

NELSON

SmartZone™ EZ

INSTALLATION AND PROGRAMMING GUIDE

For Models:

- 8504
- 8506
- 8508
- 8512
- 8514
- 8516
- 8518
- 8522
- 8574
- 8576
- 8578
- 8582



THANK YOU for purchasing the **SmartZone™ EZ** electronic irrigation controller. You'll soon discover why we've dubbed it the "EZ". We are confident it will be the easiest and most reliable controller you will ever use. It's so "EZ", you'll probably be able to install and program this feature-packed controller without instructions. However, before installing and programming the controller, we recommend you read these instructions carefully to take full advantage of all the **SmartZone™ EZ** has to offer.

If you have questions, problems or comments on your new **SmartZone™ EZ**, please call our Technical Services Department toll-free at 1-800-NELSON8.

Leaders in Turf Irrigation Since 1911

NOTE: In our efforts to continually improve and update our products, features and specifications in this manual may change without notice.

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FEATURES

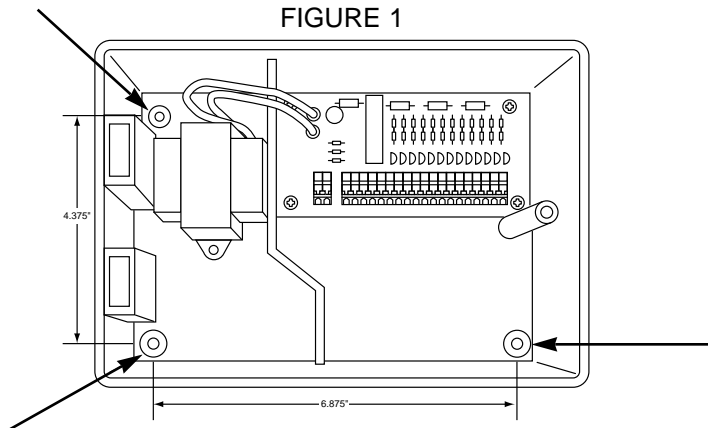
- Professional grade
- Easy to use dials and buttons for programming
- Large and clear LCD (Liquid Crystal Display)
- Non-volatile memory for program retention without AC power or batteries
- 3 independent programs
- 3 start times per program (9 total starts)
- 3 scheduling options (7 day calendar, odd/even, 1-30 day interval)
- 3 test cycles (manual, cycle, 3 minute test)
- Water budgeting
- Programmable run times from 1 minute to 9 hours 59 minutes
- Exclusive Select&Adjust™ programming
- Internal transformer
- 2 year warranty on materials and workmanship

INSTALLATION INSTRUCTIONS

NOTE: Instructions are for indoor or outdoor use.

Find a location near a 110V (220V for 8574, 8576, 8578, and 8582 models) outlet or a 110V wiring source. Install the **SmartZone™ EZ** near eye level if possible. Open the face panel by loosening the panel locking screw and pulling the tab on the right of the front panel to swing the panel open on its hinges. Use the three holes in the case to mark and pre-drill pilot holes in the wall. The left two hole guides in the **SmartZone™ EZ** are vertically aligned for mounting the controller to a stud. (See Figure 1) Insert screws through the holes in the case and screw each into the corresponding pilot hole in the wall.

NOTE: The front panel can be removed to aid in installation by removing the ribbon connector from the interconnect board and pulling the front panel off its hinges.



INSTALLATION INSTRUCTIONS

Terminal Strip

All zone, pump and sensor wire connections made inside the **SmartZone™ EZ** utilize tool-less connectors. Press on the terminal strip lever with a pen or small screwdriver and insert the wire into the bottom. The terminal strips in the **SmartZone™ EZ** controller accept 12 AWG (4.8mm) wire or smaller.

Connecting Master Valve or Pump-Start Relay

The **SmartZone™ EZ** is equipped with a shared circuit to operate either a pump-start relay or a master valve. Connect one wire from the pump-start relay to COM (common) on terminal strip, the other to PMP/MV (pump/master valve) on the terminal strip. Refer to the pump-start relay manufacturer's instructions for specific installation details.

Wiring the Transformer*

*110 VAC in United States, Canada and Mexico; 220 VAC in Europe and Australia

NOTE: Refer to and follow local codes if different from these instructions.

CAUTION: Disconnect 110V (220V for 8574, 8576, 8578, and 8582 models) power source before wiring transformer. Complete all wiring and installation before connecting the transformer to power source. This will avoid accidental shorting which could damage the controller.

INSTALLATION INSTRUCTIONS

For models 8504, 8506, 8508, 8512

With front panel open to provide access to the internal transformer, bring 110V wires up through 1/2" conduit hole in the bottom of the case. (For field connection, AC wires must have an insulation rated at 75°C minimum). Conduit should be secured to the case (follow local codes). Attach AC wires to transformer wires using wire nuts. Also, ensure earth ground wire is attached to green with yellow stripe ground wire. Please check local codes for the grounding requirements in your area. Bundle wire within cable tie loop and tighten cable tie to prevent loose wiring from touching secondary circuits. The transformer is now wired. **DO NOT** turn on power yet.

For models 8574, 8576, 8578, 8582

With front panel open to provide access to the internal transformer, bring 220V wires up through 1/2" conduit into the left hole in the bottom of the case. (For field connection, AC wires must have an insulation rated at 75°C minimum). Conduit should be secured to the case (follow local codes). Connect AC wires to connector provided and tighten screws. Observe proper polarity of wires as you install them (ie. L1, L2 and ground). Bundle wire within tie loop and tighten cable tie to prevent loose wiring from touching secondary circuits. The transformer is now wired. **DO NOT** turn on power yet.

NOTE: Failure to ground unit properly may cause severe damage to the controller and/or personal property and will void warranty.

For models 8514, 8516, 8518, 8522:

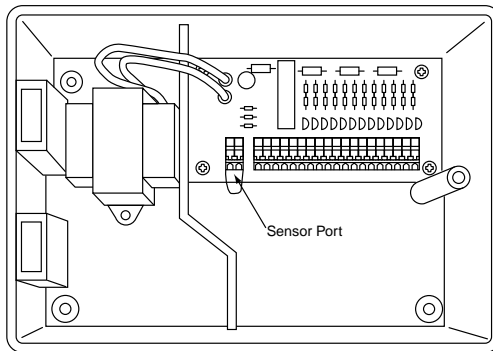
The transformer has been pre-wired with a 6 foot AC power cord with grounding plug. We recommend that you do not alter this connection. Replacement of this cord must follow local codes and in all cases the unit must be properly grounded.


INSTALLATION INSTRUCTIONS

Connecting Rain/Moisture Sensor

The **SmartZone™ EZ** is equipped to operate a sensor with normally-closed leads. The sensor port on the **SmartZone™ EZ** is the first tool-less connector on the interconnect board (see Figure 2). To install a sensor, remove the factory-installed jumper wire from the sensor connector on the terminal strip and insert the sensor wires. Refer to the sensor manufacturer's instructions for specific installation details.

FIGURE 2





If a sensor has suspended watering, the sensor indicator segment will appear on the LCD . The symbol will go off when the sensor has dried out or when the controller is set in one of the manual modes (see pages 23-25). The **SmartZone™ EZ** will resume operation based on the selected program.

INSTALLATION INSTRUCTIONS

Connecting Battery and Resetting Controller

Connect one 9V Alkaline battery to the battery clip and insert into the battery holder on the back of the front panel. The battery enables the **SmartZone™ EZ** to be programmed without AC power and maintains the real time clock in the event of a power outage. If a battery is not installed, the controller will lose real time in the event of a power outage. The battery should be replaced once a year.

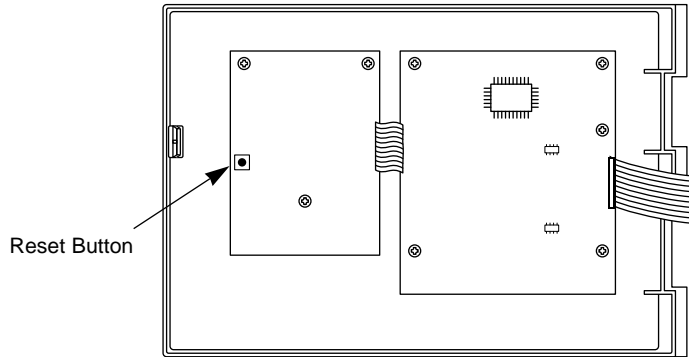
CAUTION: Use a 9V alkaline battery only. A 9V NiCad battery may leak or explode causing personal injury or property damage.

After installing the battery, press the black reset button on the back of the front panel to reset the controller (does not affect program(s)). To reset the controller to its default settings, press both the black reset button and the **SELECT**  key simultaneously. Release reset button before releasing select  key. Close the front panel, being sure not to damage wires. If wires are stiff, you may find it helpful to pre-bend them. Tighten the panel screw to secure the front panel to the case. Plug in the AC cord for the transformer or turn on the power source.

NOTE: Since all programs are stored in non-volatile memory, you will not lose program settings during a power failure - even if there is no battery installed.

INSTALLATION INSTRUCTIONS

Figure 3



You're now ready to start programming!

PROGRAMMING INSTRUCTIONS



Programming Overview





Before programming the **SmartZone™ EZ**, it may be helpful to become familiar with some general programming guidelines:

- If a segment(s) on the LCD is flashing, it means that it can be changed by the user.
- When using \triangle or ∇ keys, hold the button three seconds to start a fast scroll.
- Be sure the appropriate program letter is displayed when you are programming; program changes are specific to the program letter displayed on the LCD.
- There is no “ENTER” key. Key-presses and dial settings are stored automatically for you.
- If you make a programming change while a program is running, the program terminates immediately. The new program starts at the next start time scheduled.
- When not running, the controller displays the current time and the current day.
- During manual operations, there is a 10 second delay before the operation begins. During this time, you can change your settings. Each time you make a change, the delay resets to 10 seconds.
- MANUAL, CYCLE, and 3 MINUTE TEST procedures only operate with the Program dial set in the AUTO position.
- After a test procedure runs, the controller reverts back to the AUTO procedure and runs the next program scheduled.
- The test procedures ignore the sensor connection; this allows you to water or run your program even if the sensor has suspended operation.

PROGRAMMING INSTRUCTIONS

Front Panel Layout

Looking at the front panel (see figure 4), you see a large LCD, 4 rubber buttons, one large rotary dial, and two small rotary dials. The rubber buttons are marked “**SELECT**” and “**ADJUST**” and are the heart of Nelson’s exclusive **SELECT&ADJUST™** programming. The keys are identified with   for increasing or decreasing the segment you’re working on.

SELECT&ADJUST™ works on the principle that you first **SELECT** what you want to set, and **ADJUST** the variables of what you selected. For example, if you want a run time of 10 minutes on zone 5, you would use the **SELECT**   keys to select zone 5 and, once on zone 5, you would use the **ADJUST**   keys to set the run time to 10 minutes.

There are instances when only **SELECT** or only **ADJUST** is required. They will be explained in this guide where appropriate. ***A Rule of Thumb: SELECT will select zones or a particular start time (1,2 or 3). ADJUST will adjust Times, Dates, and % Water Budget.*** See the hang card inside the lid of the **SmartZone™ EZ** for a quick reference on what buttons to use for different dial positions.

PROGRAMMING INSTRUCTIONS

FIGURE 4



NOTE: The MODE dial must be in the “Program” position.

NOTE: Every time the \triangle or ∇ key is pressed, the time will increase or decrease one minute. Hold the \triangle or ∇ key for three seconds to initiate a fast scroll.








NOTE: Please refer to the Technical Data section for an explanation of the LCD segments

PROGRAMMING INSTRUCTIONS

Set Time of Day

Turn the large dial to the **TIME** position. Press **ADJUST**   to scroll to the correct time. There is no A.M. indicator.

Set Current Day

Turn the large dial to the **CURRENT DAY** position. Press **SELECT**   to position the current day indicator  over the current day. **SELECT**  will advance the  indicator to the right; **SELECT**  will advance the  indicator to the left.





Set Today's Date

Turn the large dial to the **DATE** position. Press **ADJUST**   keys to scroll to the current date. The YEAR will automatically advance upon rolling over 12/31.

NOTE: A DATE is only required if you intend to use ODD/EVEN scheduling or to set a start date, other than the current date, for INTERVAL scheduling.

Select Zones and Set Their Run Times

A zone run time determines the duration a zone will run.

Turn the large dial to the **ZONE / RUN TIME** position. Press **SELECT**   to select the zone you want for the selected program (A, B, or C). With the zone number displayed on the LCD, press **ADJUST**   to adjust the RUN TIME for that zone. RUN TIMES can be set from 1 minute to 9 hours 59 minutes. Continue selecting zones and adjusting their run times until you have all the zones you want in the selected program.

PROGRAMMING INSTRUCTIONS

After the last zone and before the first zone, a RUN TIME summation is provided. This is useful for determining the total run time for a program. The LCD displays the letters "ALL" and a total RUN TIME is displayed. The time displayed is a summation of all the RUN TIMES for the selected program (100% water budget). (ex. A program has a run time of 5 minutes on zone 1; 12 minutes on zone 2; and 6 minutes on zone 4. The display at this position displays ALL and a run time of 23 minutes).



FIGURE 5



PROGRAMMING INSTRUCTIONS


Set Start Times

A START TIME is the time of day a program will start running. The **SmartZone™ EZ** allows three start times per program.

Turn the large dial to the **START TIMES** position. Press **SELECT**  to select the start time you want to set (1, 2, or 3). Press **ADJUST**  to set the time of day the program will start. Repeat as needed.

Set % Water Budget

% WATER BUDGET changes the duration of run times in a program by the percentage entered 5 - 200% (i.e., a 10 minute run time at 50% water budget will run 5 minutes). This feature is useful when changes in weather occur. If it is unusually dry, you may want to extend your run time for each zone in a program. With % Water Budget, you can change one number, and all run times in the program are adjusted.

Turn the large dial to the **% WATER BUDGET** position. A % symbol will appear on the LCD to let you know you are working on the % Water Budget amount. Press **ADJUST**  to choose the desired percentage amount.

PROGRAMMING INSTRUCTIONS

If water budget is set for 110% or greater, the **SmartZone™ EZ** will split the run time in half to reduce runoff. Half of the calculated run time will operate for each zone in that program, followed by the second half of the run time for each zone.

Remember, % Water Budget is changeable by program. If you have programming in A, B, and C, you must enter three water budget values if you want every program to be changed.

SCHEDULING

A quick note on scheduling and the SmartZone™ EZ ...

The **SmartZone™ EZ** controller has three scheduling options:



- **WATER DAYS**, or daily, lets you choose which days of the week you want to water (i.e., Monday, Wednesday, Friday only).
- **ODD/EVEN** tells the controller to water on either the odd or even days of the month (i.e., the controller will water on the 31st and the 1st when an ODD schedule is chosen).
- **INTERVAL** waters every X number of days (from 1 to 30 days) (i.e., water every 3 days, water every 10 days, etc.). A value of 1 in an interval schedule means to water every day. When using the interval option, you have the flexibility to tell the controller what day to start the interval program on (up to 30 days out).






PROGRAMMING INSTRUCTIONS

NOTE: The MODE dial must be in the “Program” position to set a schedule.

When the dial is set to any of the scheduling options, the LCD will display the currently scheduled program (default is a 1 day interval schedule with today’s date for a start date). Be sure the PROGRAM dial is set on the program you want to change (A, B, or C) and that you want to change the current schedule. A scheduling option is chosen after you press a button, either SELECT or ADJUST. The old schedule is replaced with the new one. If you want the old schedule back, it’s easy to reprogram with the following procedures.

Set Water Days Scheduling Option



Turn the large dial to the **WATER DAYS** scheduling option. The last scheduling option chosen for the current program or the default 1 day interval scheduling option will appear on the LCD. Press the **SELECT**  button to select that day for watering or press **SELECT**  for non-watering days.

A flashing indicator  appears over the day you’re about to set. Rain drops  appear over selected days to water. The  indicator automatically moves one day to the right after a **SELECT**  or  key press. Continue selecting or deselecting the days you want the controller to water until you have your 7 day calendar set.

NOTE: Programming a WATER DAYS schedule deletes any other schedule for the selected program.



PROGRAMMING INSTRUCTIONS

Set Odd/Even Day Scheduling Option

Turn the large dial to the **ODD/EVEN** position. The last scheduling option chosen for the current program or the default 1 day interval scheduling option will appear on the LCD. To set either an odd or an even schedule press the **SELECT**  button (a date must be set for odd/even watering). An arrow will appear on the LCD next to the appropriate schedule (Odd or Even). The **SELECT**  buttons act as toggle keys and will toggle between odd or even.

NOTE: Programming an ODD/EVEN schedule deletes any other schedule for the selected program.

Set Interval Scheduling Option

Turn the large dial to the **INTERVAL** position. The last scheduling option chosen for the current program or the default 1 day interval scheduling option appears on the LCD. Press **SELECT**  to set the interval days between watering (1-30). The date displayed is day one of the interval schedule. (today's date if one has been set). As needed, change the date for day one of the interval schedule with **ADJUST**  (can only be set up to 30 days out).


Repeat the above procedures for each program (A, B, or C) you require.

That's it! Your **SmartZone™ EZ** is now programmed. Turn the **MODE** dial to the **AUTO** position to run the program you entered.

NOTE: Programming an ODD/EVEN schedule deletes any other schedule for the selected program.

PROGRAMMING INSTRUCTIONS

PROGRAM REVIEW

To review the current program, Turn the **MODE** dial to the **PROGRAM** position and turn the large dial to the setting you wish to review (i.e., turn the large dial to TIME to review the time set for the controller). When you need to view different zones or run times (1, 2, 3), use the **SELECT**  buttons only.

NOTE: Since you are in the program mode, the potential exists to change the program accidentally.

TURNING THE CONTROLLER OFF

There are instances when you'll want to suspend watering, either for short periods (while it's raining if you don't have a sensor connected), or long periods (during winter). To accommodate this, the **SmartZone™ EZ** can be turned "Off". Turn the **MODE** dial to the **OFF** position. This suspends all watering operations (including manual/test procedures) from operating. The clock continues to maintain the current time and date and your program(s) is retained until you want to run your program(s) again. To run your program, turn the **MODE** dial back to the **AUTO** position.

NOTE: The non-volatile memory of the SmartZone™ EZ will maintain your program without power. If a battery is not present and AC power is lost, the real time for the clock will be lost. The time will need to be reprogrammed.

ADVANCED FEATURES



The **SmartZone™ EZ** incorporates three manual/test procedures for checking the function of the controller or allowing you to bypass the current program to water immediately. The following section will show you how to set up the controller to:

- run a zone manually
- run a program manually
- run a 3 minute test of every programmed zone



NOTE: All test procedures are run with the MODE dial in the AUTO position. This allows the controller to reset to the AUTO setting after running a manual/test procedure. It also allows you the ability to walk away from the controller after setting up a manual/test procedure and not have to come back to reset the controller to AUTO.

NOTE: All manual/test procedures ignore the sensor connection. Therefore, you can water utilizing one of the manual/test procedures even if the sensor has suspended your scheduled program.

Run a Zone Manually

Turn the large dial to the **MANUAL** position. The default of zone 01 and 00:10 minutes will be flashing (recall that this means you can change them). Press **SELECT**  to select the zone number that you want to run. Press **ADJUST**  to set the run time for the selected zone. The controller will delay 10 seconds before starting the zone.

ADVANCED FEATURES

The **SmartZone™ EZ** incorporates Nelson's **ManualAdvance™** feature in the MANUAL procedure. **ManualAdvance™** allows you to cease the currently running zone and immediately advance to any new zone you select. With the MANUAL procedure running a zone, press **SELECT**  to advance to a new zone. The last entered run time will be displayed. Press **ADJUST**  to enter a new run time for the new zone (the controller will delay 10 seconds before starting the new zone).

Run a Program Manually

Turn the large dial to the **CYCLE** position. The current program letter will flash. To change to a different program, turn the PROGRAM dial to the desired program (A, B, or C). The controller will delay 10 seconds before starting the selected program. After running, the controller resets to the AUTO procedure.

NOTE: CYCLE runs your current program immediately. Changes cannot be made to the program in the CYCLE procedure.

Run a 3 Minute Test (Syringe)

Turn the large dial to the **3 MINUTE TEST** position. A B C will flash on the LCD (they cannot be changed). This is to let you know the controller will review all three programs and run a 3 minute test on only those zones that have been programmed. We call this **SmartSyringe™**.

This feature allows the controller to skip zones that have not been programmed. These may be zones that are not hooked-up, hence, saving your pump (if equipped).

TECHNICAL DATA

1. Transformer

24 VAC internal transformer; 20 VA, .83A for zones and logic. The transformer can run a pump or master valve and one zone valve, maximum.

2. Surge Protection

7 joule MOV across secondaries. (see Circuit Breaker below)

3. Sensor Operation

The **SmartZone™ EZ** is configured to operate the controller with or without a sensor. Sensors must have normally closed connections (leads). The factory-installed jumper wire must be in place if no sensor is used.

4. Zone Lines

The **SmartZone™ EZ** will operate a maximum of two (2) outputs concurrently, providing one is the pump/master valve. Each zone output can operate one solenoid.

I inrush .52A max

I hold .40A max

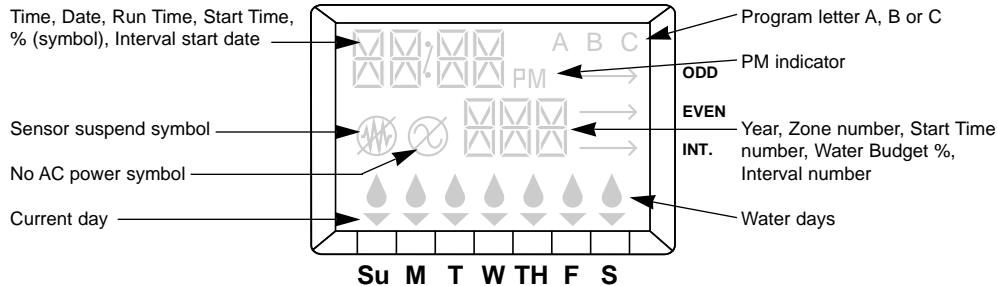
TECHNICAL DATA

5. Temperature Range

Operating: -5° to $+55^{\circ}$ C (23° to 131° Fahrenheit)

Storage: -30° to $+85^{\circ}$ C (-22° to 185° Fahrenheit)

6. Display



7. Batteries

One 9V Alkaline battery is required. **Do not use NiCad batteries.**

8. Program Retention

Non-volatile memory is used to retain programs when battery and AC power are lost. The non-volatile memory is updated when the program is changed and at 5 minute intervals. Non-volatile memory will operate for a minimum of 5 years, worst case.

9. Case Dimensions (approx.)

6" H x 9.5" W x 3.75" D (lid is removable without tools)

TECHNICAL DATA

10. Default Program

12:00 a.m. (there is no "a.m." indicator on the LCD)

Sunday

Date is 01/01 96

No Run Times (zone 01, —:—)

No Start Times (start number 01, —:—)

100% Water Budget

Every day watering schedule (Interval = 01; Start date = today)

Mode dial is at OFF position

Program dial is on A program

3 second delay between zones (cannot be changed)

11. Circuit Breaker

An electronic poly-switch is incorporated on the interconnect PCB of the controller. This type of circuit breaker does not require resetting or replacement by the user.

TROUBLESHOOTING/SERVICE

SYMPTOM	POSSIBLE CAUSE	SOLUTION
no output to zone, pump or master valve	<ul style="list-style-type: none"> AC disconnected 	<ul style="list-style-type: none"> check AC source, if AC is not detected by the controller, the no AC indicator will be lit ☒
no AC and blank display LCD is blank	<ul style="list-style-type: none"> no battery or dead battery no AC and no battery ribbon cable is disconnected 	<ul style="list-style-type: none"> replace battery and press reset install battery to regain use of display, check AC to ensure output to field ensure ribbon cable between the front panel and controller board is connected at both ends
LCD is scrambled or is missing segments	<ul style="list-style-type: none"> controller needs to be reset 	<ul style="list-style-type: none"> press the reset button. If still scrambled, press the reset button and the select + button at the same time (returns to factory defaults)
"M-X" appears on the LCD when trying to run a zone manually	<ul style="list-style-type: none"> MODE dial is in program position 	<ul style="list-style-type: none"> position the MODE dial in the AUTO position to run a zone manually
"C-X" appears on the LCD when trying to CYCLE a program	<ul style="list-style-type: none"> MODE dial is in program position 	<ul style="list-style-type: none"> position the MODE dial in the AUTO position to cycle a program
"S-X" appears on the LCD when trying to run a 3 MINUTE TEST	<ul style="list-style-type: none"> MODE dial is in program position 	<ul style="list-style-type: none"> position the MODE dial at the AUTO position to run the 3 Minute Test procedure
The controller won't run a 3 MINUTE TEST	<ul style="list-style-type: none"> No programs on A, B, or C 	<ul style="list-style-type: none"> enter a program with run times for the zones you need. The 3 MINUTE TEST only runs those zones with programmed run times on them
Er1 is displayed on the LCD	<ul style="list-style-type: none"> This is a communications error between the micro-controller and the non-volatile memory 	<ul style="list-style-type: none"> press reset. If the error does not clear, replace the board
Er2 is displayed on the LCD	<ul style="list-style-type: none"> This is telling the user there is more than 24 hours of run time programmed 	<ul style="list-style-type: none"> Review your total run times on all programs and correct - OR - Press reset and select + at the same time to return to factory default settings.

REPLACEABLE PARTS

- Transformer
- Interconnect ribbon
- Front panel
- 6' AC cord
- Interconnect board

FCC RULES

This electronic irrigation controller generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this controller does cause interference to radio or television reception, which can be determined by turning the controller off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna

Relocate the controller with respect to the receiver

Move the controller away from the receiver

Plug the controller into a different outlet so that the controller and receiver are on different branch circuits

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

CANADIAN RADIO INTERFERENCE REGULATIONS

NOTE: This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

WARRANTY

Limited Warranty

L.R. Nelson Corporation ("Nelson") warrants all electronic products to be free of defects in material and workmanship for a period of two (2) years from the original date of purchase. In the event of such defects, Nelson will repair or replace, at its option, the product or the defective part.

This warranty does not extend to damage to a Nelson product or part resulting from accident, misuse, alteration, neglect, abuse, improper installation or normal wear and tear, or to exterior appearance and color. This warranty extends only to the original user of the Nelson product.

If defect arises in a Nelson product or part within the warranty period, you should contact your installing contractor, Nelson retailer, distributor, or L.R. Nelson Corporation at one of the following locations:

One Sprinkler Lane
Peoria, IL 61615
(309) 690-2200
Fax (309) 692-5847

1961 Miraloma Ave.
Suite B
Placentia, CA 92670
(714) 993-0496
Fax (714) 993-0496

3462 Maggie Blvd.
Orlando, FL 32811
(407) 648-1020
Fax (407) 648-0924

Nelson may, at its option, require that the product or part be returned to a Nelson service point or your retailer or distributor. Nelson will determine whether the claimed defect is covered by the warranty. If coverage is found, the product will be repaired or replaced. Please allow 4 to 6 weeks for completion of repairs or replacement and return of the product or part. If a product or part is replaced, the replacement is warranted only for the remainder of the original product or part warranty period.

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