

RAIN BIRD

CONTROLS / DIVISION

Rain Bird Electronic Time Switch with carry-over system

Seven Day, Single Channel
Photo-Initiated, Plus Security Lighting Circuit
Double Pole Double Throw

**Model
EZ-701-P**

Clock Power: 120 VAC.—60 HZ.
10 VA. Maximum

Switch Ratings:
10 AMP Resistive or Inductive—
Each Pole 240 VAC.
470 VA. Pilot Duty
Each Pole 120 or 240 VAC.



Installation, Programming and Operating Instructions

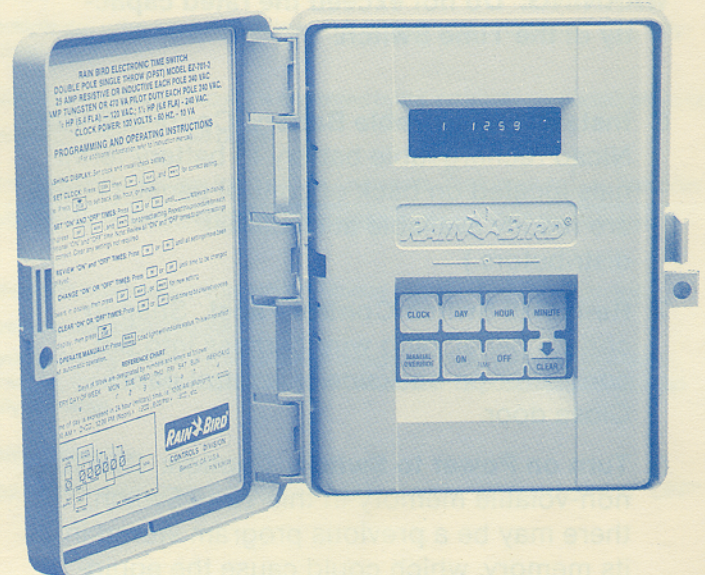
This "State of the Art" Rain Bird Electronic Time Switch is designed to automatically turn an electrical load ON and OFF according to the users preset program. The Switch is intended for use with resistive or inductive loads or for pilot duty.

This Rain Bird Time Switch is easy to install, easy to program and very simple to operate. It features timing accuracy to the minute, seven day programming, automatic or manual operation, a built-in power carry-over system, and an exclusive "non-volatile" memory which assures the users programmed settings will be unaffected by power outages — **no reprogramming ever required.**

This Rain Bird Time Switch has been specifically designed for use with an external photo-control, to control mechanically or electrically held contactors.

The security lighting circuit provides dusk to dawn every day operation.

The programmable channel provides photo-control ON, preset-time OFF operation.



INSTALLATION

1. **Turn Power Off at the Circuit Breaker or Fuse Box.**
2. **Remove Time Switch Control Panel from Case:** (See Fig. 1). Open door, unplug wire harness connector and snap out control panel.
3. **Mount Time Switch:** Properly locate and position case. Insert screws through holes in case (See Fig. 2) and tighten to secure.
4. **Connect Power Supply to Switch** (Two knockouts are provided in the bottom for proper conduit connection.) Loosen terminal screws and insert power wire(s) under pressure plate as far as possible. Then, tighten terminal screw(s). Next connect neutral wire to neutral terminal.
5. **Connect Electrical Load(s) to Switch:** (See Fig. 3). Loosen terminal screws and insert load wire(s) under pressure plate as far as possible. Then tighten terminal screw(s). Be sure to comply with local and national wiring codes.

WARNING: Do not exceed the rated capacity of the Time Switch.

6. **Install Rechargeable Battery.** Connect 9 Volt Nicad rechargeable battery to battery terminals located on back of control panel. (These are readily available at electrical distributors.)
7. **Re-install Switch Control Panel.** Snap in control panel, plug wire harness into pin connector on backside of control panel. Close door.
8. **Turn on Power to Switch. Caution:** Due to non-volatile memory in this Time Switch, there may be a previous program stored in its memory, which could cause the equipment being controlled to receive power immediately; therefore, personnel should be kept clear of this equipment until clock and correct "ON/OFF" settings are programmed.

Switch display will begin flashing when power is turned on. This indicates it is now ready for programming.

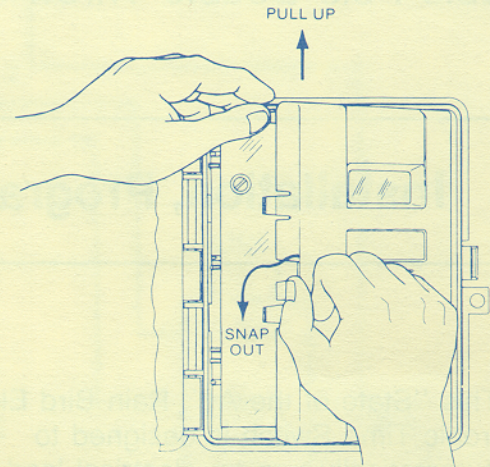


Fig. 1

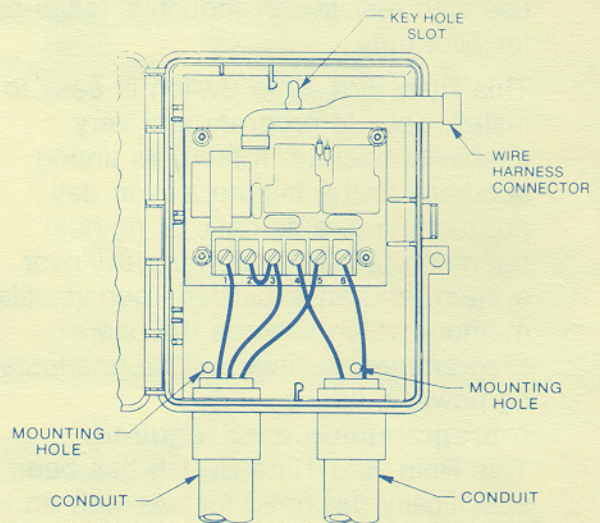


Fig. 2

PROGRAMMING AND OPERATING INSTRUCTIONS

The Rain Bird Electronic Time Switch is very simple to program. Following the procedure listed below will ensure proper programming is completed in just a few minutes.

About the display—The display will show each entry as it is made. When the setting desired appears in the display, programming of that setting is completed. When programming is finished, the display will return to the clock mode (showing day, hour and minute) within two minutes of pressing the last key. When the load is turned "on" a light will appear in the left side of the display to indicate the equipment is in operation.

After Switch has been in operation awhile, a flashing display indicates a power outage has occurred. To restore display, press clock key and check time of day. If time of day is incorrect, set it for correct time. Battery should be checked and if necessary replaced.

Step 1. Set Clock: Press then , , and for correct settings. If display skips by setting, press to back up display to correct setting.

Note: Days of the week are designated by a number as follows:

(Week Day)	(Mon)	(Tue)	(Wed)	(Thu)	(Fri)	(Sat)	(Sun)	(Every Day of Week)
<input type="button" value="D"/>	<input type="button" value="1"/>	<input type="button" value="2"/>	<input type="button" value="3"/>	<input type="button" value="4"/>	<input type="button" value="5"/>	<input type="button" value="6"/>	<input type="button" value="7"/>	<input type="button" value="E"/>

Time of day is expressed in 2400 hour (military) time, i.e.

12:00 AM (midnight) = 0000

4:00 AM = 0400, 12:00 P.M. (noon) = 1200

6:00 PM = 1800, etc.

Example: When clock is set for Thursday at 2:05 PM, the display will show **4 1405**

Step 2. Set "ON" and "OFF" Times: Press or until — — — — — appears in display, then press , , and for correct setting. Repeat this procedure for each additional "ON" and "OFF" time. Review all "ON" and "OFF" times to confirm settings are correct. Clear any settings not required.

Step 3. Review "ON" and "OFF" Times: Press and until all settings have been displayed.

To Change "ON" or "OFF" Times: Press or until time to be changed appears in display, then press , , or for new setting.

To Clear "ON" or "OFF" Times: Press or until time to be cleared appears in display, then press .

Counting "ON" and "OFF" Time Settings (set points): The Time Switch has a minimum of 15 set points per week with the capability of multiple day scheduling to expand the number of set points to 105.

Each "ON" and "OFF" time counts as one set point. Using the multiple day scheduling "weekdays" () or "everyday of the week" () only counts as one set point for the "ON" time and one for the "OFF" time.

Contact Closure Outputs—There are two (2) separately controlled SPDT relay closure outputs. Circuit 1 is controlled by the externally connected photo-cell and Circuit 2 is energized by the external connected photo-cell and is de-energized by the set points.

Photo Control Programming—When programming the EZ 701-P it is recommended that the user input all set points. Then input an set point to initiate the timer. Control from either the Photo-cell or the set points will only occur when the EZ 701-P has entered into an "ON" time window.

To Operate the Switch Manually: Press . Load status light will indicate when equipment is in operation. Manual operation will not affect next automatic schedule. However, Time Switch will remain in manual status if there is no automatic program.

Power Carry-Over. Is available with the installation of a 9 volt Nicad rechargeable battery. When there is a power outage the battery will keep the clock operating on time, for up to 10 hours, provided the battery is fully charged; however, the load and display will be off. When normal power is restored, load will switch on or off according to the pre-set program. Battery will automatically recharge.

Programming Example

Program 1—See Typical Wiring Diagram. Outdoor lighting to be controlled by a photo-cell (Circuit 1) and Indoor Lights to come "ON" at dusk and "OFF" at 10 PM on Weekdays and 8 PM on Weekends.

Press , enter correct settings, display shows **D 2200**

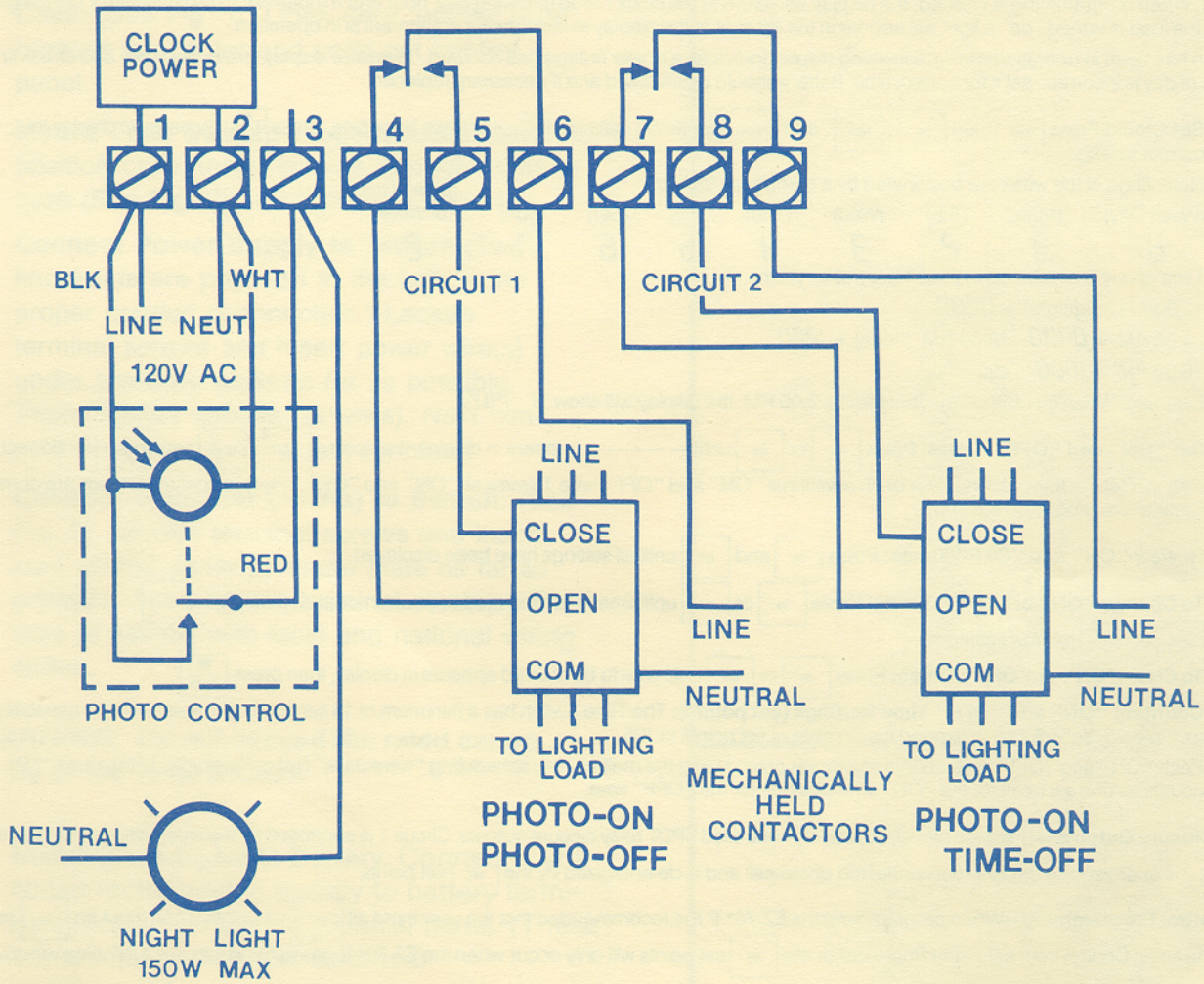
Press , enter correct settings, display shows **6 1800**

Press , enter correct settings, display shows **7 1800**

Press , enter correct settings, display shows **E 1400**

Note: The **E 1400** setting insures the timer will be reset to an "ON" state, should the or the set points be changed when the time switch is in the "OFF" state.

TYPICAL WIRING DIAGRAM



Thank You for your expression of confidence in Rain Bird National Sales Corporation, Controls Division. Our efforts are directed to providing you with the finest quality products and components available today.

Your new EZ-701 Electronic Time Switch has been designed using the latest technology. You will find it simple to use and we are confident that you will enjoy many years of reliable, trouble-free operation.

This manual describes the EZ-701 functions in detail. We invite you to read it thoroughly so that you may use your Time Switch to its maximum capability.

Again, thank you for providing Rain Bird with the opportunity to meet your electrical load control and energy management needs.

If you have any questions, need additional information or would like to comment on this product, feel free to write or phone:

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