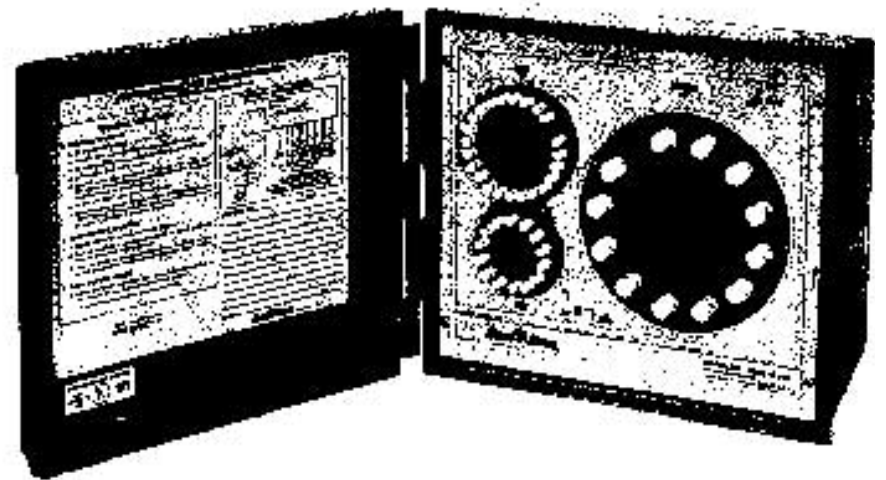


# instruction manual



**RAIN BIRD®**

rc-1230/rc-1260

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**RAIN BIRD®**  
Rain Bird Sprinkler Mfg. Corp.

## DESCRIPTION OF CONTROLS

(Refer to Figure 1 on page 1)

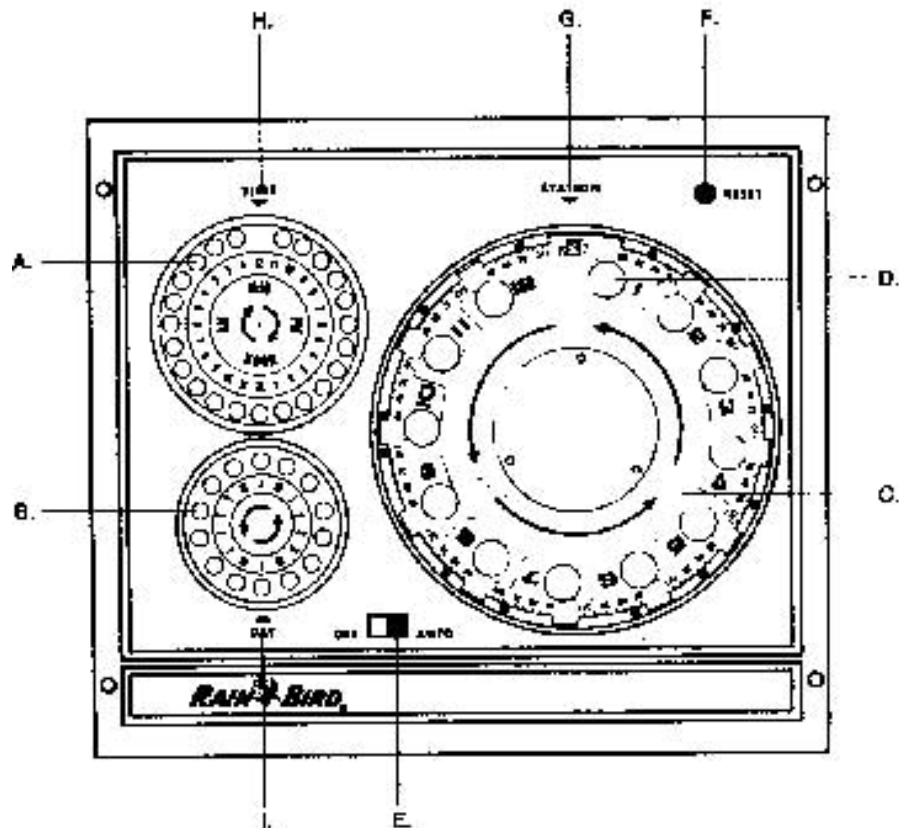


Fig. 1

**A. HOUR DIAL with 23 CYCLE START PINS** — The HOUR dial contains 23 pins for scheduling automatic "Starts" on any hour (except midnight — which is day changeover time). Embossed characters provide quick identification for each hour, AM or PM, noon and midnight. Captive type pins are designed for simple push-pull operation.

**B. DAY DIAL with 14 SCHEDULING PINS** — The calendar DAY dial contains 14 captive pins for scheduling irrigation everyday or any day within a two week range. Each pin represents a 24 hour period beginning at midnight. Embossed characters on the dial, adjacent to each day of the week.

**C. STATION SELECTOR/INDICATOR DIAL** — The STATION selector/indicator dial contains the timing controls (D) for each of the twelve stations. The dial automatically rotates during a watering cycle with the current station appearing at the top under the Station Pointer. REST indicates the system is off and no watering is taking place. The dial is also used for manual selection of any station for semi-automatic operation.

**D. STATION TIME CONTROL KNOBS** — Individual TIME controls for each station. Timing is adjustable to suit all landscape growth requirements. A small white arrow moves with each knob along the timing scale on the Station dial (C) for visual indication of the time setting. The scale is marked-off in 5 minute graduations on Model RC-1230 or 10 minute graduations on Model RC-1260. The ratchet action of the knob provides for precision adjustment of watering time. The OFF position eliminates the station from the watering schedule. All omitted stations are automatically "rapid advanced" through to the next timed station.

**E. OPERATIONAL MODE SWITCH** — The 2-position MODE switch provides the operating control for the system. AUTO position for automatic irrigation as scheduled and "timed" watering of manually selected station. The OFF position is used for rainy weather shutdown. This position eliminates controller "output" to the system valves without interrupting the clock operation.

**F. CIRCUIT BREAKER RESET BUTTON** — Circuit overload RESET button. A built-in circuit breaker protects the controller from damage due to current overload. Push to reset after the source of trouble has been remedied.

**G. CURRENT STATION INDICATOR** — STATION indicator identifies the current position of controller operation. See control (C).

**H. CURRENT TIME INDICATOR** — TIME indicator identifies the current time on the controller clock.

**I. CURRENT DAY INDICATOR** — DAY indicator identifies the current day of the watering schedule.

## INSTALLATION

The controller is housed in an ABS cabinet suitable for convenient wall mounting in sheltered areas. Three mounting holes are provided through the back surface of the cabinet. Before mounting the controller, consideration should be given as to accessibility, electrical power sources and wiring connections to the system control valves.

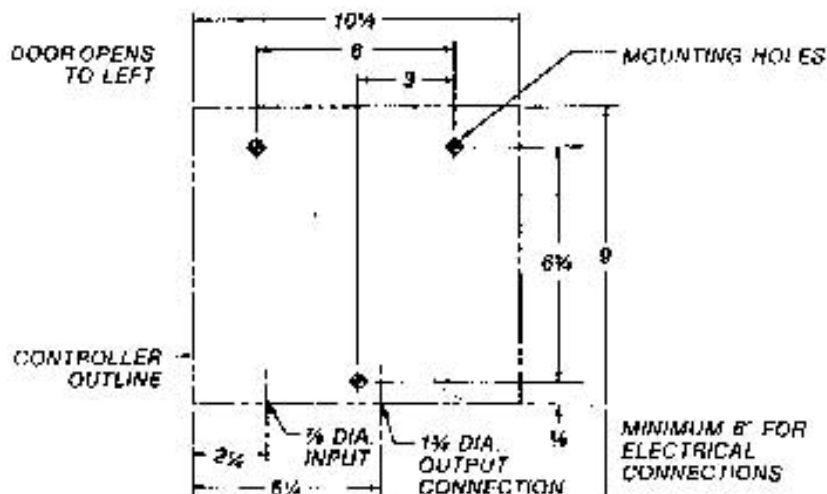


Fig. 2

CONTROLLER MOUNTING

## MOUNTING

1. Choose a location that provides a minimum clearance of 12" wide x 15" high. Since the electrical connections are provided at the bottom of the cabinet, clearance should be allowed for the conduit connections, etc. Refer to Figure 2.
2. Remove the 4 panel mounting screws, lift out the panel carefully and disconnect the 2 wire harnesses at the receptacles.
3. Position the cabinet on the wall at the desired mounting location, and with a pencil, mark the 3 mounting hole locations on the wall. Or, refer to Figure 2 for dimensions if a direct layout on the wall is desired.
4. Install the 2 top fasteners first. Before tightening down, pull down on the cabinet to lock the fasteners at the top of the mounting slots. (Note: Use #10 screws or smaller.)
5. Next, install the bottom fastener. Tighten all screws. With the cabinet mounted securely to the wall, proceed with the wiring connections.

## PEDESTAL MOUNTING

If outdoor pedestal mounting is desired, the Rain Bird Model PD-7K Pedestal Adapter may be ordered which adapts the controller cabinet to a standard 2" pipe.

## ELECTRICAL CONNECTIONS

ALL WIRING MUST BE INSTALLED AND CONNECTED IN ACCORDANCE WITH LOCAL CODES. A basic wiring diagram, with color code identification is provided on the inside surface of the controller for easy reference.

### Valve Output Wiring

The controller transformer provides 24 VAC output for the station valves. The output leads are color coded and stamped with the corresponding station designations.

1. Two methods are acceptable for making the valve wiring connections to your controller.

#### Method A (Direct connections inside control box).

- A 1 1/2" diameter hole is provided in the bottom of the cabinet for direct connection of a 1 1/2" conduit connector.
- Feed the valve wires up through the 1 1/2" conduit and into the space provided for wire connections.
- Cut off wires such that they extend 4 1/2" from conduit connector and strip ends for wire nut connections.
- Connect one lead from each valve to the desired station output lead using the wire nuts provided.

**NOTE:** A maximum of four Rain Bird 2-watt solenoid valves may be connected to each station output lead. This applies when the Master Valve Circuit is NOT used. Refer to Fig. 8 for variations of the station load capacities.

**NOTE:** Extreme care and neatness is required to successfully pack wires into the space provided.

- Bend and pack wires as shown in Fig. 3.

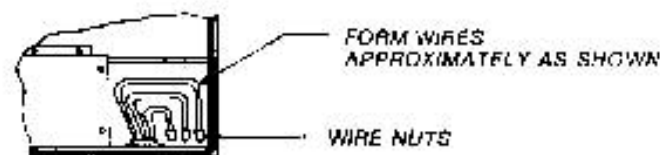
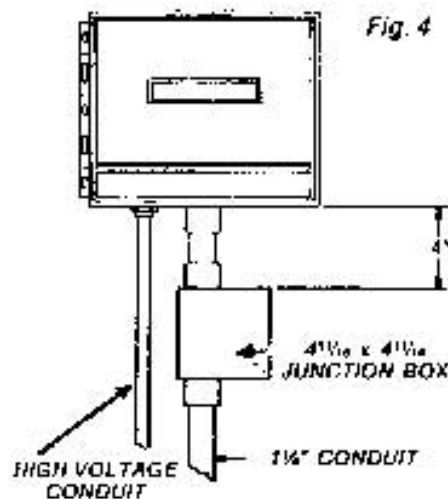


Fig. 3

#### Method B (Alternate assembly method).

- Mount a 4-11/16" x 4-11/16" junction box below the controller case to provide a large area for making the wire nut connections to each station output lead. See Fig. 4.



2. Connect the second lead from all valves to the green/white COMMON output lead. Record the valve locations or landscape zone identification for each station on the label inside the cabinet door.

Output Lead	Color
Station 1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	White
9	Black
10	Brown/White
11	Red/White
12	Orange/White
Master Valve	Black
Valve Common	Green/White

Fig. 5  
Valve Output Identification

TYPE OF MASTER VALVE	NUMBER OF VALVES PER STATION		
	Z.O. MATT Solenoid	Thermal Hydraulic	PTH Adapter
None	4 or 1	1 or 2	2
9 Man Solenoid	3 or 1	1 or 2	2
Thermal Hydraulic	2 or 0	0 or 1	1
PTH Adapter	2 or 1	1 or 2	2

Fig. 6  
Station Capacity

### Master Valve Wiring

If a Master Valve is to be used, refer to Fig. 8 for station capacity limitations.

1. Connect one lead from a 24 VAC Master Valve to the controller MASTER VALVE lead (black).
2. Connect the other Master Valve lead to the controller COMMON (green/white) along with the valve common leads.

**CAUTION:** If a master valve is not being used, be sure to tape the end of black MASTER VALVE lead to prevent any possibility of "shorting" against the metal cabinet, etc.

### Main Power Wiring

The 117 V step-down transformer is mounted at the lower left portion of the controller cabinet.

1. Remove the 3 screws and cover plate at the bottom left side of the cabinet.
2. The 3/4" dia. hole in the bottom of the cabinet is provided for direct input connection with a 1/2" conduit fitting.
3. Connect a 117 Volt-A.C. supply line to the LINE INPUT leads using the wire nuts provided.

### Pump Start

(OPTION — not furnished on all controllers)

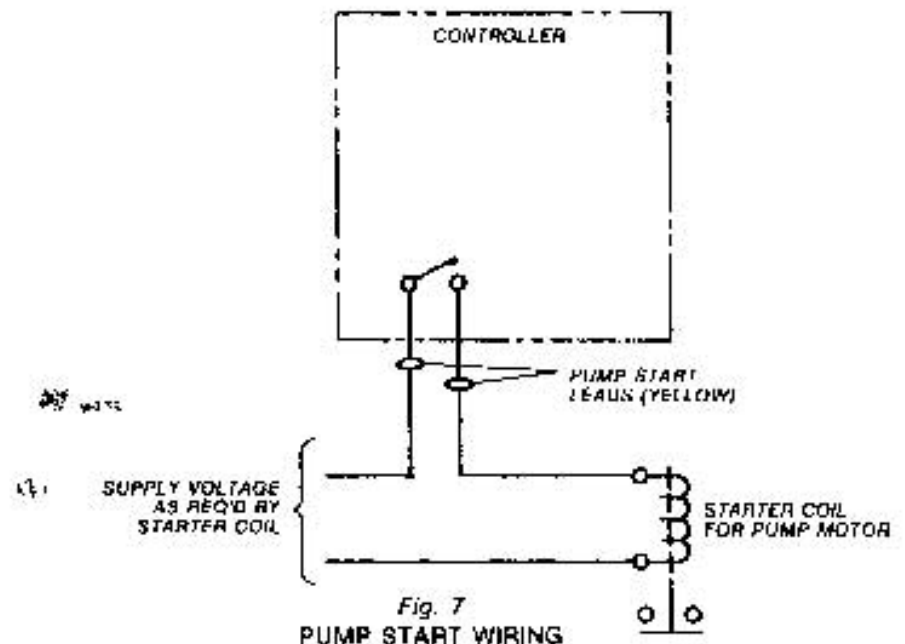
The Pump Start feature provides a control circuit for an external pump motor. A relay is mounted in the enclosure below the transformer with 2 yellow PUMP START leads for convenient connection.

**NOTE:** The controller does not provide a supply voltage for the pump starter. Starter voltages higher than 120 VAC are not recommended.

1. Connect the wiring from the pump starter to the yellow leads indicated.
2. Replace the cover plate and secure the three screws.

After all wiring is completed, reinstall the controller panel, connecting two plugs in their proper receptacle. Do not force the plugs, they are keyed for proper orientation.

The controller is now ready for operation. At this point, it is advisable to check out the electrical system connection.



## Electrical System Checkout

1. Rotate the STATION dial counterclockwise to position REST at the top directly under the Station pointer.
2. Place all pins on the HOUR and DAY dials in the "out" position.
3. Put the MODE switch in the AUTO position.
4. Turn "on" the main power at the source.
5. Adjust each station TIME control to the 5 minute mark on the RC-1230 or the 10 minute mark on the RC-1260. See Fig. 9.
6. Rotate the STATION dial (counterclockwise) to position Station 1 under the pointer. Watering should commence shortly as the automatic mechanism latches with the Station dial.

The 5-minute interval should provide sufficient time to observe control valve operation. If more time is required, simply adjust the timing knobs as necessary. The controller will advance through each station, in sequence, providing opportunity to observe each circuit for proper operation.

Upon satisfactory checkout of the system, proceed to adjust the controller clock.

## SETTING THE CONTROLLER

With the main power ON, proceed to adjust the clock for the correct time and day.

1. Put the MODE switch in the OFF position.
2. Rotate the HOUR dial (clockwise only) to position the current time opposite the TIME pointer at the top of the panel. Observe the dial for the correct AM or PM numerals.

**Example:** If the correct time is 1:35 PM, position the dial such that the TIME pointer will point midway between the 1 and 2 numerals on the PM side of the dial. If a more precise adjustment is desired, the best procedure would be to push-in the pin corresponding to the upcoming hour (in this example, the 2 PM pin) and on that hour, slowly rotate the dial until you hear the "click" of the micro switch.

3. Proceed to set the present day by rotating the calendar DAY dial to position the correct letter opposite the DAY pointer at the bottom of the dial.

4. Next, rotate the STATION dial in a counterclockwise direction to position REST at the top under the STATION pointer.

This completes the controller clock setting.

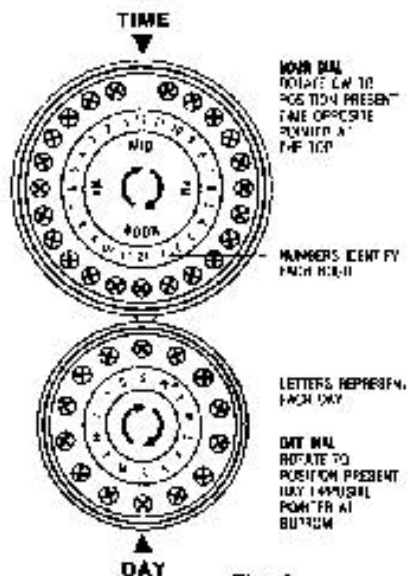


Fig. 8  
CONTROLLER CLOCK

## SCHEDULING AUTOMATIC OPERATION

Before proceeding to set the automatic schedule, be sure the HOUR and DAY dials are adjusted for the correct time and all pins are in the "out" position.

1. Push "in" the pin(s) corresponding to the day(s) on which watering is desired. Remember, each DAY pin represents a 24 hour period beginning at midnight.
2. Next, select the desired starting time(s) and push "in" the corresponding pin(s) on the HOUR dial. Multiple "starts" within a given day may be scheduled after completion of the time accumulated by the previous cycle. See NOTE following Step #3.
3. The first mark (square dot) is the minimum time setting and represents approximately 3 minutes on the RC-1230 or 6 minutes on the RC-1260. The small white indicating arrow moves with the knob for visual indication of each setting. (There will be no valve output when the arrow is positioned between "off" and the "square dot.") The ratchet notches represent 1 minute increments on the RC-1230 or 2 minute increments on the RC-1260 for precise settings. The "OFF" position at each timing dial omits the station from the schedule. Any omitted stations will be automatically "rapid advanced" through to the next "timed" station.

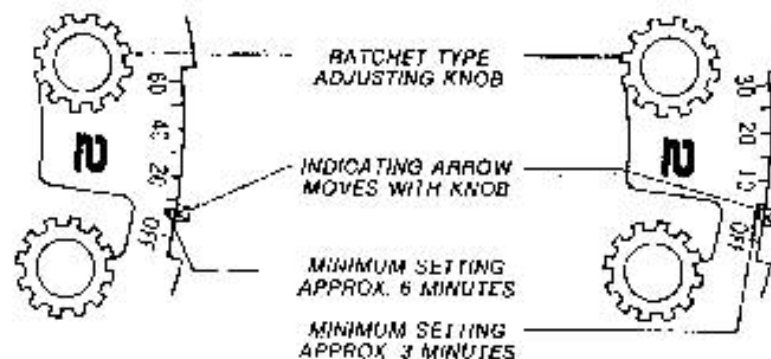


Fig. 9  
STATION TIME CONTROL

**NOTE:** The minimum accumulated cycle time required to prevent a second "start" within a given hour is 15 minutes. Conversely, the maximum accumulated time to permit a cycle "start" on a consecutive hour is 55 minutes. Total cycle time of more than one hour is permissible.

This completes the automatic setting of the controller. Move the MODE switch to the AUTO position. The controller will now automatically control the landscape irrigation according to the schedule.

## SEMI-AUTOMATIC OPERATION

The controller may be operated at any time in a semi-automatic mode simply by turning the STATION dial counterclockwise to position the desired station at the top, just ahead of the Station pointer. Allow the automatic mechanism to advance into the desired timing zone. The selected station will operate for the time set on the dial, after which, the remaining stations will follow in sequence until the REST position again appears under the Station pointer.

## RAIN SHUTDOWN

There may be occasions where it is desired to interrupt all landscape irrigation. Conditions such as rainy weather, system repair, landscape renovation, or other excavation work. The temporary shutdown of the system is accomplished by moving the MODE switch to the OFF position. This eliminates controller "output" to the valves without interrupting the controller timing circuitry. The controller will not operate either automatically or semi-automatically.

A summary of the operating instructions is provided on the label inside the controller door.

## MAINTENANCE

The controller is designed to provide years of trouble-free service. The controller requires no preventative maintenance or lubrication. Should trouble occur, refer to the Trouble-Shooting chart for possible remedies, or contact your local authorized dealer.

## TROUBLE-SHOOTING CHART

Difficulty	Possible Cause	Remedy
Clock stopped	a. Circuit breaker tripped. b. No power to controller.	a. Push RESET. If controller stops again, check system circuits to locate trouble. b. Check line voltage and connections at each end.
DAY and HOUR dials function incorrectly.	a. Clock set for incorrect time. b. Pins incorrectly set.	a. Reset clock for the "present" time. b. Check pin settings and "accumulated" cycle time on station dial.
DAY and HOUR dials function, but cycle will not start automatically.	a. MODE switch in wrong position.	a. Move switch to AUTO position.
Controller recycles immediately without stopping in the REST position.	a. Insufficient cycle time allowed. b. Total cycle time coincides with a succeeding START pin.	a. Adjust cycle time for more than 15 minutes. b. Reset the HOUR pins or readjust the accumulated cycle time.
Some stations do not operate.	a. Station time set at OFF. b. Faulty valve wiring.	a. Set TIME control for more than 3 minutes on the RC-1230 or 6 minutes on the RC-1260. b. Check connections between controller and valve. Also, check valve actuators.
Station dial does not stop at a "Timed" station.	a. Insufficient time set on dial.	a. Adjust the TIME control for more than 3 minutes on the RC-1230 or 6 minutes on the RC-1260.

Should trouble be isolated in the controller mechanism, remove the entire panel assembly from the cabinet and return to your local distributor for repair. If repair requires an inconvenient period of time, the system may be manually operated by the use of a Rain Bird model AX-7 Auxiliary Control Module. Contact your Rain Bird distributor for details.

FILL OUT AND RETURN THE WARRANTY REGISTRATION CARD IMMEDIATELY.