

Thank You for Purchasing a



SUPER NOVA

12B

Twelve Zone Misting Controller

Automatic Misting Controller

INSTRUCTION MANUAL

*Please read entire Instruction Manual
(including Limited Warranty)
before installation.*

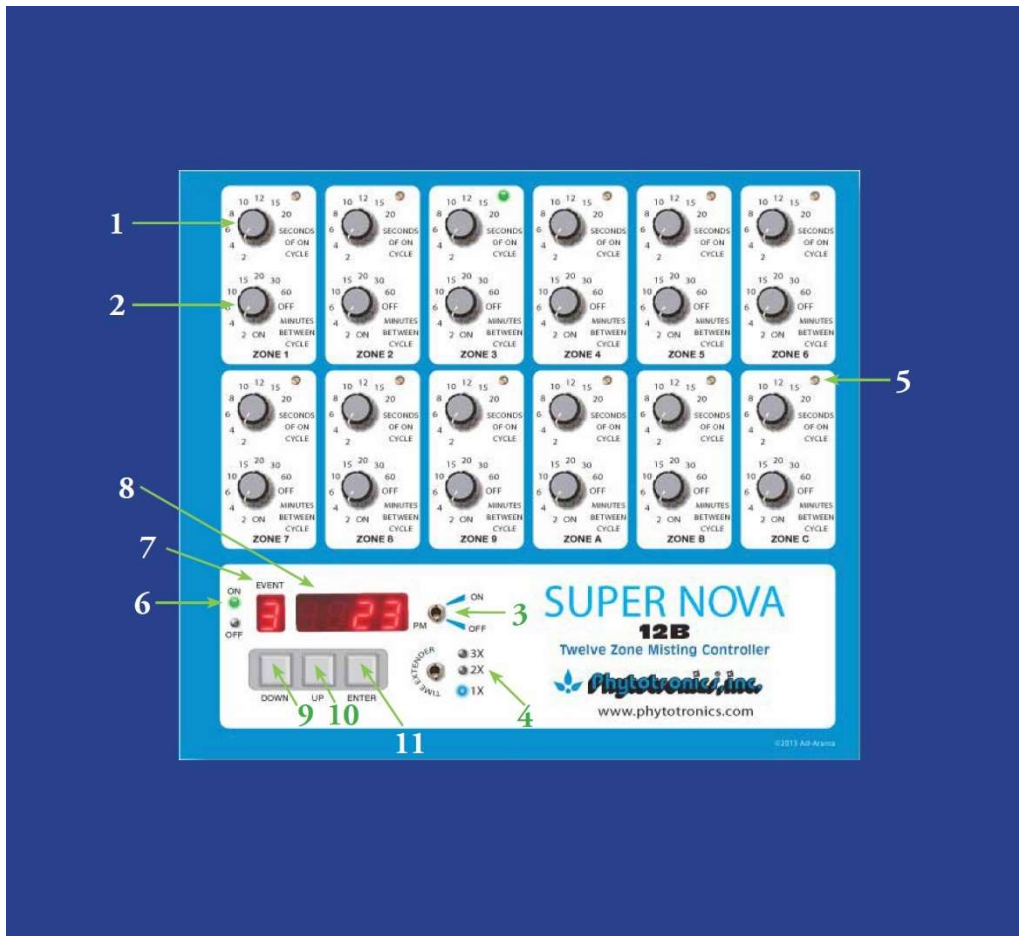
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13688 Rider Trail North

Earth City, MO 63045

(314) 770-0717 • Fax: (314) 506-4587



- 1) "ON" Time Rotary Switch
- 2) "OFF" Time (or Time Between Cycles) Rotary Switch
- 3) ON/OFF Switch
- 4) Time Extender Switch
- 5) Zone "ON" Light
- 6) Solenoid "ON" / "OFF" LED
- 7) Event (or Program) 7- Segment Display
- 8) Clock/Timer 7- Segment Display
- 9) "DOWN" Button
- 10) "UP" Button
- 11) "ENTER" Button

Understanding Your Controller

"Zone Control Blocks"

Your new controller has six (12) "Zone Control Blocks". Each "Zone Control Block" contains the necessary switches and lights to control the misting operation for that zone. Each "Zone Control Block" contains the following three (3) items: 1) a "Zone On Indicator (LED lamp)"; 2) a "Seconds of On Time" rotary switch; and 3) a "Minutes Between Cycle" rotary switch. The operation of each of these zone controls is described in detail below.

"Zone On Indicator (LED Lamp)"

The "Zone On Indicator" is a light located at the top of each "Zone Control Block" on your new controller. The light is an indication that 24VAC power is being delivered to the zone's valve.

"Seconds of On Time"

The "Seconds of On Time" switch is located in the top portion of the "Zone Control Block". Rotating the selector switch clockwise will increase the amount of time during which 24VAC output power will be delivered to the appropriate valve. Rotating the selector switch counter-clockwise will decrease the amount of time. "Seconds of On Cycle" selections for the NOVA controller are listed below:

Time Extender	Available Selections (Seconds)
1X	2, 4, 6, 8, 10, 12, 15, and 20
2X	4, 8, 12, 16, 20, 24, 30, and 40
3X	6, 12, 18, 24, 30, 36, 45, and 60

"Minutes Between Cycle"

The "Minutes Between Cycle" switch is located at the bottom of each "Zone Control Block". Rotating the selector switch clockwise will increase the amount of time between the start of each "On" cycle when 24VAC power is delivered to the appropriate valve. Rotating the selector switch counter-clockwise will decrease the amount of time. The "OFF" position will prohibit any valve operation; while the "ON" position will force the valve into continuous operation. The "ON" and "OFF" positions are considered manual operations. "Minutes Between Cycle" selections for the controller are listed below:

Time Extender	Available Selections (Minutes)
1X	ON, 2, 4, 6, 10, 15, 30, 60, and OFF
2X	ON, 4, 8, 12, 20, 30, 60, 120, and OFF
3X	ON, 6, 12, 18, 30, 45, 90, 180, and OFF

"Power Switch"

The "Power" switch turns on and off all power to the controller. Safety requirements dictate that the unit be turned "Off" when the unit is being installed or serviced, or when valves are being attached to or removed from the controller.

Self-Resettable Internal Fuse

Each controller is supplied with a 2 AMP self-resettable internal fuse to prevent damage to the internal circuits as well as to valve wiring and low wattage solenoid valves. The fuse will interrupt all internal power to the controller and the 24VAC power to the valves. Should the 'short circuit' still exist, the fuse will again trip and interrupt service.

Manufacturer's Note: Whenever the fuse 'trips' it is recommended that all valves and valve wiring be inspected for 'short circuits'. Excessive tripping of the fuse will shorten its lifetime, requiring factory service and grower loss of use. Short circuits may be caused by crossed wiring, improper grounding techniques, damaged valves, moisture collection, or an internal controller malfunction.

"Time Extender Block"

Equipped with an additional feature; the "Time Extender". The "Time Extender" is a three (3) position toggle switch which will multiply the "Seconds of On Time" and "Minutes Between Cycle" times by one (1X), two (2X), or three (3X), depending on switch position. Selection of the 1X position indicates that the "Seconds of On Cycle" and "Minutes Between Cycle" periods will be as they are marked. Selection of the 2X position of the "Time Extender" will double all time periods, and selection of 3X will triple the time periods.

Example #1: With the "Time Extender" set for 3X operation:

Function	Knob Setting Position	Actual Time
"Seconds of On Time"	20 seconds	60 Seconds
"Minutes Between Cycle"	60 minutes	180 Minutes

NOTE: Controllers have water-tight, easy-turn switches to endure many years of continued use. Each switch has a fixed stop position at the minimum and maximum selectable time. DO NOT force the switches past the minimum or maximum times available for your model.

Installing Your Controller

We would highly recommend using a surge protector when operating your misting controller; so it will stop voltage spikes and surges that could damage your controller, such damage is not covered by your warranty.

CONTROLLER LOCATION:

Selecting the proper location for mounting your new controller is important, and there are several guidelines you should follow to insure long and satisfying service.

- 1) HEAT: Avoid locations of excessive heat, such as extended exposure to direct sunlight and locations near heaters or boilers.
- 2) LIQUIDS: Select a location where the controller is away from direct and continuous flooding from liquids. When water is sprayed on the controller, the water will get inside and on the circuit board shorting it out. This will cause damage not covered by the warranty.
- 3) POWER: 24V plug in transformer supplied.

CONTROLLER MOUNTING: Your new controller is supplied with all necessary mounting hardware for a typical installation. For hollow-wall or concrete mounting surfaces, additional hardware may be required to secure the controller properly. Pre-drill the marked locations with a 1/8" or smaller starter hole. Install the two (2) bottom mounting screws, leaving approximately 1/16" between the head of the screw and the mounting surface. Test fit the controller by inserting the bottom mounting holes over the head of the mounting screws. Loosen or tighten the mounting screws as required, to provide a snug- fit between the controller and mounting surface.

Starting Your Controller

After you have selected and mounted your controller, and wired the solenoid valves, you are ready to begin misting operations. Improper grounding will void the warranty of the controller. Do Not connect solenoid valves to the controller before verification and trial operation.

Connecting the 24VAC Power Plug:

Wire the power cord to both AC terminals on the transformer. Do not use the ground terminal. Be sure the controller power switch is in the “off” position. Plug into connector. Ensure the power cord is routed away from walkways and high traffic areas to prevent accidental interruption of power to the controller.

SETTING OR CHANGING THE TIME

Note When setting the clock the screen will actually go through the event programming first.

Note it is easy to tell when in the programming mode as the BLUE LEDs will no longer be lighted.

- Hold down ENTER for 4 Seconds.
- The display will first switch to EVENT programming after 2 seconds and then to the TIME programming mode. (notice the blue timing indication lights will be off and the time will be showing)
- Use the UP or DOWN buttons to set time.
- When the correct time is set, push enter to go back to the run mode.

NOTE: A red dot will appear on the lower right digit display indicating PM.

TO SET OR CHANGE PROGRAMS

NOTE: Events are not needed for controller to work. Controller will run 24 hours with no programs.

NOTE: A red dot will appear on the lower right digit display indicating PM.

- There can be up to 8 events (on-off functions) that can be programmed.
- Hold down the ENTER key for 2 Seconds.
- #1 will show in the small window and either ON or OFF in the big window. If you want the controller to run 24 hours, make sure it says OFF.
- To set a program, push either the UP or DOWN key to show ON in the big screen.
- Press the ENTER key again to program the “ON” time and use the UP or DOWN key to set the time. Press the Enter key again to program the OFF time and use the UP or DOWN keys to set the time.
- Normally program 1 is set to run during the day and program 2 through 8 are used to have the controller come on up to 7 times during the night. Setting each program to run for a minute or two. This is good if you are using bottom heat.

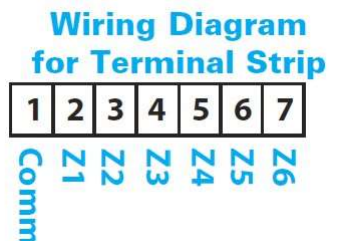
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For example: program 1 – 8:30am to 8:30pm. Program 2 – 10:00pm to 10:03pm. Program 3 – 11:30pm to 11:33pm. Program 4 – 1:00am to 1:03am. Program 5 – 2:30am to 2:33am. Program 6 – 4:00am to 4:03am. Program 7 – 5:30am to 5:33am. Program 8 – 7:00am to 7:03am

When a program has the controller off, just the time will show on the display. If you think the controller should be running, check to make sure there are not two programs overlapping each other.

CONNECTING YOUR SOLENOID

- Standard 24VAC Solenoids
- Simply strip wire jacket back approximately 1/4” from end of both wires, (if not already done by manufacturer).
- The controller powers AC solenoids (common solenoids used for lawn irrigation) There is no hot or neutral wire. Tie one wire from all the solenoids together and insert wire into #1 slot of solenoid plug (provided by Phytotronics) and the other wires into the #2 through #7 slots and tighten down firmly, BY HAND, with supplied Phytotronics screwdriver.
- 3 Wire 24VAC Solenoids
- Attach the 2 power wires just like a 2 wire solenoid into solenoid plug.
- The 3rd wire is a ground wire. (usually green or green with a yellow stripe) ground this wire properly with all local, state, and national codes.
- 120VAC solenoids will not work directly with your Nova.
- You must use some kind of 24VAC interface between your controller and 120VAC solenoid. i.e. a 24VAC relay.



NOTE: Any attempt to bypass the 24VAC transformer to power this unit directly from a 120VAC power source will damage the controller’s circuitry and render it unfit for use. Such action will also void the Phytotronics warranty!

NOTE: Maximum controller output is 1 Amp at one time. If output is exceeded, CR ERR will appear on the display. Turn the unit off, fix the condition and turn back on. This should clear the error.

FOR ANY TROUBLESHOOTING PLEASE CONTACT PHYTOTRONICS @:

OFFICE: (314) 770-0717 FAX: (314) 506-4587 EMAIL: repairs@phytotronics.com

**See Phytotronics.com for information regarding
loaner units or repair policy**

EVENT PLANNER						
Event	"ON" Time	AM	PM	"OFF" Time	AM	PM
1						
2						
3						
4						
5						
6						
7						
8						

EVENT PLANNER						
Event	"ON" Time	AM	PM	"OFF" Time	AM	PM
1						
2						
3						
4						
5						
6						
7						
8						



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Limited Warranty

Phytotronics®, Incorporated (“we”) warrant to the original purchaser (“you”) that the product or system accompanying this warranty (the “product”) will be free from defects in material and workmanship existing at the time of manufacture and appearing within two (2) years from the date of original purchase. This warranty applies only so long as the product is stored, installed, operated and maintained in accordance with our recommendations, and when used under proper and normal use. THIS WARRANTY SHALL BE EXCLUSIVE AND, TO THE EXTENT PERMITTED BY LAW, SHALL BE IN LIEU OF ANY OTHER WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT IMPLIED WARRANTIES MAY NOT BE DISCLAIMED, THE DURATION OF SUCH WARRANTIES, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, IS EXPRESSLY LIMITED TO THE TWO YEAR PERIOD OF DURATION OF THIS LIMITED WARRANTY. In certain circumstances, some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

When this Limited Warranty does not apply

This warranty does not cover claims resulting from power surges, lightning strikes, failure to follow instructions on installation and use, neglect, misuse, accident, modifications, alterations, acts of God, vandalism, misapplication or repairs made by you or others, use of unauthorized attachments, use on a current or voltage other than specified, or overloading.

Your remedies

If a covered defect appears during the warranty period, we will, (at our sole option), repair or replace the defective product at no charge for service or parts, provided that the product is delivered at your expense to our authorized service center. Parts and/or replacement product supplied under this warranty may be new or rebuilt at our option. Any product which is repaired or any replacement product will be covered under this warranty for the remainder of the one year period or for 90 days after repair or replacement, whichever is longer. THIS IS YOUR EXCLUSIVE REMEDY FOR BREACH OF THIS WARRANTY OR OF ANY IMPLIED WARRANTY OR OF ANY OTHER OBLIGATION ARISING BY OPERATION OF LAW OR OTHERWISE.

What is not covered by the Limited Warranty

The warranty does not include reimbursement for the expenses of labor, transportation, installation, removal or any other expenses which may be incurred by you. For instructions on how to obtain warranty service, call 314-770-0717 or write to Phytotronics® Customer Service, 13688 Rider Trail North, Earth City, Missouri 63045.

IN NO EVENT SHALL WE BE LIABLE OR RESPONSIBLE FOR PUNITIVE, EXEMPLARY, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOST PROFITS, LOSS OF CROP, REVENUES OR SAVINGS ARISING OUT OF THE BREACH OR PERFORMANCE OF ANY WARRANTY OR THE USE OR INABILITY TO USE THIS PRODUCT FOR ANY PURPOSE WHATSOEVER.

YOUR EXCLUSIVE COMPENSATION FOR LOSS OR DAMAGE ARISING FROM PURCHASE, USE, REPAIR OR REPLACEMENT OF ANY PRODUCT SHALL BE LIMITED TO AN AMOUNT EQUAL TO THE PURCHASE PRICE OF THE PRODUCT. THIS LIMITATION OF LIABILITY SHALL BE APPLICABLE TO ANY CLAIMS PRESENTED TO US REGARDLESS OF THE LEGAL THEORY FORMING THE BASIS OF SUCH CLAIM, AND WHETHER SUCH THEORY INVOLVES NEGLIGENCE, CONTRACTUAL LIABILITY, FAILURE OF REMEDY OR OTHERWISE.

In certain circumstances, some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. *This warranty gives you specific legal rights, and you may have other rights which vary from state to state.*