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INNOVATIVE WATER PRODUCTS

United Water Inc.

AutoFlush Programmable Controllers

Operation and Instruction Manual

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Battery Powered Programmable Controller

Battery Powered Bluetooth Programmable Controller

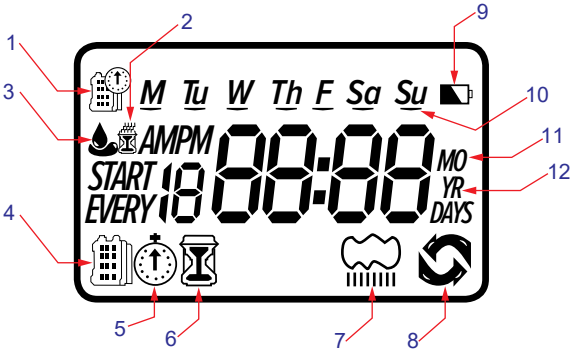
INTRODUCTION

Thank you for purchasing the AutoFlush Battery Powered Programmable Controller. This manual describes how to get the AutoFlush controller up and running quickly. After reading this manual and becoming familiar with the basic functionality of the controller, use the manual as a reference for less common tasks in the future.

The AutoFlush controller employs the latest programming features to allow for complete control of the system and comes assembled on an in-line valve or the controller only with adapters to fit most manufacturers' valves. The AutoFlush Programmable Controller is powered by two AA batteries that can last up to 3 years using name-brand alkaline batteries. The controller is enclosed in a compact, waterproof housing to protect it from the elements.

LCD DISPLAY AND CONTROLS

LCD Display



1. ***Time and Date Icon*** – Indicates current time and day is displayed
2. ***Sensor Icon*** – Not applicable to flushing set-up
3. ***Flushing Icon*** – Appears when valve is open
4. ***Set Flushing Days Icon*** – Choose either specific days, odd/even days, every X hours, or up to once every 30 days
5. ***Start Time Icon*** – Up to 4 start times per day available
6. ***Run Time Icon*** – Flushing duration from 1 minute to 5 hours and 59 minutes
7. ***Delay Icon*** – Delay setting from 1 to 99 days with auto restart
8. ***Manual Run Icon*** – Appears when manual button is pushed
9. ***Battery Level Indicator*** – Flashes when batteries are low and need to be replaced
10. ***Day of the Week Underscore*** – Shows which day of the week the controller will operate
11. ***Represents Month***
12. ***Represents Year***

Control Buttons

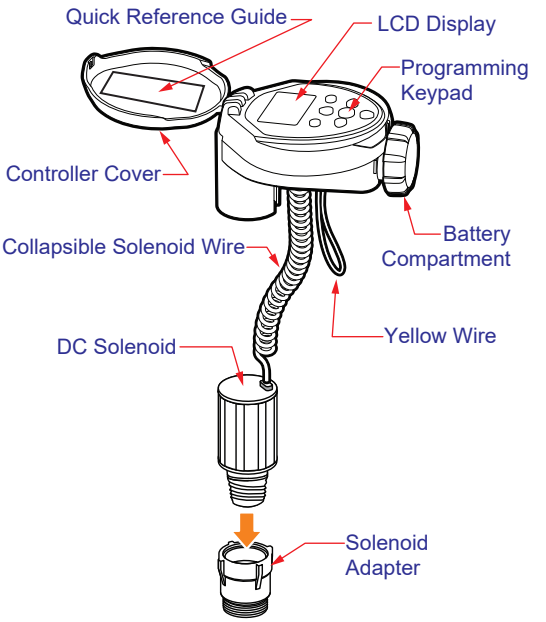
Select programming mode

Turn program(s) ON/OFF

Start/stop a manual cycle

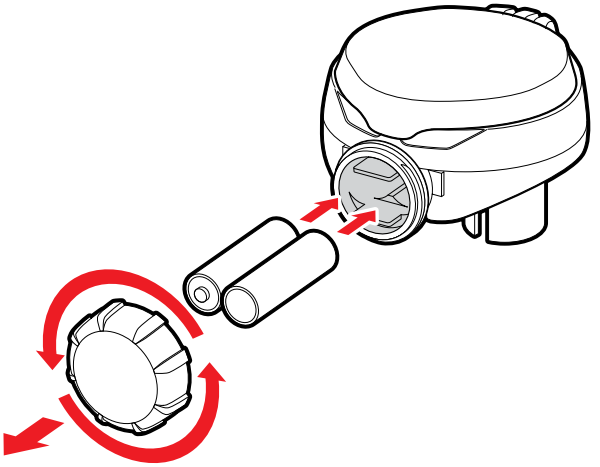
Move left/right to select a value

Raise/lower the selected value



INSTALLING THE BATTERIES

1. Open the battery compartment cap by turning it counter-clockwise.
2. Install two fresh, brand name, AA alkaline batteries (not included) and note the proper direction of the positive and negative orientation on the underside of the controller.
3. Insert and screw the battery cap clockwise. Make sure to securely tighten the cover firmly by hand only. The controller display appears with a day, PM, and the hour digit flashing. The controller is ready to be installed and programmed.



CHANGING THE BATTERIES

The AutoFlush controller's batteries can last up to 3 years when using name brand AA alkaline batteries. Actual battery life will depend on the sensitivity of the installed batteries to temperature ranges experienced by the controller as well as the number of valve operations programmed per day. To ensure proper operation, it is recommended that the AutoFlush controller be checked regularly and the batteries replaced once the low battery indicator starts flashing.

The AutoFlush controller is designed to maintain the current time settings for up to 60 seconds with the batteries removed.

Note: If the batteries are dead or drained, manual operation can also be accomplished by turning the solenoid counterclockwise, or by turning the external bleed screw counterclockwise. This will cause the valve to open. Both must be turned clockwise to close the valve.

PROGRAMMING

The AutoFlush controller can be programmed to operate on any day of the week, odd days or even days. In cyclical mode, the AutoFlush can also operate from every 1 hour up to every 12 hours or from once a day up to every 30 days. The AutoFlush has four start times per day and durations from 1 minute up to 5 hours and 59 minutes. This section explains the programming features, and the steps necessary to assign flushing schedules. To program the controller, use the ◉ to select the desired programming mode, the → to make the entry flash and the ↓ ↑ buttons to change the value.

Note: Only a flashing value can be changed.

Note: If the last data entered stops flashing, press → again to resume programming and repeat the steps.

SETTING CURRENT TIME AND DATE

The controller can display the time in either a 12 or 24 hour format. To change the time format, from the home screen:

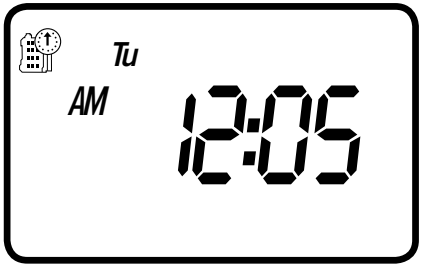
1. Press the ↓ button for three seconds until the display switches format (AM/PM disappears).

Setting the Current Time and Date

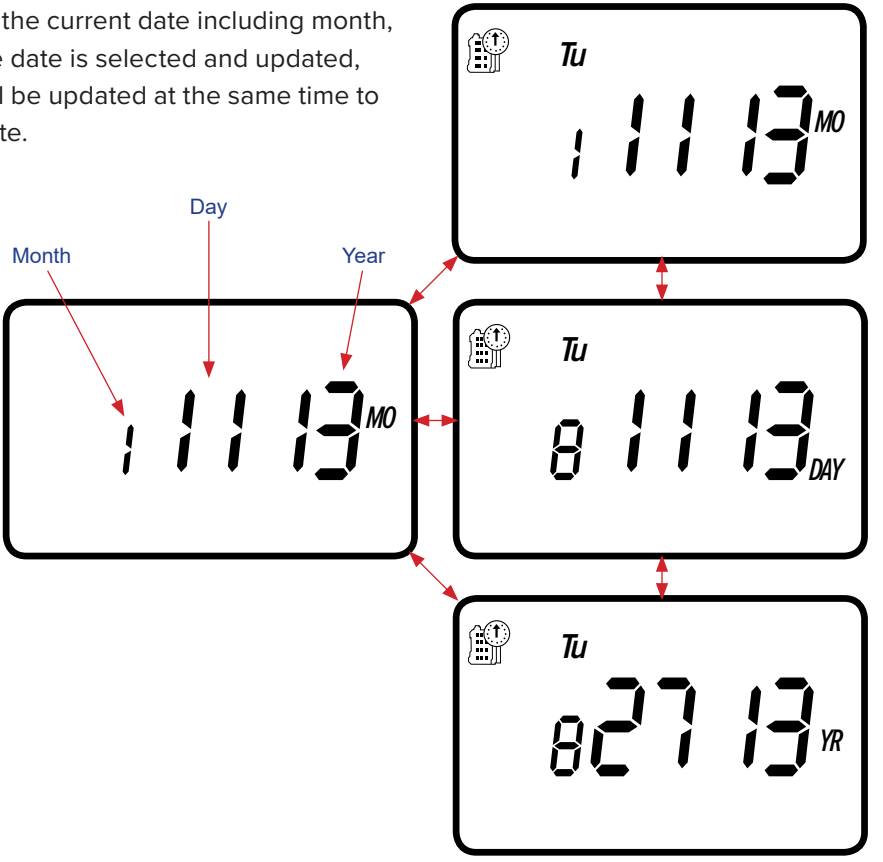
To enable the controller to operate properly, the current time and date must be set.

1. Press the ◉ button, until the icon appears along with the time and the day of the week.
2. If the current time has not been set or needs to be updated press → and the hour digit starts flashing.
3. To set the current hour, press ↑ or ↓ (note AM and PM designations).

4. To set the minutes, press again and the minute digit will start flashing. Press the or to set the current time in minutes.



5. Repeat the steps to set the current date including month, day and year. When the date is selected and updated, the day of the week will be updated at the same time to correspond with the date.



Press to proceed to the next step, SET DAYS or to review the program.

Press to move backward.

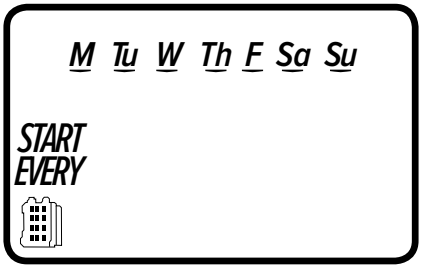
SETTING FLUSHING DAY SCHEDULES

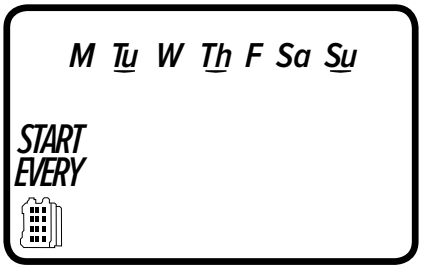
Option 1 – Setting Specific Days of the Week:

This setting determines which days the AutoFlush controller will operate. Choose either flushing on specific days of the week, EVEN/ODD days, or cyclical from daily up to once every 30 days. The controller's default setting is to flush on all specific days of the week.

For example, if you want to flush every Tuesday, Thursday and Sunday:

1. Press the button until the icon and the days of the week appear on the screen.
2. Press once and ***M*** (for Monday) starts flashing.
3. Press and underscore under ***M*** (Monday) disappears. Monday is de-selected.
4. Press twice and ***W*** (for Wednesday) starts flashing.
5. Press and the underscore under ***W*** (Wednesday) disappears. Wednesday is de-selected.
6. Press twice and ***F*** (Friday) starts flashing.
7. Press and the underscore under ***F*** (Friday) disappears. Friday is de-selected.
8. Press and the underscore under ***Sa*** (Saturday) starts flashing.
9. Press and the underscore under ***Sa*** (Saturday) disappears. Saturday is de-selected.





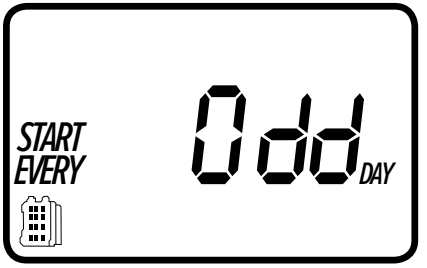
Option 2 – Setting Even or Odd Days:

To select EVEN days, ODD days refer to the example.

Example: setting the controller to flush on ODD days:

1. Press the button until the icon and the days of the week appear.
2. Press and to skip all the days of the week (underscore must be removed beneath all days).
3. Press and EVEN appears flashing.
4. Press and ODD appears flashing

Press the button to proceed to the next step, START TIME or to review the program.



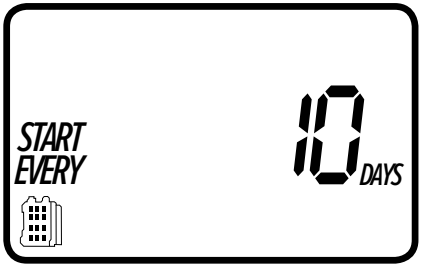
Option 3 – Setting every X hours:

Example: setting the controller to flush every 7 hours:

1. Press the button until the icon and the days of the week appear.
2. Press and to skip all the days of the week. (Underscore must be removed beneath all days.)
3. Press and EVEN appears flashing.
4. Press again and 1:00 hour appears flashing. To select the number of hours between flushing to 7 hours, press until 7:00 appears on the display.

Press the button to proceed to the next step, START TIME or to review the program.

Option 4 – Setting every X days:



Example: setting the controller to flush every 10 days:

1. Press the button until the icon and the days of the week appear.
2. Press and to skip all the days of the week. (Underscore must be removed beneath all days.).
3. Press and EVEN appears flashing.
4. Press again and 1 hour appears flashing.
5. Press again and 1 DAY appears flashing. To select the number of days between flushing to 10 days, press until 10 appears on the display.

To set the controller back to specific days mode:

1. Push the button until – START EVERY and the icon appear at the bottom left of the screen.
2. Push until the days of the week appear at the top of the screen.

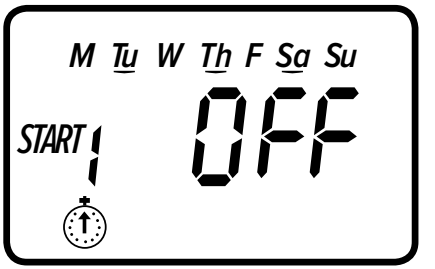
Press the button to proceed to the next step START TIME or to review the program.

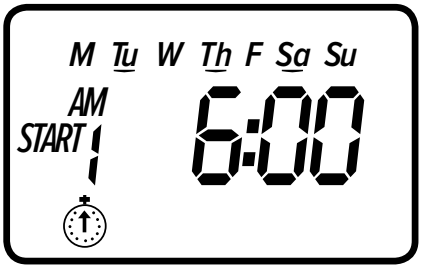
SETTING FLUSHING START TIMES

The AutoFlush smart controller can have up to four separate flushing start times per day.

(Note: If the controller is set to flush every X hours, only one start time is available to be programmed).

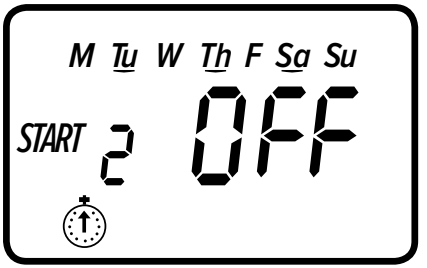
To set a start time:





1. Press the button until the icon appears. START 1, displays OFF (or the last start time programmed) in START 1 appears.
2. Press and OFF (or the first start time programmed) begins flashing.
3. To set the desired first start time hour (Note: AM and PM designations) press or .
4. Press and the minutes start flashing.
5. Press or and set the desired start time minutes.

6. Press → again, the second start time and OFF or the last start time programmed appear flashing. Repeat the steps to set the second, third, and if needed, the fourth start time. During programming, if you are set to flush on specific days of the week, the screen also shows which days the controller will operate with an underline.



To delete a start time:

1. Press ◉ until START 1 appears.
2. Press → until the start time appears that you want to delete.
3. Press ↓ until the word OFF appears.

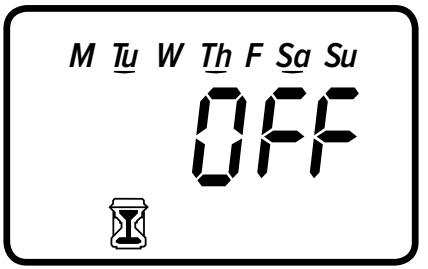
Pressthe ◉ button to proceed to the next step RUN TIME ⧗ or to review the program.

SETTING FLUSHING RUN TIMES (PROGRAM(S) DURATION)

This setting determines the length of time the AutoFlush Smart Controller will allow the valve to remain open (duration is from 1 minute up to 5 hours and 59 minutes). For example, setting flushing run time to 10 minutes on certain days of the week will program the controller to flush the system for 10 minutes on each of the days chosen and at every start time selected. (Note: If the controller is set to flush every X hours, the maximum duration is 59 minutes).

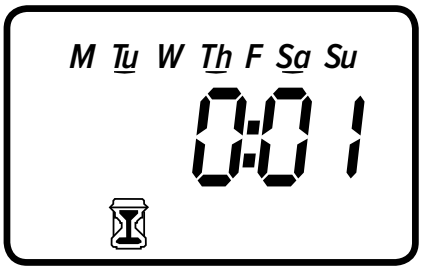
To set the flushing run time ⧗ :

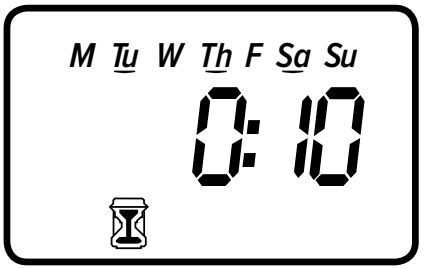
1. Press the ◉ button until the ⧗ icon appears and OFF or the last run time setting appears. (OFF will appear if duration is set to 0).
2. Press the → button, and 0:00 (or the last run time programmed) appears with hours flashing.



Continued SETTING FLUSHING RUN TIMES (PROGRAM(S) DURATION)

3. To set a desired flushing run time in hours, press ▲ or ▼ and select the number of hours.
4. If only flushing in minutes is required, press ➔ to skip the hour digit, and the minutes will start flashing.
5. To set the desired flushing duration in minutes (example of 10 minutes), press ▲ or ▼ to select minutes. When programming the flushing duration, if you are set to flush on specific days of the week, the screen will also show the days the controller will operate with an underline.





At this point, the controller's normal programming is concluded.

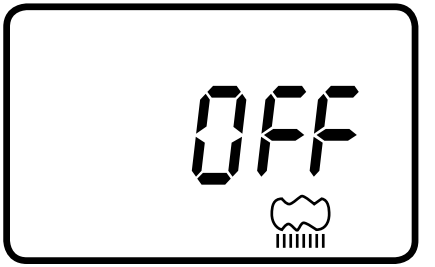
Press the ◉ button to proceed to the next step DELAY or to review the program or to exit.

SETTING DELAY - OPTIONAL FEATURE

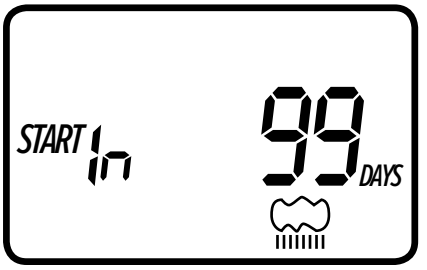
The Delay setting is used to temporarily suspend all flushing for a defined number of days. For example, during low usage periods, such as a vacation, regularly scheduled programs can be turned off from 1-99 days. At the end of the designated period, regularly scheduled programming will resume automatically.

To set a temporary suspension of the program:

1. Press the ◉ button until the icon and OFF appear.
2. Press the ➔ button and OFF starts flashing.



3. To set the desired temporary suspension of the program (1-99 days), press ▲ or ▼.
4. The temporary suspension of the program can be canceled at any time by re-entering Delay screen and changing the setting to OFF. (Press ▲ or ▼ until OFF appears).



Note: OFF appears in between the numeric value of 99 and 1.

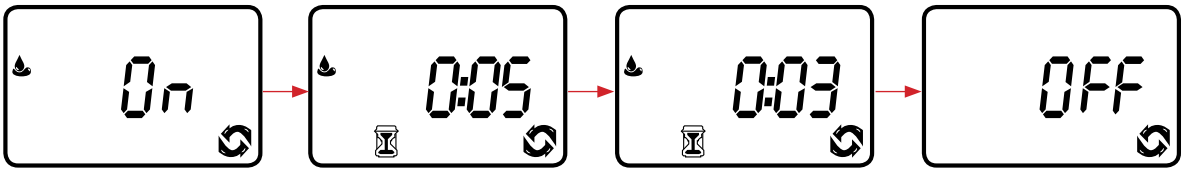
Press the ◉ button to review the program or to exit.

MANUAL FLUSH

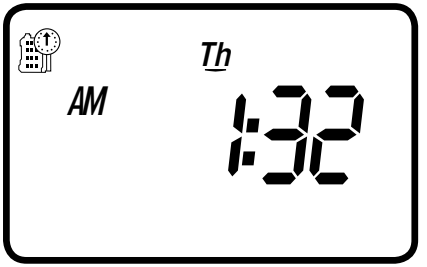
The manual mode allows the user to test the system and flush for a specified run time set in flushing duration. The controller will automatically stop flushing at the end of the defined flushing period. The originally programmed flushing schedule continues to function at the times assigned.

To start a manual run:

1. Press the 💧 button and the 🔄 icon and the 💧 icon appears. ON appears momentarily, and then the last flushing duration is displayed with ⏳ 🔄. The controller will open the valve and in 5 seconds a count down of the remaining flushing duration appears, showing when the controller will close the valve.



2. Press the 💧 button to end manual run.
3. After 5 seconds, the display will revert to the current time screen.



To restore the controller to the default settings:

1. Press the button until the START EVERY is displayed and the icon appears on the bottom left of the screen.
2. Press and hold down the for three seconds.
3. The screen returns to the home screen (clock) and all the default settings are restored. The current time and date are retained.

PROBLEM: Controller fails to open automatically or manually

CAUSE: No water pressure

SOLUTION: Open main water supply valve

CAUSE: Flow control knob is turned down

SOLUTION: Turn flow control knob clockwise to open

PROBLEM: Valve/actuator functions via the manual mode but not automatically

CAUSE: Controller is set to OFF mode

SOLUTION: Verify that the controller does not show OFF in current time mode

CAUSE: AM/PM not set correctly in current time mode

SOLUTION: Check current time, change AM/PM if necessary

CAUSE: AM/PM not set correctly in start time mode

SOLUTION: Check start time(s), change AM/PM if necessary

CAUSE: Delay is preventing flushing

SOLUTION: Set delay to OFF

CAUSE: Yellow sensor wires have been cut

SOLUTION: Re-connect sensor wires together with waterproof connector

PROBLEM: The display is blank

CAUSE: No buttons have been pushed in the previous 15 minutes

SOLUTION: Press any button

PROBLEM: Valve fails to close

CAUSE: Solenoid is loose

SOLUTION: Tighten solenoid by turning it clockwise to the right

CAUSE: Valve is installed backwards

SOLUTION: Check flow arrow and verify arrows points away from water source – reverse valve if necessary

CAUSE: Debris is blocking solenoid port

SOLUTION: Shut off water supply, unscrew and remove solenoid, then open water supply and flush out solenoid port, re-install solenoid

CAUSE: Flow control knob is too far open

SOLUTION: Turn flow control knob clockwise and retest

CAUSE: Flow rate is below minimum flow rate

SOLUTION: Increase system flow rate or pressure

PROBLEM: Controller flushes more than once per day

CAUSE: More than one start time has been programmed

SOLUTION: Change start time 2, 3, 4, and 5 to OFF

BLUETOOTH INTRODUCTION

Thank you for purchasing AutoFlush Single Station Battery Operated Controller. This section describes how to get the AutoFlush series controller up and running quickly. After reading this manual and becoming familiar with the basic functionality of the controller, use the manual as a reference for less common tasks in the future.

The AutoFlush series irrigation controller employs the latest in Bluetooth® technology using the free DIG BTT app for Android™ or iPhone®. The AutoFlush is available as a single station battery operated controller and is powered by two AA batteries that can last up to one year using name brand alkaline batteries. The controller is enclosed in a compact, waterproof housing to protect it from degradation.

COMPONENT IDENTIFICATION

Figure 1

INSTALLING THE BATTERIES

1. Open the battery compartment cap by turning it counterclockwise. See Figure 1.
2. Install two fresh, brand name, AA alkaline batteries (not included) and note the proper direction of the positive and negative orientation on the underside of the controller.
3. Insert and screw the battery cap clockwise. Make sure to securely tighten the cover firmly by hand only. The controller will now appear on the smart phone app and is ready to be connected and programmed.

PROGRAMMING

- Download the DIG BTT app using the iOS App Store, Google Play, or the QR code on the box.
- Open the DIG BTT app from your smart phone or tablet and use the instructions in the App Screens Overview to program and operate the controller.

APP SCREENS OVERVIEW

The DIG BTT app automatically scans for nearby controllers after installation. Any DIG Bluetooth® controllers within 50′ (15 meters) line of sight will appear on screen.

- Your new controller will appear as the BT Controller. Its default image, status (flushing -on- or not flushing -off-), connection strength, and battery life will appear alongside it.
- Tap on the controller to connect to it and start programming.

You can access ***Connection History*** and ***Contact Us*** through the information icon in the top right corner of the screen.

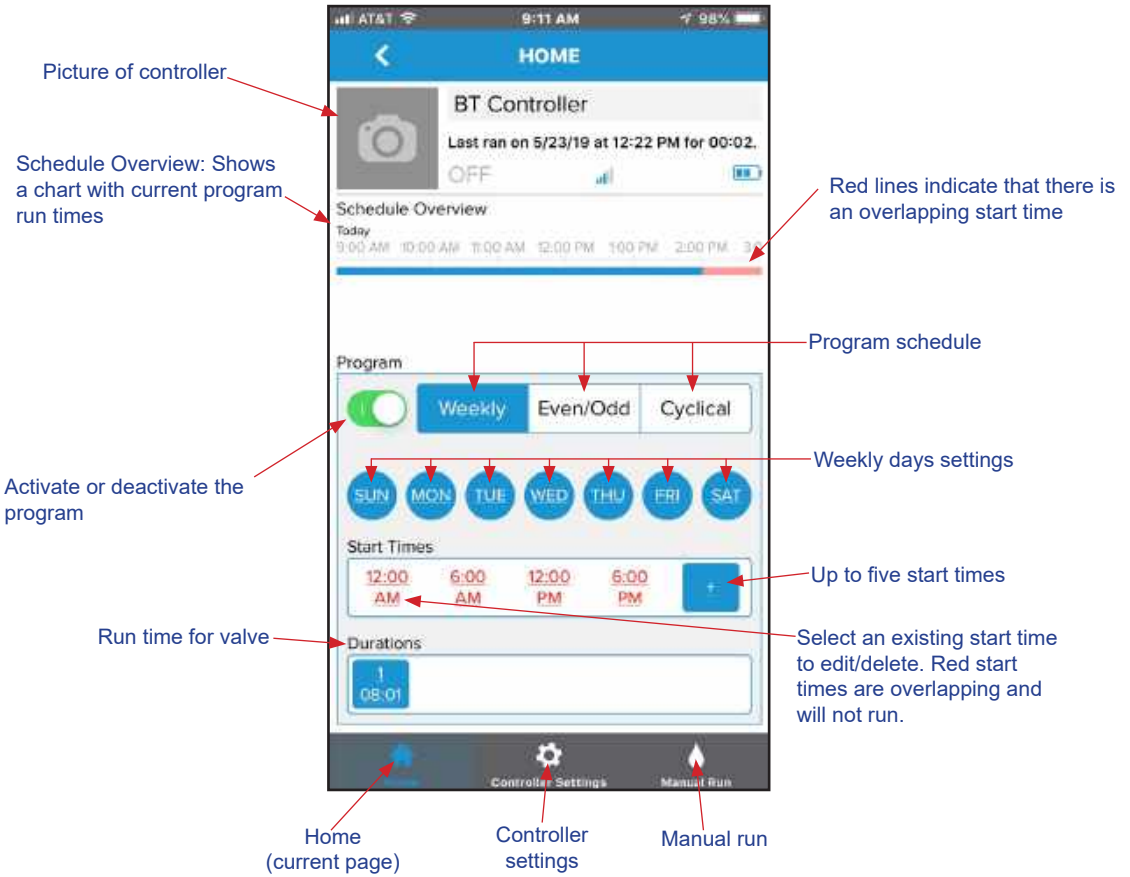
- The Connection History allows you to see every controller and timer connected to from this phone or tablet. It stores the data it last received from each tap timer, but no editing can be done. Deleting an entry will remove all the saved data for that unit. Any passwords and/or pictures need to be reentered. To delete an entry, tap it and select the trash icon.

HOME SCREEN

Once connected, the ***Home*** screen will appear. This screen has everything needed to program the controller.

By default, the controller's ***Program*** is off. To turn it on, push the switch under the "Program" area. It will turn green and the ***Program*** area will light up indicating that the program is active and can now be modified.

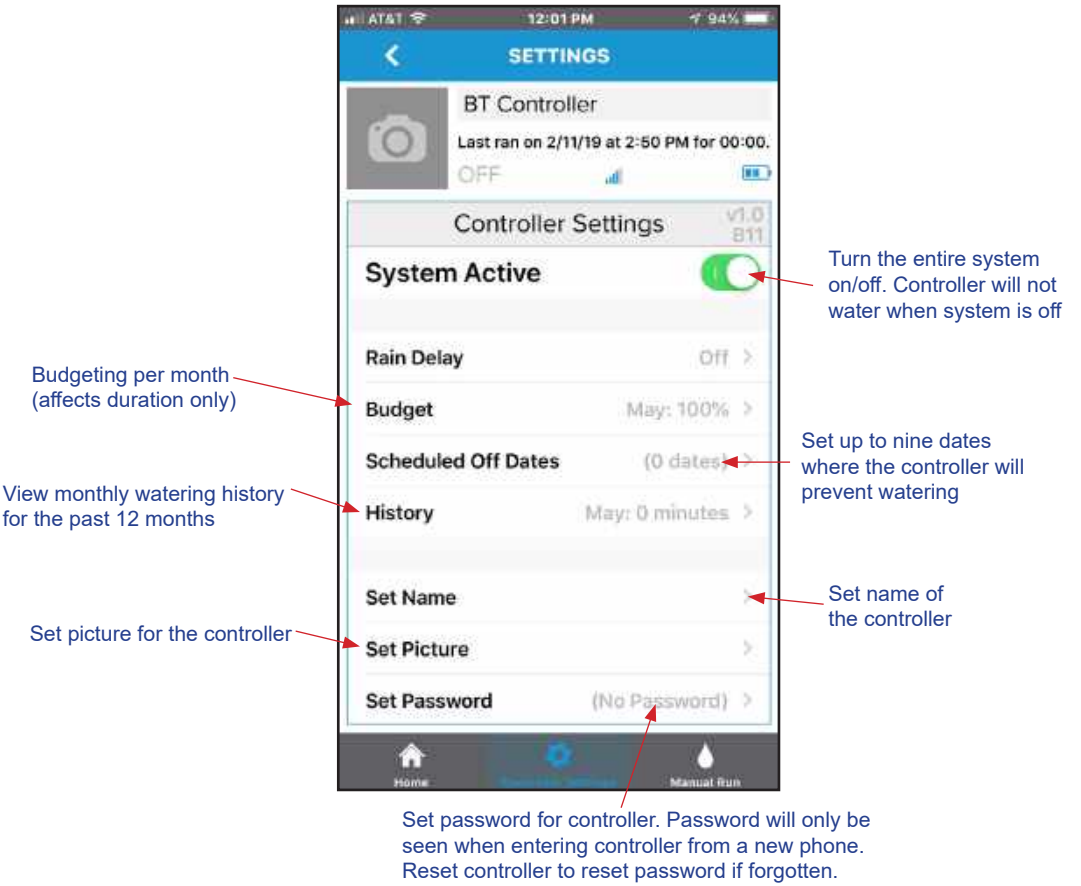
The controller is now ready to be programmed. Simply select the schedule (weekly, even/odd, or cyclical), set your start date or days, add times and set a duration. The controller is updated immediately each time a button is tapped.



CONTROLLER SETTINGS

The controller's ***Settings*** screen contains everything else needed to fully control your flushing system. It can be reached by selecting the ***Controller Settings*** button on the bottom of the screen. On this screen you can turn on or off the entire system through the ***System Active*** switch. Budget each month to modify the flushing duration based on your usage needs. Set specific dates on which the timer should not run, and view 12-month history of the controller.

Use the SETTINGS menu to rename the controller to something memorable and upload a picture for easy and fast recognition for future viewing. Set a password to prevent unauthorized users from connecting to your timer. The password is saved to the phone so it will (almost) never have to be entered again (unless it's changed or when connecting to the timer with a new phone).

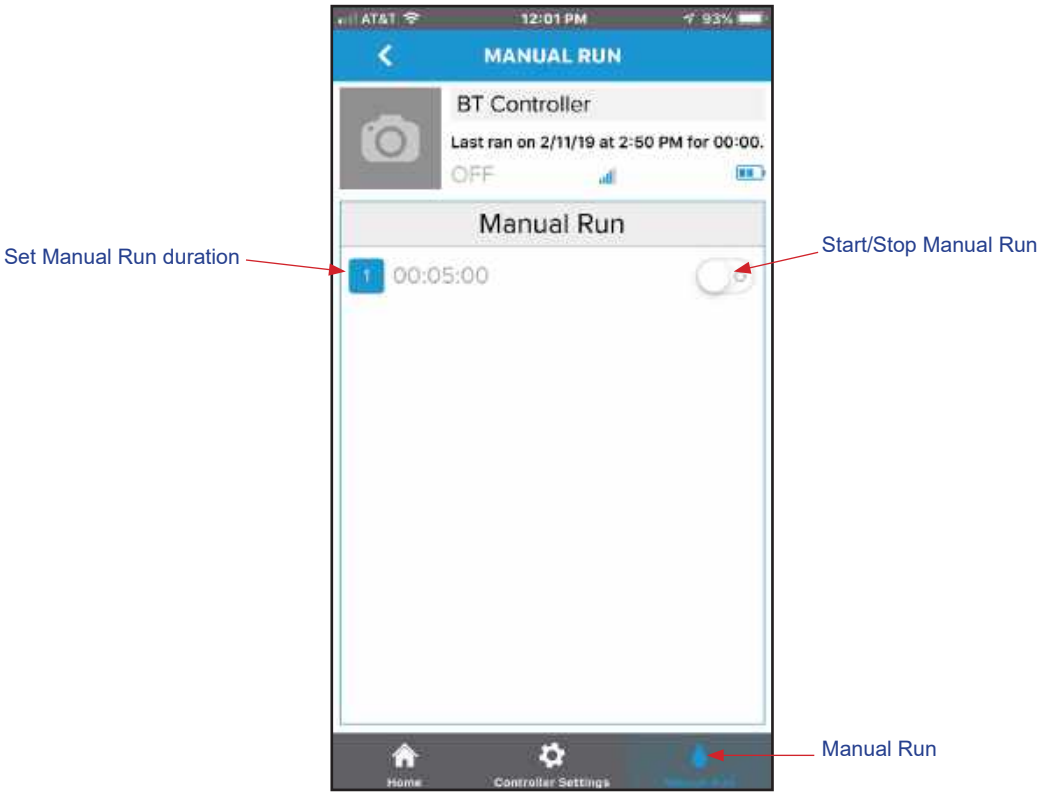


MANUAL RUN

The Manual Run screen allows for manual operation of the controller. It can be reached by selecting the Manual Run button on the bottom right of the screen.

To manually run the controller, tap the button on the right of the screen. This button can also be used to stop any existing run. The default manual run time is for five minutes. This can be changed by tapping on the time then changing it.

The controller can also manually run from the controller itself by tapping the water droplet button. The duration of this manual run is equal to the duration of the scheduled program. The button can also be used to end any flushing.



RESET TO FACTORY DEFAULTS

- Press and hold the button on the AutoFlush Controller for 15 seconds. This will remove all app settings, historical information, and any set passwords. This is the only way to remove a password, so try not to forget it!

FCC

This device complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. The device should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This device must not be collocated or operating in conjunction with any other antenna or transmitter.

I. Changes or modifications not expressly approved by DIG Corporation could void the user's authority to operate the equipment.

II. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

III. Industry Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

WARRANTY

NELSEN CORPORATION warrants these products to be free from defects in material and workmanship for a period of one year from date of purchase. This warranty does not cover damage resulting from accident, misuse, neglect, modification, improper installation or subjection to line pressure in excess of 125 lbs. per square inch for anti-siphon valves, in-line valves and for actuators. This warranty shall extend only to the original purchaser of the product for use by the purchaser.

The obligation of DIG CORPORATION under this warranty is limited to repairing or replacing at its factory this product which shall be returned to the factory within one year after the original purchase and which on examination is found to contain defects in material and workmanship. NELSEN CORPORATION SHALL IN NO EVENT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND; THE SOLE OBLIGATION OF DIG BEING LIMITED TO REPAIR OR REPLACEMENT OF DEFECTIVE PRODUCTS. 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.

Unattended use for prolonged periods without inspection to verify proper operation is beyond the intended use of this product. Any damage resulting from such use shall not be the responsibility of NELSEN CORPORATION. There are no warranties which extend beyond the description on the face hereof. In the case of purchase of the product for use other than for irrigation purposes, NELSEN CORPORATION hereby disclaims any implied warranties including any warranties of merchantability and fitness for a particular purpose. In the case of the purchase of the product for personal, family or household purposes, NELSEN CORPORATION disclaims any such warranties to the extent permitted by law. To the extent that any such disclaimer or implied warranties shall be ineffectual, then any implied warranties shall be limited in duration to a period of three years from the date of the original purchase for use by the purchaser. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

Subject to the above terms and conditions, we will replace and/or repair, at our discretion, any parts of the unit found defective in materials and workmanship. Defective parts must be returned to NELSEN CORPORATION, freight pre-paid, by your dealer or original point of purchase. NELSEN CORPORATION will supply a replacement to the dealer or original point of purchase. This warranty does not cover labor, shipping charges, damages caused by delays of consequential damages or other causes beyond our control.

This warranty is to the original purchaser and is not transferable after the third year to any subsequent owner(s).

No other guarantee or warranty, expressed or implied, is applicable to our product. No repair or replacement made under the terms of the warranty shall extend this warranty.

Allow four weeks for repairs and shipping time. Repair of damaged units not otherwise within warranty may be refused or fixed at a reasonable cost or charge at the option of NELSEN CORPORATION.