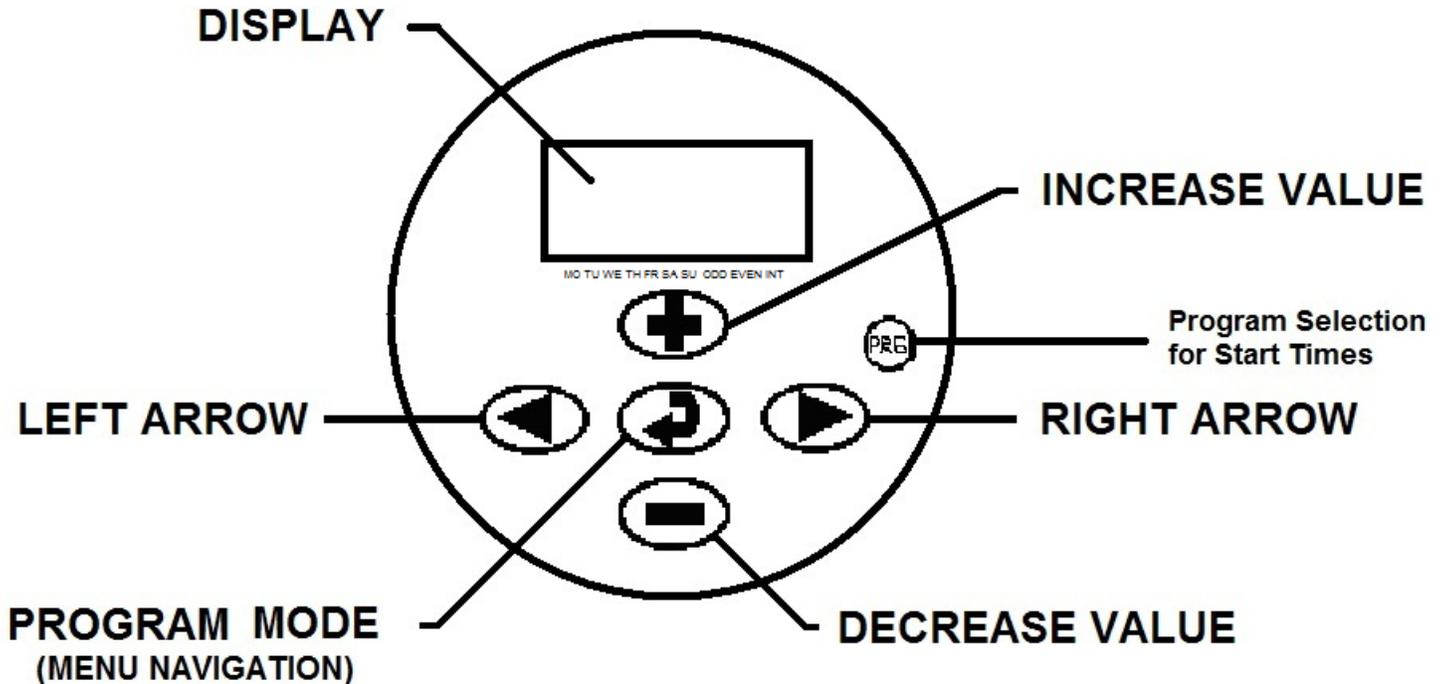




NODE CONTROLLER PROGRAMMING GUIDE

2/2013

NODE CONTROLLER INTRODUCTION



- THE PROGRAM MENU  BUTTON ALLOWS YOU TO NAVIGATE BETWEEN MENUS.
- PRESS THE PROGRAM MENU  BUTTON TO FIRST WAKE UP THE UNIT.
- DURING A SHORT PERIOD OF INACTIVITY, THE DISPLAY WILL SHUT OFF (GO TO SLEEP) TO CONSERVE BATTERY POWER. THE CONTROLLER WILL STILL CARRY OUT THE FLUSHING PROGRAM LAST ENTERED AS LONG AS THE CONTROLLER DOES NOT GO TO SLEEP ON THE OFF MODE (LAST MENU).
- WHEN PROGRAMMING, THE FLASHING PORTION OF THE DISPLAY CAN BE CHANGED BY PRESSING THE INCREASE OR DECREASE VALUE  or  BUTTON.
- TO MOVE THE CURSOR TO OTHER AREAS WITHIN A MENU, PRESS THE RIGHT OR LEFT ARROW  or  BUTTONS UNTIL THE DESIRED FIELD IS FLASHING.
- TO EXIT OUT OF A MENU AND ADVANCE TO THE NEXT MENU PRESS THE  MENU BUTTON.

NODE CONTROLLER OVERVIEW

THE PROGRAM MODE  BUTTON WILL ALLOW YOU TO MOVE TO THE NEXT MENU. THERE ARE SEVEN DISPLAY MENU SCREENS. THESE ARE;

1. 'HOME MENU' - CURRENT TIME, DAY AND BATTERY LIFE INDICATOR.



2. SETTING 'CURRENT YEAR, MONTH, DATE, & TIME MENU'



3. 'FLUSHING START & STOP TIMES MENU' (UP TO 4 START TIMES AVAILABLE FOR EACH PROGRAM A, B, or C)

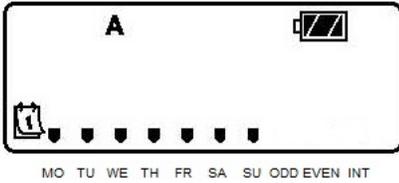


4. 'RUN TIMES PROGRAM MENU' (LENGTH/DURATION OF EACH FLUSHING)

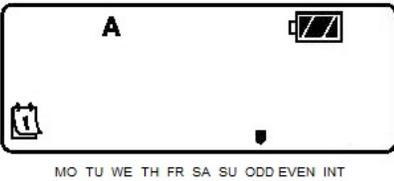


5. 'FLUSHING DAYS' MENU – THREE DIFFERENT OPTIONS ARE AVAILABLE -

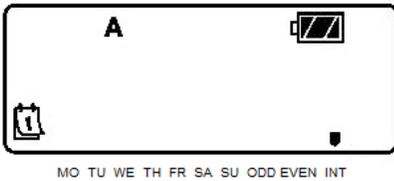
'DAY OF THE WEEK' FLUSHING OPTION – MOST RECOMMENDED



'ODD OR EVEN DAYS' OPTION



'INTERVAL' OPTION



6. 'SEASONAL ADJUSTMENT' MENU – ALWAYS LEAVE AT 100%



7. UNIT 'OFF DISPLAY MENU'



8. 'MANUAL/TEST FLUSH'



PROGRAMMING THE NODE CONTROLLER

STEP #1 – SETTING THE CURRENT YEAR, MONTH, DATE AND TIME



1. PRESS THE  BUTTON UNTIL THE CURRENT TIME/DAY ICON  IS DISPLAYED.
2. THE YEAR WILL BE FLASHING, PRESS THE  or  BUTTON TO CHANGE THE YEAR. PRESS THE RIGHT ARROW  BUTTON TO PROCEED TO SETTING THE MONTH AND DATE.
3. THE MONTH WILL BE FLASHING. PRESS THE  or  BUTTON TO CHANGE THE NUMERICAL MONTH SHOWN ON THE DISPLAY. PRESS THE RIGHT ARROW  BUTTON TO PROCEED TO SETTING THE DATE.
4. THE DATE WILL BE FLASHING. USE THE  or  BUTTON TO CHANGE THE DATE SHOWN ON THE DISPLAY. PRESS THE RIGHT ARROW  BUTTON TO PROCEED TO SETTING THE AM/PM OR 24 HOUR TIME.
5. THE TIME WILL BE DISPLAYED AND THE AM/PM/24 WILL BE FLASHING. PRESS THE  or  BUTTON TO SELECT AM, PM OR 24 HOUR. PRESS THE RIGHT ARROW  BUTTON TO PROCEED TO SETTING THE HOUR.
6. HOURS WILL BE FLASHING. PRESS THE  or  BUTTON TO CHANGE THE HOUR SHOWN ON THE DISPLAY. PRESS THE RIGHT ARROW  BUTTON TO PROCEED TO SETTING THE MINUTES.
7. MINUTES WILL BE FLASHING. USE THE  or  BUTTON TO CHANGE THE MINUTES SHOWN ON THE DISPLAY. PRESS THE PROGRAM MODE  BUTTON TO PROCEED TO THE NEXT MENU, SETTING FLUSHING START TIMES.

***THE NODE AUTOMATICALLY SETS YOUR DAY (MONDAY-SUNDAY) ACCORDING TO THE YEARLY CALENDAR/MONTH/DATE THAT WAS SET

THE YEAR, MONTH, DATE, AND TIME HAVE NOW BEEN SET.

STEP #2 – SETTING FLUSHING START TIMES



1. PUSH THE PROGRAM MENU  BUTTON UNTIL THE START TIMES  ICON IS DISPLAYED.
2. USE THE  or  BUTTON TO CHANGE THE START TIME (THE START TIMES ADVANCE IN 15 MINUTE INCREMENTS). HOLD EITHER BUTTON DOWN FOR 1 SECOND TO CHANGE TIME RAPIDLY.
3. PRESS THE RIGHT ARROW  BUTTON TO SELECT THE NEXT START TIME (UP TO 4 START TIMES ARE AVAILABLE PER EACH PROGRAM A, B, & C).
4. PRESS THE PROGRAM BUTTON  TO TOGGLE BETWEEN THE THREE DIFFERENT PROGRAMS, A, B, & C. ADD START TIMES TO THE PROGRAM BY PRESSING THE  or  BUTTON TO CHANGE THE START TIME WITHIN EACH INDIVIDUAL PROGRAM.

ELIMINATING A START TIME

- A. WITH THE DISPLAY IN THE FLUSHING START TIME MODE , PUSH THE  or  BUTTON UNTIL YOU REACH 12:00AM (MIDNIGHT). FROM HERE PUSH THE  BUTTON ONCE TO REACH THE OFF POSITION (OFF IS LOCATED RIGHT BEFORE 12:00 AM).

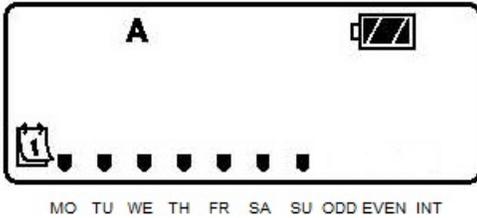
NOTE: IF THE NODE HAS ALL 4 START TIMES IN EACH PROGRAM (A,B,& C) TURNED OFF, THEN THE CONTROLLER IS OFF.

STEP #3 – SETTING THE RUN TIME (LENGTH OF FLUSHING/DURATION).



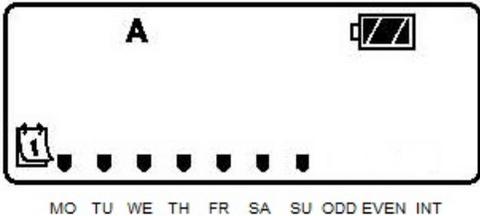
1. PRESS THE PROGRAM MENU  BUTTON UNTIL THE RUN TIME  ICON IS DISPLAYED.
2. THE RUN TIME WILL BE FLASHING. THE PROGRAM LETTER (A, B, OR C) WILL BE SHOWN HERE ALSO, IF THIS IS THE FIRST TIME SETTING, START WITH THE LETTER A. THERE IS ALSO A NUMBER TO THE LEFT SHOWN, DISREGARD THIS NUMBER, IT WILL NOT BE USED FOR THE FLUSHING PROGRAM. CONTINUE BELOW TO SET THE RUN TIME.
3. USE THE  OR  BUTTONS TO INCREASE OR DECREASE LENGTH OF FLUSHING TIME (FROM 1 MINUTE UP TO 6 HOURS). FOR RAPID ADVANCEMENT, HOLD THE BUTTONS DOWN FOR 2 SECONDS.
4. THERE ARE THREE DIFFERENT PROGRAMS (A, B, & C) AVAILABLE SO THAT RUN TIMES CAN BE ADMINISTERED TO EACH PROGRAM, AND DIFFERENT PROGRAMS CAN BE RUN (SOME SEASONS MAY NEED DIFFERENT FLUSHING PROGRAM TIMES). IF MORE THAN ONE FLUSHING PROGRAM IS NECESSARY, PRESS THE PROGRAM BUTTON  TO ADVANCE TO EACH PROGRAM (A, B, OR C) IN ORDER TO SET A DIFFERENT FLUSHING TIME FRAME FOR EACH PROGRAM.
5. PLEASE REMEMBER THAT WHEN SETTING TIMES, TO MAKE SURE NOT TO OVERLAP TIME SETTINGS WITH DURATION (LENGTH OF FLUSH TIME) AS THIS CAN KEEP THE CONTROLLER FROM STARTING OR STOPPING A FLUSH TIME CORRECTLY.

STEP #4 – SELECT AND PROGRAM THE ‘FLUSHING DAYS’ MENU – SELECT BETWEEN THREE DIFFERENT WATERING DAYS AS FOLLOWS: **NOTE: THE SCREEN THAT WILL APPEAR WILL DEPEND ON WHICH FLUSHING MODE THE UNIT WAS LAST EXITED FROM.



- A. DAYS OF THE WEEK (RECOMMENDED)
- B. ODD OR EVEN DAYS
- C. INTERVAL

A. “DAYS OF THE WEEK” – EXAMPLE: FLUSH ON MONDAY, WEDNESDAYS AND FRIDAYS.



1. TO SELECT THE DAYS OF THE WEEK OPTION, PUSH THE  BUTTON UNTIL THE FLUSHING DAYS  ICON IS DISPLAYED ALONG WITH THE SEVEN DAYS OF THE WEEK WITH AN ARROW  POINTING TO EACH DAY (MONDAY-SUNDAY – SEE BELOW DISPLAY WINDOW). THE ARROW  ICON REPRESENTS AN “ON” FLUSHING DAY A BLANK AREA ON THE DISPLAY ABOVE THE ‘DAY’ REPRESENTS AN “OFF” FLUSHING DAY.
2. TO SELECT SPECIFIC DAYS OF THE WEEK TO FLUSH, WITH THE  CURSOR ON A SPECIFIC DAY (THE CURSOR ALWAYS STARTS WITH MONDAY), PRESS THE  BUTTON TO ACTIVATE A PARTICULAR DAY OF THE WEEK TO FLUSH. PRESS THE  BUTTON TO CANCEL FLUSHING FOR THAT DAY. AFTER PRESSING A BUTTON THE CURSOR AUTOMATICALLY ADVANCES TO THE NEXT DAY.
3. REPEAT STEP 2 UNTIL ALL DESIRED DAYS HAVE BEEN SELECTED. THE SELECTED DAYS WILL SHOW WITH A  ICON TO INDICATE THEIR STATUS AS ON. THE LAST  ICON IS THE LAST FLUSHING DAY FOR THE PROGRAM.

YOU HAVE FINISHED PROGRAMMING FOR “DAYS OF THE WEEK” FLUSH MODE. PLEASE READ STEP 6 AND ADDITIONAL IMPORTANT INFORMATION & MENUES BELOW. TO MOVE PAST THIS MENU PRESS THE  BUTTON.

B. “ODD OR EVEN” DAYS OF THE CALENDAR MONTH

EXAMPLE: 1ST, 3RD, AND 5TH, OR 2ND, 4TH, & 6TH



1. PRESS THE BUTTON AND MOVE THE CURSOR TO THE END AND THE CURSOR IS SITTING ABOVE EITHER ODD OR EVEN. (BELOW THE DISPLAY WINDOW AT THE END OF THE NAMED ‘DAYS OF THE WEEK’.)
2. PRESS THE BUTTON TO SELECT OR THE TO CANCEL A RUN TIME FOR ODD OR EVEN DAYS TO FLUSH.
3. ONCE ODD OR EVEN HAS BEEN SELECTED THIS IS THE ONLY YOU WILL SEE ON THE SCREEN. (SEE BELOW SECTION D IF FINISHED SETTING WATERING DAYS AND INTERVALS)

C. “INTERVAL” – EXAMPLE: FLUSH EVERY OTHER DAY OR EVERY 3RD DAY, ETC.



1. FIRST PUSH THE BUTTON UNTIL THE “DAYS OF THE WEEK” MODE SCREEN IS DISPLAYED. THEN PRESS THE BUTTON AND MOVE THE CURSOR TO THE END AND THE CURSOR IS SITTING ABOVE ‘INT’.
2. NEXT PRESS THE , A CURSOR WILL THEN BE FLASHING ON THE 1.
3. PRESS THE OR BUTTONS TO SELECT THE NUMBER OF DAYS BETWEEN FLUSHING DAYS (1-31). THIS IS CALLED THE INTERVAL. (SEE BELOW SECTION D IF FINISHED SETTING WATERING DAYS AND INTERVALS)

STEP #6 - “SEASONAL ADJUSTMENT” – WHEN FINISHED WITH THIS SECTION SEE IMPORTANT INFO ABOUT ‘ADDITIONAL MENUS’ ON NEXT PAGE.



SETTING AT 100% WILL ALLOW THE CONTROLLER TO RUN AT THE CURRENT SETTINGS. THE SEASON ADJUSTMENT ALLOWS YOU TO DECREASE OR INCREASE THE AMOUNT OF FLUSHING BY A PERCENTAGE. FOR EXAMPLE YOU CAN DECREASE FLUSHING BY 50% IN THE WINTER BY SETTING THE CONTROLLER AT 50%.

YOU HAVE FINISHED PROGRAMMING YOUR CONTROLLER PUSH THE BUTTON UNTIL YOU REACH THE HOME MENU/IDLE MENU THIS IS THE DISPLAY WITH THE CURRENT TIME AND BATTERY LIFE DISPLAY. ALLOW THE UNIT TO GO INTO SLEEP MODE AUTOMATICALLY HERE AND YOUR SCHEDULED PROGRAM WILL RUN DURING THE SCHEDULED TIMES. (HOME MENU=CURRENT TIME AND BATTERY LIFE MENU)

Important Info: ADDITIONAL MENUS

NOTE: TO STOP MANUAL FLUSHING. (WARNING: PLEASE READ IMPORTANT INFO BELOW ABOUT LETTING THE UNIT GO INTO SLEEP MODE ON THIS MENU.)



PRESS THE  BUTTON UNTIL THE OFF FLUSHING SYSTEM  ICON IS DISPLAYED. WAIT 4 SECONDS AND “OFF” WILL APPEAR ON THE DISPLAY. PRESS THE  AGAIN AND THE NODE WILL FLUSH BASED UPON THE CURRENT PROGRAM. This menu is used to stop a current flushing period that is in action, to stop in the middle of a manual test flush, or to put the controller in permanent hibernation, see below.

****IF THE UNIT FALLS ASLEEP ON ‘THE OFF’ MENU, THE CONTROLLER WILL GO INTO PERMANENT HIBERNATION UNTIL THE CONTROLLER IS MANUALLY ‘WOKEN’ UP BY PRESSING THE  BUTTON. IF YOU WANT THE UNIT TO CONTINUE ITS SCHEDULED FLUSHING PROGRAM, LET THE CONTROLLER FALL ASLEEP ON THE HOME MENU/IDLE MENU (HOME MENU=CURRENT TIME AND BATTERY LIFE MENU).**

“MANUAL” – EXAMPLE: FLUSHING ON DEMAND/MANUAL TEST FLUSH.



1. PRESS THE  BUTTON ONCE TO DISPLAY THE HOME MENU - CURRENT TIME OF DAY/BATTERY LIFE MENU.
2. PRESS AND HOLD THE  BUTTON FOR TWO SECONDS TO DISPLAY THE MANUAL  FLUSHING ICON.
3. USE THE  OR  BUTTON TO ADJUST THE MANUAL FLUSH RUN TIME FROM 1 MINUTE TO 4 HOURS.
4. RELEASE THE BUTTONS AND THE CONTROLLER WILL COUNT DOWN 10 SECONDS BEFORE ACTIVATING THE MANUAL CYCLE.
5. THE FLASHING FLUSHING  ICON WILL APPEAR ON THE DISPLAY WHEN FLUSHING IS OCCURING.

NODE CONTROLLER RESETTING PROCEDURE

WARNING: CURRENT PROGRAM DATA WILL BE ERASED AND THE CONTROLLER WILL BE RESTARTED DURING THIS PROCEDURE.

The reset procedure for the NODE controller is as follows:

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The reset procedure for the NODE controllers is as follows:

- Wake up the controller by pressing the program menu button , make sure you are on the main menu (this menu shows the current time and battery life, DO NOT try this on the “Off” menu, which is the last menu (For any questions regarding this, please call customer service)).
- Press and hold down the MINUS , RIGHT ARROW  and the PROGRAM  buttons in sequence, continue to hold all three buttons down at the same time as the screen goes blank.
- The screen will go blank and then three lines will appear. Continue to hold all three buttons down.
- ■ ■ ■ will show on the display screen, at that time, release the keys and the screen will show 12:00am.
- The screen will then flash 12:00am on the controller. (There may be a brief countdown from 10 to 1, while the controller is flashing 12:00am) The controller has now been reset and ready for reprogramming.

**Contact Customer Service at Kupferle Foundry if you have questions or need assistance.
800-231-3990 Monday - Friday 7:30am - 4:00pm CST**