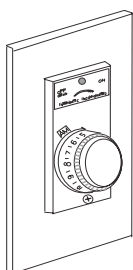# INTERMATIC®

Instructions

Single Pole (Model EJ341C): For lights controlled from one wall switch.

Three Way (Model EJ343C): For lights having two or more switches.

Manufactured under one or more of the following patents: 4,274,045,4,270,058, 4,344,000, 4,349,748, 4,439,7488, 4,360,739, 4,379,245 4,439,688 and other patents pending.

INTRODUCTION

LIGHTING LOAD REQUIREMENTS

Use to control standard incandescent light bulbs or thermally protected Class P ballast fluorescent lighting (standard fluorescent) ONLY.

Load	Minimum	Maximum
Incandescent	40 Watts	400 Watts
Fluorescent	40 Watts*	500 Watts

* Two standard 3 foot (30 Watt) bulbs or one standard 4 foot (40 Watt) bulb with rapid starter.

SPECIAL NOTES:
- Do not use with dimmers or photoelectric switches.
- Do not use with "PAR" or "R" type outdoor flood lamps or bulbs larger than 150 watts. Currents generated during lamp burn-out could damage the timer.
- Do not use to operate Mercury Vapor Lights, Appliances, Radios, TV's, Stereos, etc.
- Your Timer generates radio energy and may in rare cases cause radio or television interference. Possible solutions include: readjusting the receiver's antenna, plugging the receiver into a different AC outlet or moving the receiver itself.
- The three way timer (EJ343) may not work if the remote switch is more than 30 feet from the timer. For such applications we recommend you use model SS5C

CONTROLS AND INDICATORS
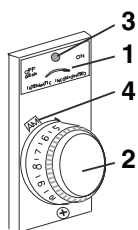
1. **Control lever**
   - OFF-CLEAR • no power to timer or controlled light(s).
     - • Clears the memory.
   - ON • Timer is in operation or ready for programming.
2. **Pushbutton** (time dial)
   - • Push to turn lights on or off manually.
   - • Push twice quickly to switch between automatic and manual.
   - • Turn to set automatic times, or review automatic times.
3. **Indicator light** (red)
   - flashing • Memory has been cleared, timer is ready to be programmed.
   - pulses • Pulses when Pushbutton (time dial) is turned during programming or review.
   - ON (steady) • Timer is programmed and in automatic.
   - OFF • Control lever in OFF position.
     - • Timer is in Manual Mode. (Push button to turn lights on/off manually.)
     - • Timer is being programmed.
     - • Timer is in review.
     - • Light bulb burned out.
4. **AM/PM** • Reference for programming and review.

INSTALLATION

Your Timer replaces a standard light (toggle) switch. It fits into a wall box easily and uses the same wires as the switch you took out. If you can install a light switch, you can install the Timer.
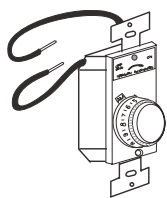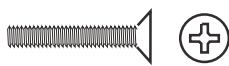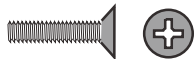

Single Pole (has two black wires)
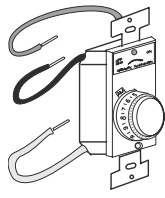
Three Way (has one red, blue and black wire)
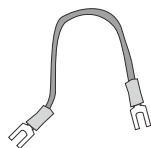
Supplied: twist on wire connectors (2 or 3)

outlet box screws (2)

black control panel screw (1)
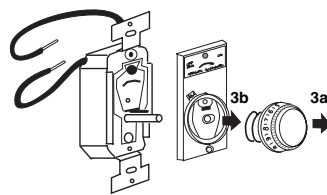
control panel screw (1)

jumper wire (1) (three way only)

Tools needed:


Step by Step Installation:

1. **TURN POWER OFF** to the wall switch by removing fuse or turning off circuit breaker.
2. Remove switch plate and pull the existing switch out.
3. Carefully pull off the push-button (time dial) **3a** and remove the cover assembly from timer 3b.

4. Note: If the old switch has a ground wire (normally a bare wire connected to a green hex head screw) fasten it securely to metal box or to timer metal bracket.
4a. **Single Pole** Disconnect wires from old switch and connect them to the Timer. Use twist on wire connectors provided.
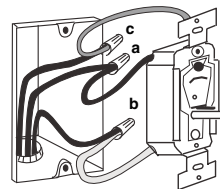

7/16"

Go to step 6 below
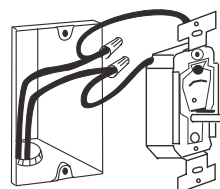
4b. **Three Way** Identify the "common" wire. (The common terminal normally has a different color screw, or is marked on the old switch. The common wire is the power wire and is
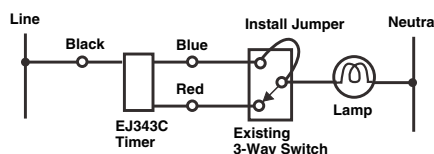

7/16"

usually black.) Connect common wire to black timer wire (use twist on wire connector) **a**.

Connect the other two wires to the red **b** and blue **c** timer wires (use twist on wire connector).

Three way wiring diagram for old wiring (using the existing 3-way switch)

Three way wiring diagram for new wiring or when existing remote switch was a dimmer, lighted or back wired switch (a standard single pole switch is used for the remote switch).
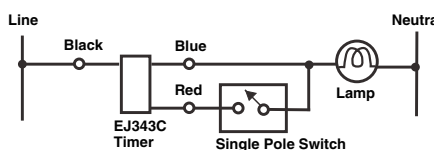

5. **Three Way continued (at the second three way switch)**
   Note: These instructions use trial-and-error to figure out how to install the jumper wire.
   1. **Be certain power is off.**
   2. Remove switch plate and pull the existing switch out.
   Note: If the existing switch is a dimmer, illuminated switch or back wire pressure terminal switch: Replace it with a standard (single pole non-dimmer) switch. Identify the "common" wire. Attach the common wire together with one of the other wires, to either screw terminal. Attach the remaining wire to the other screw terminal.
   3. Identify the "common" wire. (The common terminal normally has a different color screw, or is marked on the old switch. The common wire is the power wire and is usually black.)
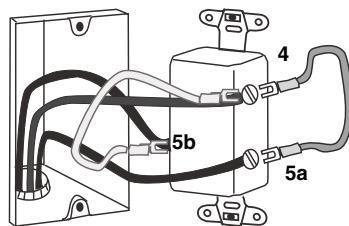
   4. Loosen the common terminal just enough to add one end of the jumper wire. Retighten.
   5. At either of the other two terminals 5a or 5b, loosen the terminal just enough to add the other end of the jumper wire. Retighten.
   6. Re-install the switch (do steps 6 - 8 below to install the timer).
   7. If the timer and remote switch do not turn the light on and off correctly, repeat steps 1 and 2 of 5 (above).
   8. Leave the jumper attached to the common terminal. Switch the jumper to the other of the two remaining terminals.
   9. Re-install the switch.
6. Mount the timer into the wall box. Be careful not to cut the wires on the edges of the box. Use 2 outlet box screws provided.
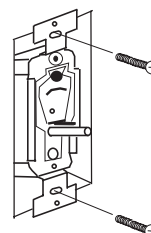
7. If using a decorator wall plate do 8a and 8b. If using a regular wall plate do 8c. If neither AM nor PM is centered in its window turn the gear with your finger.

8a. Install the decorator wall plate with screws provided with the decorator wall plate.
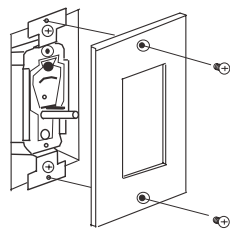
8b. Mount the timer plate:
1. Insert the indicator rod into its hole.
2. Insert the black timer screw.
3. Insert the timer screw.

8c. If using a regular wall plate:
1. Don't use the screws provided with the wall plate.
2. Insert the indicator rod through the top hole in the wall plate and into its hole.
3. Insert the black timer screw through the toggle switch hole.
4. Insert the timer screw.
5. Install the pushbutton time dial. Rotate it two turns to make sure AM/PM indicator works.
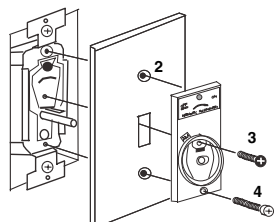
9. Turn power back on. Check that the installation works by:
1. Move the control lever to ON.
2. Push and release the pushbutton. The light should turn on.
3. If a 3-way installation, check that the remote switch also turns the light on and off. If not go to step 5 -7 above and switch the jumper wire.
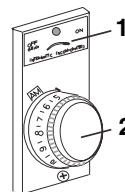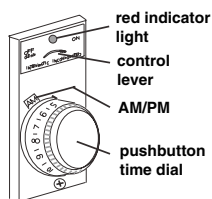
PROGRAMMING

Telling the timer when to turn the lights on and off (programming) can be done 2 ways.

In **Rapid Programming** you set all the on/off times in just minutes.

In **24 hour self programming** simply use the timer as a light switch for 24 hours and the timer 'remembers' those settings and repeats them automatically.

Rapid Programming.

1. Move control lever to OFF-CLEAR for at least 5 seconds
   • red indicator light goes off
   • all time settings are erased.
2. Move control lever to ON.
   • red indicator light will start flashing.
3. Check a clock; then turn pushbutton time dial clockwise at least one click.
   • stop at the half hour nearest to present time (note AM or PM).
   Note: When turning pushbutton time dial, do NOT accidentally PRESS at the same time.
4. Press pushbutton time dial once to enter present time.
   • red indicator light goes off (present time has been recorded).
5. Turn pushbutton time dial clockwise to desired ON time.
   • red indicator light blinks with each click.
6. Press pushbutton to enter ON time.
   • controlled light(s) will turn on.
7. Turn pushbutton time dial clockwise to desired OFF time.
   • red indicator light blinks with each click.
8. Press pushbutton time dial to enter OFF time.
   • controlled light(s) turn off.
9. Repeat 5-8 for other on/off times.
10. Turn pushbutton time dial for at least 2 more turns from the first ON time to complete this program
   • red indicator light will turn on and stay on (steady light means timer is in automatic).
   Note: Pushbutton time dial does not turn automatically after setting to indicate time of day.

24 Hour Self Programming

1. Move control lever to OFF-CLEAR for at least 5 seconds
   • red indicator light goes off
   • all time settings are erased.
2. Move control lever to ON.
   • red indicator light will start flashing.
3. Turn light(s) on and off as you normally would during a 24 hour period.
   • When you turn lights on the first time, the red indicator light will go off and stay off.
   Note: Each on/off period must be at least 30 minutes. If you turn light(s) off or on in less than 30 minutes, RED INDICATOR will resume FLASHING.
   • After 24 hours, your Timer will be fully programmed, red indicator will stay ON and timer will automatically repeat the lighting pattern you entered during the 24 hours.
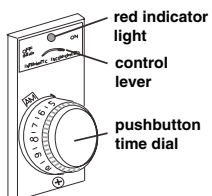
Program Review

Program Review lets you check the ON/OFF settings in Timer memory without erasing them.
1. Timer must be in AUTOMATIC mode
   • red indicator light on and steady.
2. Turn pushbutton time dial clockwise at least one click.
   • Stop at the nearest half hour to present time (Note AM or PM).
3. Push pushbutton time dial once to start review.
   • red indicator light goes off.
4. Turn pushbutton time dial clockwise slowly
   • red indicator will flash with each click.
   • lights turn on and off at programmed times
   • watch the time on the pushbutton time dial.
5. Press pushbutton time dial once to end review.
   • red indicator light turns on and stays on.
   • timer returns to automatic mode.
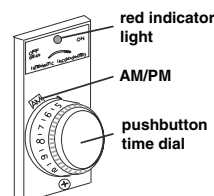
MANUAL OPERATION

Push the pushbutton time dial quickly twice to switch to manual operation.
• The stored program remains.
• The red indicator light goes off.
• Lights can be turned on or off by pushing the pushbutton time dial.
Push the pushbutton time dial quickly twice to return to automatic operation.
• The red indicator light is lit and steady.

TIMER IS ALWAYS A LIGHT SWITCH

With the Timer in automatic.
• The red indicator light is lit and steady.
• Push the pushbutton time dial to turn lights on or off. The automatic program is not changed. Lights will still turn on (or off) at the next programmed setting.

BURNED-OUT BULBS

If a bulb controlled by your Timer should burn out, the red indicator light will go off. To restore normal operations, move control lever to OFF-CLEAR and replace light bulb. Re-program timer.

Symptom:	Solution:
1. Timer cannot be programmed using rapid method.	a. Was timer programmed according to instructions? b. Is control lever in Off position? c. Is red indicator light flashing at beginning of programming sequence? d. Was present time entered before programming desired ON and OFF times? e. Is pushbutton time dial being depressed fully?
2. Timer does not turn lights ON or OFF automatically, as programmed	a. Was timer programmed according to instructions? b. Is timer unintentionally in manual mode (red indicator light off)? c. Be sure light bulbs are tight in their sockets and are not burned out. d. Check wiring for loose connections.
3. Timer does not turn light(s) ON or OFF using pushbutton time dial.	a. See solution 2c and 2 d. b. Check fuse or circuit breaker.
4. Timer is warm to the touch.	a. Some warmth is normal. Be sure light bulb wattage does not exceed ratings.
5. Controlled light flickers or goes to half brightness.	a. Recheck wiring diagrams and instructions.
Three-way (EJ343) only:	Three-way (EJ343) only:
6. Controlled light cannot be turned ON or OFF from the remote switch.	a. Check for proper jumper installation b. Make sure control lever is not in OFF position. c. Is the remote switch the proper type? d. Is the remote switch more than 30 feet from timer?

TROUBLESHOOTING EJ341, EJ343 SPECIFICATIONS

• **POWER SUPPLY REQUIREMENTS:** Operates in series with 120 VAC, 60Hz lighting loads.
• **LOAD CAPACITY,** Incandescent 40-400 watts, fluorescent 40-500 watts.
  NOTE: Derate to 400 watts maximum when two or more Timers are installed in same wall box. For fluorescent control see Lighting Load Requirements on page 1.
• **MINIMUM ON OR OFF PERIOD**; 30 minutes.
• **REPEAT CYCLE:** 24 hours.
• **DAILY OPERATIONS:** Up to 48 (24 ON periods and 24 OFF periods.)
• **VARIABILITY:** ON and OFF times automatically vary at least 7 minutes from the time programmed and at least 15 minutes from the previous day.
• **POWER FAILURE MEMORY PROTECTION:** In case of power failure, the Timer's memory will be retained for a minimum of 15 minutes, depending upon conditions at time of power failure.

WARRANTY

If within one (1) year from the date of purchase, this product fails due to a defect in material or workmanship, Intermatic Incorporated will repair or replace it free of charge.

The warranty does not apply to: (a) damage caused by accident, abuse, mishandling, dropping, (b) units which have been subject to unauthorized repair, opened, taken apart; (c) units not used in accordance with directions; (d) damages exceeding the cost of the product. Some states do not allow a limitation of damages, so the foregoing limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased or (b) mailing postage prepaid to the nearest authorized service station listed below. Please be sure to wrap the product securely when mailing to avoid shipping damage. This warranty is made by Intermatic Incorporated, Intermatic Plaza, Spring Grove, Illinois 60061-9698.

AUTHORIZED SERVICE STATION

INTERMATIC INCORPORATED
SPRING GROVE, ILLINOIS 60081-9698
http://www.intermatic.com   158EJ12396