Click to verify



It's simple to reset a Hunter X-Core. All you have to do to reset the irrigation controller is press the negative, hand, and program keys at the same time, then use a small tool to insert the side of the controller. A small screwdriver or pen will suffice. As a result, how do I reset my hunter core? Press and hold the Programs button while simultaneously pressing the recessed Reset button with the tip of a ball point pen. Continue holding the Reset button until the Reset button until the Reset button. Also, how do you set up a Hunter X Core irrigation system? Run. Automatic and manual dial position for all controllers. Current Time/Day Allows you to set the current day and clock time. Start Times. Allows each program to set up one to four start times. Run Times. Allows the user to set the run time of each valve station from one minute to four start times. Run Times. Allows the user to set the run time of each valve station from one minute to four start times. Station Manually Turn the dial to MANUAL - ONE STATION. The display will display the station run time. To run the station, turn the dial clockwise to the RUN position (only the designated station will water before the controller returns to automatic mode with no changes to the previously set program). Why is it that my sprinkler system runs twice a day? Too many programmed start times are a common reason for a controller to repeat a cycle. When a station's watering time is completed, the controller will automatically switch to the next station in the program. What is the best way to reset my Rain Bird ESP-Me sprinkler timer to factory default settings? Seasonal Adjust is the setting on the dial. For at least 3 seconds, press and hold the left and right arrow buttons simultaneously. Until the word "CLEARED" appears on the screen. Return the dial to AUTO RUN. How do I remove all of the programming and reset my Rain Bird ESP-Me sprinkler timer to factory default settings? Seasonal Adjust is the setting on the dial. For at least 3 seconds, press and hold the left and right arrow buttons simultaneously. Until the word "CLEARED" appears on the screen. Return the dial to AUTO RUN. How do you put a hunter sprinkler system to the test? Press and hold the PRG button to start the test program. The station's number will appear. Scroll to the station where you want the test program to begin by pressing the or button. Set a run time of up to 15 minutes with the and buttons. The test program will begin after a two-second pause. Press and hold the PRG button to start the test program. you want the test program to begin by pressing the or button. Set a run time of up to 15 minutes with the and buttons. The test program will begin after a two-second pause. What is the best way to reset my irrigation system? Turn the control dial to "off" position to reset a sprinkler system. To access the clear-memory feature, press the "next" button Until the display stops blinking, press and hold the "off" position to reset a sprinkler system. To access the clear-memory feature, press the "next" button. Until the display stops blinking, press and hold the "off" button to reset a sprinkler system. button. Turn the control dial to "run" mode. Press and hold the "minus" and "prog" buttons at the same time. What's the problem with my Hunter irrigation system? If your irrigation system? If your irrigation water supply has been turned off. If the sprinklers don't turn on, the irrigation system may be turned off by a valve. Why does my sprinkler system continue to function? Your sprinklers may continue to function? Your sprinklers may continue to function? solenoid is on the top of the valve, and it resembles a cylinder with two wires protruding from it. Why does my Rainbird sprinkler system fail twice? You have a second start time set, which is a common reason for a program to repeat. The start times determine the exact time your ESP-Me timer begins to water, as well as how many times it will water each day. You can set up to six start times per program with the ESP-Me. How do you set up a Rainbird sprinkler timer? To set the desired time, turn the dial to "Set Watering Start Times," and press the "Manual Start/Advance" key if more than one watering cycle is required each day and then choose another time. What's the problem with my irrigation system? Your valve is working if the valve opens and the sprinklers turn on, and you'll need to double-check the controller and field wiring. The water to the valves is still off if the valve does not turn on any of the sprinklers. Open the irrigation isolation valve and locate it. Why aren't my sprinkler head's thin spray opening becomes easily clogged with dirt and debris. While the water supply is turned off, inspect malfunctioning sprinkler head's thin spray opening becomes easily clogged with a thin, block for -e (International models only) Page 5 X-CorE CompoNENTs ICD Display Allows user to set each valve station run times from 1 minute to 4 hours Run times station run time from 1 minute to 4 hours Run times station run time from 1 minute to 4 hours Run times allows 1 to 4 start times to be set in each program start times to be s their source to the controller Reset Button Use to reset the controller (located on side of controller) Allows for connection of Hunter SmartPort and Hunter Remote Controller (located on side of controller) Allows current day and clock time to be set Current time/Day Allows 1 to 4 start times to be set in each program start times Allows user to set each valve station run time from 1 minute to 4 hours... THE CoNTrollEr To Wall Note: the indoor version of the X-Core is not water- proof or weather resistant, and must be installed indoors or in a protected area. 1. Secure one screw into the wall. Install screw anchors if attaching to drywall or masonry wall. CoNNECTING ValVEs aND TransformEr Installation of the X-Core should only be done by trained personnel. Valve 4 1. Route valve wires between the control valve state a common wire to either solenoid wire on all valves. THE baTTEry After installing your X-Core, make sure to remove the battery contact insulator to allow the X-Core to keep time in the event of a power outage. CaUTION: RIsk OF eXPLOsIOn IF BAtteRy Is RePLACeD By An InCORReCt type. DIsPOse OF UseD BAtteRy Is RePLACeD By An InCORReCt type. the common wire to either solenoid NoTE: Complete this section only if you have a wire of the valve. Attach a separate control wire to the remaining master valve installed in your irrigation system. A solenoid wire. Connecting a pump start relay installed. A pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump to provide water to your system. CoNNECTING a HUNTEr "Cllk" WEaTHEr sensor or other micro-switch type weather sensor or other micro-sw deactivated automatic watering, is to stop automatic atten conditions dictate. Connecting when weather conditions dictate. Connecting when weather solar sync estimates and wireless solar by using the buttons (refer to page 13 for explanation Sync and Wireless Solar Sync and Wireless Solar Sync estimates and wir Region setting). Use the button to advance to the adjust the X-Core controller's watering schedule (based on... Connecting a HUNTEr solar sync ET sensor region (reference below). You can use methods A, B or C to help you choose which region is For accurate Solar Sync measurements, the controller needs to best for your area: be programmed for the average peak season ET for your region. Uninstalling a solar sync sensor Water adjustment is a 1 to 10 scale that allows for easy then the seasonal adjust value used by the controller will be adjustment of the Seasonal Adjust value from the solar Sync calculated from the weather data supplied by the Solar Sync sensor. Connecting a HUNTEr solar Sync has been installed and programmed, it is recommended to allow the system to run for a few days at the initial setting. Because of the variety in site conditions (including sensor location, amount of direct sunlight available to the sensor, reflective heat from surrounding structures, etc), the initial setting may require adjustment in order to arrive at the desired performance. (not included). The SmartPort ® wiring harness (included with all • Red wire to left side "24VAC" terminal Hunter Remotes) allows for fast and easy use of the Hunter controls. • White wire to right side "24VAC" terminal The Hunter remotes make it possible for you to operate the system • Blue wire to right side "24VAC" terminal The Hunter remotes make it possible for you to operate the system • Blue wire to right side "24VAC" terminal Without having to walk back and forth to the controller. NoTE: A basic programming rule is that whatever idle. The display will show the last program morning, afternoon, or evening watering cycles. selected (A, B, or C). You can switch to start times may be entered in any order. the X-Core another program by pressing the button. WATER DAYS will automatically sort them. proGrammING THE CoNTrollEr selecting from 1 to 31 days. MO), press the button to activate 1. THE CoNTrollEr setting Event Day(s) off system off The X-Core allows you to program a No Water Day(s). For example, if you... THE CoNTrollEr seasonal adjustment Seasonal Adjustment is used to make global run time changes When using a Hunter "Clik" weather sensor, the Seasonal Adjustment value can be adjusted as described. proGrammING THE CoNTrollEr manually run a single station one Touch manual start and advance 1. Turn dial to MANUAL -One stAtIOn position. You can also activate all stations to water without using the dial. 2. Station run time will flash in 1. Test program the controller so that the The X-Core allows the user to program the controller so that the The X-Core allows the user a simplified method for running a sensor disables watering on only desired stations. For example, test program. Easy retrieve[™] program memory program memory for retrieval at a later time. This feature allows for a between stations the user to insert a delay between stations into memory for retrieval at a later time. TroUblEsHooTING GUIDE problem Causes solutions The controller is continuously watering Too many start times have been Only one start time is necessary to activate a program programmed (refer to Setting the Program Start Times on page 18) There is no display Check AC power wiring Correct any errors The display reads "No AC"... Page 28 TroUblEsHooTING GUIDE problem Causes solutions Display shows a station is running but The sensor is interrupting irrigation, Check the sensor override status (see page 23) icons are flashing however the station has been programmed to override the sensor Automatic irrigation does not start at • AM/PM of time of day not set correctly • Correct AM/PM of time of day the start time and controller is not in the... Page 29 TroUblesHooTING GUIDE problem Causes solutions Seasonal Adjust ment setting. If you minimize the Water Adjustment setting too high require reduced seasonal adjustment, move up one Region (from 2 to 3, for example) and start at Water Adjustment setting 5. Use CR2032 3-volt. • Simple manual operation • Sensor override by station • Non-volatile memory for program data • Programmable rain delay (1 to 7 days) • UL Listed • Manual Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment using Solar Sync sensor • Clean only with a cloth dampened with mild soap and water • Sensor bypass switch Explanation of symbols • X-Core-x00 for outdoor use = AC • Sea level to 6500 ft (2000 m) at -13° F to 140° F (-25° C to 60° C) = Consult Documentation... CErTIFICaTE of CoNformITy To EUropEaN DIrECTIVEs Hunter Industries declares that the irrigation controller Model X-Core complies with the standards of the European Directives of "electromagnetic compatibility" 87/336/EEC and "low voltage" 73/23/EEC. Project Engineer This product should not be used for anything other than what is described in this document. This product should only be serviced by trained and authorized personnel. Page 32 Hunter Industries Incorporated The Irrigation Innovators • © 2011 Hunter Industries Incorporated 1940 Diamond Street San Marcos, California 92078 USA INT-784 9/11 • indoors or in a protected area. This device is not intended for use by young children. ConneCTInG ValVes and aC PoWer1. Route valves, attach a common wire to either solenoid wire of all valves. electrician perform the following power his is most commonly a white colored wire. ConneCTInG THe baTTerY (optional) ... controller has non-volatile memory, the program clock and calendar will be retained during a power outage even if no battery is installed. Do not connect the controller, a pump is to be operated by the controller, a pump is to be operated by the controller will result. When a pump is to be operated by the controller, a pump is to be operated by the controller will result. relays for most applications. PSR Series... ConnecTInG a WeaTHer sensor (not included)A Hunter Mini-Clik rain sensor or other type of micro-switch weather ® SENSOR BYPASS position to disable the rain sensor from the system sensor may be connected to the Pro-C. The purpose of a rain sensor is to allow for the controller operation. ® allowing for fast and easy use of 4. Attach the red wire to the bottom most AC1 the Hunter SRR, or Long Range "Thread screw slot, attach the white wire to the upper ICR remote controls. The SRR... #SRR-SCWH) with a full 25 feet of shielded cable. ConneCTInG To THe HUnTer eT system allows irrigation programs to be created automatically, based on local climate conditions. These programs are then loaded into the controller and run automatically. ET System uses a sensor to determine the local "evapotranspiration"... It's able to team with any or all of the standard be handled directly at each site's controller. Scheduling of days to water, automatic controllers in the Hunter line-up, from the SRC to the Pro-C to run times, start times, cycle and soak operations, and more can now the ICC. sPrInKler sYsTeM fUndaMenTalscan be pumped to the location. Each valve is connected via wire to the There are three main components that are involved with all automatic controller. Here the wire . There are some guidelines that should be followed when determining NOTE: It is usually good to water one or two hours when and how long to water. These factors are the soil type, the part before sunrise. WaTerInG is connected to a number that corresponds to sprinkler systems that are made today. CreaTInG a WaTerInG sCHedUle 1. Select a program (A, B, or C) by pressing We realize that many consumers will have variations in their plant watering needs, so at Hunter we button on the controller (it is equipped the Pro-C with three different programs A, B, and C. These programs are independent recommended to start with Program A). Pro-C sCHedUle forM exaMPle . . Residential and Light Commercial Irrigation Controllers Setting the Current Date and Time The display changes when PCC Series Controller the dial is rotated to indicate 1. Turn the dial to the SET the specific programming Owner's Manual and CURRENT DATE/TIME position. Page 52 ProGraMMInG THe . Selecting Specific Days of the Week to Water Selecting Interval Watering 1. Press the button to have a more consistent watering schedule cancel watering for that day. Page 54 ProGraMMInG THe ConTroller (continued) Seasonal Adjustment After programming is complete, turn the dial to Seasonal Adjust is used to make RUN to enable automatic execution of all selected global run time changes without programs and start times. re-programming the entire controller. Page 55 ProGraMMInG THe ConTroller (continued) One Touch Manual Start and time, OFF, a number and the DAYS The default is for all stations to have the icon all remain on. master valve/pump start circuit ON. The 5. Page 57 HIdden featUres Program Customization Programmable Delay Between Stations The Pro-C comes factory configured with 3 independent programs (A, B, This feature allows the user to C with four start times each) for different plant type requirements. The insert a delay between when Pro-C can be customized to display only the required programs. Page 58 HIdden featUres (continued) Programable Sensor Override When the Pro-C receives an input from the sensor to disable watering, the display will indicate those The Pro-C allows the user to program the controller so that the sensor stations that have been programmed to override disables watering on only desired stations. Page 59 When a field wiring short is detected, an ERR symbol preceded by the station number will momentarily flash on the controller LCD display. After the Hunter Quick Check completes running this circuit diagnostic procedure, the controller returns to... Page 60 TroUblesHooTInG GUIdePROBLEM CAUSES SOLUTIONS The controller returns to... Program is ously waters, even when it should not be required. Refer to "Setting Program Start on (cycling repeatedly). Page 61 TroUblesHooTInG GUIde (continued)PROBLEM CAUSES SOLUTIONS The display reads "SENSOR OFF". The rain sensor is interrupting irrigation or Slide the Rain Sensor switch on front panel the sensor jumper is not installed. to the BYPASS position to bypass rain sensor circuit, or install the sensor jumper. ..Operating Specifications • Station Run Time: 1 minute to 6 hours on programs A, B, and C. • Start Times: 4 per day, per program, for up to a 31-day interval or true odd or even day programming, made possible by the 365-day Page 62 sPeCIfICaTions clock/calendar. Page 63 This booklet is available from the U.S. Government Printing Office, Washington, D.C., Stock No. 004-000-00345-4 (price - \$2.00) CerTIfICaTe of ConforMITY To eUroPean dIreCTIVes Hunter Industries declares that the irrigation controller Model Pro-C complies with the standards of the European Directives of "electromagnetic compatibility" 87/336/EEC and "low voltage" 73/23/EEC. Page 65 To Decrease Arc 1. Insert the key end of the Hunter wrench into the adjustment socket (Fig. 2 & Fig. 3). 2. While holding the nozzle turret at the right stop, turn the wrench counterclockwise. Each 360° turn of the wrench decreases the arc 45°. Page 66 I-25 Ultra Performance Charts I-25 Ultra Nozzle I-25 Ultra Nozzle I-25 Ultra High-Speed Nozzle I-25 Ultra High-Speed Nozzle Performance Data Performance Installation 1. Insert the key end of the Hunter wrench into the lifting socket Arc Adjustment of a pop-up sprinkler. Pull the riser up to gain access to the Socket nozzle socket. Page 68 I-40 Institutional Series TM Gear-Driven Sprinklers I-40 Institutional Series Method Page 68 I-40 Institutional Series I-40 Institutional Series TM Gear-Driven Sprinklers I-40 Institutional Series TM Gear-Driven Series TM Gear-Driven Sprinklers I-40 Institutional Series TM Gear-Driven Sprinklers I-40 Institutional Series TM Gear-Driven Series TM Ge Opposing Nozzle Performance Data Nozzle Performance Data... Page 69 The right side arc can easily to Decrease the arc: be realigned. One way to 1. Insert the plastic key end of the Hunter wrench into the adjustment socket realign the right stop is to (Fig. 3 & 4). turn the whole sprinkler body assembly and the fitting 2. Page 70 0.76 "Looks good, works hard. Pressure Radius Flow Precip mm/hr 0.73 0.84 Nozzle Bars l/min 0.74 0.86 Commit to Hunter's Blue Nozzle Solution 0.75 0.87 0.11 10.5 0.78 0.90 for choice coverage with no more 0.13 10.5 0.96 1.10 0.15 11.9... Page 71 5000 & 5000 Plus Series Rotors (including PRS models) Installation Instructions Radius Adjustment slot Pull-up slot Cavité de soulèvement de la tige Cavité de réglage de la portée Ö ffnung zum Hochziehen Strahlstörschraube Ranura de ajuste del radio de alcance Ranhura de puxar Ranhura de ajuste do raio de alcance Alloggiamento chiave di sollevamento... Page 72 English Installation Sanleitung Einsetzen und Herausnehmen der Düsen: Installation Sanleitung Einsetz Öffnung, drehen es um 90° und ziehen den Aufsteiger hoch. (A) 2. Page 73 Instrucciones para la instalación - español Odhgºeq egkatåstash kai apomåkrynsh akrofysºvn: 1. Introduzca la herramienta en la ranura de elevación, gire 90 grados 1. Topoueteºte to ergaleºo sth sxism, trab, gmatoq, peristr[™] fete y tire hacia arriba para levantar el vástago (portaaspersor). (A) 90 mo^oreq, kai anyc√nete to st[™] lexoq toy ektojeyt, ra (A) 2. Page 74 Installare e Rimuovere gli Ugelli : Insira uma ferramenta na ranhura de puxar, gire 90 graus e 1. Inserire l'apposita chiave nell'allogamento previsto, ruotare levante a haste. Page 75 Instructions d'installation - français Nederlandse Installeren en Verwijderen van Nozzles: 1. Steek het hulpstuk in de sleuf, draai dit 90 graden en trek de 1. Introduisez l'outil dans la cavité de soulèvement; tournez à 90 degrés et soulevez la tige escamotable. Page 76 5000/5000 Plus Nozzle Performance Türkçe kullanma kılavuzu Nozulların yerles tirilmesi ve çıkartılması: (Standard Angle Rain Curtain Nozzle Performance Verformance ve gövdeyi kaldırın. (A) ... Page 77 5000/5000 Plus Low Angle Nozzle Performance 5000/5000 Plus PRS Nozzle Performance (Standard) (Metric) (Standard) 5000/5000 Plus PRS Low Angle Rain Curtain Nozzle Performance 5000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance Low Angle Rain Curtain Nozzle Performance 5000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus PRS Series Rotor (Standard) (Metric) Low Angle Rain Curtain Nozzle Performance S000/5000 Plus Precipica Performance S000/5000 Plus Precipica Performance S.A.R.L. Rain Bird Sweden 6991 E. Southpoint Rd., Bldg. #1 900 Rue Ampère, BP 72000 PL 345 (Fleninge) Tucson, AZ 85706 USA 13792 AIX-EN PROVENCE CEDEX 3 260 35 Ödåkra Phone: (520) 741-6100 FRANCE Sweden Fax: (520) 741-6522 Tél. Page 80 Advanced Commercial Controller Owner's Manual, Installation, and Programming Instructions for ACC and ACC Decoder Controllers and ACC-1200 12 Station Controller, 42 ACC-99D 2-Wire Decoder Controller, 42 ACC-99D 2-Wire Decod Plastic Pedestal... Page 82 Key COnneCtIOnS 24 VAC teSt terMInAl COnneCtInG the MASter VAIVe(S) AnD/Or PuMP StArt relAy(S) COnneCtInG to IMMS... Page 83 Setting Station Run Time Duration Changing Seasonal Adjust Using the Global Setting Using a Program Specific Setting (set Season Adjust by Program) Timed Delay between Stations Setting Days to Water Day of the Week Watering Interval Watering Odd/Even Watering Setting Pump and Master Valve Operation ... Page 84 View Station Logs Advanced Features View Version and Station Size COMMOn AlArM (AttentIOn) Messages Overcurrent Overflow eXtenDeD feAtures Contrast Adjustment No Water Window To set a No Water Window rules Delay Between Stations To set a Delay P/MV Style (Normally Closed/Normally On) To change the Normal condition of P/M outputs... Page 85 Setup Overview Connect an HFS Meter to an ICD-SEN SEN/DEC Setup Other SPeCIAl DeCODer functions (ADVAnCeD feAtureS) View Decoder Config Display ADM Current Sen/Dec Alarms ACC SOlAr SynC Preparation Facepack Version Master Module Base Run Times Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation Setup SetuP And ADDreSSInG the COM MODule Set the Controller Radio Installation Setup SetuP And ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP AnD ADDreSSInG the COM MODule Set the Controller Radio Installation Setup SetuP And ADDreSSInG the COM MODule Set the Controller Radio Installation, additional steps SetuP And ADDreSSInG the COM MODule Set the Controller Radio Installation Setup Se Last MR Cmd (Radio Only) DTMF Wait (Radio Only) MR Default Run Time (Radio Only) Modem Type Country Code... Page 87 With plug-in Com and other modules, the ACC is also prewired to accept Hunter wireless remote controls. Page 88 aCC InTerfaCe and Key ComponenTs1. ICD Display - Backlit, adjustable contrast display 8. left and right in (re-lights when any button is pressed) some screens 2. + button - Increases flashing value, depending on 9. Page 89 WIrInG ComparTmenT InTerIor1. Inner Door - Opens to main wiring compartment 9. Master Module - Includes sensor, Pump/Master Valve, and other accessory connections 2. AC Wiring compartment - For connections 2. AC Wiring compartment - For connections 2. AC Wiring compartment - For connections 2. AC Wiring compartment 9. Master Module - Includes sensor, Pump/Master Valve, and other accessory connections 2. AC Wiring compartment - For connecting compartment - For connecting compartment - Fo and extension • Philips screwdriver or bit (for use with long extension) - magnetic recommended • Wire strippers 31" (80 cm) Facepack Door Mounting Holes Remove the facepack assembly from the controller. 1. Page 91 ConneCTInG aC maIn poWer, Wall mount CabIneT The ACC can operate with either 120 VAC or 230 VAC power, depending on how the incoming AC wires are connected. The green, or green-and-yellow safety ground Supply wires must be 14 AWG (2 mm) or larger. may not be required or permitted with this floating ground, double-insulated transformer. Page 92 meTal CabIneT opTional pedesTal InsTallaTion Location Requirement: A) a switch or circuit-breaker 3. Level the mounting bolts before the concrete sets. shall be included in building installations; B) the switch 4. After the concrete sets, remove the door of the operator;... Page 93 ConCreTe base InsTallaTIon bottom of the thread and slide each bolt through the 1. Set forms for a 21" (533 mm) wide x 26" (660 mm) hole in the template. Put a washer and nut on each long concrete base. The base pad should be 2" (50 J-bolt to secure it to the template. Put a washer and nut on each long concrete base.120 VAC COnneCtIOn The ACC Pedestal controller can operate with either 120 Place the Voltage Selector Switch in the "115V" position. VAC or 230 VAC power. Connect the incoming black (or "hot") wire to the Red wire Supply wires must be 14AWG (2 mm) or larger. Page 95 Junction Voltage Selector Switch Controller Power Switch Terminal Block: Terminal Block: red Wire = blue Wire = neutral "hot" or Active White (uS) 120V black blue (International) 230V brown... Page 96 ConneCTInG earth ground lug, to the Ground Lug immediate right of the transformer assembly. This earth ground connection is isolated from the primary AC power and is used to ground incoming surges from the communications and output valve wires. Page 97 InsTallInG sTaTion modules, requiring no tools to install and only a screwdriver for station wiring connections. The base configuration is 12 stations (two 6station modules installed) with a maximum station capacity in a metal wall cabinet of 42 stations (7 total output modules: 1. Page 98 Upper Deck cover Each station output is rated for 0.56 A, max or enough to operate two typical Hunter solenoids simultaneously. Once the output module is installed in the slot, the station numbers assigned to the output module appear in the upper deck label above each slot. Page 99 Hunter HFS flow sensor 7. ET connections (+ and -) - Not used. Connections for Hunter ET Sensor only. If upper ET terminal is colored red, Master Module requires update for use with ET. 8. If Master Module has a sticker that says "ET Ready," or if the version number of the module is 4.0 or later, the... Page 100 Set Pump Operation section of the Programming and Operations portion of this manual. ConnecTInG a raIn or freeze shuT off deVICe Up to 4 Hunter sensors can be connected to the ACC Hunter Clik sensors are usually normally closed, and open controller, including: on alarm. Page 101 Set Sensor Operation section of the WRC instructions. Programming and Operations connections may also be possible. Page 102 This connection is automatically compatible with Hunter ICR and SRR remote receiver's pins with the mating receptacle, and push firmly until the receiver is fully seated. Page 103 Stacking and SmartStack rules do apply when manual program ICR commands are sent to the ACC. If a program ConneCTInG To ImmshunTer IrrIGaTIon manaGemenT and monITorInG sysTem ACC controllers can upgraded to provide full two-way DIAl-uP telePhOne (ACC-COM-POtS) communications with central control software (IMMS 2.0). Page 104 All radio communications for ACC work with RAD3 radio interface to all radio-equipped ACC/AGC controllers. module or later. IMMSR radios, designed for original See Hunter's ACC System Design of central control systems. Page 105 6. return the dial to the run position. This is all that Off after the last "real" station has run. is required for the most basic operations. ACC will test actually starts stations, and this will cause water automatically in any dial position except actual watering in a fully installed system. Page 106 SettInG Current DAte AnD tIMe To Set Program Start Times Three items are programmed at this position: • Time of Day and Date, the day of the week sets automatically • Daylight Savings time usage • Units of measure, English or Metric Turn the dial to the SET CURRENT DATE/ TIME position 1. Page 107 CAUTION: Understand your irrigation system's hydraulic restrictions before allowing programs to overlap. Overlapping programs may overdrive the hydraulics of your system. Overdriving your hydraulics will damage the components and result in inferior sprinkler performance. More advanced programming overlap options are available by turning the dial to the SET PROGRAM OVERLAP OPTIONS dial position. Page 108 nOte: If the ACTUAL value is different from the PROGRAMMED value, Seasonal adjust has been changed from the default of 100% to a new value. The actual run time is the duration will water. Turn the dial to the SET STATION RUN TIMES position. Using the Global Setting 1. Page 109 Day of the Week Watering 3. Press the - button when the cursor is on a day that you do not want to water. An "N" will appear, to show that day is never able to water, regardless of the schedule. Page 110 4. Press the + or - button to change the Cycle cursor value. The default cursor value is N/A. Cycles can be set from 1 minute to 6 hours. 5. Press the + or - button to change the Cycle cursor value. Page 111 stations do not have learned flow, the display will show Flow Not Learned at the top, when the Information button is pressed with the dial in the Run position. When a station with no learned flow is running, flow monitoring is temporarily disabled. Page 113 5. If the flow sensor selection has been changed to NONE after learning, the display will show FLOW NOT MONITORED. The actual flow may still be visible, even if all stations have been set to Not Monitored. Station level alarm diagnostics would not be available, but the flow will be visible. Page 114 • It may take a full hour or longer to learn flows for The default Limit is always 115%, meaning the station an entire 42-station controller. Each station may must exceed the flow by 15% before it will be treated take from 35 seconds to 5 minutes to be learned, as an alarm (to prevent false alarms due to normal flow depending on stability of the flow. Page 115 If the station passes (runs within the Limit), the controller To view the diagnostics while they are in progress, press will Pause the station, and move on to test the next station that had been running (if applicable). Page 116 • The primary purpose of Underflow alarms is to protect a Pump from deadheading, if a station has failed to open. If a station that has learned flow is activated for test purposes without turning on an actual valve, an Underflow alarm may occur. Page 117 Once a response (SUSPEND or PAUSE) has been set for a Program, all sensor responses must either be the same time. If a Pause response is set for Program A to Sensor 2, then Pause is the only response that can be set for Program A. Page 118 sensor alarms (ClIK sensors sen 1-4 only)Whenever a sensor alarms (changes to Open from its If a Program configured for shutdown by that sensor was Normally Closed state), an ATTENTION message appears active when the alarm occurred, it will either Suspend or in the display if a program response has been configured Pause as configured. Page 119 Sensor alarms have no effect on Manual Single-station If a sensor is alarmed, and a Manual Program start is starts that are running. attempted for a Program start is starts that are running. program."... Page 120 • ET Sensor: A Hunter model ET Sensor is a sensor inputs. The ET Sensor is a sensor platform, and three of its individual sensors can be used for certain alarm inputs. The ET Sensor is a sensor platform, and three of its individual sensor inputs for alarm purposed to the ACC Controller. (terminals SEN 1-4 on the controller's... Page 121 SenSOr lOCAtIOnS Individual ET sensors can be used to perform alarm shutdowns, by assigning them to the Sen 1-4 positions in the controller. The ET Sensors will then function exactly like "Clik" Sensor inputs. They may have Suspend or Pause responses set by Program. Assigning ACC Sensor 1-4 alarm functions to an ET Sensor is done without connecting any additional wires. Page 122 seTTInG proGram overlap options. These options allow you to maximize the number of stations operating simultaneously, if the system's hydraulics can support the flow. To program the Program Overlap option 1. Turn the dial to the SET PROGRAM OVERLAP OPTIONS position 2. Page 123 Information operated as a single unit. screens. The factory default setting is Hunter Industries contact information, but it can be replaced with the Combining stations into SSGs shortens programming... Page 124 daTa hIsToryName a Program (Up to 12 Characters and Spaces) This dial position allows you to view flow totals and various logs containing important histories of all activity. 1. Turn the dial to the SET STATION & PROGRAM NAMES position. Page 125 The Station Log will store up to 1500 events, and records all station activity, including every start and stop of each station. It may include the set station activity including every start and stop of each station. alarm events if applicable. A complete list of possible Station Log messages appears near the end of this manual. Alarm log items labeled "Missed Irrigation"... Page 126 If station module contacts are in good order and that the modules are fully inserted. Make sure powerlock tabs on front of modules have good contact with the slide lock. Page 127 ADM means the ADM99 decoder output module, and shows that the meter or sensor input has been assigned to an ICD-SEN sensor decoder in the two-wire path. ET followed by a sensor name means the input has been assigned to an ET Sensor. ET Functions are described in their own section in this manual. Page 128 Pause and go into alarm diagnostic mode. P/MV outputs have a max output of 0.325 A. Pump start relays with very high current requirements may need a dedicated transformer and an additional relay (such as Hunter Model PSRB) for reliable operations. Page 129 unDerflOW Alarm diagnostics consist of pausing all operations, then A station has caused too little flow, indicating a possible starting each station that was running at the time of the percentage of the Limit amount set for flow sampled alone, to see if it caused the overflow. Page 130 If a start time has already been programmed, and the nO WAter Windows prevent any automatic irrigation overlaps the start time, the display will flash a warning. from occurring during certain hours, by Program. This can be used to protect high traffic areas from accidental programming, or the results of Seasonal Adjust, during busy times of day. Page 131 To set a Delay 1. Use the Program button to select the Program for which the Delay is to be set. 2. Use the +/- keys to set the delay in h:mm:ss format. Use the left and right arrows to move through the hour, minutes, and seconds fields until the delay is set. Page 132 ACC's Real Time Flow Monitoring is designed to operate with true Normally Open valves. Hunter HFS flow sensors. It is necessary to tell ACC what size fitting the HFS has been installed into, so that flow can ACC's two Pump/Master Valve outputs (labeled on the... Page 133 Additional settings for OTHER 2. Use the down arrow button to move to Select Flow Sensor, and press the + button to choose it. Most other brands of flow sensor require two settings for calibration, the K-factor and the Offset. The correct settings for these values are found in the sensor manufacturer's documentation, they are based on the pipe type and size. Page 134 To create and use SSGs: In order to create and use SSGs, the controller must first be placed into the SSG. 1. Page 135 Once the controller is in ACC Setup mode, all 20 SSGs are available. whether they are used or not. DELETING AN SSG Technically SSGs are never deleted, as there are always 20 available. Instead, simply select the unwanted SSG, and delete the stations are listed under the SSG name. Page 136 CuStOM MAnuAl PrOGrAM SetuP programmed to use Cycle and Soak with the "Y" selected If you want the stations or SSGs to use their normal Cycle Press the INFORMATION button and turn the dial to and Soak settings (if applicable), leave the option. • Use the Program button to select the Custom Manual program (Custom Manual programs will appear after the A through F selections). • Turn the dial to Run, to start the Program at the beginning. Page 138 SAVE will be highlighted. Press the + button to save the • The Test Program will try to start ALL stations counted program, and a confirmation message will appear. The by the controller. If you are running a Test Program on Save can still be cancelled with the -... Page 139 one TouCh manual sTarTadvance through all the stations/SSGs in a Program. • If the controller is running that last (highest numbered) station or SSG with a run time in the selected program, and the right arrow button is pressed again, the station will be stopped and no new stations will be started (the program will allow an entire Program to be run immediately, and will allow an entire Program to be started at any station (to run from that point to the end). • Use the Program button to select the Program (Custom Manual programs will appear after the A through F selections). Page 141 (then release the Programs button). these operations are not reversible! Reset should only be performed if: a) a "clean start" is desired for programming purposes, or b) if directed to do so by Hunter Technical Services as a troubleshooting technique. Page 142 The display will show the following Reset options: • Programs: Erases Day schedules, start times, and run times. • Flow Totals: Clears the running flow total histories (they will restart with 0.0 for all entries), only. • ... Page 143 When programming a 2, 4, or 6-station decoder, you only assign a station number to the first station output. The Blank (Off) : Normal. other stations are automatically filled in by the decoder size. Page 144 5. The display will show "DECODER FUNCTIONS," at the bottom of the selections. Use the down arrow button to select Decoder Functions. Press the + button to select. 6. The Decoder Functions screen will appear, with "Program a Decoders may be reprogrammed at any time. If it is "Controller" means the selected P/MV output will operate necessary to change the station numbers or other settings through the screw terminal with that number on the of a previously programmed decoder, the decoder may be Master Module, in the controller. Page 146 Hunter HFS flow meters may only be connected to Port A. path, and that the location of the HFS or Clik Sensors are mapped to the ADM, described in the section titled, "Set Clik sensors may be attached to either port. Page 147 • If you are unable to enter an address or port for a inserted into the Programming Port, a screen will sensor or flow meter, the Location for that device appear with the decoder settings. has probably not been set to "ADM." Return to the •... Page 148 address or the sensor selections at anytime, if • Once the sensor decoders are configured, the changes occur to the system. controller will immediately begin polling the sensor • Turn the dial to "Set Sensor Operation." There decoder continuously to monitor the alarms. This may is a display page for each sensor to be set. Page 149 to the current draw, even when they are not running. Decoders require a tiny amount of current just to stay awake, about 5 mA. • With a connected two-wire path, the mA reading in standby mode (no stations running) will vary depending on the number of decoders and other factors. Page 150 • Facepack updates may be obtained from the • The Solar-Sync compatible master modules were not Resources section of the Hunter Industries.com). • Master Modules cannot be installed at has • The Solar-Sync sensor cannot be installed at the same been collected, time as a Hunter ET Sensor, Only one sensor can be connected to the ET terminals, Page 152 SenSOr teSt • The settings will be set to Region 3, Water Adi, 5, Either of these factors can be changed, based on the • When the sensor is installed, it is possible to test the following explanations, connection to the Solar-Sync sensor. •... Page 153 • Select Solar Sync Check. The screen will show "Initializing..." for a few seconds as the controller contacts the sensor. • If the check is successful, the screen will show "Sensor Check OK". Continue with the Operation and Adjustment procedures if necessary. •... Page 154 • Press and hold the Information button, while turning If the Sensors (S1, 2, 3, and 4) are set to Off, they will the ACC dial to the Set Sensor Operation position. not shutdown the selected Program. Then, release the Information button. •... Page 155 MAKInG ADjuStMentS • Notice that as the Water Adjustment factor is changed, the current S-Sync Adjust amount at the top of the After programming the Solar Sync module and your screen is changed. This can help you predict how controller, allow the system to operate for 3 days to gather much more or less watering will occur, as a result of sun and temperature data. Page 156 SOIAr-SynC SenSOr AlArMS • Use the - or + buttons to step backward and forward through the Controller Log to track the S-Sync S-Sync RAIN ALARM, S-Sync TEMP ALARM changes. Each log will show the date and time, and the Before and After settings for Seasonal Adjustment. Page 157 S-Sync COMM fAllure • If the Solar-Sync sensor fails to respond to the ACC controller, a Comm Failure message will be posted on the display and a log will be entered in the controller Alarm Log. • This may indicate a problem with the wiring from the controller to the Solar Sync sensor. Page 158 ET Sensor to the central After each ET function, it is possible to press the Back computer via IMMS control software. Page 159 Operation enabled, and set to YES, more ET FUNCTIONS displayed according to the Units of Measure setting at the home screen. Set Current Date/Time dial position. NO will hide all ET functions and the daily ET will not Readings can be updated at any time, by performing a new be read or displayed, and no ET will be available for the... Page 160 Turn the dial to another position, and then back to the alarm and the actual shutdown. If this is not acceptable, a Set Sensor Operation dial position (without holding separate sensor (such as Rain-Clik or Freeze-Clik) should Information). At this location, choose the Suspend or be installed and wired directly to one of the Sen 1-4 inputs Pause responses for each ET Sensor by program for instant shutdowns. Page 161 eVenT mode opTions (aGC, surVeyor)Event Mode is a special function of the controller designed to work with Surveyor Golf control software. Event mode allows the controller to run individual station events. This will permanently delete all downloaded Then press the right arrow button to view the downloaded System Events. The controller will not be able to irrigate events for that day. Page 163 ACC-COM-POTS, or the ACC-COM-GSM (E) does not controllers, via optional RAD3 UHF radio modules (sold contain a radio. It is designed for use with a Hunter RAD3 separately) with antenna for wireless communications, UHF radio, which must be ordered separately. Page 164 Pedestal mounted controllers have a power terminal switch, which can be pressed to the OFF position. Hardwired communications also requires Hunter GCBL • Note that there are additional steps listed for installation with RAD3 radio modules. CommunICaTIon module InsTallaTIon for Wall mounT ConTroller Page 165 8. Insert the ACC-COM module into the opening where the RAD3, before installing the radio into the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the radio compartment, through the opening, Secure with 4 screws (supplied) • Install the opening, Secure with 4 screws (supplied) • Install the opening, Secure with 4 screws (supplied) • Ins the Address. The controller • To use a UHF Maintenance Radio (Hunter Model will now be addressed. TRNR) as a remote control for the controller. Page 167 wait period has elapsed or the radio carrier signal stops, If your country appears on the following list, change the with no more tones. code display to the number shown: A longer DTMF wait allows slower typing speeds of the Country Code command on the radio. Page 168 PInG teSt This is a useful diagnostic tool. The ping test allows any controller for test purposes. RAD: Shows T when the controller radio is transmitting, Select a Target controller from the Source controller. and R when it is receiving data from another radio. Page 169 TroubleshooTInG...... Problem Causes Solutions No Display Check AC~ power to controller Fix power supply Facepack is not firmly seated and locked, Seat facepack is not firmly seated and locked. of the event at for some reason, and indicates why the station was the top of the screen. Page 171 COntrOller lOGS Alarm Log, "Reason" Labels Track significant events at the controller, which are not The Reason label indicates the type of alarm condition. necessarily alarms or malfunctions. Unknown No reason specified Message Description Overflow Overflow alarm occurred EASY RETRIEVE Easy retrieve programs Underflow Underflow alarm occurred... Page 172 StAtIOn IOGS Message Description Station activity in the controller. IRRIGATION STOPPED BY Irrigation was stopped by MAINT RADIO maintenance radio The Mode labels are the same as shown in the Run dial PAUSE MODE SET BY Pause Mode set by position, when stations are running. Page 173 Pump/Master Valve output: 325 mA @24 VAC Test terminal output: 325 mA facepack: 9 VDC alkaline, for facepack remote power only. Page 174 parTsWAll MOunt COntrOllerS (ACC1200, ACC99D) Item Description Catalog no. Front Faceplate 571500 Face Pack Front Face Pack 589000 Door Frame Metal Front Door 585500 w/o Lock Lock & Key Set 387300 (Not Shown) Key Set (2) 122516 (Not shown) Metal Cabinet 585000 w/o Door... Page 175 PeDeStAl COntrOllerS (ACC) 571505 Front Face Pack (ACC) 571505 Fron ..Download 40, 59, 76 Address 16, 57, 59, 61, 62, 77, 80, 82 Adjustment 22, 64, 67, 69, 72 Earth 5, 8 19, 24, 25, 34, 41, 42, 46, 47, 57, 59, 60, 63, 84, Easy retrieve Alarm 14, 27, 28, 29, 31, 32, 33, 34, 35, 38, 39, 41, 42, ET sensor 56, 62, 63, 70, 71, 73, 74, 84, 85... Page 177 including Lock 553305 Lid Antenna for Ped,... Page 176 IndeX 86, 89 Technical support Telephone 1, 17, 18, 37, 77, 78, 79, 81, 82 Temperature 30, 35, 40, 64, 69, 73, 74... Page 179 Hunter Industries Incorporated 1940 Diamond Street • San Marcos, California 92078 www.hunterindustries.com LIT-389 01/10... Page 180 DUAL The Two-Wire/Decoder Module Owner's Manual and Programming Instructions For use with I-CORE controller... Page 181 For use with Intelligent Modular Intuitive... Page 182 TAbLE oF CoNTENTs SyStem ComponentS4 overview of DUAL DeCoDer operAtion5 [™] Decoder Benefits . . 5 SvStem7 wire SpeCifiCAtionS AnD inStALLAtion .. sysTEM CoMpoNENTs DUAL 1 DUAL 2 DUAL S DUAL 48M i r e l i . 6 inStALLAtion of DUAL DeCoDer moDULe7 Installation for Combined Decoder and ICM-600 Module......8 Using Pre-Existing Wire overview d d i n i e l iD wirE (ExAMpLE) Place ground plate in 6" wide trench, perpendicular to shielding wire, 8 feet away, 36" below ground level. w i r u n d Surround plate evenly with PowerSet material. ovErviEW oF DUAL DECoDEr opErATioN The over relatively is a control of irrigation Decoder benefits a system over relatively with PowerSet material. long distances by attaching waterproof Decoder systems save wire. A significant benefit is the ability decoders as needed in a low voltage, direct burial two-wire to operate up to 48 stations with only two wires, instead of path. sysTEM ovErviEW i-CorE CoNTroLLEr MAx DisTANCE To END oF TWo-WirE pATh iD1 WirE (14 Ga) 5000 fEET (1500 m) Or iD2 WirE (12 Ga) 7500 fEET (2300 m) DUAL -1 (OnE-STATION DECODER) groUND pLATE (Or GrOUND rOD) DBr/v-6 wATErprOOf cOnnecTOrS in ALL Two-wirE pATH SpLiceS DUAL-s sUrgE Arrestor MAxiMUM DiSTAnce 5000 fEET (1500 M) Slide the module lock to the locked "Power On" position. Hunter I-CORE series controllers and provides two-wire decoder The I-CORE will apply power to the module and recognize it outputs for the Hunter DUAL family of field decoders. for decoder use (controller maximum station). As lightning damage is never covered by warranty, service troubles. Hunter provides two types of wire for use with it is in the installer's best interest to share what Hunter has I-CORE DUAL decoder systems. TypiCAL WirE LAyoUT single Two-Wire path back to the controller. Page 189 TypiCAL WirE LAyoUT single Two-Wire path back to the controller. Page 189 TypiCAL WirE LAyoUT single Two-Wire path back to the controller. TO EACH END Of wire paths. iD2: Up TO 7,500 fT/2300 M frOM controller. Wire paths NoTE: Do not loop the two-wire path back to the controller. Wire paths Turn Controller. Wire paths Turn Controller. Wire paths Turn Controller. Wire path back to the controller. Wire path solution (s), the decoder output Route the red and blue wire paths from the field up through module will display "Line openings or conduit into the controller wiring compartment. Turn controller wiring compartment. Turn controller wiring compartment. Turn controller wire path. Decoders can also be programmed in the field with the Hunter ICD-HP Handheld Programmer, if available. Insert the stripped end of the red wire from a DUAL decoder Program the station number(s) into the decoders, and then write into one of the two Programming Ports to the right of the the station number assignments on the label on the decoders. Page 192 ovErviEW oF DECoDEr programming Ports to the right of the two Programming Ports to the two Programming Ports to the two Programming Ports indicate when programming has been module has completed identification of the decoder. completed by showing "Programming DONE". If the decoder red/blue wires are not fully inserted into the malfunctions, the display will show "Programming ERROR". Page 193 ovErviEW oF DECoDEr

progrAMMiNg NoTE: Decoders may be reprogrammed at any time. if it is necessary to change the station numbers previously programming port. the station number(s) will be displayed. Conduct the programming port at any time. Decoder wire runs and connections temperature changes. hunter recommends at least must be completely waterproof. Decoder 5 feet/1.5 m slack for each decoder to allow it to wiring is more critical than "conventional"... Page 195 iNsTALLiNg ThE DECoDErs Identify the color-coded wires on the decoder. The red Each pair color-coded decoder output wires operates and blue wires connect to the red and blue wire path from one or two solenoids up to 100 feet/33 m away (greater the controller. 4" x 36" x 0.0625" (100 mm x 2.4 m x 1.58 mm). A 25-foot (8 m) continuous length Hunter DUAL-S surge arrestors must be used on all DUAL (no splices allowed unless using exothermic welding process) of 6 two-wire systems. LighTNiNg proTECTioN AND groUNDiNg in-Line surge Arrestor installation End of Line surge Arrestor installation for the DUAL-S surge arrestor. Page 198 LighTNiNg proTECTioN AND groUNDiNg in-Line Surge Arrestor installation Solid bare copper shielding wire, 8 feet (2.5 m) away, 36" (1 m) below ground level. Surround plate evenly with PowerSet material. DiAgNosTiCs The DUAL decoder module has features and diagnostics to Find solenoid Function help you troubleshoot installation issues and check the status of The "Find Solenoid" function allows the users to activate solenoid operation. Basically, two functions are available to the the solenoid of a single station in a mode the produces a user in the Diagnostic mode: "chattering"... Wireless programmer If one or more station numbers are listed on the display, troubleshoot those stations. If there is no station number, This Hunter product allows wireless connections. With DUAL decoders, even when they are wired into field installations. Page 201 TroUbLEshooTiNg Press the Mode (center) button on the DUAL48M control Observe the current draw with no stations running. Divide panel. Select "Diagnostics" with the arrows, and press the current draw by the number of decoder modules Mode to select. "Line Fault" when no stations are running, the most likely cause is a direct short between the two wires in the two wires in the two wires in the two wires in the decoder-to-solenoid wiring for the affected stations. Page 203 TroUbLEshooTiNg * Current Draw Too Low: In a low current situation, the controller If No Stations Will Activate: will retry the command to the station number when it is power is on to the DUAL48M module (display appears). Page 204 TroUbLEshooTiNg Clear Fault Alarms Press the - button on the ICore facepack to clear the Fault message and/or Alarm light. Special Notes: ICore Decoders are not compatible with mechanical relays. When combining DUAL48M with conventional ICore station output modules, not all stations will be available for decoder addressing. Page 205 NoTEs... Page 206 NoTEs... Page 207 The irrigation innovators • © 2010 Hunter Industries Incorporated 1940 Diamond Street San Marcos, California 92078 USA LIT-533 9/10 • www.hunterindustries.com... Page 208 Commercial Irrigation Controller RAIN SENSOR ACTIVE BYPASS SYSTEM OFF SET CURRENT DATE / TIME MANUAL OPERATION SET PROGRAM START TIMES SETTINGS SET STATION RUN TIMES ADVANCED FEATURES SET DAYS TO WATER SET SEASONAL ADJUSTMENT SET SENSOR OPERATION SET PUMP OPERATION CYCLE AND SOAK Owner's Manual and Installation Instructions IC-600PL 6-station Controller expandable to 30 stations, Plastic Cabinet... Page 210 Bypassing the Sensor(s) InTrOduCTIOn The Hunter I-Core controller is a full-featured controller .10 Sensor Bypass Switch for demanding commercial and high-end residential applications. Versatility is what makes the I-Core one of Hunter's highest performing irrigation controllers. I-Core WIrIng COMpartMent and InTerIOr battery Compartment (9-volt alkaline battery) - The alkaline battery (not included) keeps time during power outages. The user may also program the controller without AC power. battery Compartment (CR2032 3-volt lithium) - The lithium battery provides backup timekeeping during power outages and when the 9-volt is not installed (location is on the back of the facepack). MOunTIng The COnTrOller TO Wall Wall Mount for plastic and Metal Cabinet All necessary mounting hardware is included with your controller and should be suitable for most installations. Tools required: • Long drill bit and extension) -... MOunTIng The COnTrOller (MeTal pedestal Mount for Metal/stainless Cabinet ½" (13 mm)Conduit Nut 2" (50 mm)Conduit Nut Location requirement: A) A switch or circuit-breaker shall be included in building installations; B) the switch or breaker shall be in close proximity ½"... COnneCTIng aC power noTe: It is recommended that a licensed electrician perform the following power installation. The I-Core can operate with either 120VAC or 230VAC power. Supply wires must be 14AWG or larger. Turn AC power off at the source, and verify that it is off. Remove the cover from the primary AC power, and is used to ground incoming surges from the communications and output valve wires. Do NOT connect the primary AC 120/230V electrical ground wire to the earth ground lug. COnneCTIng The pOWer and sTaTIOn MOdules station module for six stations. Additional station modules may be Open the inner facepack door and locate the Slide Lock. Move the added in six station increments to expand the controller's station capability. Each station output is rated for 0.56A max, or enough to operate two controller will result. Hunter AC solenoids simultaneously. Route valve wires between Master Valve or Pump Start Relay location Route valve wires between controller. COnnecTIng a WeaTher sensor (OpTIOnal and nOT Included) The I-Core Controller has the ability of connected and the jumper wire has been removed, the display on the I-Core will indicate that the sensor is ACTIVE. COnneCTIng a hunTer sOlar sync is a "smart" controller's station run times based upon changes in local climate conditions. The Solar Sync is a solar and temperature sensor to determine evapotranspiration, also known as ET. The I-Core is designed to operate primarily with the Hunter HFS Flow Sensor, route the pair of 18 AWG (1 mm) wires from the sensor into the cabinet (max distance of 1,000 ft.). Refer to the remote control owner's If there are stations within the program that follow this station numerically manual for further information on how to operate your Hunter remote. and are NOT programmed to the sensor, these stations will run and the... pOWer failures. Due to the possibility of power failures, the I-Core has nonvolatile memory to preserve programming data indefinitely. The 9-volt battery is not installed), will maintain the current time and day during power outages. 1. the rest of the start times 2 through 8 would be left blank --:--. The I-Core controller has the ability to operate five Hunter valves at one time, and, therefore, allows for more than one program to run at the same time. COnTroller program to run at the same time. COnTroller program to run at the same time. specific days of the week. (For example, Odd Days 1st, 3rd, 5th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) the displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) the displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and run time will be displayed in the lower right corner of Even Days 2nd, 4th, 6th, etc.) and the lower right corner of Even Days 2nd, 4th, 6th, etc.) and the lower right corner of Even Days 2nd, 4th, 6th, etc.) and the lower right corner of Even Days 2nd, 4th, 6th, etc.) and the lower right corner of Even Days 2nd, 4th, 6th, etc.) and the lower right corner of Even Days 2nd, 4th, 6th, etc.) and the lower right corner of Even Days 2nd, 4th, etc.) and the lower right corner of Even Days 2nd, 4th, etc.) and the lower right corner of Even Days 2nd, 4th, etc.) and the lower right corner of Even Days 2nd, 4th, etc.) and the lower right corn controller. This provides for the maximum amount of water saving while promoting healthy plant material. COnTrOller prOgraMMIng (COnTInued) Cycle will flash OFF. Use the + / - button to set the Cycle time. You The Solar Sync will take over and the percentage will change according to the findings of the Solar Sync sensor. If you set seasonal adjust mode to may select a maximum Cycle time of up to 60 minutes. Page 228 COnTrOller prOgraMMIng (COnTInued) Rotate the dial to the set sensor operation. Use the sensor response. The default is to have the sensor input active for each station, therefore indicating a . Turn the dial to run, and the station will begin irrigating. program or station at the same time, because the I-Core has the ability to Up to five stations or events at once. To initiate multiple events, you... COnTrOller prOgraMMIng (COnTInued) If the user has not selected a station's flow to be monitored the controller Once the correct station number is displayed, turn the dial to Run. Again, will display no flow testing for that particular station. The Sensor Configure feature allows you to program the SEN1 or SEN2 terminals to accept a Hunter Clik-type sensor, a Solar Sync sensor, an HFS flow sensor, or a non-Hunter flow sensor. It is important to program the correct flow sensor. It is important to 300% of Expected Flow. During system operation, if the station flow exceeds the Overflow limit, the controller will shut the system down and begin diagnostic testing. adVanCed feaTures (COnTInued) station turns on. This is very helpful on systems with slow closing valves, or on pump systems that are operating near maximum flow or have slow well recovery. adVanCed feaTures (COnTInued) To save your watering Time feature displays the total run time of all stations V to select easy retrieve Memory and use the + button to enter. in a particular Program. adVanCed feaTures (COnTInued) Use the V button to select point B. To reset reference point B. The V to select point B. To reset reference point B. To reference point B. To referenc the contrast of will change to the current date and the gallons will be set back to 0. prOgraMMIng solar synC seTTIngs The table will assist you in identifying the type of region, along with typical ET and temperature characteristics. It is recommended that, if possible, the region be chosen based upon average July ET or peak summer ET (inches/mm per day). prOgraMMIng sOlar sync Sensor is installed the controller will begin I-Core with built in Solar Sync has the ability to delay the automatic, daily collecting ET data This ET data can be erased/cleared if desired. update of the seasonal adjustment value from Solar Sync for up to 99 days. hIdden feaTures The stations run time will be flashing. Use the a or b buttons to select the programmable rain Off allows the user to set period of time in which use the + / -... Page 239 (COnTInued) The Learn Expected Flow display will also indicate if there is a problem with For non-Hunter flow sensors, Custom 1, Custom 2, or Custom 3 (Metal any programming. If station run times were not programmed in the set Version I-Core) can be selected as a flow sensor type COnTrOller diagnOsTICs and TrOubleshOOTIng system status dashboard station status. The System Status Dashboard is a guick reference indicator that uses LED The Status light monitors and indicates whether a station lights to provide system status information regarding sensor status, value is operating normally or if an overcurrent condition for a particular station operation, and flow monitoring. Page 241 COnTrOller diagnOsTICs and TrOubleshOOTIng (COnTinued) Once a minute has passed, the controller will again activate the station (the The I-Core can activate stations simultaneously. After the Start Delay display will still indicate that it is Isolating the Flow Alarm). After the Start elapses for the flow monitored station, if the controller detects overflow, Up delay has elapsed, if the station flow resembles the learned flow, the it will initiate a diagnostic testing procedure. QuICK Check 18 an efficient and effective way to diagnose problems in the field. Instead of having to physically check each field wiring circuit for potential problems, the user can run the Hunter Quick Check circuit test procedure. TrOubleshOOTIng problem Causes solutions No display. Check AC power to controller. Fix power supply. 14-Pin connector is not fully connected. Connect ribbon cable on back of facepack door. Module locking bar is in the Power Off Slide the module locking bar into the Power On position. Page 244 TrOubleshOOTIng problem Causes solutions Rain or other Clik sensor ports. down system. (Jumper installed). Verify that one wire from each sensor is to each SEN1 or SEN2 terminals. I-COre: InsTITuTIOnal/COMMerCIal COnTrOller (IC-600pl & IC601pl) - plasTIC CabInet 117805 RAIN SENSOR ACTIVE BYPASS SET CURRENT DATE / TIME SYSTEM OFF Door Without Lock, Plastic I-Core 131305 MANUAL OPERATION SET PROGRAM START TIMES SETTINGS SET STATION RUN TIMES... I-COre: InsTITUTIOnal/COMMerCIal ConTrOller (IC-8009 & IC-80098) - MeTal CabIneT Item Description Catalog No. Front Panel 124705 Knob 129300 RAIN SENSOR ACTIVE BYPASS SYSTEM OFF SET CURRENT DATE / TIME Door Without Lock, Metal I-Core 125500 MANUAL OPERATION SET PROGRAM START TIMES SETTINGS SET STATION RUN TIMES ADVANCED FEATURES... I-COre plasTIC pedesTal Item Description Catalog No. I-Core Front Panel 12475 552200 Hinge Pin 558400 Access Door 553200 Lock & Key Set (2) 122516 SmartPort Bracket 576000 Mounting Template 558600 Mounting Hardware 420200 Smart Port Wiring Harness SRR-SCWH 25' Shielded Cable Ribbon Cable - Plastic Ped I-Core... specIfICaTIOns Operating specifications • Station Run Time: 1 minute to 12 hours (in 1-minute increments) on programs A, B, C, D. • Start Times: 8 per day, per program (A, B, C), 16 per day (D), for up to 40 daily starts. •... Page 249 nOTes

... Page 251 Industries Incorporated The Irrigation Innovators • © 2011

Hunter Industries Incorporated 1940 Diamond Street San Marcos, California 92078 USA LIT-502 3/11 • www.hunterindustries.com... Page 252 Pro-C Residential and Light Commercial Irrigation Controllers PC Series Modular Controller 1000r/Outdoor Models Owner's Manual and Installation Instructions Please leave with property owner ®...11 TROUBLESHOOTING AND SPECIFICATIONS CONTROLLER PROGRAMMING Page 254 Pro-C . AND OPERATION Troubleshooting Guide Page 255 A. - LCD Display C. - Control Dial 1. Program Selector - Identifies the program in use A, B, or C. Run - Normal dial position for automatic operation. 2. Station Number - Identifies currently selected station number. Set Current Date/Time - Set current date .. All necessary hardware is included for most installations. NOTE: The indoor Pro-C is not weather or water resistant, and must be installed indoors or in a protected area. This device is not intended for use by young children. ConneCTInG ValVes and aC PoWer ... time. 3. MoUnTInG THe ConTroller To a Wall .1. Route valve wiresInstalling PCM Modules The Pro-C controller is supplied with a between control valve location and controller. NOTE: It is recommended that a licensed 2. At valves, attach a common wire to either solenoid wire of all valves. electrician perform the following power This is most commonly a white colored wire. InsTallInG sTaTIon ModUles factory-installed base module for up to 3 stations. Additional modules may be added in increments The Pro-C controller is designed with a simple to use Power Lock feature of 3 stations (PCM-900) to expand the that assures that the modules are energized and firmly secured into the controller's station capability to 15 stations. ConneCTInG THe battery (optional)Connect a 9-volt alkaline battery (not included) to the battery terminals and place in the battery terminals and place in the battery compartment in the front panel. The battery terminals and place in the battery allows the user to program the controller without AC power. Watering will not occur without AC power. Watering will not occur without AC power. the program clock and calendar will be retained during a power outage even if no battery is installed. Do not connect the controller, a pump is to be operated by the controller, a pump is to be operated by the controller directly to the pump - damage to controller will result. When a pump is to be operated by the controller directly to the pump is to be operated by the controller directly to the pump - damage to controller directly to the pump - damage to controller directly to the pump is to be operated by the controller directly to the pump is to be operated by the controller directly to the pump - damage to controller directly to the pump - damage to controller directly to the pump is to be operated by the controller directly to the pump - damage to controller directly to the pump - damage to controller directly to the pump is to be operated by the controller directly to the pump - damage to controller directly to the pump - dama Series... ConneCTInG a WeaTHer sensor (not included)A Hunter Mini-Clik rain sensor or other type of micro-switch weather ® SENSOR BYPASS position to disable the rain sensor from the system sensor may be connected to the Pro-C. The purpose of a rain sensor is to allow for the controller operation. ONE TOUCH MANUAL START (see page 20). During the Manual Cycle, pressing the test button on the Mini-Click will interrupt watering. ConneCTInG to THe HUnTer solar sYnC The SmartPort harness housing... (part #SRR-SCWH) with a full 25 feet (7.6 meters) of shielded cable. ConneCTInG to THe HUnTer solar sYnC The Solar Sync is a sensor system that, when connected to Hunter Pro-C, will automatically adjust your controller watering based upon SOLAR SYNC SENSOR changes in local climate conditions. PoWer fallUresDue to the possibility of power failures, the controller has non-volatile memory to preserve the program indefinitely. There is no default program. The Pro-C is also capable of keeping the current time and date for an extended period of time during power outage conditions. sPrInKler systems that are involved with all automatic can be pumped to the location. Each valve is connected via wire to the sprinkler systems that . 1. Select a program (A, B, or C) by pressing We realize that many consumers will have variations in their plant watering needs, so at Hunter we button on the controller (it is equipped the Pro-C with three different programs A, B, and C. These programs are independent recommended to start with Program A). Pro-C ProGraMMInG THe Setting Program Start Times NOTE: If a program has all four start times turned off, 1. Turn the dial to the SET then that program details are PROGRAM START TIMES retained). ProGraMMInG THe ConTroller (continued) Selecting Specific Days of the Week to Water Selecting Interval Watering 1. Press the button to activate a particular day of the week to water This feature is convenient if you want to (the display always starts with Monday). Press the button to have a more consistent watering schedule cancel watering for that day. ProGraMMInG THe ConTroller (continued)Set Pump/Master Valve Operation 4. Turn the dial back to the RUN position at which time, OFF, a number and the DAYS The default is for all stations to have the icon all remain on. the button for 2 seconds. 2. This feature automatically defaults to program A. You can select program B, or C by pressing program. adVanCed featUres Program Customization Programmable Delay Between Stations The Pro-C comes factory configured with 3 independent programs (A, B, This feature allows the user to C with four start times each) for different plant type requirements. The insert a delay between when Pro-C master valve/pump start circuit ON. The 5. HIdden featUres can be customized to display only the required programs. Page 276 HIdden featUres (continued) Programable Sensor Override When the Pro-C receives an input from the sensor to disable watering, the display will indicate those The Pro-C allows the user to program the controller so that the sensor stations that have been programmed to override disables watering on only desired stations. Page 277 When a field wiring short is detected, an ERR symbol preceded by the station number will momentarily flash on the controller LCD display. After the Hunter Quick Check completes running this circuit diagnostic procedure, the controller returns to... TroUblesHooTInG GUIde PROBLEM CAUSES SOLUTIONS The controller repeats itself or continu- Too many start times (user error). Only one start time per active program Start on (cycling repeatedly). Page 279 TroUblesHooTInG GUIde (continued)PROBLEM CAUSES SOLUTIONS The display reads "SENSOR OFF". The rain sensor is interrupting irrigation or Slide the Rain Sensor switch on front panel the sensor jumper. sPecIfICaTIonsOperating Specifications • Station Run Time: 1 minute to 6 hours on programs A, B, and C. • Start Times: 4 per day, per program, for up to 12 daily starts. • Watering Schedule: 7-day calendar, interval watering up to a 31-day interval or true odd or even day programming, made possible by the 365-day clock/calendar. This booklet is available from the U.S. Government Printing Office, Washington, D.C., Stock No. 004-000-00345-4 (price - \$2.00) CerTIfICaTe of ConforMITY To eUroPean dIreCTIVes Hunter Industries declares that the irrigation controller Model Pro-C complies with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the European dIrecTIVes Hunter Industries declares that the irrigation controller Model Pro-C complex with the standards of the Page 289 A. - LCD Display C. - Control Dial 1. Program Selector - Identifies the program in use A, B, or C. Run - Normal dial position for automatic operation. 2. Station Number - Identifies currently selected station number. Set Current Date/Time - Set current date time. 3. MoUnTInG THe ConTroller To a Wall All necessary hardware is included for most installations. NOTE: The indoor Pro-C is not weather or water resistant, and must be installed indoors or in a protected area. This device is not intended for use by young children. ConneCTInG ValVes and aC PoWer1. Route valves between control valve location and controller. NOTE: It is recommended that a licensed 2. At valves, attach a common wire to either solenoid wire of all valves. electrician perform the following power This is most commonly a white colored wire. ConneCTInG THe baTTerY (optional) .Connect a 9-volt alkaline battery (not included) to the battery terminals and place in the battery compartment in the front panel. The battery allows the user to program the controller without AC power. Watering will not occur without AC power. Since this controller has non-volatile memory, the program clock and calendar will be retained. during a power outage even if no battery is installed. Do not connect the controller directly to the pump - damage to controller will result. When a pump start relays for most applications. PSR Series... ConneCTInG a WeaTHer sensor (not ...A Hunter Mini-Clik rain sensor or other type of micro-switch weather ® SENSOR BYPASS position to disable the rain sensor is to allow for the controller operation. ® allowing for fast and easy use of 4. Attach the red wire to the bottom most AC1 the included) Hunter SRR, or Long Range " Thread screw slot, attach the white wire to the upper ICR remote controls. The SRR... #SRR-SCWH) with a full 25 feet of shielded cable. ConnecTInG To THe HUnTer eT system allows irrigation programs to be created automatically, based on local climate conditions. These programs are then loaded into the controller and run automatically. ET System uses a sensor to determine the local "evapotranspiration"... It's able to team with any or all of the standard be handled directly at each site's controller. and soak operations, and more can now the ICC. sPrInKler sysTeM fUndaMenTalscan be pumped to the location. Each valve is connected via wire to the There are three main components that are involved with all automatic controller. Here the wire is connected to a number that corresponds to sprinkler systems that are made today. realize that many consumers will have variations in their plant watering needs, so at Hunter we button on the controller (it is equipped the Pro-C with three different programs A, B, and C. These programs are independent recommended to start with Program A). Pro-C ProGraMMInG THe ConTroller Residential and Light Commercial Irrigation Controllers Setting the Current Date and Time The display changes when PCC Series Controller the dial is rotated to indicate 1. Turn the dial is rotated to seconds. 2. This feature automatically defaults to program A. You can select program B, or C by pressing program. adVanCed featUresSet Pump/Master Valve Operation 4. Turn the dial back to the RUN position at which time, OFF, a number and the DAYS The default is for all stations to have the icon all remain on. master valve/pump Program Customization Programmable Delay Between Stations The Pro-C comes factory configured with 3 independent programs (A, B, This feature allows the user to C with four start times each) for different plant type requirements. The insert a delay between when Pro-C can be customized start circuit ON. The 5. HIdden featUres to display only the required programs. Page 309 HIdden featUres (continued) Programable Sensor Override When the Pro-C receives an input from the sensor to disable watering, the display will indicate those The Pro-C allows the user to program the controller so that the sensor stations that have been programmed to override disables watering on only desired stations. Page 310 When a field wiring short is detected, an ERR symbol preceded by the station number will momentarily flash on the controller returns to... TroUblesHooTInG GUIde CAUSES SOLUTIONS The controller repeats itself or continu- Too many start times (user error). Only one start time per active program is ously waters, even when it should not be required. Refer to "Setting Program Start on (cycling repeatedly). Page 312 TroUblesHooTInG GUIde (continued) PROBLEM CAUSES SOLUTIONS The display reads "SENSOR OFF". The rain sensor is interrupting irrigation or Slide the Rain Sensor switch on front panel the sensor jumper is not installed. to the BYPASS position to bypass rain sensor circuit, or install the sensor jumper. SPeCIfICaTionsOperating Specifications • Station Run Time: 1 minute to 6 hours on programs A, B, and C. Start Times: 4 per day, per program, for up to 12 daily starts. • Watering Schedule: 7-day calendar, interval or true odd or even day programming, made possible by the 365-day clock/calendar. Page 314 This booklet is available from the U.S. Government Printing Office, Washington, D.C., Stock No. 004-000-00345-4 (price - \$2.00) CerTIFICaTe of ConforMITY To eUroPean dIreCTIVes Hunter Industries declares that the irrigation controller Model Pro-C complies with the standards of the European Directives of "electromagnetic compatibility" 87/336/EEC and "low voltage" 73/23/EEC. Page 316 Rain Sensor Shutoff for Automatic Irrigation Systems Owner's Manual and Installation Instructions Wireless Rain-Clik WR-CLIK Wireless Rain/Freeze-Clik WRF-CLIK... Page 317 Table of ConTenTs Features6 Mounting the Transmitter10 Adjustments and Operation include: 1. Quick Response - Unique technology that Wireless Rain/Freeze-Clik (WRF-CLIK) - The 1 trigation system immediately Wireless Rain/Freeze-Clik includes a freeze rather than after it has accumulated a fixed sensor that is designed to keep the irrigation amount of rain. Page 319 Wireless rain-Clik ComponenTs 1 3. Radio Antenna - Transmits a wireless signal Wireless rain-Clik Transmitter 1 to the receiver up to 1. Manual Test Spindle - Press and hold 800 ft. (275m). It is the manual test spindle to confirm proper recommended that the operation of your transmitter. Page 320 Wireless rain-Clik ComponenTs 1 Blue/Orange Wires (used for normally open Wireless rain Clik receiver ¹ sensor applications) 1. Bypass Button - Allows automatic or manual 7. Rubber Cover - Used to protect the receiver watering when the sensor is active. when mounted in outdoor locations. 2. Page 321 The receiver watering when the sensor is active. Attach the two yellow wires to the AC terminals. receiver to a hunter aCC iCC and i-Core 1. Connect the blue and white wire to any of the four Sensor Terminal pairs (Sen 1 shown). 1. Remove the sensor jumper across the two 2. Page 323 mounTing The reCeiver Wiring the receiver to other Controllers: normally Closed sensor applications 1. Attach the blue and white wire to the sensor terminals. 2. Attach the blue and white wire to the sensor terminals (if available) or in-line with the valve common wire. Page 324 mounTing The reCeiver normally open sensor applications Pump A few controllers on the market require AC AC normally open rain sensors. To attach the receiver to this type of controller, attach the blue and orange wire to the sensor input. SENSOR BYPASS Red light indicates sensor is bypassed... Page 325 mounTing The TransmiTTer standard mounting gutter mounting (optional) Using the screws The sensor gutter provided with your mount can be sensor, mount the purchased as an transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs and operaTion hints for mounting the transmitter on any optional accessory surface where it for your Wireless Rain-Clik (order 1... Page 326 adjusTmenTs adjusTme building or post. The closer the transmitter is Freeze-Clik model is important for accurate to the receiver, the better the reception. Do temperature sensing. Page 327 adjusTmenTs and operation 2. SENSOR BYPASS LED: RED - Rain sensor is bypassed (even though There is nothing to set up with the the sensor is bypassed, the STATUS LED Wireless Rain-Clik M will continue to alert you of the sensor (wet or dry). Page 328 adjusTmenTs and operaTion bypassed by using the built in bypass feature on the receiver. To Each transmitter is produced with a unique bypass the sensor, press the SENSOR BYPASS address. Page 329 adjusTmenTs and operaTion 1. Prior to applying power (yellow wires) to the battery life receiver, press and hold the bypass button on The Wireless Rain-Clik transmitter is ** the receiver. designed to operate up to ten years with 2. While the bypass button is depressed, it's sealed, maintenancefree battery. Page 330 adjusTmenTs and operaTion To check the status of the battery in the system will not come on at all: transmitter: • Check to make sure that the sensor discs are dry and the system will not come on at all: transmitter: system will not shut off even after sensor bypass led is flashing red: heavy rainfall: • Check that the battery in the transmitter is good (See page 15). • Remove the sensor jumper across the two • Check for obstructions around the transmitter is good (See page 15). subject to the following two conditions: 1. This device may not cause harmful interference and 2. This device must accept any interference received, including interference received, including interference and 2. This device must accept any interference received, including interference and 2. This device must accept any interference and 2. This device must accept any interference received, including interference and 2. This device must accept any interference and 2. This device must accept accep WR-Clik-R COMPLIANCE TEST REPORT NUMBER B00217D3 COMPLIANCE TEST REPORT DATE Jan. 29, 2010 RESPONSIBLE PARTY Hunter Industries Incorporated ADDRESS 1940 Diamond St. San Marcos, CA 92078 TELEPHONE 760-744-5240 This equipment has been tested and found to comply with the limits for class B digital devices, pursuant to part 15 of the FCC Rules. Page 334 fCC deClaraTion of ConformiTY If this equipment does cause harmful interference to radio or television reception, please refer to you user's manual for instructions on correcting the problem. The undersigned, hereby declare that the equipment specified above conforms to the above requirements Signature: Place: San Marcos, CA Full Name: Peter Woytowitz... Page 335 indusTrY of Canada noTiCe Sensor - IC:2772A-WRCER Receiver - IC:2772A-WRCER Operation is subject to the following two conditions: 1. This device may not cause harmful interference and 2. This device may not cause harmful interference and 2. This device may not cause harmful interference and 2. This device may not cause harmful interference that may cause undesired operation. Page 336 Ce & ausTralia noTiCe Hunter Industries hereby declares that this remote control device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/CE. Declaration of Conformity: We, Hunter Industries Incorporated, 1940 Diamond Street, San Marcos, CA 92078, declare... Page 337 noTes... Page 338 noTes... Page 339 The irrigation innovators © 2011 Hunter Industries Incorporated • 1940 Diamond Street San Marcos, California 92078 USA P/N 715182 23-594 02/11 • www.hunterindustries.com... Page 340 Residential Irrigation Controller Owner's Manual and Programming Instructions Compatible with Hunter to 4 hours Run times Allows 1 to 4 start times to be set in each program start times station number... Page 345 Use to attach transformer, sensor, and valve wires from their source to the controller Reset Button Use to reset the controller (located on side of controller) Allows for connection of Hunter SmartPort and Hunter Remote Controls ® sensor Bypass switch Ignores "Clik"... Page 346 X-CorE CompoNENTs Dial settings Normal dial position for all controller automatic and manual operation Allows user to set each valve. station run time from 1 minute to 4 hours... THE CoNTrollEr To Wall Note: the indoor version of the X-Core is not water- proof or weather resistant, and must be installed indoors or in a protected area. 1. Secure one screw into the wall. Install screw anchors if attaching to drywall or masonry wall. CoNNECTING ValVEs aND TraNsformEr Installation of the X-Core should only be done by trained personnel. Valve 4 1. Route valve wires between the control valve location and controller. 2. At valves, attach a common wire to either solenoid wire on all valves. THE baTTEry After installing your X-Core, make sure to remove the battery contact insulator to allow the X-Core to keep time in the event of a power outage. CaUTION: RIsk OF eXPLOsIOn IF BAtteRy Is RePLACeD By An InCORReCt tyPe. DIsPOse OF UseD BAtteRies ACCORDInG to the InstRUCtIOns. CoNNECTING a masTer Valve, attach the common wire to either solenoid NoTE: Complete this section only if you have a wire of the valve. Attach a separate control wire to the remaining master valve installed in your irrigation system. A solenoid wire. CoNNECTING a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the controller to actuate a separate electrical circuit to energize a pump start relay is a device that uses a signal from the control electrical circuit to energize a pump start relay is a device that uses a signal from the control electrical circuit to energize a pump start relay is a device that uses a signal from the control electrical circuit to energize a pump start relay is a device that uses a signal from the control electrical circuit to energize a pump start relay is a device that uses a signal from the control electrical circuit to energize a pump start relay is a device that uses a signal from the control electrical circuit to energize a pump start relay is a device that uses a signal from the control electrical circuit to electrical circuit to energize a pump s system. CoNNECTING a HUNTEr "Cllk" WEaTHEr sensor or other micro-switch type weather sensor or other micro-switch type weather sensor deactivated automatic watering, is to stop automatic watering when weather conditions dictate. CoNNECTING a HUNTEr solar syNC ET sENsor The X-Core is compatible with the Solar Sync and Wireless Solar by using the buttons (refer to page 13 for explanation Sync Region setting). Use the button to advance to the adjust the X-Core controller's watering schedule (based on... CoNNECTING a HUNTEr solar syNC ET sENsor region Use the following table for choosing your region. Uninstalling a solar sync sensor Water adjustment If a Solar Sync sensor has been installed on the X-Core controller will be adjustment of the Seasonal Adjust value from the seasonal adjust value from the seasonal adjust value used by the controller will be adjustment of the Seasonal Adjust value from the seasonal Adjust value from the seasonal adjust value used by the controller will be adjustment of the Seasonal Adjust value from the seasonal Adjust valu CoNNECTING a HUNTEr solar syNC ET sENsor Calibration/setup After Solar Sync has been installed and programmed, it is recommended to allow the system to run for a few days at the initial setting. Because of the variety in site conditions (including sensor location, amount of direct sunlight available to the sensor, reflective heat from surrounding sensor location. structures, etc), the initial setting may require adjustment in order to arrive at the desired performance. (not included). The SmartPort ® wiring harness (included with all • Red wire to left side "24VAC" terminal Hunter remotes) allows for fast and easy use of the Hunter controls. make it possible for you to operate the system • Blue wire to "REM" terminal without having to walk back and forth to the controller. THE CoNTroller The X-Core display shows the time and day when the controller. THE Controller is NoTE: A basic programming rule is that whatever idle. character is flashing will be the item specific programming information to enter. 2. The display will show the last program morning, afternoon, or evening watering cycles. selected (A, B, or C). You can switch to start times may be entered in any order. the X-Core another program by pressing the button. WATER DAYS will automatically sort them. proGrammING THE CoNTrollEr selecting specific Days of the Week to Water selecting Interval Watering from 1 to 31 days. MO), press the button to activate 1. THE CoNTrollEr selecting specific day With this option you can select (the cursor will always start with interval watering from 1 to 31 days. MO), press the button to activate 1. THE CoNTrollEr selecting Security Sec you to program a No Water Day(s). This feature Valves currently watering will be shut off after SYSTEM OFF is useful to inhibit watering on specific day(s). For example, if you... THE CoNTrollEr seasonal adjustment is used to make global run time changes When using a Hunter "Clik" weather sensor, the Seasonal without reprogramming the entire controller. To use the Seasonal Adjustment value can be adjusted as described. proGrammING THE CoNTrollEr manually run a single station one Touch manual start and advance 1. Turn dial to MANUAL - One stAtIOn position. You can also activate all stations to water without using the dial. 2. Station run time will flash in 1 Test program of all stations The X-Core allows the user to program the controller so that the The X-Core is capable of saving the preferred watering program This feature allows the user to insert a delay between stations into memory for retrieval at a later time. This feature allows for a between when one station turns off and the next one turns on. TroUblEsHooTING GUIDE problem Causes solutions The controller is continuously watering Too many start times have been Only one start time is necessary to activate a program programmed (refer to Setting the Program Start Times on page 18) There is no display check AC power wiring Correct any errors The display reads "No AC"... TroUblEsHooTING GUIDE problem Causes solutions Display shows a station is running but The sensor is interrupting irrigation, Check the sensor override status (see page 23) icons are flashing however the station has been programmed to override the sensor Automatic irrigation does not start at • AM/PM of time of day not set correctly • Correct AM/PM of time of day the start time and controller is not in the... Page 368 TroUblEsHooTING GUIDE problem Causes solutions Seasonal Adjust seems high • Region too low Decrease the value of the Water Adjustment setting. If you minimize the Water Adjustment setting too high require reduced seasonal adjustment, move up one Region (from 2 to 3, for example) and start at Water Adjustment setting 5. Use CR2032 3-volt. • Simple manual operation Electronic short circuit protection • Sensor override by station • Non-volatile memory for program data • Programmable rain delay (1 to 7 days) • UL Listed • Manual Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) • Model X-Core-x00 has an IP2X Rating • Automatic Seasonal Adjustment (10% to 150%) soap and water • Sensor bypass switch Explanation of symbols • X-Core-x00 for outdoor use. X-Core-x00 for outdoor use = AC • Sea level to 6500 ft (2000 m) at -13° F to 140° F (-25° C to 60° C) = Consult Documentation... CErTIfICaTE of CoNformITy To EUropEaN DIrECTIVES Hunter Industries declares that the irrigation controller Model X-Core complies with the standards of the European Directives of "electromagnetic compatibility" 87/336/EEC and "low voltage" 73/23/EEC. Project Engineer This product should not be used for anything other than what is described in this document. This product should only be serviced by trained and authorized personnel Page 371 Hunter Industries Incorporated The Irrigation Innovators • © 2011 Hunter Industries Incorporated 1940 Diamond Street San Marcos, California 92078 USA INT-784 9/11 • www.hunterindustries.com... Resetting a Hunter X-Core is easy. To reset the irrigation controller, all you need to do is press the negative, the hand and the program keys at the same time, then use a small tool to press in the small reset button on the side of your controller. A small screwdriver or a pen will do the trick. Why does my Hunter X-core sprinkler system run twice? X-Core - Station Repeats A common reason for a controller to repeat a cycle is too many programmed start times. Only one start time per active program is required, a second start time will cycle the program an additional time. How do you program a Hunter X-Core Sprinkler System Step 1: Set The Current Time. First, you will want to ensure that the current time is correct. Step 2: Set the Start Times. Next, turn the dial to "Start Times". Step 3: Set the Run Time. Step 4: Set the Watering Days. Step 5: Test Coverage. Step 6: Finished! Why do my sprinklers come on twice? A common reason why a program is repeating is that you have a second start time set. The start times control the exact time your ESP-Me timer will begin to water and they also control how many times a dav vour timer will water. The ESP-Me allows vou to set up to 6 start times per program. Why did my sprinklers stop working? One of the most common problems is a clogged nozzle. Other times the nozzle may be irreversibly damaged, so a new one is needed. If cleaning or replacing the nozzle doesn't fix the problem, the next place to look is at the actual head. In these cases, your sprinklers might drip water instead of spraying it. When to reset the Hunter X core controller? Your controller? Your controller? Your controller? to factory settings? X-Core 1 Press and hold down the, and buttons. 2 Press and release the RESET button on the right side of the controller. 3 Wait 2 seconds and release the, and buttons. The display should now show 12:00am. All the memory has been cleared and the controller may now be reprogrammed. How do I Reset my Hunter Industries controller? Press and release the RESET button on the right side of the controller. Wait 2 seconds and release the , and buttons. The display should now show 12:00am. All the memory on my Hunter controller? Press and hold the Programs button, and at the same time press in the recessed Reset button with the tip of a ball point pen. Release the Reset button and continue holding the Programs button until the Reset Memory screen appears (then release the Programs button).