PC Control Installation and Start Up

Specifications

- **Dimensions - Controller**
- 6" W x 9" H x 3" D
- (15.3 cm W x 22.9 cm H x 7.6 cm D)
- **Dimensions - Remote**
- 3" W x 8" H x 2" D
- (7.6 cm W x 20.3 cm H x 5.1 cm D)

- **Power Specifications:**
- **Controller**
- Plug-in Transformer, Class 2, UL Listed,
- CSA Certified (or equivalent)
- • **Input:** 120 V a.c. 50/60 Hz, 0.5 Amps
- • **Output:** 24 V a.c. 50/60 Hz, 20 VA
- **Remote**
- • **Input:** 9 VDC - battery

- **Maximum Load Per Station:**
- 0.4 Amps @ 24 V a.c.

- **Maximum Load For Pump/Master Valve:**
- 0.4 Amps @ 24 V a.c.

- **Total Maximum Output:** One station plus pump,
- not to exceed 0.80 Amps @ 24 V a.c.

- **Temperature Limit Range:**
- Operating – 14°F to 140°F (0°C to 60°C)
- Storage – -22°F to 149°F (0°C to 60°C)

- **Wireless:**
- 902-927 MHz frequency hopping
- up to 1000 ft. range, LOS

- **Computer Interface:**
- USB 1.1
- Windows 98SE or higher

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System Connections

Irritrol SYSTEMS

In the home

In the garage

The PC Control system is made up of three main components; the software disk for the customer's computer, the remote control device (with desktop stand and USB cord) and the 12-station, indoor controller.

The remote relays commands and programming from the computer to the controller .
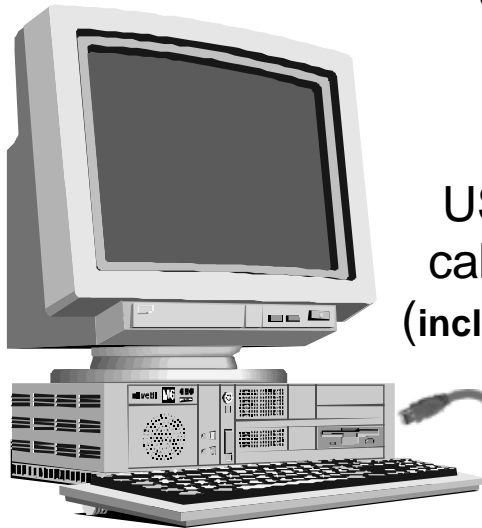
USB cable, (**included**)

Desktop or laptop computer with software

USB module/ hand-held remote control with desktop stand

Irrigation controller with built-in transceiver

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Remote Overview

Shuttle
- Move between segments

Start
- Start currently selected zone

Stop
- Stop all active zones

Auto On
- Resume automatic operations

LCD
– all segments shown

Up Arrow
- Move values upward

Down Arrow
- Move values downward

Lights
- Turn lighting station on/off

Auto Off
- Suspend automatic operations

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![Irritrol Systems logo]
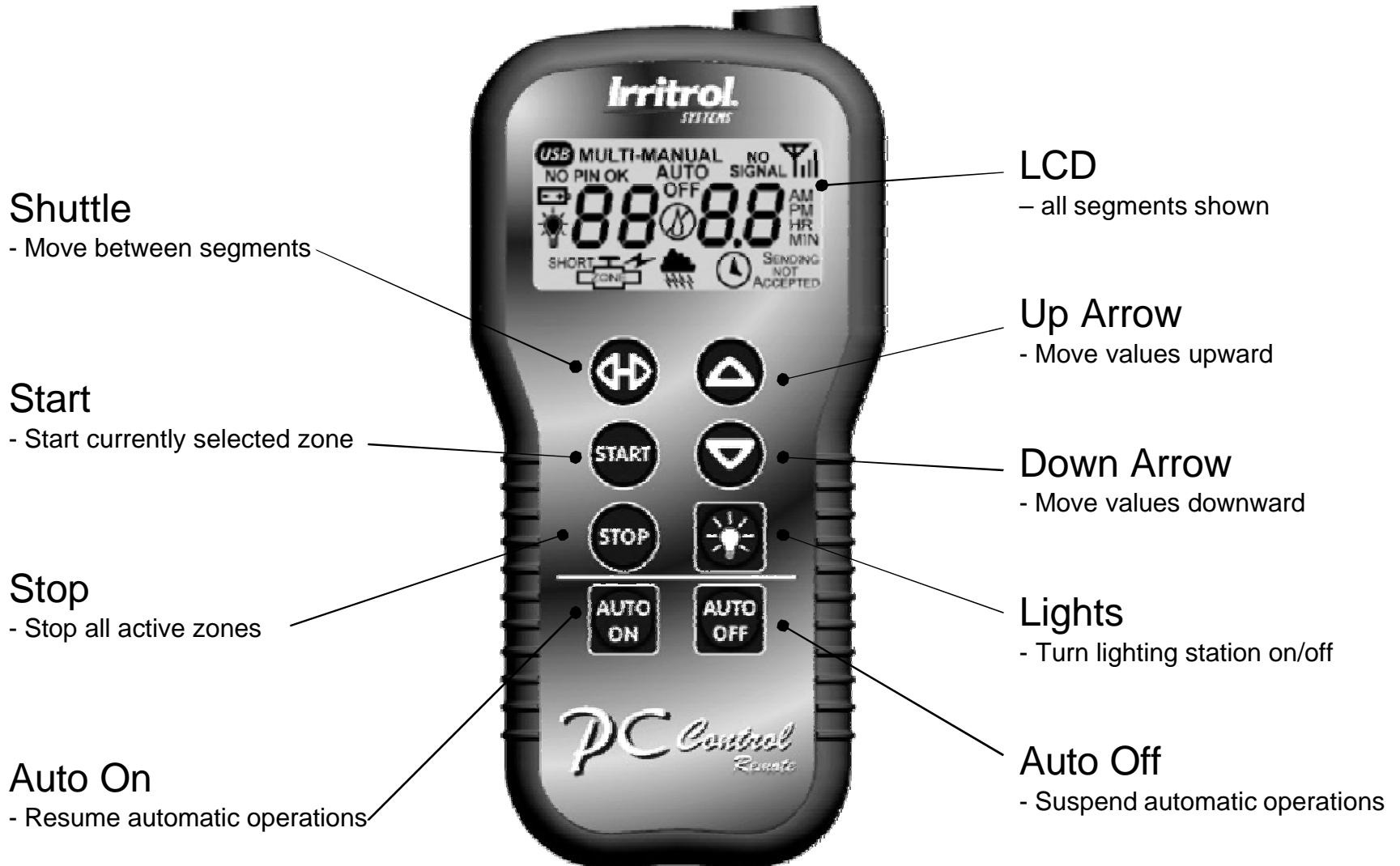
Controller (VCU) Overview

Zone Indicators
- Shows active zones

Hook-up Panel
- Remove for wire installation

Power

Signal Indicator
- Indicates signal quality

Sensor
- Shows an active sensor (flow/rain)

Master Pump/Valve
- Indicates active MP/MPV

Test Indicator
- Lights during test modes

All Stations
- All station run mode

Manual (button/light)
- When manual mode is active

Off (button/light)
- VCU is off

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Here is a quick overview of the installation steps

1. Make sure the computer meets the system requirements.

2. Check to see if the remote and the controller will be within range of each other.

3. Install the controller

4. Connect the remote to the computer

5. Load the software into the computer
   (Details on each step follow)

Make sure the computer meets these System Requirements

- Windows 98SE (second edition)*, 2000, ME, XP Prof, or 2003
- Windows compatible PC with CD-ROM drive
- Available USB port (1.0 or greater)
- 900 MHz CPU
- 64 MB RAM
- 12MB free hard disk space
- 1024x768 64K color display/monitor
- Mouse & keyboard
- Internet capability (preferably high speed)
- Digital photo capability

* The 2nd edition of Windows 98 was the first version to support the USB capability required.

Check the range between the remote and controller

1. **Connect the controller's transformer following these steps**
   - **Do not plug in the transformer!**
   - **First, remove the access cover from the controller by pushing inward on the finger grips on both sides and sliding the cover forward and off the controller.**
   - **Slip the 3-wire cord from the transformer through the small whole on the left hand side of the bottom of the controller's case.**
   - **Pull about 6 inches of cable into the controller and tie a loose, half knot in the cord to prevent it from being pulled back out.**
   - **With a screwdriver, connect the red wire to the left hand terminal on the terminal strip, the black wire to the terminal that is second from the left and the green wire to the third screw terminal from the left.**
   - **Connect the 9-volt battery to the battery clip and replace the access cover.**
   - **Without mounting the controller, you can now plug it in to prepare for a communications check.**

Checking the range: Preparing the controller

To wirelessly communicate and to prevent interference from other systems, the controller and remote need to be set with the same personal identification number or PIN. The controller, the handheld remote and the program on CD are all shipped from the factory with "0000" as their PIN. This default PIN will allow immediate communication.

A few moments after the controller is plugged in, its POWER and AUTO ON indicator lights will illuminate. The SIGNAL light may blink occasionally, which is normal.

Checking the range: Preparing the remote

1. Connect a 9-volt battery to the battery clip in the rear compartment of the remote. Insert the battery into the compartment and (without crimping the wires) replace the compartment's cover.
2. Make sure the controller is plugged in.
3. Press any button on the remote to "wake it up". All the segments in the display will illuminate for about 2 seconds.
4. If your controller in plugged in and its AUTO ON light is lit, the remote will soon display "AUTO" and the signal strength indicator. This means the two devices are communicating.
5. You can further test the communication by pressing the UP Arrow button. You will see "MANUAL" along with "01" flashing for zone #1. Press the START button. On the controller's face panel, you should see the station #1 indicator light come on. If so, the units are communicating.
6. Press the STOP button. You should see "SENDING" and then "ACCEPTED" momentarily in the display and Station #1's indicator light should go out on the controller.
7. Now you are ready to see if the range is adequate for your application.

Checking the range: Computer location to the controller.

- Place the controller, plugged in and upright, at the approximate location at which it will be mounted in the garage. If the controller's AUTO ON indicator light is not on, press the AUTO ON button to turn on the light.

- Take the handheld remote to the location of the computer within the home.

- Press any button to wake up the remote. It should then automatically contact the controller and then display the signal strength icon in the upper right hand corner of the display and "AUTO" to indicate the controller is in AUTO ON mode.

- Press the remote's AUTO OFF button. The display should momentarily show "SENDING" then "ACCEPTED" and then "OFF" to indicate you have turned off the controller.

- You now know the locations of components for your PC Control system are within range of each other.

- Now you can install the controller.

Installing the controller

The installation procedure for the PC Control's irrigation controller is the same as conventional controllers. Make sure the controller is unplugged.

- Choose an indoor location that allows the plug-in-style transformer to easily reach from the electrical outlet to the controller with its 3-wire cord. Make sure the outlet is the type with an earth ground that will accept the 3-pronged transformer connection.

- Drive a woodscrew into the wall at eye level and leave approximately ¼" (6mm) of its shank showing.

- With the access panel removed, hang the controller by its rear, keyhole slot on the screw. If the controller does not hang securely, remove it from the wall and drive the screw a little further into the wall. When the controller does hangs securely by the first screw, then drive a second screw through the lower wall mounting hole in the wiring compartment.

- The recommended field wire is 18AWG (1.0mm^2) UF with multiple, insulated wires within a single jacket. This cable is insulated for direct burial and its inner wires are color coded to simplify zone idenification.

- Route all the zone wires, the valve common wire, the Master Valve wire (if required), any sensor wires and even zone wires for landscape light switching (if needed) in from the field and up through the bottom, right hand opening in the controller.

- The field wire opening has two "knockouts" to accommodate ¾" and 1"conduit adapters if you need more room for incoming wires or connectors.

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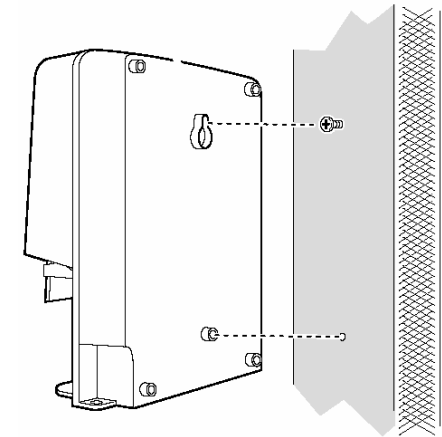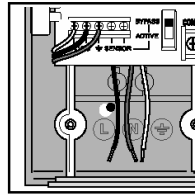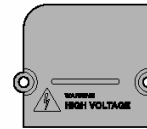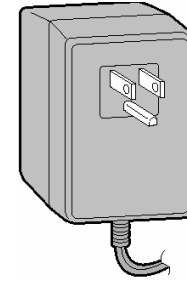
Installing the controller: wire hookup

- If you are not using a conduit to cover the incoming field wires, the open entrance hole in the bottom of the controller is large enough to accommodate two 7-wire (one white- colored valve common and six different colored valve wires) cables just in case the less common13-conductor (for a 12-station controller) cable is not available.
- The wire connections out at the valves need to be waterproof using connectors like insulated wire nuts or grease caps.

Wire Pattern:

- Attach the white color-coded wire from the cable to one wire lead from each valve solenoid (or 24 VAC relay for landscape light switching). This wire is the "valve common" wire.
- Attach a separate cable wire to the remaining wire lead from each valve solenoid (or lighting relay). Note the color code if you want to keep track of each zone's location.
- At the controller end of the valve connection cable, bring the cable up into the bottom of the controller and cut the cable leaving 5 inches for reaching the terminal strip. Separate the colored wires and then strip back ¼-inch (6mm) of insulation from the end of each.
- Secure the white-colored valve common wire to the screw terminal labeled "VC-COM"
- Connect the individual valve wires to the appropriate numbered station or zone terminals.
- If the system includes a master valve or pump start relay, connect that wire to the "MV" terminal screw. (See illustration on valve connections and pump start). Either the master valve or the pump start relay will use Valve Common for their other wire connection.
- If a rain or rain/freeze sensor is being used, loosen the screw terminals labeled "SL" and "SH" and remove the jumper wire connecting them. Then connect the two wires from the sensor, or in the case of a wireless sensor, the two wires from the receiver, to the "SL" and "SH" terminals.
- At this point the field wiring to the controller is complete. Replace the controllers access cover and plug in the transformer to power up the controller.

Wire Terminal Diagram
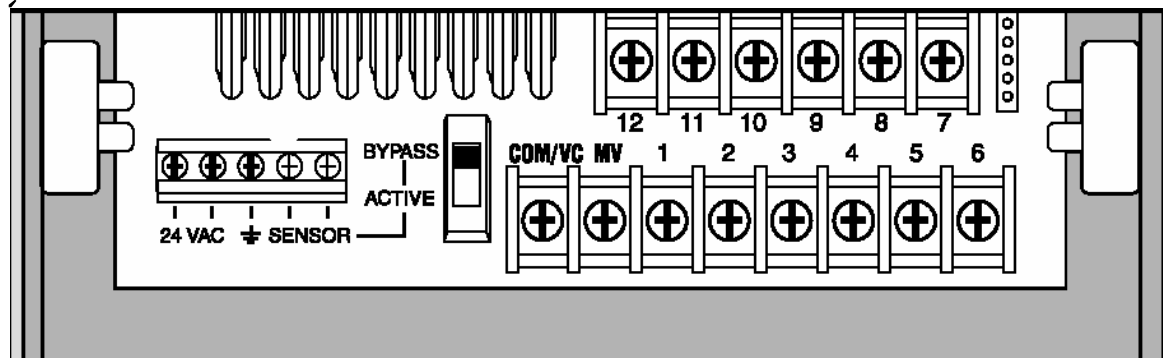
Electromagnetic Compatibility
Domestic: This device complies with FCC rules Part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference that may be received, including interference that may cause undesirable operation.
This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a FCC Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient the receiving antenna, relocate the remote control receiver with respect to the radio/TV antenna or plug the irrigation controller into a different outlet so that the irrigation controller and radio/TV are on different branch circuits.
If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:
"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.
International: This is a CISPR 22 Class B product.

Contains FCC ID: OF7RTS1
 Industry Canada: Contains IC: 3575A-RTS1

 Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

For Technical Assistance: 951-785-3623 or 800-634-8873