

Operator Interface Touch Screen Instructions – Irrigation Controller

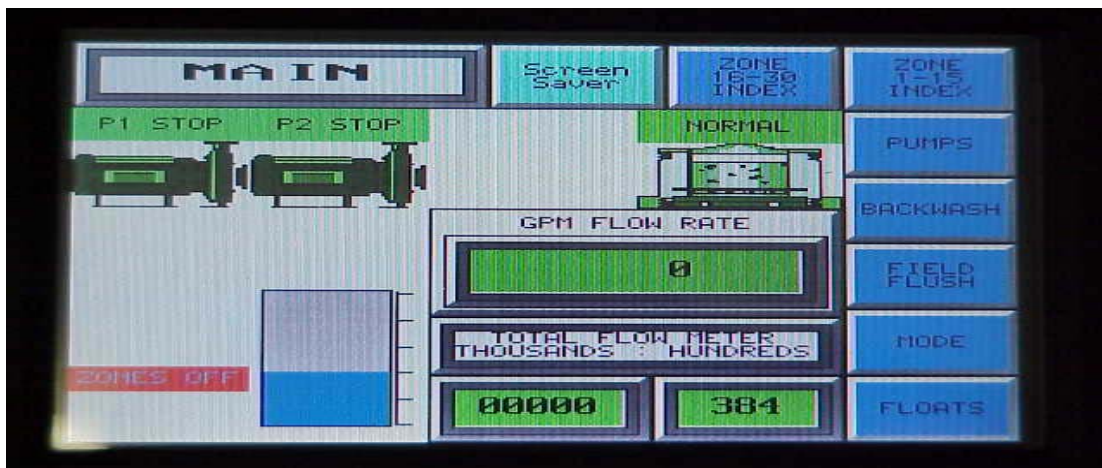
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General Description

The Operator Interface Touch Screen is a tool used by the system operator to set specific parameters and view status of operation. These instructions will walk you step by step, through the operation of each screen. For other information not found in these instructions, visit our web site at www.teicontrols.com.

Screens

Main Screen



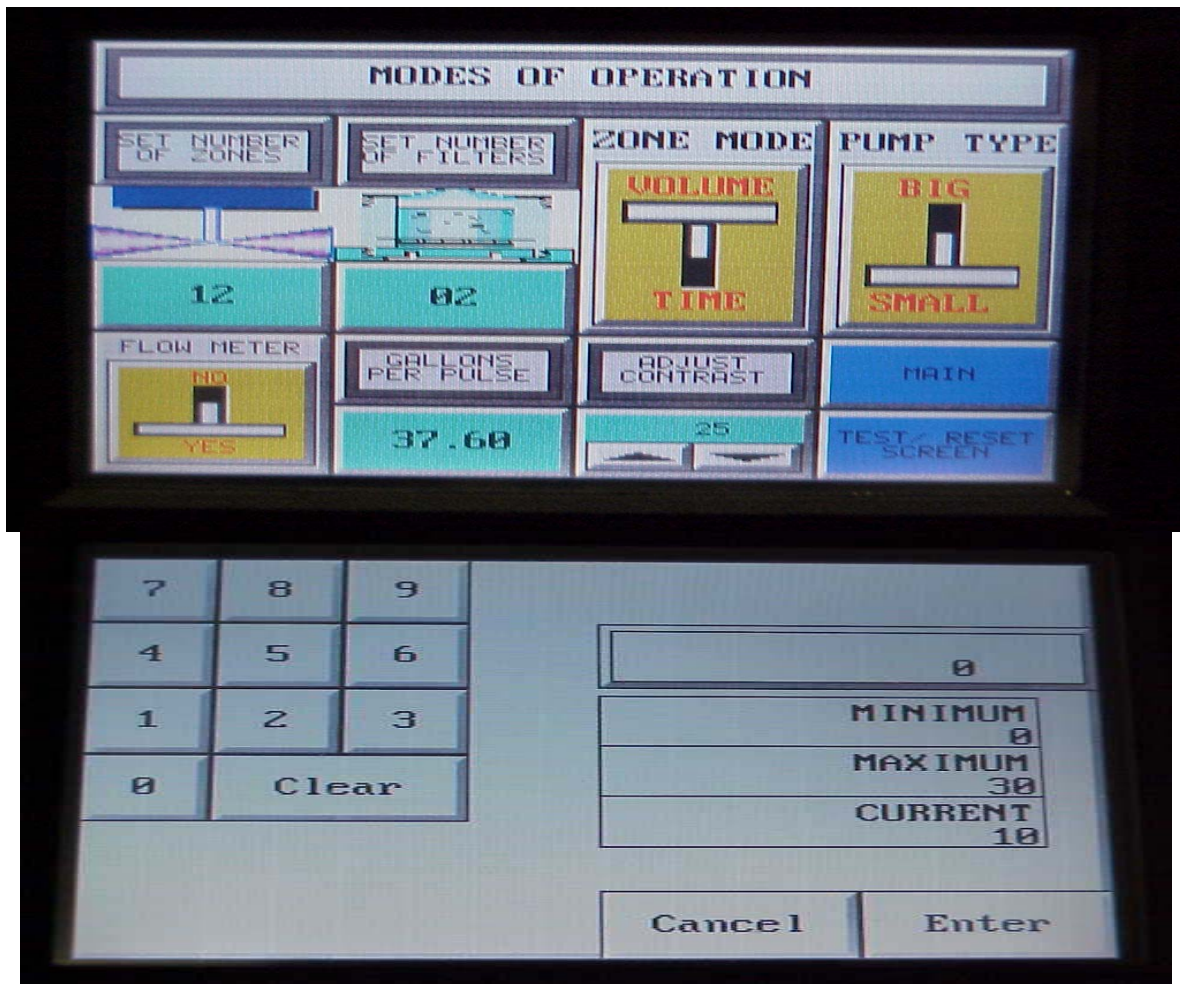
General Description

The Main Screen has two basic features. The first feature allows you to see the basic run down of all functions. The second features of the main screen are the index buttons along the right side, which allow you to navigate to and from other operational screens.

Functions

- Screen Saver – This button turns the screen off. To restore the screen, simply touch any part of the screen.
- Gpm Flow Rate – Displays the gallons per minute flow rate during the current cycle.
- Total Flow Meter – Displays the total amount of gallons used
- Zone 16-30 Index – Will take you to the zone index screen for Zones 16-30 and will only appear if you set the number of zones to 16 or more.
- Zone 1-15 Index – Will take you to the zone index screen for Zones 1 – 15.
- Pumps – Will take you to the pumps screen
- Backwash – Will take you to the backwash screen
- Field Flush - Will take you to the field flush screen
- Mode - Will take you to the mode of operation screen
- Floats - Will take you to the floats screen

Operations Screen



General Description

The Modes of Operation screen is for setting up the system.

Functions

- Set Number of Zones – Allows you to enter the number of Zones used in the system. This is a numeric entry button. To operate, press the light blue number. The numeric entry screen will appear at this point, type in the number using the number pad and press enter.
- Set Number of Filters -Allows you to enter the number of Filters used in the system. This is a numeric entry button. To operate, press the light blue number. The numeric entry screen will appear at this point, then type in the number using the number pad and press enter.
- Zone Mode – Allows you to set the system to run by Time or by Gallons dosed. This is a two-position switch. Press the white lever and the switch will toggle back and forth.
- Pump Type – Allows you to choose from the Big Pump set up or the Small Pump set up. This is a two-position switch. To operate, press the white handle in the middle of the box.

- Gallons Per Pulse – Your system has a flow meter that sends out a digital pulse at a specific rate. This button allows you to enter how many Gallons or Tenths of Gallons each pulse represents. This is a numeric entry button. To operate, press the light blue number. The numeric entry screen will appear and you enter the number using the number pad and press enter. This button allows you to set up your Flow Meter.
- Total Flow Meter Reset – Allows you to reset the Total Flow Meter on the main screen. To operate, press the light blue reset. You will go to a safety screen that asks if you are sure, then press Yes to reset or No to go back to the Mode of Operation Screen.
- Adjust Contrast – Allows you to adjust the contrast of the touch screen. To operate, press the up or down arrow until you get the contrast of your liking.
- Main – Takes you back to the main screen

Pumps Screen



General Description

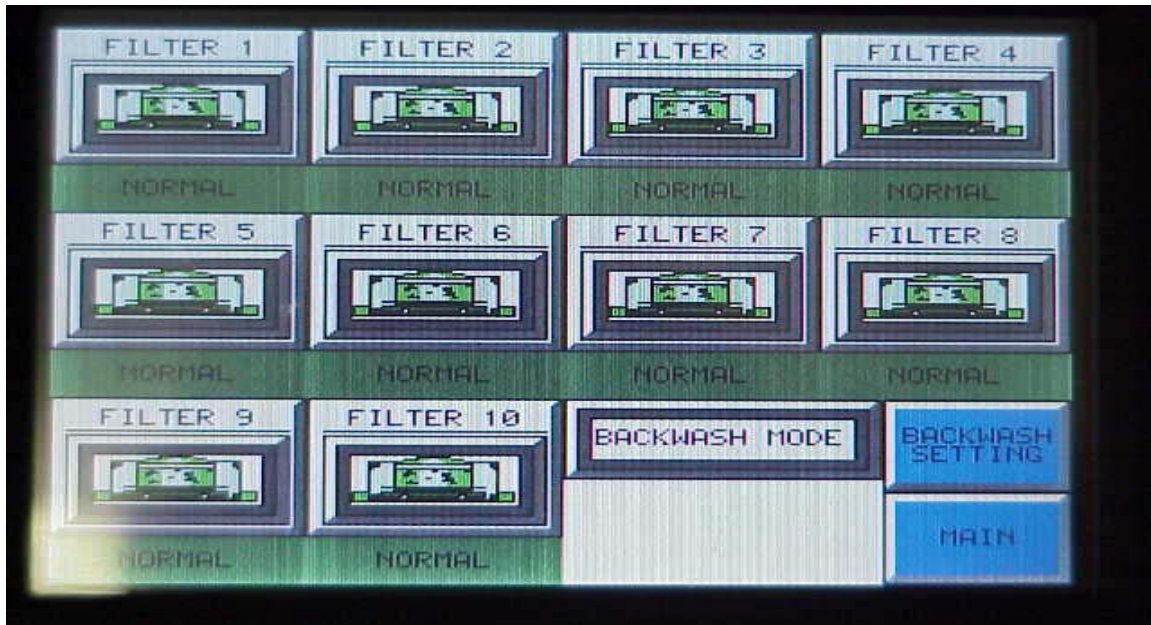
Screen allows you to set the pumps mode, look for warning or failure conditions, reset failures, and check the elapsed time meters for each pump. When a pump is running, the pump symbol will turn Red. When a pump is stopped, the pump symbol will be Green. Underneath each pump symbol are two alarm banners that will show only in the Alarm Condition.

Functions

- Off, Auto, Hand button – Allows you to set the mode for your pumps to run. In Off, the pumps will not run. In Auto, the pumps will cycle in the automatic operations controlled by the PLC. In Hand, the pumps will come on immediately if there is water in the tanks. To operate, simply touch the word you would like the mode to be in. When a mode is selected the background will be red and when the mode is not selected the background will be green. For example if you wanted the pumps off, you would touch the Off word and it will light up red.
- Reset Pumps – Will clear all the alarm conditions for the pumps. To operate, press the light blue reset word.

- Main – Will take you back to the Main Screen.
- Pump Icon – Icon is green when the pump is stopped and red when the pump is running. Under the icon are two alarm indicators. “Failed to Run” comes on when the pump is being called for and is in auto but the starter does not close. “No Flow” comes on when the pump is running but the flow meter indicates 0 flow through the system.

Backwash Screen



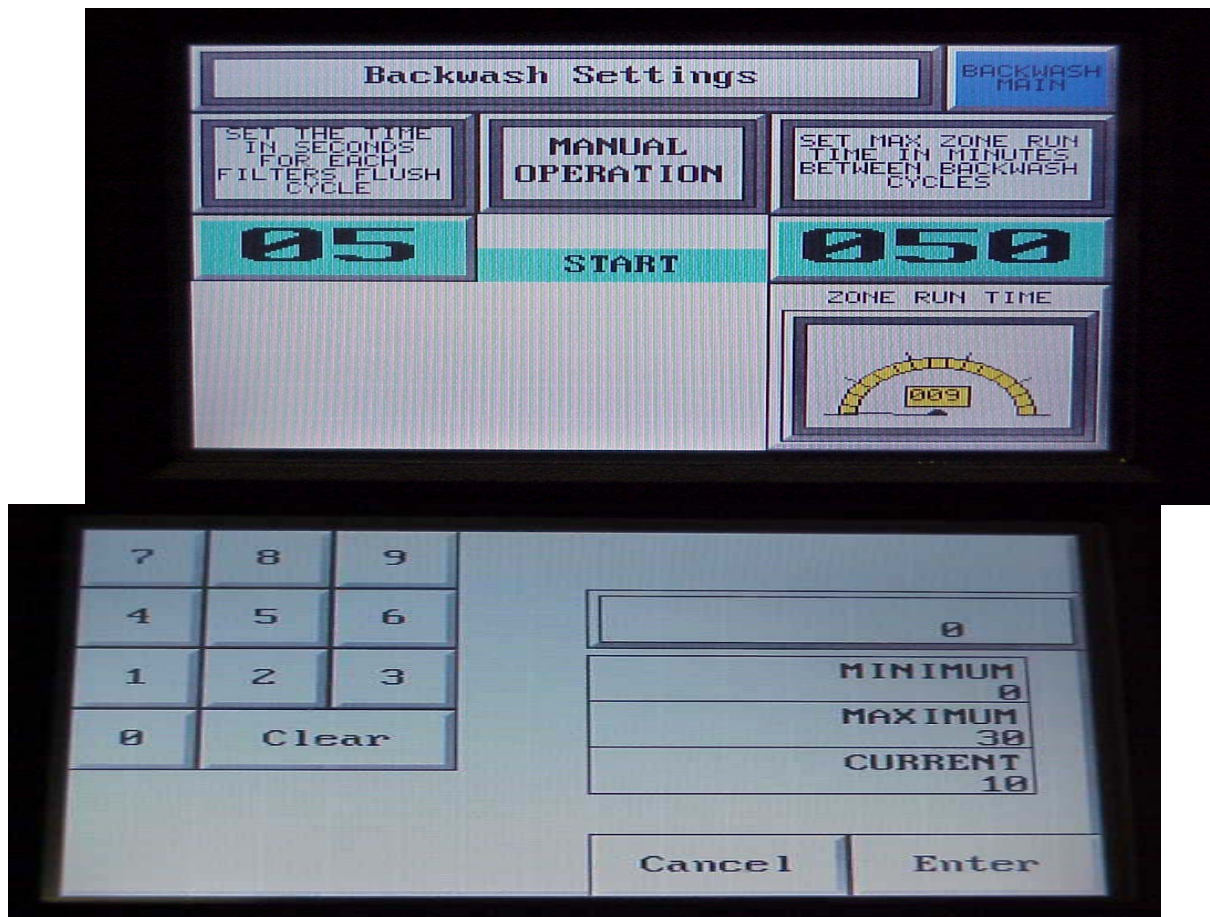
General Description

Screen will allow you to monitor the Backwash cycle and tell which backwash mode you are in. When a filter symbol is green it is in the normal operating conditions and when the filter symbol turns red, the filter is backwashing.

Functions

- Backwash Settings – Will take you to the Backwash Settings Screen
- Main - Will take you to the Main Screen
- Backwash Mode Indicators – “Manual” comes on when a manual backwash has been called for. “Pressure” comes on when the pressure differential switch triggers a backwash cycle. “Time” comes on when the max zone run time between backwash cycles times out and starts an automatic backwash.
- Filter Icon – Icon is “green” and says Normal when the filter is not backwashing. The icon is “red” and says Backwashing when the filter is backwashing.

Backwash Settings Screen



General Description

Screen allows you to set the different timers associated with your backwash cycles. You can also start manual backwash cycle from this screen.

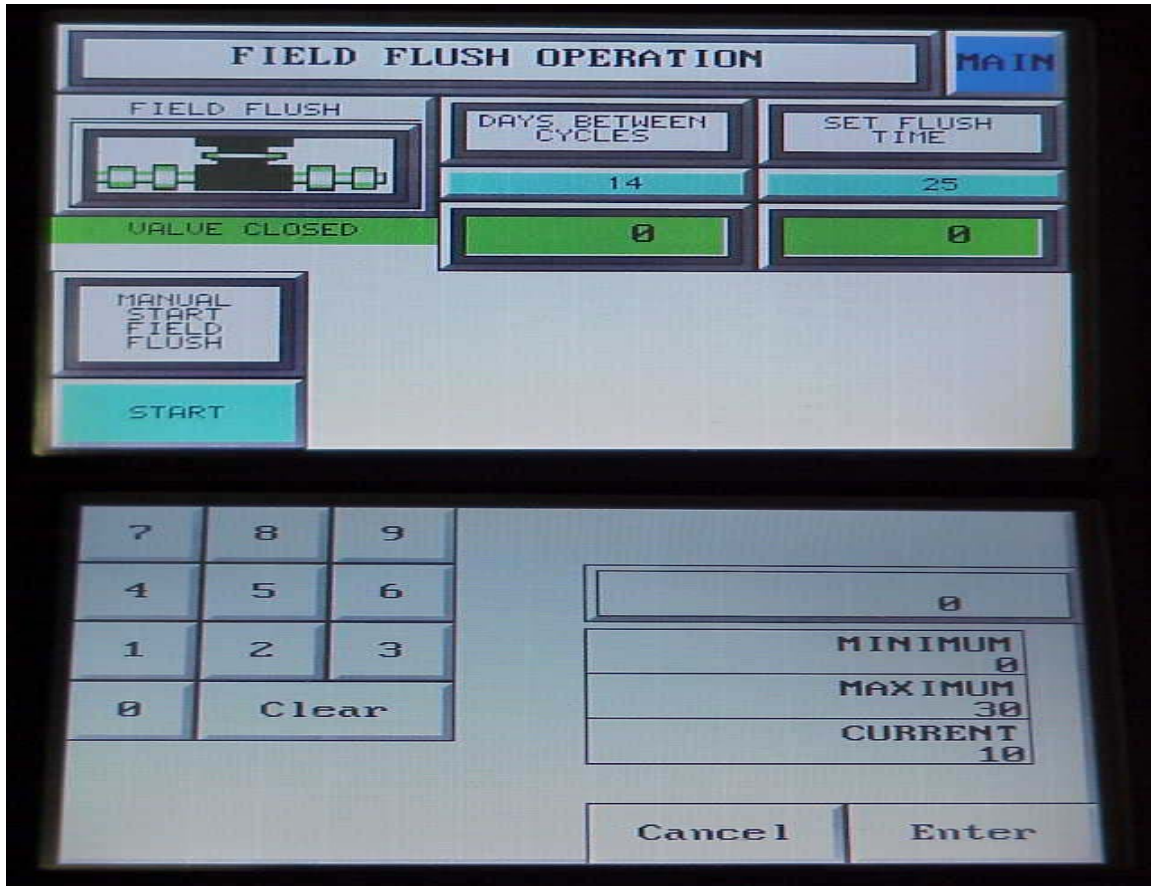
Functions

- Set the Time in Seconds for Each Filters Flush Cycle – This numeric entry button allows you to set the time period each filter should be flushed. To operate, press the light blue number. The numeric entry screen will appear at this point you type in the number using the number pad and press enter.
- Set the Air Scour Burst Time in Seconds – This numeric entry button allows you to set the amount of time you want air to scour through the filters during the backwash cycle. To operate, press the light blue number. The numeric entry screen will appear at this point you type in the number using the number pad and press enter.
- Set the Max Zone Run Time Between Backwash Cycles – This numeric entry button allows you to set the amount of zone run time between cycles. For example if you wanted the filters to backwash if the zones run for 10 hours you then press the button and enter 600, which is 10 hours times 60 minutes since the numeric entry is in minutes. To operate, press the light blue

number. The numeric entry screen will appear at this point you type in the number using the number pad and press enter.

- Manual Operations – There are two buttons here. In normal mode you will see the start button. By touching this button you will manually start a backwash cycle. In the backwash mode the button will say stop. By touching this button you will manually stop the backwash cycle.
- Backwash Main – This button will take you back to the backwash screen

Field Flush Screen



General Description

This screen allows you to monitor field flush cycles and set the different timers associated with the field flush.

Functions

- Days Between Cycles – This numeric entry allows you to set the number of days between the automatic field flush cycles. The number of days past since the last field flush will display in the green box under this button. To operate you press the light blue number. The numeric entry screen will appear at this point, type in the number using the number pad and press enter.
- Set Flush Time – This numeric entry allows you to set the time that each zone is to be flushed for. The time you enter is in seconds. The green box below this button will count up the time

during each zone flush period. To operate you press the light blue number. The numeric entry screen will appear at this point, type in the number using the number pad and press enter

- Manual Start Field Flush – Press the light blue button that says start and a manual field flush will begin as soon as the proper conditions are met.
- Main – Will take you back to the main screen.
- Field Flush Icon – Icon is “green” when the field flush cycle is stopped, and the icon is “red” when the field flush cycle is running. There are two indicators under the icon: Valve Open which tells you that the field flush valve is open, and Pump Fault which tells you that a pump has failed or that neither pump is in automatic.

Zone Index Screen



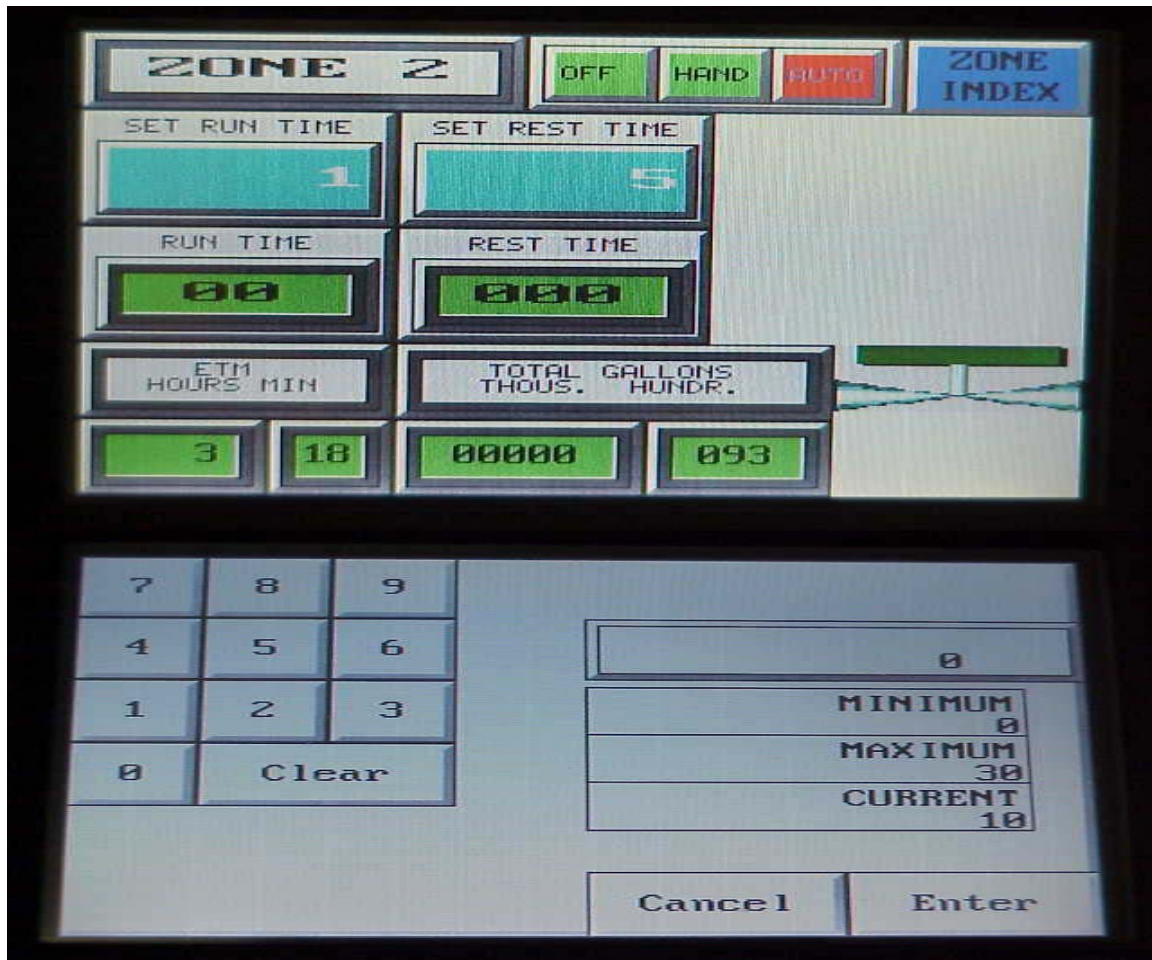
General Description

This screen has two main functions. Function one is to serve as a monitor for your normal dosing cycle. Function two is to serve as an index to all zones available for use on your system

Functions

- Zones Reset – Allows you to reset all alarm conditions for your zones. Press the light blue button to operate this function.
- Alternator Zone Shift – Allows you to shift to the next zone during a normal dosing cycle. Press the light blue button to operate this function.
- Main – Will take you back to the main screen.
- Zone1 – Zone 30 – Buttons will take you to the zone operation screen associated with the zone number on the button. For example if you touch Zone3 you will go to the zone 3 operation screen. If there is a red zone symbol to the left of the button, that indicates the zone is selected. If the word “Rest” appears to the right of the button, this indicates the zone has finished dosing and is currently in its rest time.

Zone Operation Screen



General Description

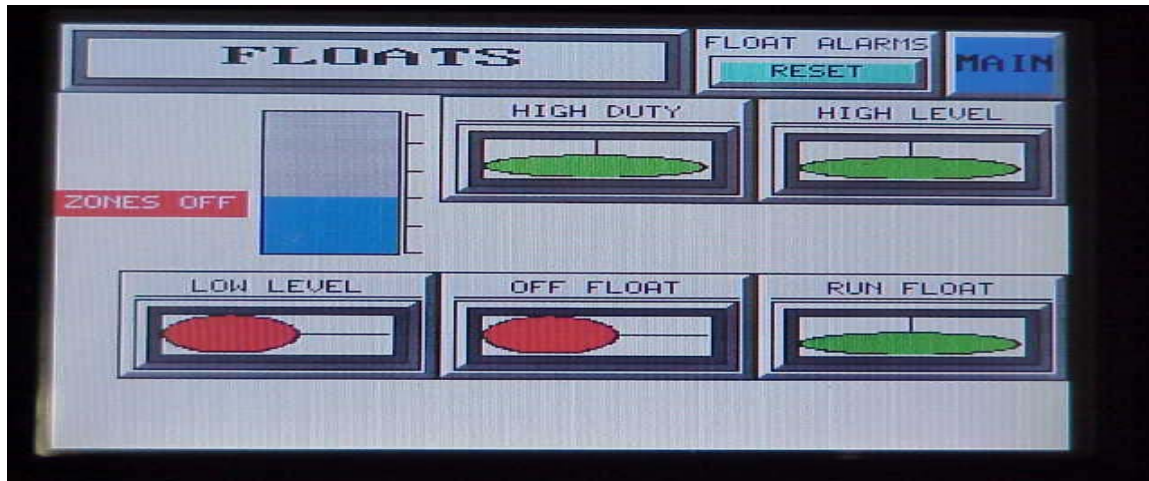
The Zone operation screen allows you to set the mode of operation, view the status of the zone, set the run and rest timers, and view the two meters associated with dosing.

Functions

- Off, Hand, Auto –Allows you to set the mode for your zones to run in .Off means the zone will not dose. Auto means the zone will cycle in the automatic operations controlled by the PLC. Hand means the zones solenoid will open. To operate, simply touch the word you would like the mode to be in. When a mode is selected the background will be red, and when the mode is not selected the background will be green.
- Set Run Time – Allows you to set the amount of time the zone will dose for in minutes. The green timer counts up the minutes during the cycle. To operate, press the light blue number. The numeric entry screen will appear at this point, type in the number using the number pad and press enter.
- Set Rest Time – Allows you to set the amount of time the zone will rest for, in minutes, before the zone can be dosed again. The green timer counts up the minutes during the cycle. To operate, press the light blue number. The numeric entry screen will appear at this point, type in the number using the number pad and press enter.

- Set Gallons – Allows you to set the amount gallons the zone will dose during a cycle. The green timer counts the number of gallons during the cycle. To operate, press the light blue number. The numeric entry screen will appear at this point, type in the number using the number pad and press enter.
- Zone Index – Takes you back to the zone index screen.
- Zone Icon –Icon is “green” when the zone is off, the zone icon is “red” when the zone is on. There are three indicators under the icon to let you know if the zone is dosing, flushing, or if there is a no flow failure.

Floats Screen



General Description

The float screen allows you to view the level in the wet well and the position of the floats. On this screen you also view all the alarm conditions for floats.

Functions

- Float Alarms Reset – Resets all the float alarm conditions. To operate you touch the light blue button.
- Main – Takes you back to the main screen.
- High-Level Float Icon - Icon is “green” when the float is in the down position in the tank, and “red” when the float is in the up position in the tank. Under the icon you have two alarm indicators. “High Level Alarm” comes on when the high level floats reaches the up position, and “Failed Closed” comes on when high level float is in the up position and the high duty, run, and off floats are in the down position.
- High Duty Float Icon – Icon is “green” when the float is in the down position in the tank, and “red” when the float is in the up position in the tank. Under the icon you have “failed closed” alarm indicator that comes on when the float is in the up position and the run float and off float are in the down position.
- Run Float Icon - Icon is “green” when the float is in the down position in the tank, and “red” when the float is in the up position in the tank. Under the icon you have two alarm indicators. “Failed Closed” comes on when the run float is in the up position and the off and low-level

alarm floats are in the down position. “Failed Open” comes on when the run float is in the down position and the high duty and high-level alarm floats are in the up position.

- Off Float Icon - Icon is “green” when the float is in the down position in the tank, and “red” when the float is in the up position in the tank. Under the icon there is one alarm indicator “Failed Open” comes on when the off float is in the down position and the run and high duty floats are in the up position.
- Low Level Float Icon - Icon is “green” when the float is in the down position in the tank, and “red” when the float is in the up position in the tank. Under the icon there are two alarm indicators. “Failed Open” comes on when low-level float is in the down position and the off and run floats are in the up position. “Low Level Alarm” comes on when the low level float is in the down position.

Test / Reset Screen



General Description

The Test / Reset screen allows you to reset all of the different flow meters and elapsed time meters, also you can actuate the flow pulse simulator to test your volume mode.

Functions

- Total Flow Meter Reset – Resets the Total Flow Meter on the Main screen
- Pumps ETM Reset – Resets both of the Pumps ETMs.
- Zones ETM Reset – Resets all of the Zones ETMs.
- Zones Flow Meter Reset – Resets all the zones Flow Meters.
- Flow Pulse Simulator – This toggle switch turns the simulator on or off. When turned on an internal timer automatically gives the PLC a pulse every 10 seconds.
- Main – Takes you back to the main screen.
- Mode – Takes you back to the mode of operation screen

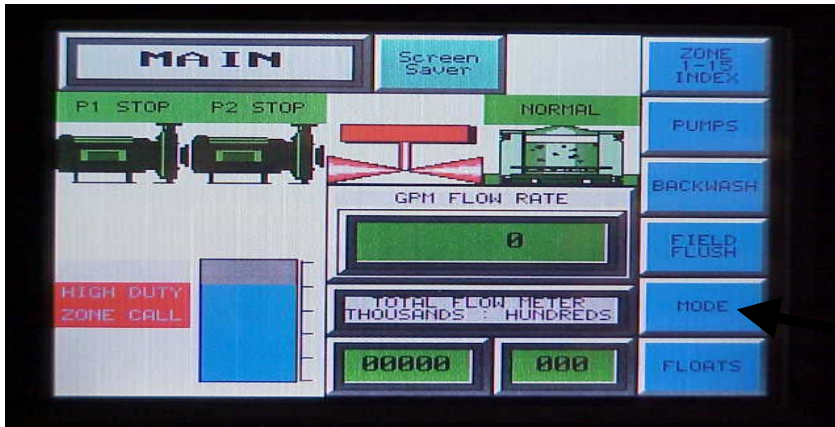
Start Up Instructions

General Description

This guide will walk you step by step through the basic operations needed for your new Irrigation Controller. You will learn how to set up the “Mode of Operations”, how to set the timers for your zones, how to run pumps manually, and many other operations.

Setting the Number of Zones

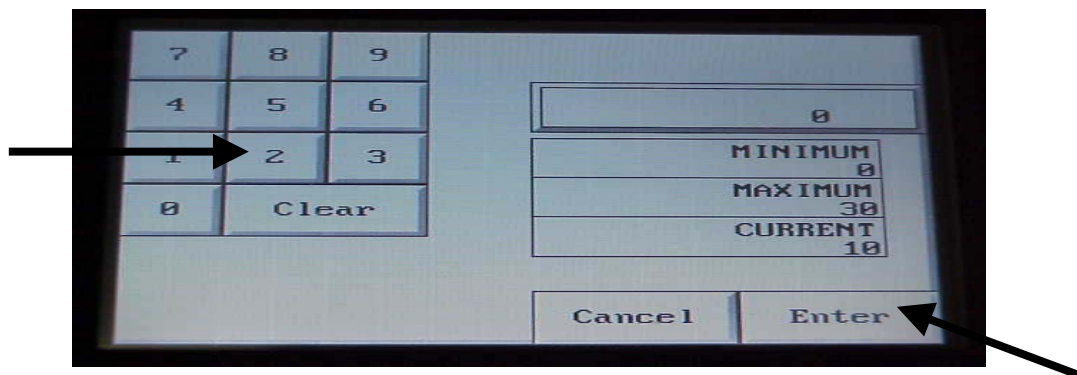
1. Step 1: From the main screen touch the button that reads “MODE”



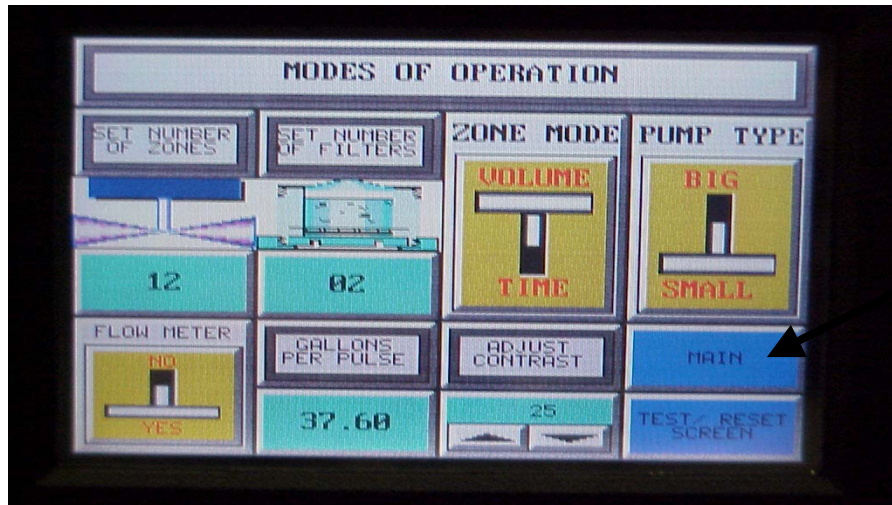
2. Step 2: From the mode operation screen touch the light blue button under the zone icon.



3. Step 3: From the numeric entry screen type in, using the touch screen number pad, the total number of zones in your system, then touch enter.

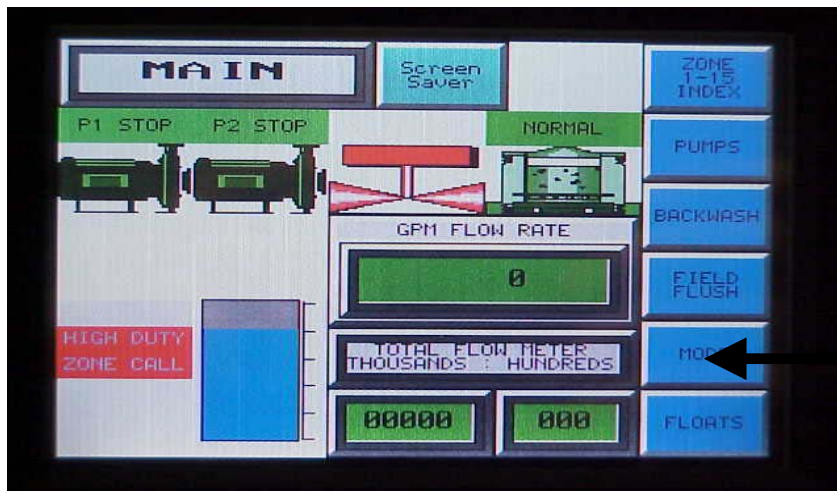


4. Step 4: From the mode of operation screen touch “Main” button to go back to main screen.

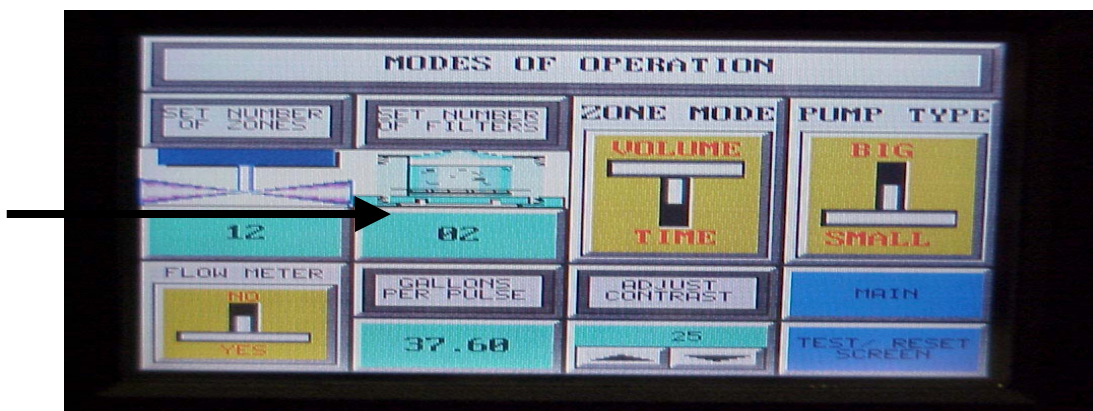


Setting the Number of Filters

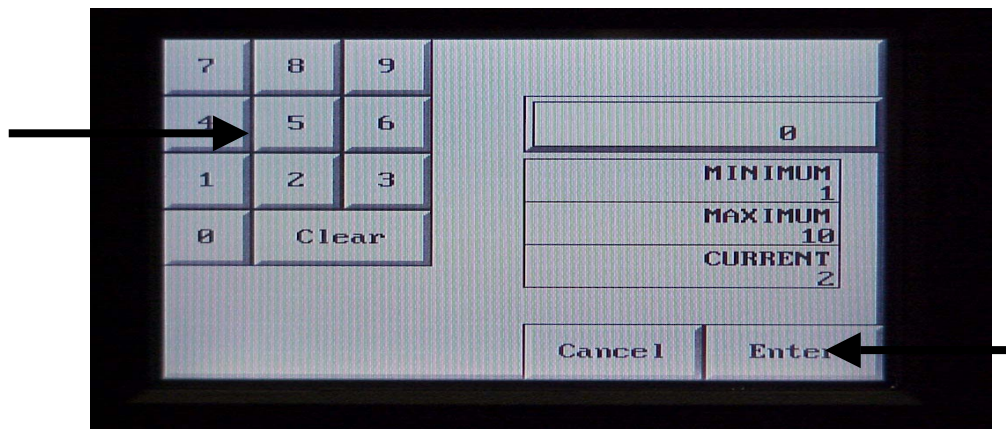
1. Step 1: From the main screen touch the button that reads “MODE”.



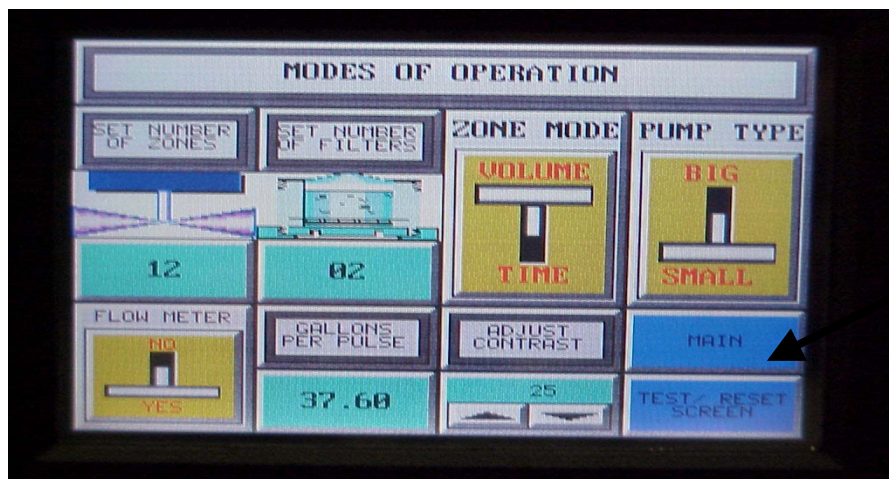
2. Step 2: From the mode of operation screen touch the light blue button under the Filter icon.



- Step 3: From the numeric entry screen type in, using the touch screen number pad, the total numbers of filters in your system then touch enter.



- Step 4: From mode of operation screen touch the “Main” button to go back to main screen.

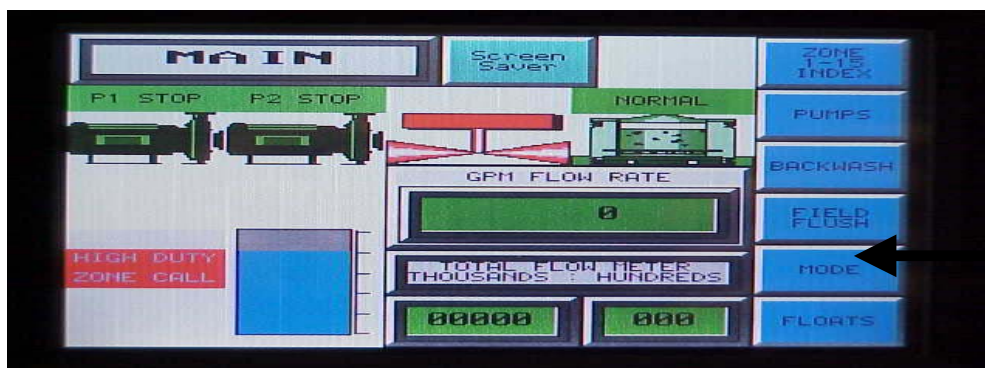


Setting up the Pump Type

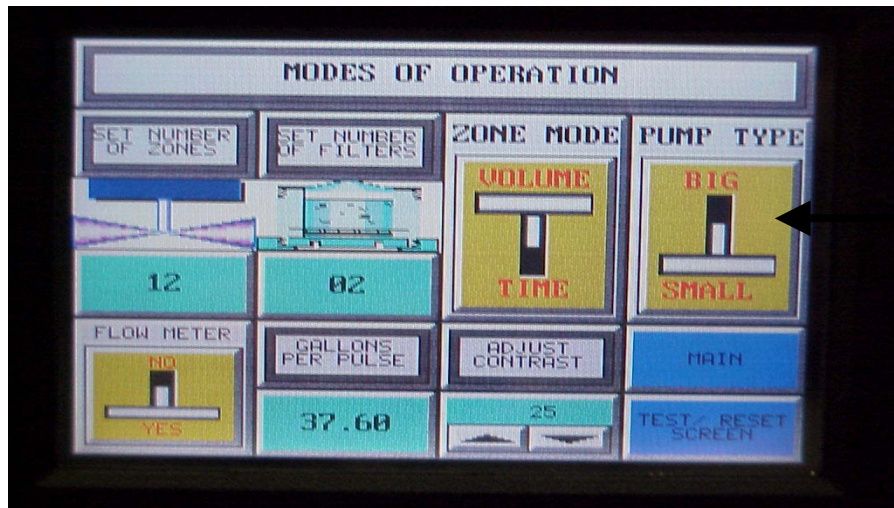
General Description

The pump type is a setting that allows you the option to set up your system in two different modes. If “**Big**” is selected 2 zones will be open with 1 pump running in normal dosing, and 1 pump will run while field flushing the zones. If “**Small**” is selected 1 zone will be open with 1 pump running in normal dosing, and 2 pumps will run while field flushing the zones.

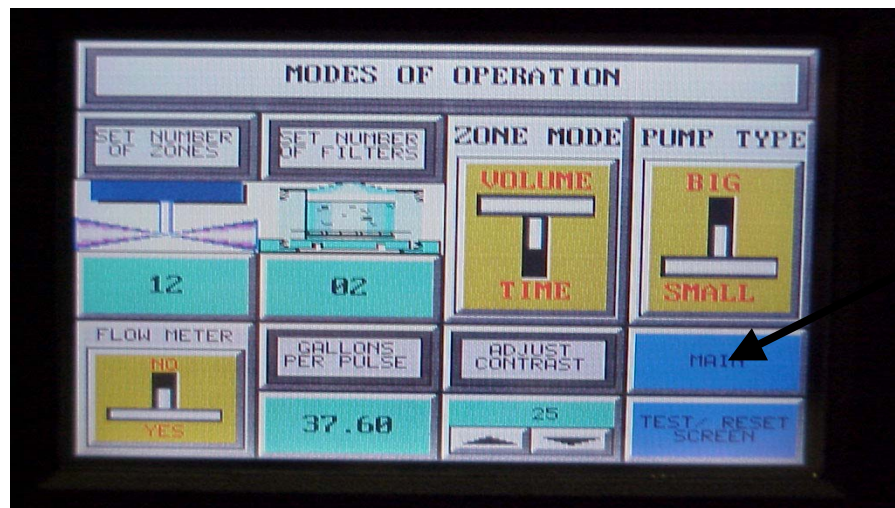
- Step 1: From the main screen touch the button that reads “**MODE**”



- Step 2: From the mode of operation screen touch the lever between the words “**Big**” and “**Small**” to toggle for your desired setting.



- Step 3: From mode of operation screen touch “**Main**” button to go to main screen.

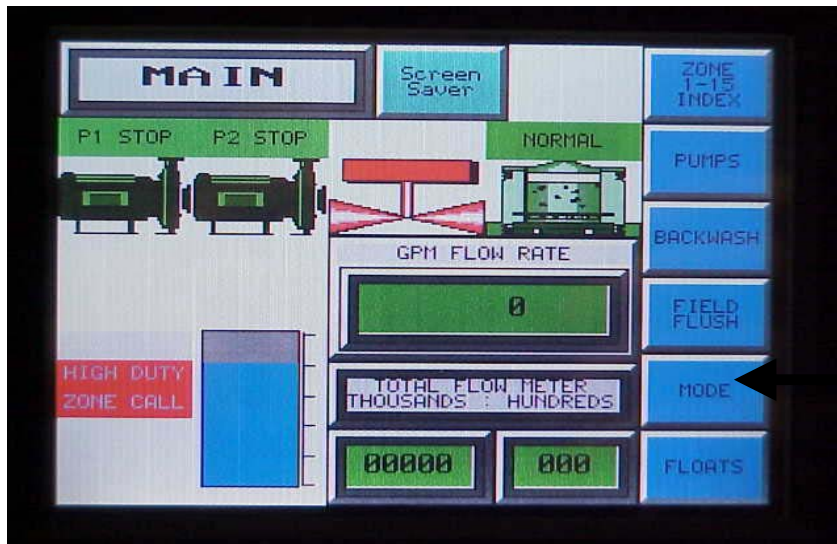


Setting up the Zone Mode

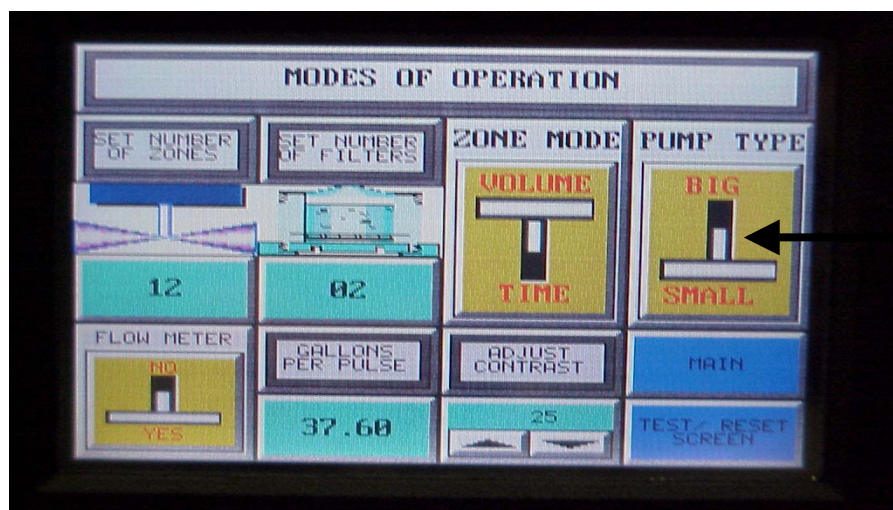
General Description

The zone mode setting deals with the way the controller is to operate the dosing cycles. If “**Volume**” is selected the zones will dose a specific number of gallons in each cycle then rest for a period of time. If “**Time**” is selected the zones will dose for a specific amount of minutes then rest for a period of time.

1. Step 1: From the main screen touch the button that reads “MODE”



2. Step 2: From the mode of operation screen touch the lever between the words “Volume” and “Time” to toggle for your desired setting.



3. Step 3: From the mode of operation screen touch the “Main” button to go back to the main screen.

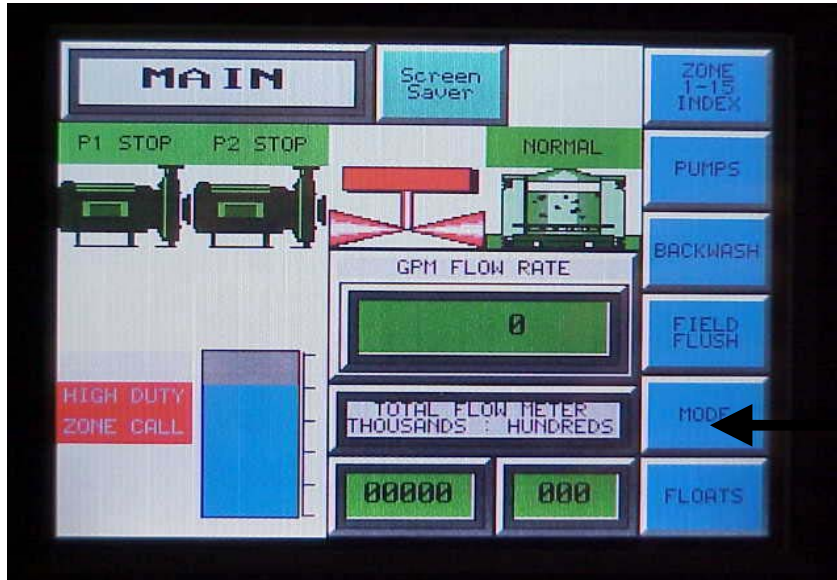


Setting up Your Flow Meter

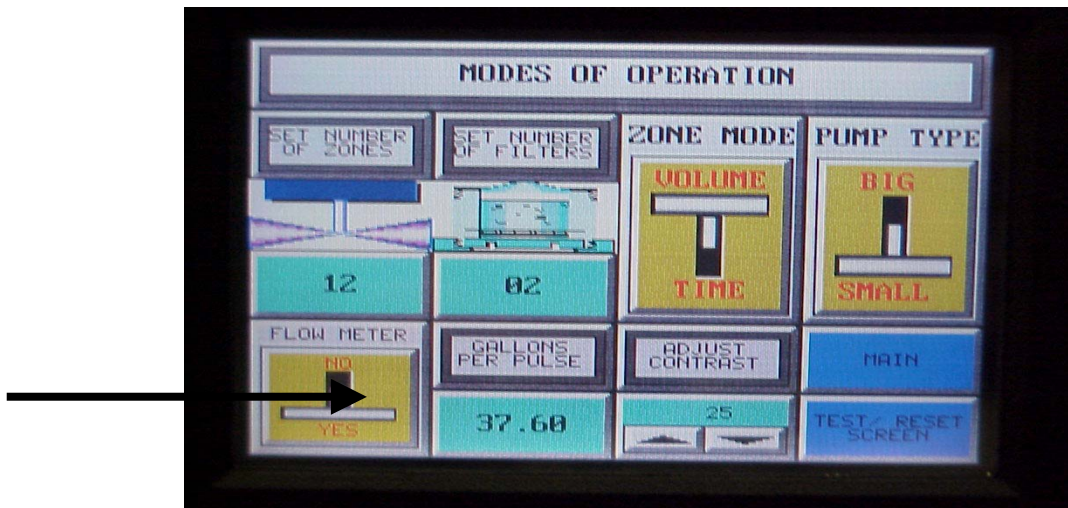
General Description

The “**Flow Meter**” toggle switch is used to turn the flow meter alarm logic on or off. When there is not a digital pulse flow meter in use at any time you must put the switch in the No position and when there is a digital pulse flow meter you should put the switch in the yes position..

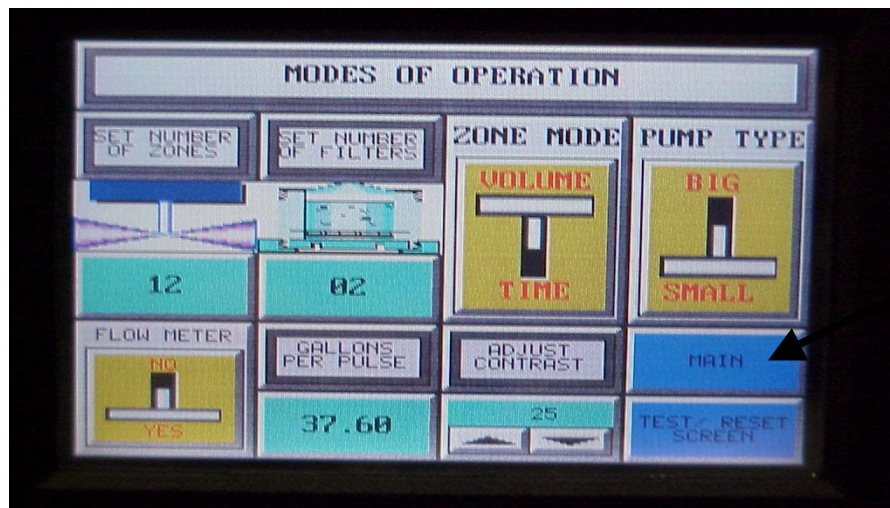
1. Step 1: From the main screen touch the button that reads “**MODE**”



2. Step 2: From the mode of operation screen touch the lever between the words “**No**” and “**Yes**” to get your desired setting.



3. Step 4: From the mode of operation screen touch the “**Main**” button to go back to the main screen.

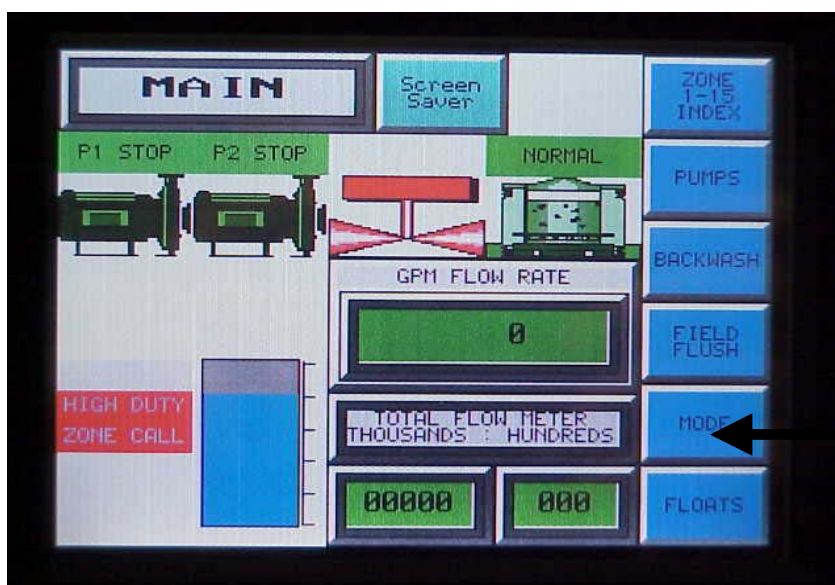


Setting up the Gallons Per Pulse

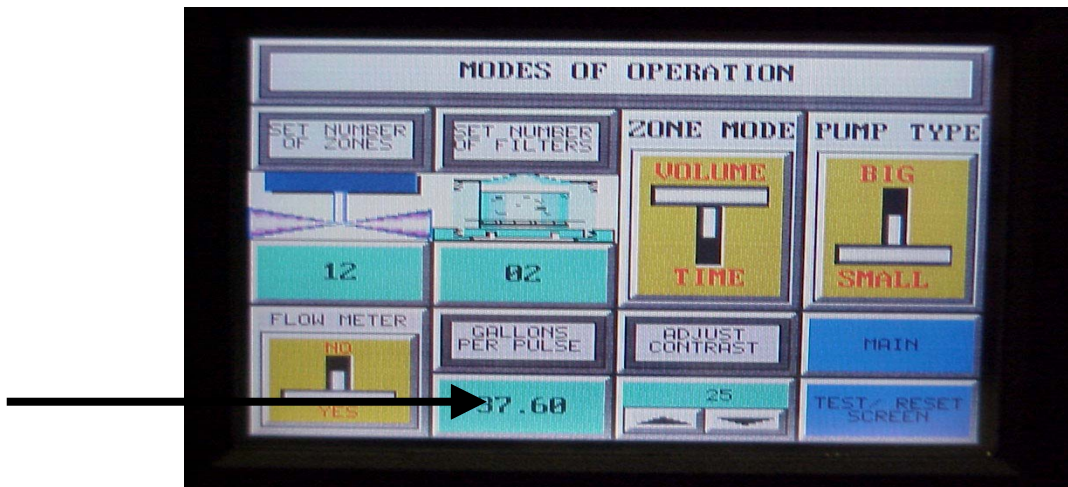
General Description

The “**Gallons Per Pulse**” setting is used to tell the controller what a digital pulse from your flow meter represents in gallons. For example if the flow meter installed on your system puts out 1 digital pulse every 1.5 gallons then you would enter 1.5 as your “**Gallons Per Pulse**” setting. Note if your flow meter puts out a pulse based on liters you must convert the liters to gallons by using the formula (liters*.2642 = gallons)

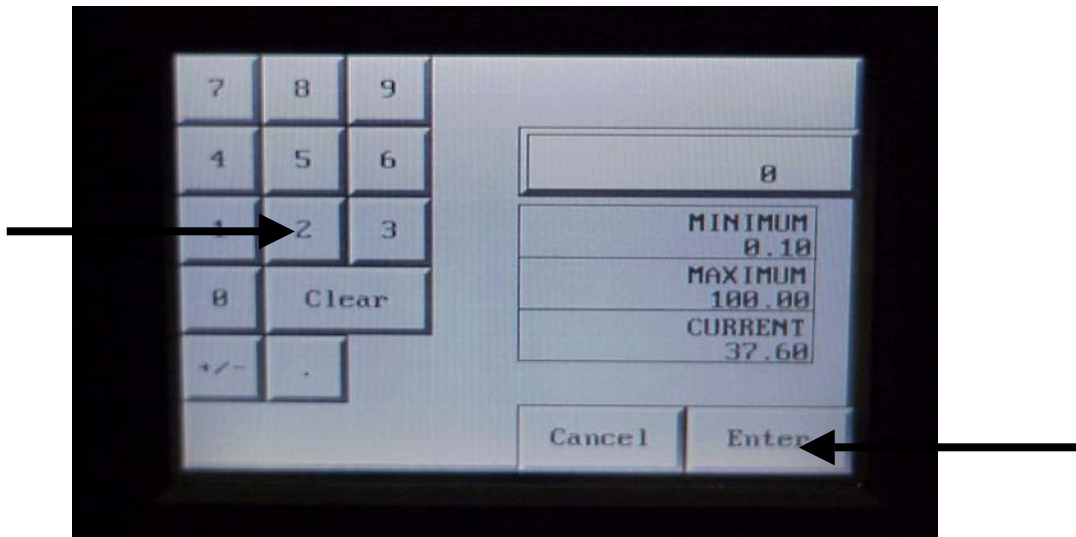
4. Step 1: From the main screen touch the button that reads “**MODE**”



5. Step 2: From the mode of operation screen touch light blue button under the “Gallons Per Pulse” banner.



6. Step 3: From the numeric entry screen type in, using the touch screen number pad, the gallons per pulse your flow meter puts out, press enter.

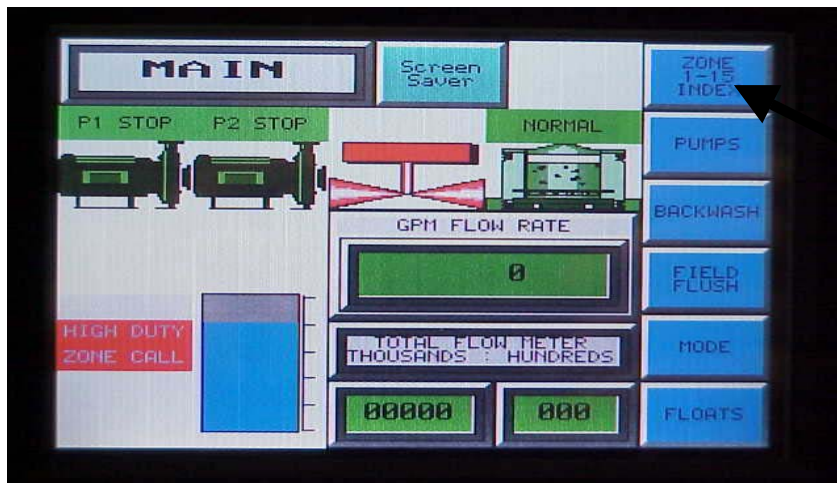


7. Step 4: From the mode of operation screen touch the “Main” button to go back to the main screen.

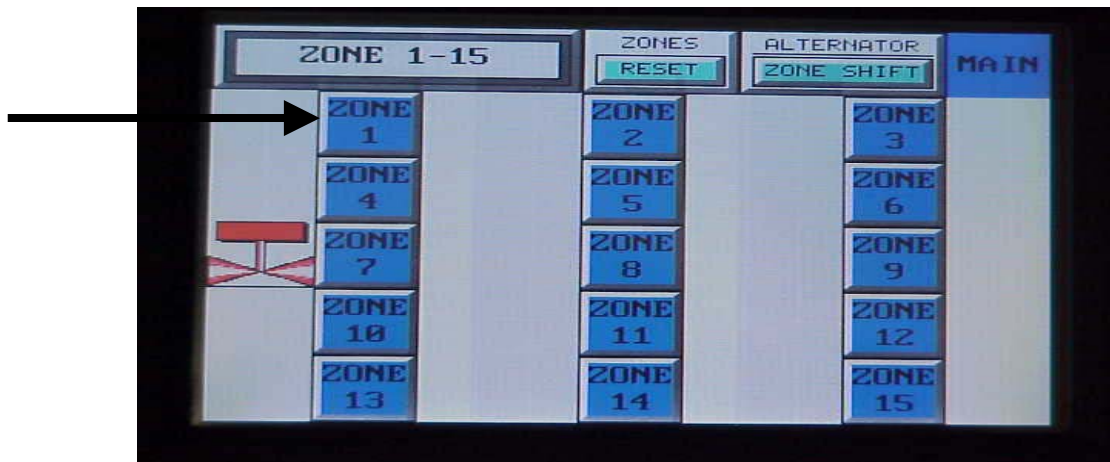


Setting up the Zone Run Time

1. Step 1: From the main screen touch the button that reads “**Zone Index**”.



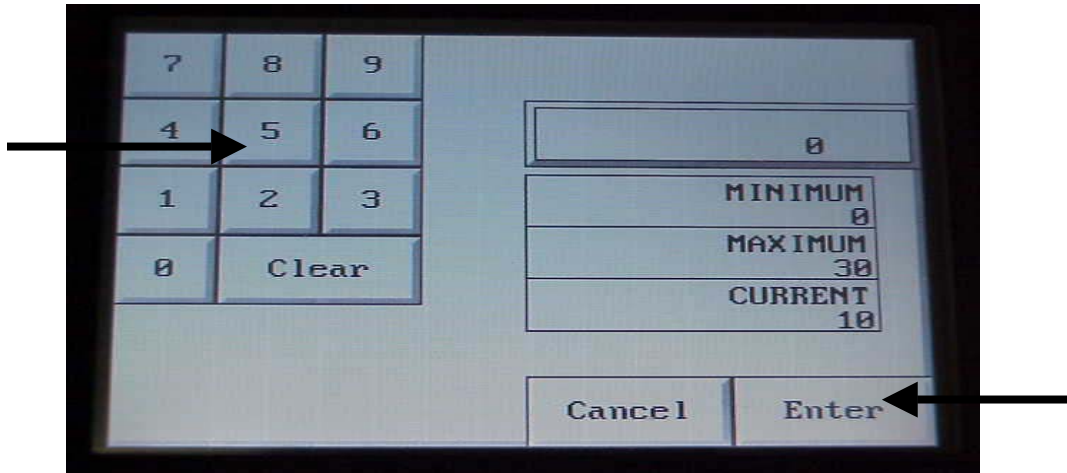
2. Step 2: From the Zone Index screen touch the blue “**Zone 1**” button.



3. Step 3: From the Zone screen touch the light blue button under the “**Set Run Time**” banner.



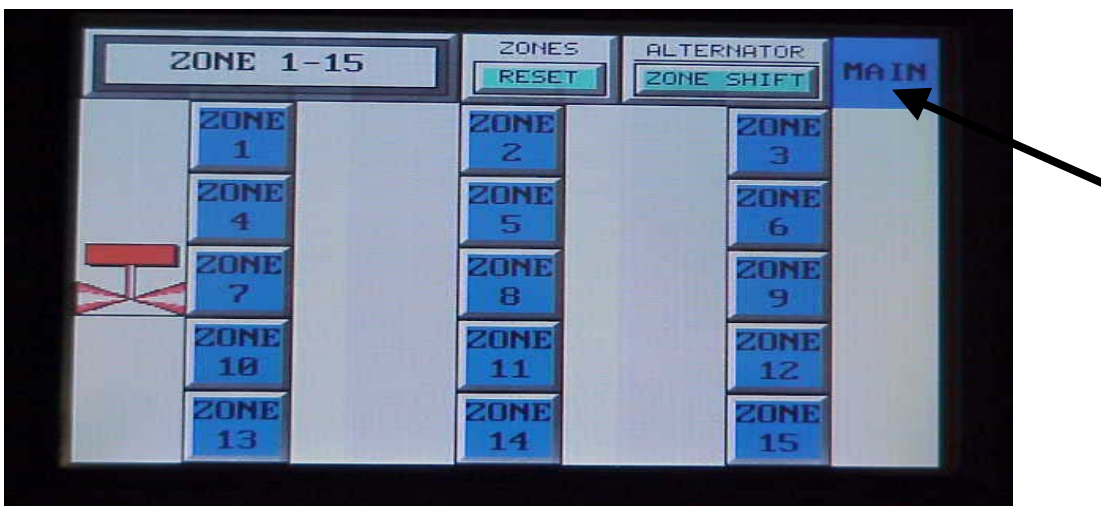
4. Step 4: From the numeric entry screen type in, using the touch screen number pad, the amount of minutes each zone will dose then press enter.



5. Step 5: Touch the blue “Zone Index” button and repeat steps 2-4 for all the zones on your zone index screen.

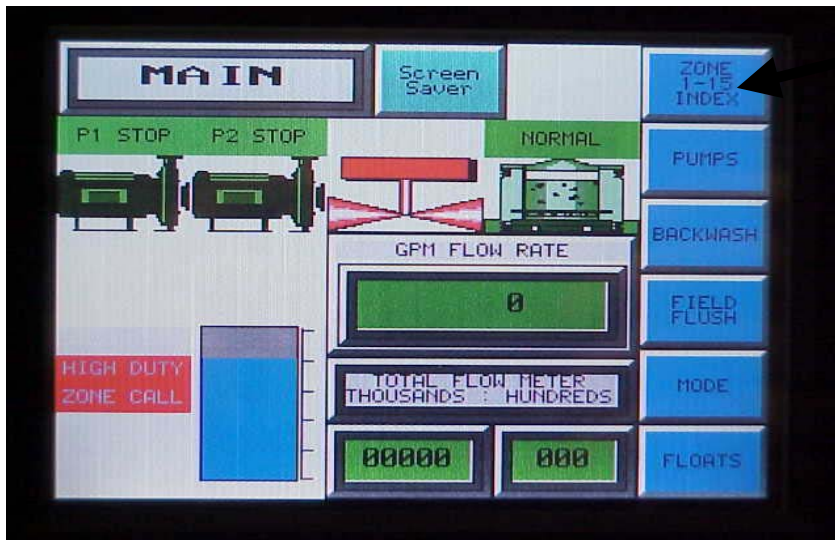


6. Step 6: From the Zone Index screen touch the “Main” button to go back to the main screen.

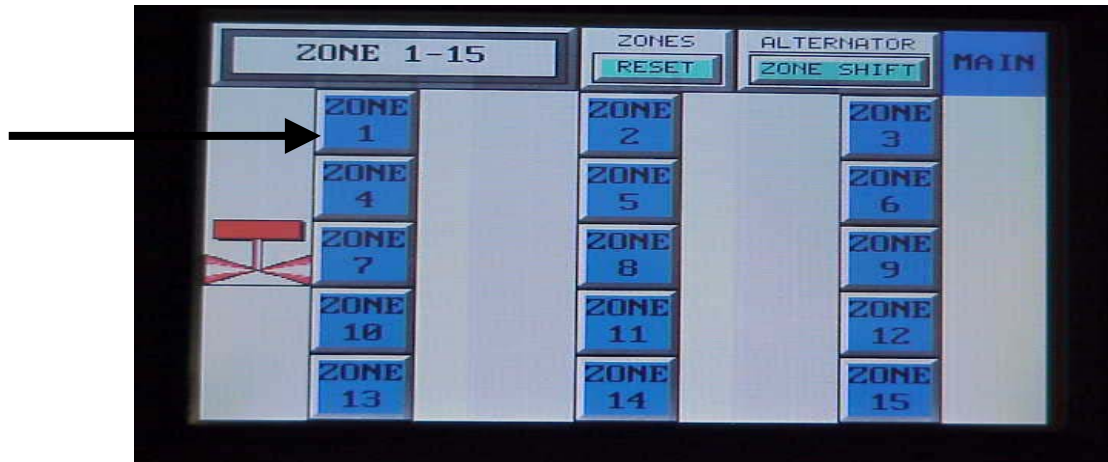


Setting up the Zone Rest Time

1. Step 1: From the main screen touch the button that reads “Zone Index”.



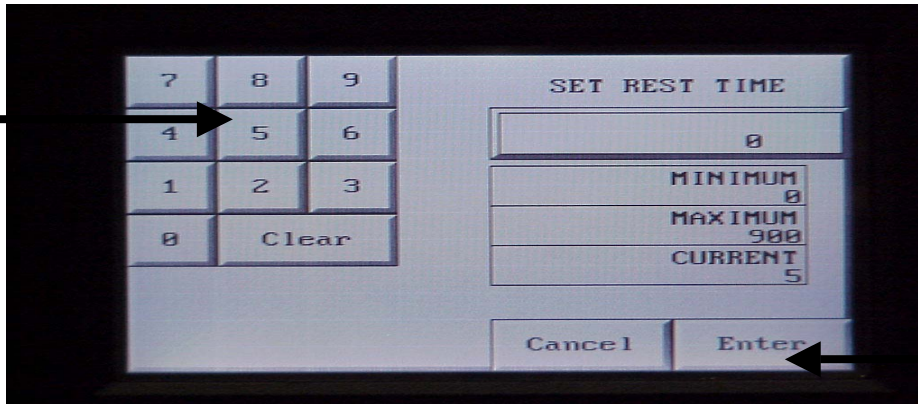
2. Step 2: From the Zone Index screen touch the blue “Zone 1” button.



3. Step 3: From the Zone screen touch the light blue button under the “Set Rest Time” banner.



4. Step 4: From the numeric entry screen type in, using the touch screen number pad, the amount of minutes each zone will rest then press enter.



5. Step 5: Touch the blue “Zone Index” button and repeat steps 2-4 for all the zones on your zone index screen.

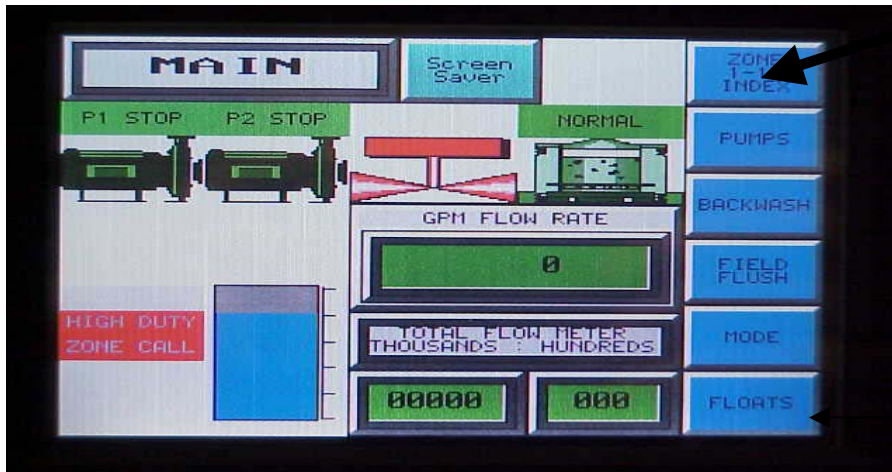


6. Step 6: From the Zone Index screen touch the “Main” button to go back to the main screen.

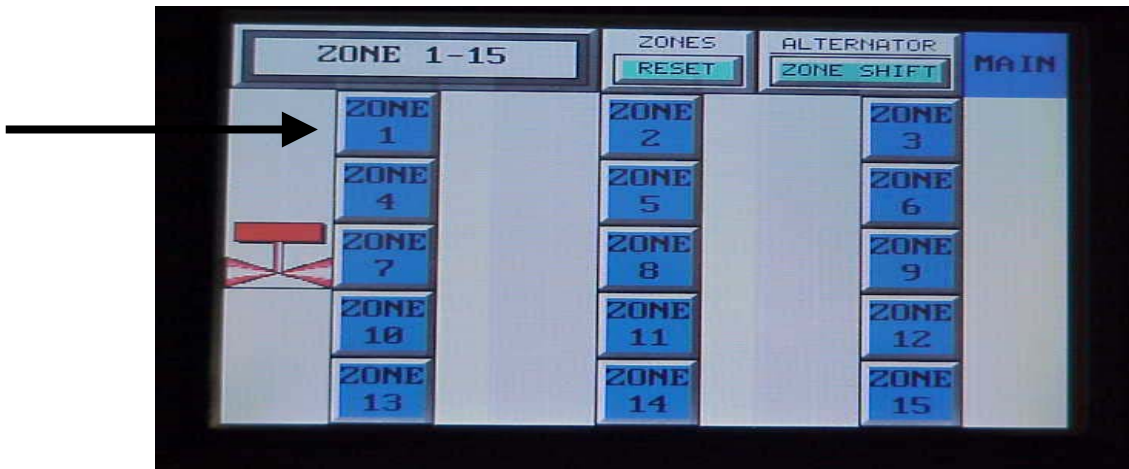


Setting up the Zone Gallons

1. Step 1: From the main screen touch the button that reads “Zone Index”.



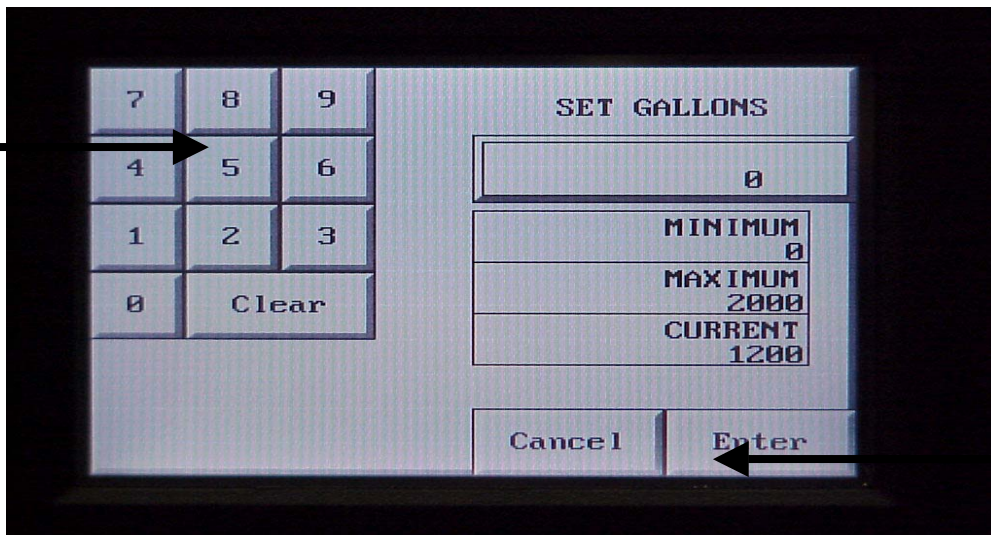
2. Step 2: From the Zone Index screen touch the “Zone 1” button.



3. Step 3: from the Zone screen touch the light blue button under “Set Gallons” banner.



4. Step 4: From the numeric entry screen type in, using the touch screen number pad, the amount of minutes each zone will dose then press enter.



5. Step 5: Touch the blue “**Zone Index**” button and repeat steps 2-4 for all the zones on your zone index screen.

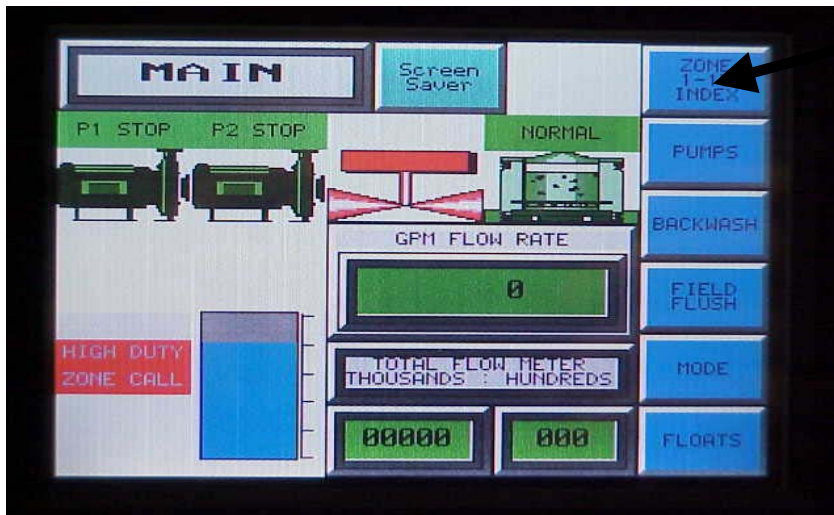


6. Step 6: From the Zone Index screen touch “**Main**” button to go back to main screen.

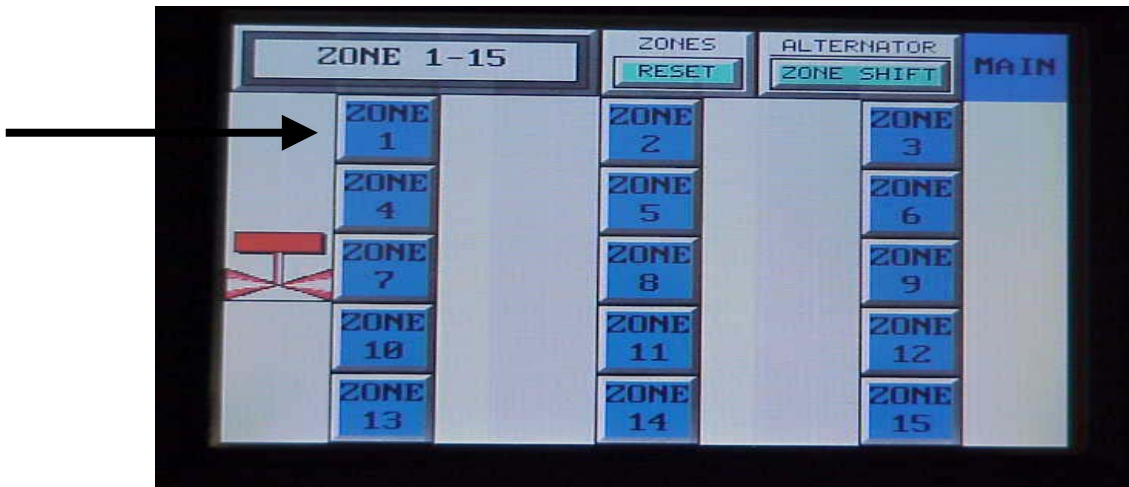


Setting up the Zone in Automatic

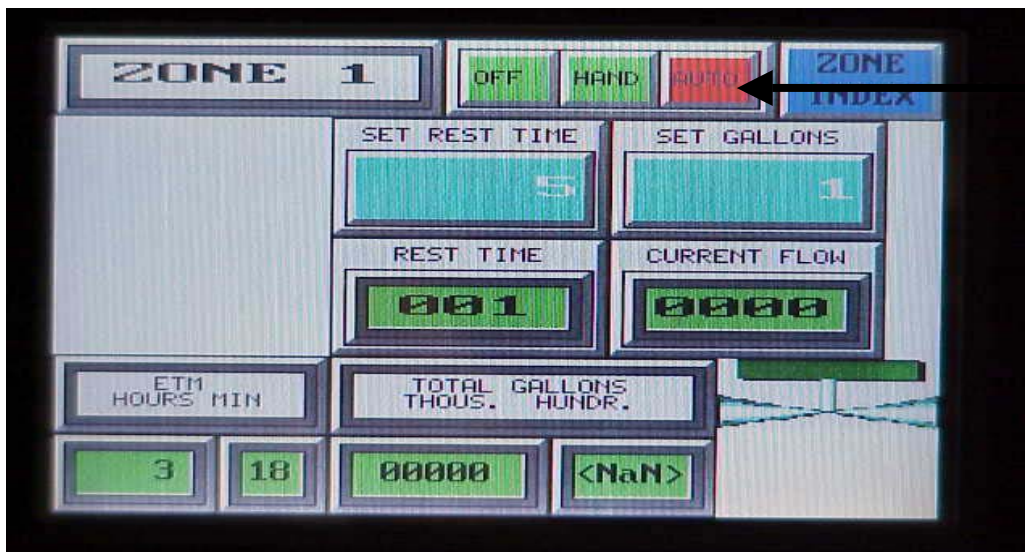
1. Step 1: From the main screen touch the button that reads “Zone Index”.



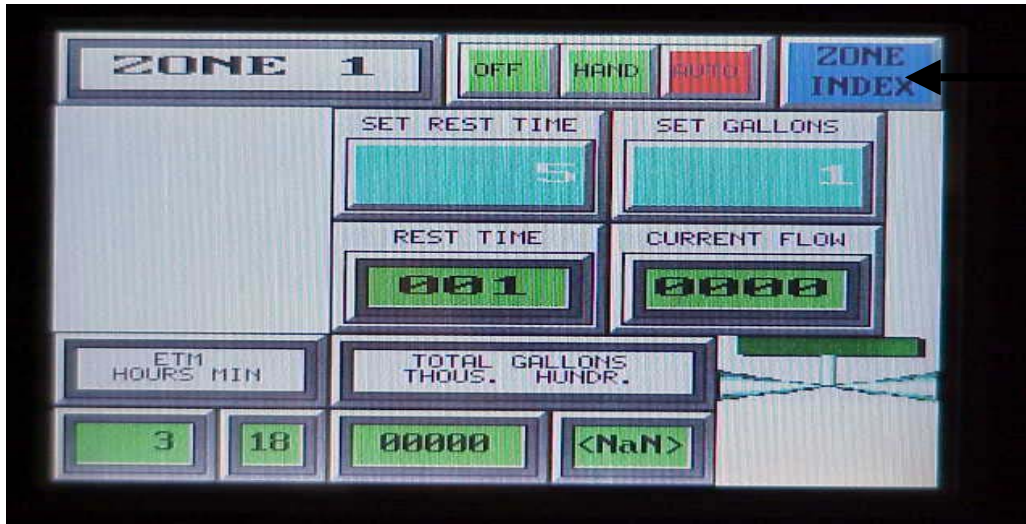
2. Step 2: From the Zone Index screen touch the “Zone 1” button.



3. Step 3: from the Zone screen touch the button that says “Auto”.



- Step 5: Touch the blue “**Zone Index**” button and repeat steps 2-4 for all the zones on your zone index screen.

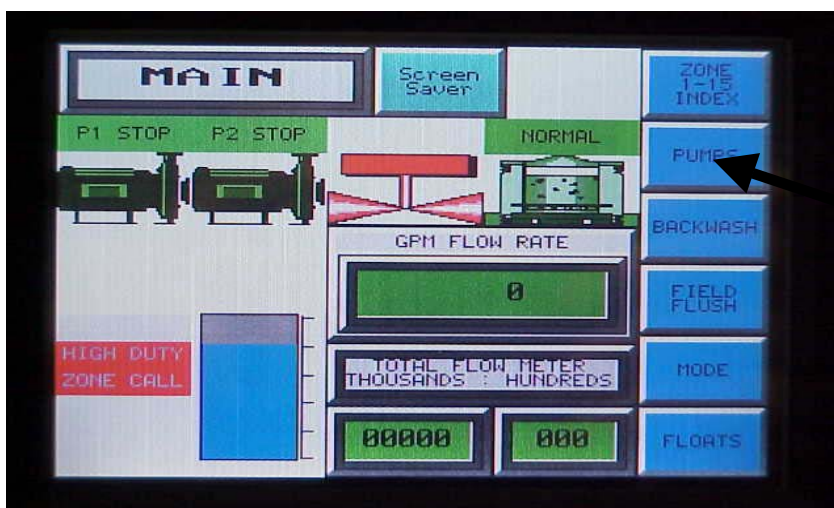


- Step 5: From the Zone Index screen touch “**Main**” button to go back to main screen.

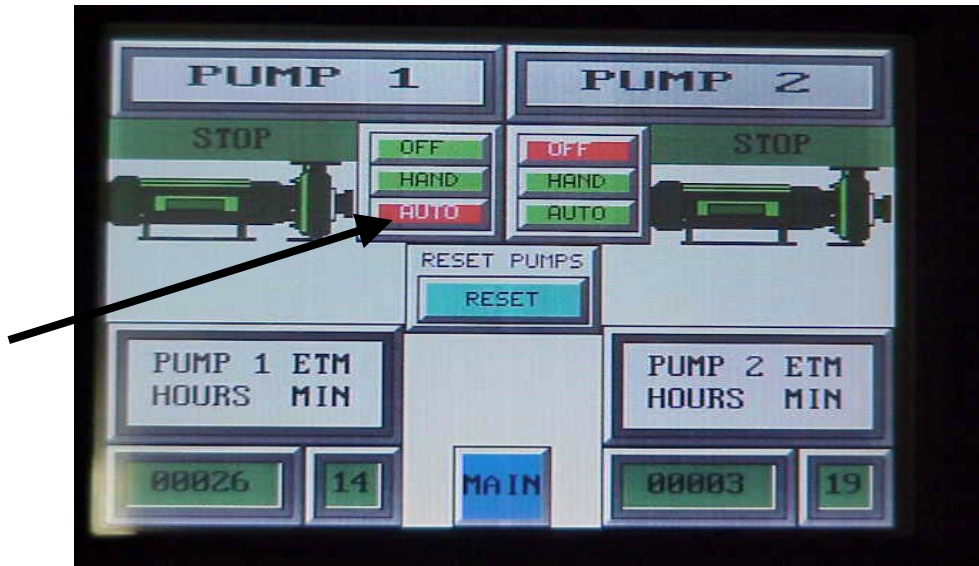


Setting up the Pumps in Automatic

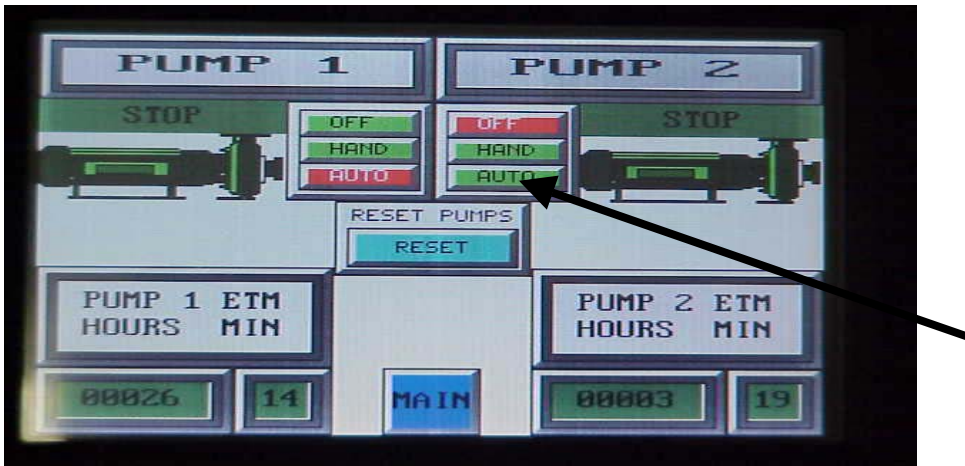
- Step 1: From the main screen touch the button that reads “**Pumps**”.



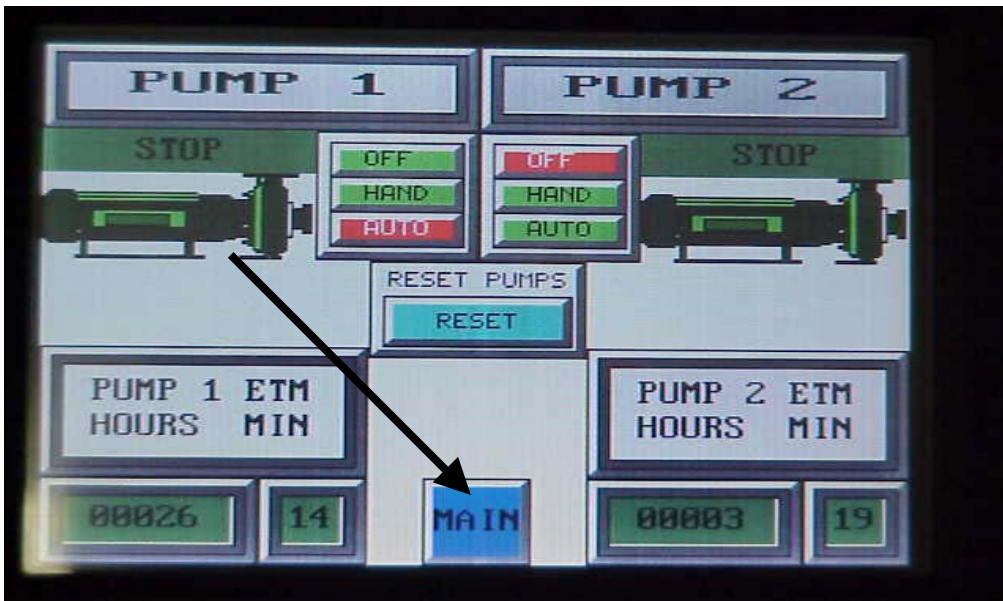
2. Step 2: From the pump screen touch the button “Auto” under the “Pump 1” banner.



3. Step 3: From the pump screen touch the button “Auto” under the “Pump 2” banner.

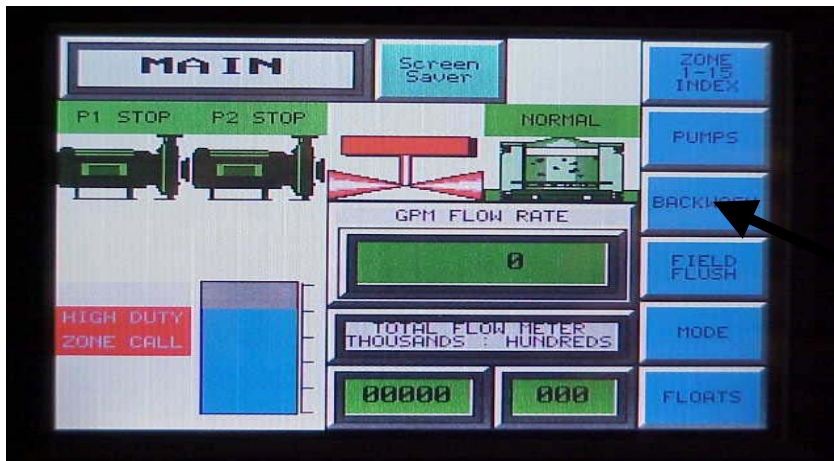


4. Step 4: From the Pump screen touch “Main” button to go back to the Main screen.



Setting up the Filter Backwash Time

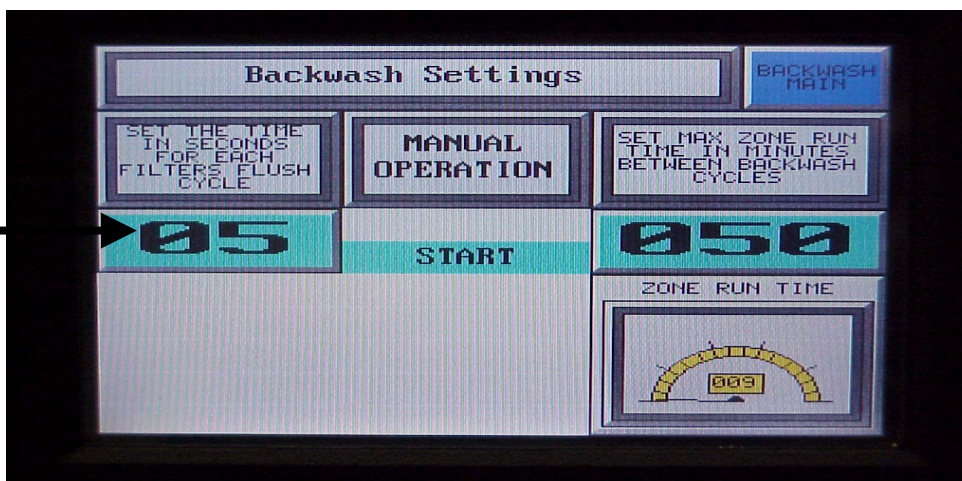
1. Step 1: From the main screen touch the button that reads “**Backwash**”.



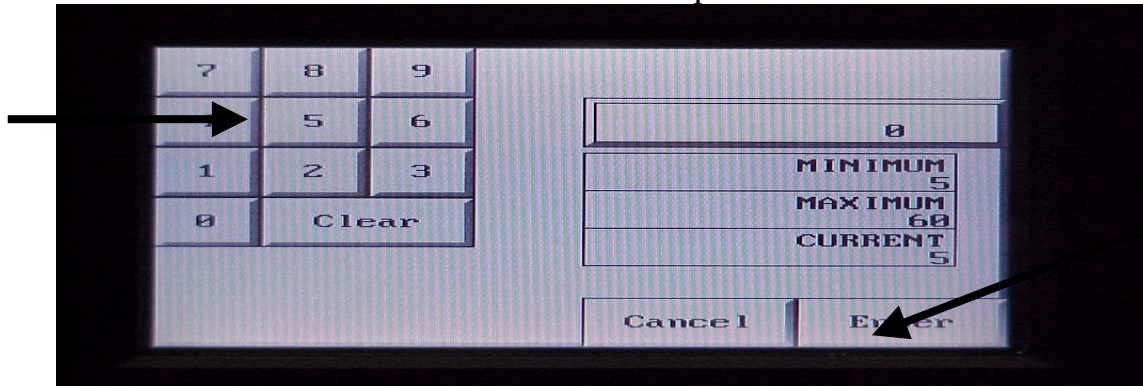
2. Step 2: From the Backwash screen touch the blue “**Backwash Settings**” button.



3. Step 3: From the Backwash Settings screen touch the light blue button under the “Set the Time in Seconds for Each Filters Flush Cycle” banner.



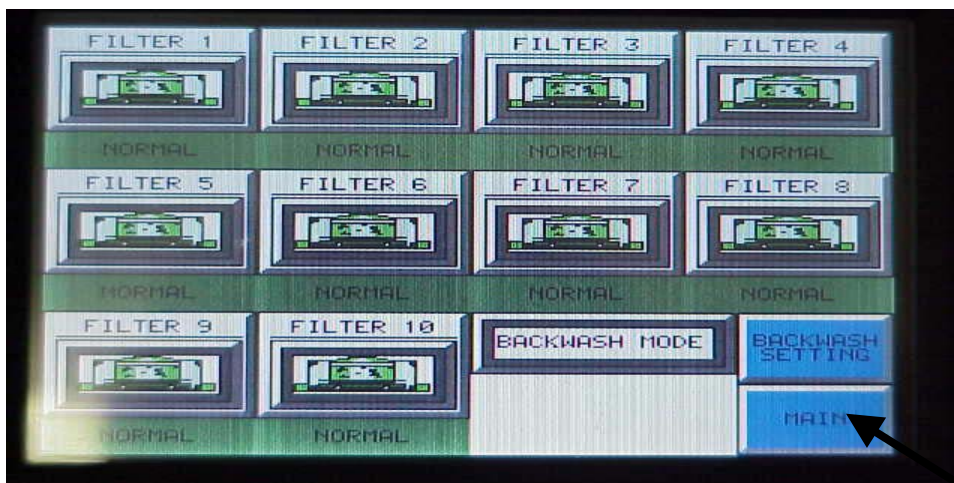
4. Step 4: From the numeric entry screen type in, using the touch screen number pad, the amount of seconds each filter will flush then press enter.



5. Step 5: From the Backwash Settings screen touch the “Backwash Main” button to go back to the Backwash screen.

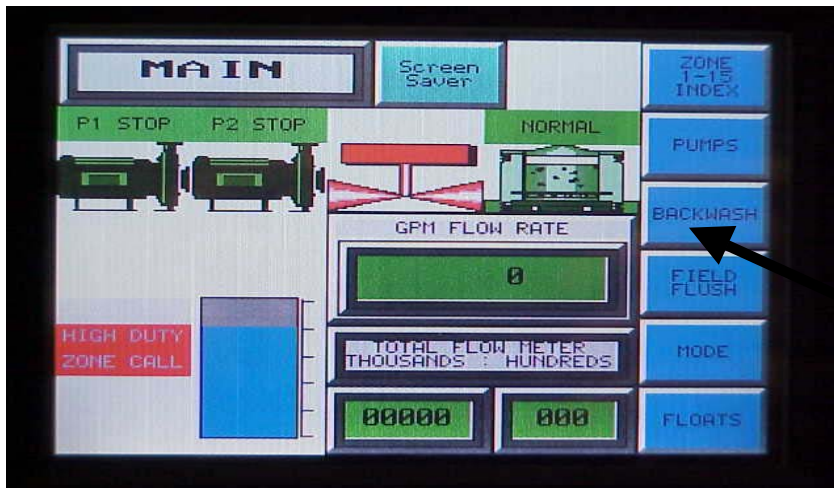


6. Step 6: From the Backwash screen touch “Main” button to go back to Main screen.



Setting up the Max Zone Run Time Between Backwash Cycles

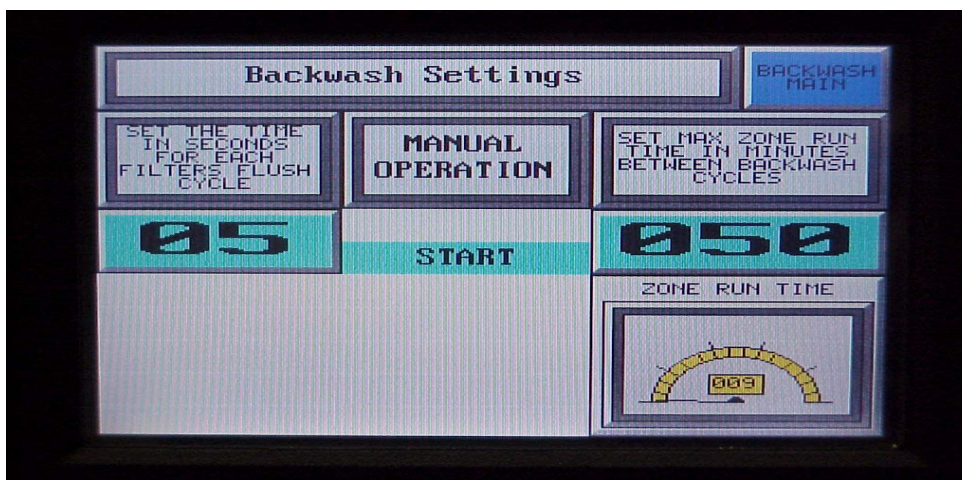
1. Step 1: From the main screen touch the button that reads “Backwash”.



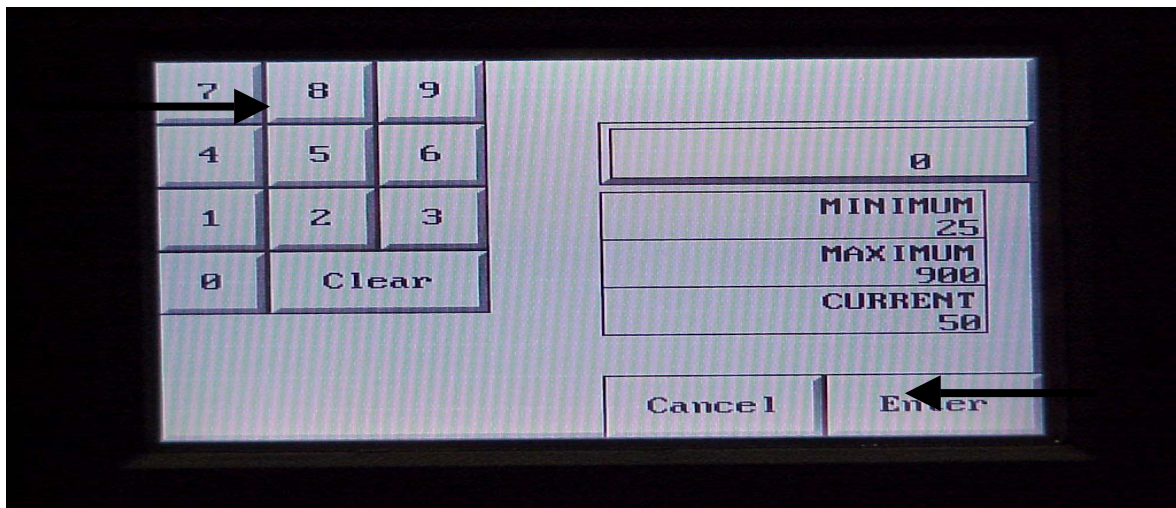
2. Step 2: From the Backwash screen touch the blue “Backwash Settings” button.



3. Step 3: From the Backwash Settings screen touch the light blue button under the “Set Max Zone Run Time in Minutes Between Backwash Cycles” banner.



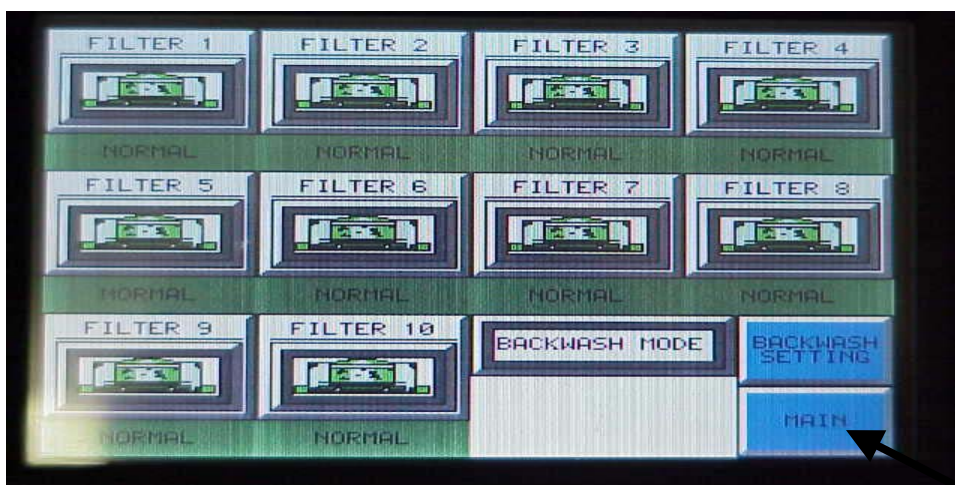
4. Step 4: From the numeric entry screen type in, using the touch screen number pad, amount of minutes for zones to run between automatic backwash cycles press enter.



5. Step 5: From the Backwash Settings screen touch the “**Backwash Main**” button to go back to the Backwash screen.

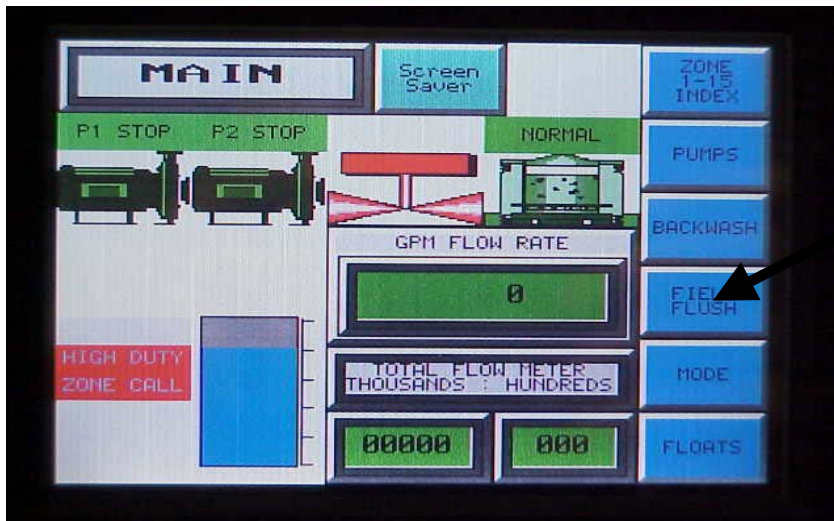


6. Step 6: From the Backwash screen touch the “**Main**” button to go back to the Main screen.

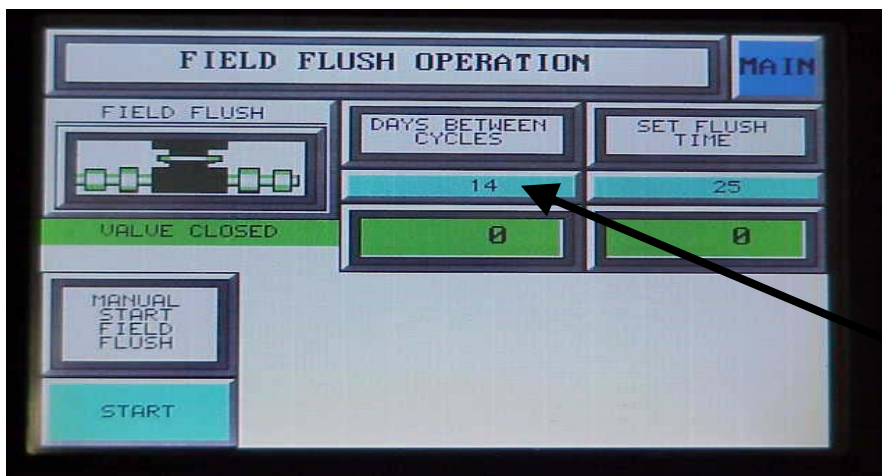


Setting the Number of Days Between Field Flush Cycles

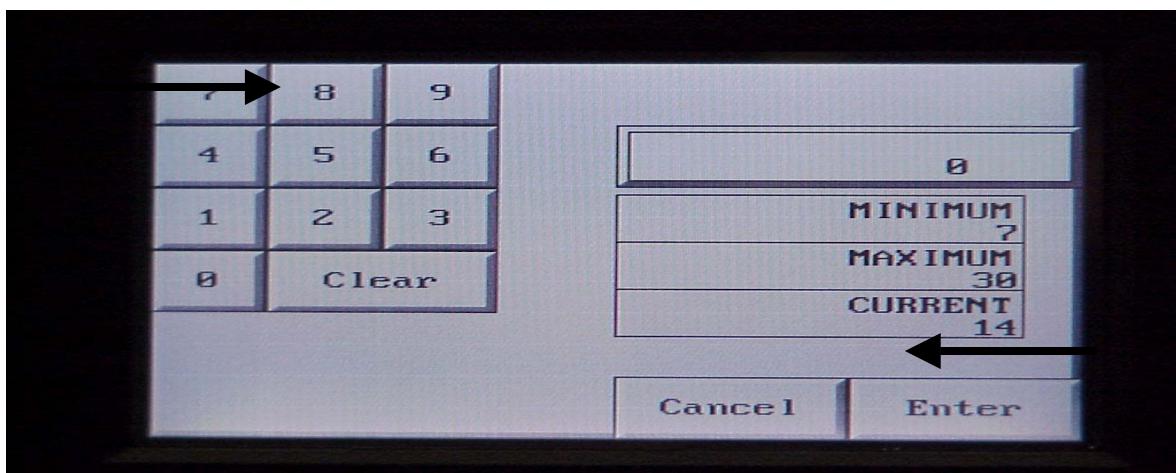
1. Step 1: From the main screen touch the button that reads “Field Flush”.



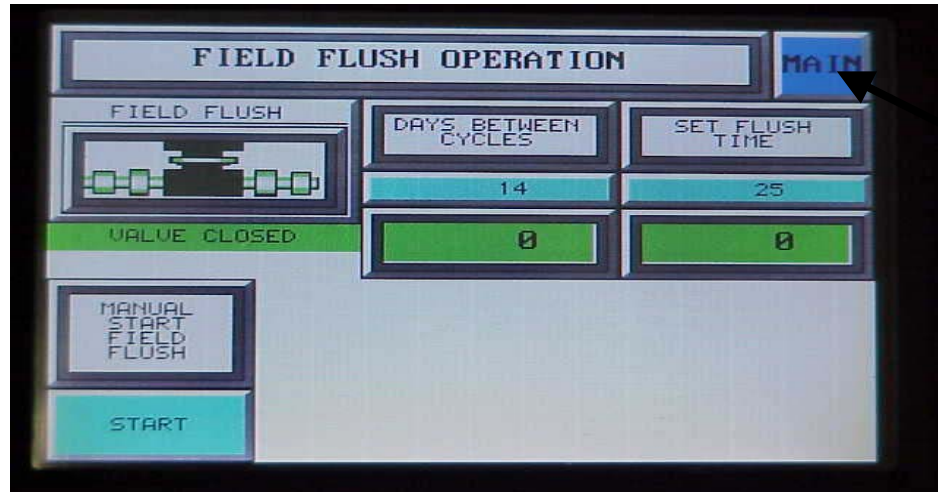
2. Step 2: From the Field Flush screen touch the light blue button under the “Days Between Cycles” banner.



3. Step 3: From the numeric entry screen type in, using the touch screen number pad, the number of days between automatic field flush cycles then press enter

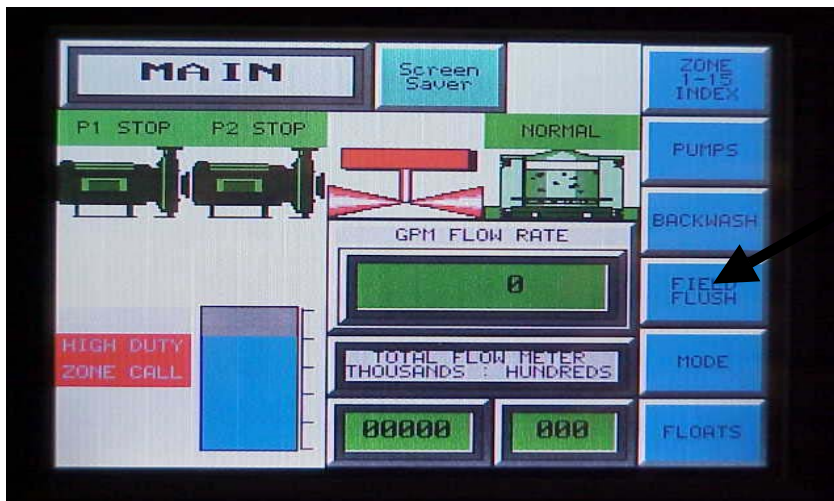


- Step 4: From the Field Flush screen touch **“Main”** button to go back to main screen.

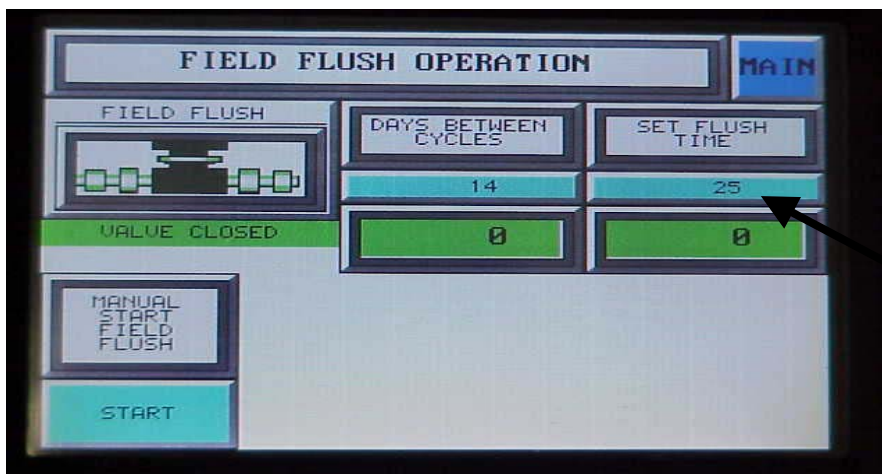


Setting the Field Flush Time for Each Zone

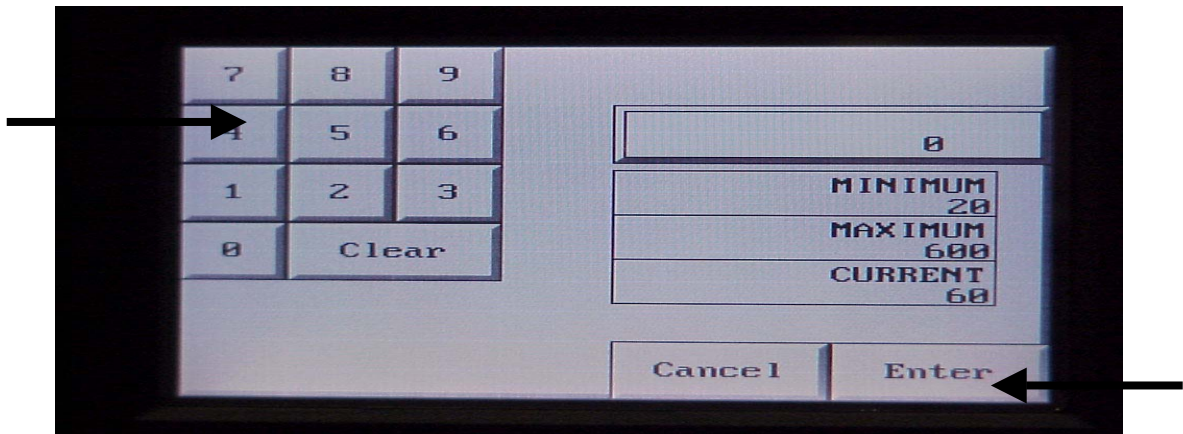
- Step 1: From the main screen touch the button that reads **“Field Flush”**.



- Step 2: From the Field Flush screen touch light blue button under the **“Set Flush Time”** banner.



3. Step 4: From numeric entry screen type, using touch screen number pad, the number of seconds each zone will flush during a normal field flush cycle then press enter.



4. Step 4: From Field Flush screen touch the “Main” button to go back to main screen.



Advanced Operations

End of Manual