

Multiponics Digital Timer

by Tom Thorn

Product Manual

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Introduction to the Multiponics Digital Timer



The Multiponics digital timer, hand-made in New York, is the solution to almost every automation issue in modern horticulture. Built on Arduino-based code, our timer can be precisely set for very specific applications. The timer can be set within as small an interval as .1 seconds, and as large an interval as 47 minutes. We manufacture our timer with the intent to make it as user-friendly, intuitive, and as easy-to-operate as possible. Our timer is manufactured from all UL-listed components, is ROHS-compliant, rated to 10 amps, and has two 7 ft chords for both the power as well as the application plug-in. Our timer also features an LED on-light, so it should be immediately apparent if the timer is malfunctioning or not operating as it should. Our timer is intended for use with any horticultural application, but works particularly well with our DIY 6800/8800 kits and other Multiponics equipment. This timer is perfect for the horticulturist looking to reduce their workload without compromising yield or quality.

Instructions for installation

The sleek, digital, interface of our timer is meant to be simple and easy to navigate. First, the timer must be plugged into an outlet to give it power. The device which you intend to automate or cycle on/off should then be plugged into the other chord attached to the timer. This essentially turns the timer into an intermediary device between the power input and the component or system which is being timed.

Now, you must know what timing scheme you want to apply. The timer is preset to off and on, and is defaulted to 2 seconds on and 3 minutes off. The button on the the far left is "down," the middle button is "set," and the far right button is "up." The up button increases the time interval by 1 second each time it is pressed. The down button decreases the time interval by .1 seconds each time it is pressed, when applied to the "on cycle." When applied to the "off cycle," both up/down buttons apply 1 second. This means if the user wants 5.5 seconds for the "on" cycle, they will press set button, and the display should read "set time" or "set time on." The user should then hit the up button 6 times and the down button 5 times. The display will read "set time" or "set time on" for another 3-5 seconds, until the device applies the settings. The user should then hit the "set" button again, or will be prompted to enter the "set time off." This will then allow the off cycle to be entered in. This will be entered in the he same manner, but the up and down intervals are both 1 second for the off time. So, if the user wants a minute for off time, they will hit the up button 60 times and wait 3-5 seconds for the timer to apply this input. Once the on/off cycles have been determined and the timer is plugged in to both power as well as the device or application being timed, then the timer should be operating correctly without any further action. Unplugging the device will not reset the on/off cycles. Hitting the reset button on the bottom of the device will not reset these cycles either. However, the user re-initializes the relay in the device when it is either unplugged or reset. This can be particularly useful if the timer is not operating the applied or desired timing scheme.

Regular Maintenance Plan

Because the Multiponics timer is digital, maintaining the timer should be fairly straightforward. Regular maintenance is not required the same way It is required with our 6800/8800 DIY kits. We recommend dusting your timer/housing regularly as well as

keeping any sticky liquids or materials clear of the buttons. This will prevent the buttons from sticking or becoming hard to operate in the future. Do NOT let your timer or housing come into contact with liquids.

Troubleshooting

-The timer will not turn on or operate.

First, make sure the timer is plugged into the wall. Make sure the outlet is working correctly and the timer is plugged in. Secondly, make sure the secondary device is plugged into the timer correctly. If the timer still won't turn on, something is wrong and the timer should be returned to Multiponics so that it can be fixed.

-The timing scheme is not working correctly/as it should/as it was programmed.

While the timing scheme is not complicated and should be user-friendly, it can be confusing to the uninitiated. The far left button is the "down" button for cycle time. The interval of time decreased with this button is .1 second with each push for on time, and 1 second for off times. The far right button on the timer is "up," and increases the time interval by 1 seconds each time it is pushed, whether for on or off times. Finally, the middle button is "set." I will illustrate an example of how to set the time scheme. Let's assume the user wants the on interval to be 50.3 seconds, and the off time to be 2 minutes, 20 seconds. After plugging everything in appropriately, the user will press the set button, and then the up button 51 times. This will put the "on" cycle on for 51 seconds. The user will then hit the down button 7 times. This will reduce the on cycle to 50.3 seconds. Since this is the interval the user wants, they should so wait for the timer to prompt them to "set time off." If the timer does not prompt the user, the user should hit the "set" button. The user will hit the up button 140 times. This will move the interval to 2 minutes and 20 seconds. The user should wait another 3-5 seconds. The timer should now be operating with an on period of 50.3 seconds, and an off period of 2 minutes 20 seconds. If you repeat this process and it is still not working correctly, either unplugging the device or pushing the "reset" button on the bottom with a paper clip should solve the issue. If the timer still does not operate correctly after resetting the device and following the instructions above, please contact a multiponics representative for support.

Contact Multiponics

While we have tried to exhaustively address every problem or issue that can arise with our timer, we realize you may have an issue or question that is not addressed in the manual. If this is the case, please contact us using either phone or email. Our company phone number is 1-720-505-FROG (3764). If you have any questions that have not been addressed above, please email the author at James@multiponics.com or visit our websites www.multiponics.com or www.multiponics.biz.