

# MODEL EJ600 SERIES DIGITAL ASTRONOMIC TIMER

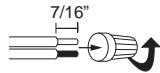
## Installation and User Instructions

### WARNING Risk of Fire or Electrical Shock

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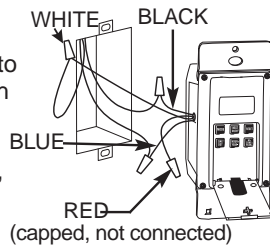
### Installing the Switch Timer

1. Turn off power at the circuit breaker or fuse and verify that the power is OFF before wiring.
2. Strip wire ends to 7/16".
3. Make wire connections using the twist on connectors provided.
4. Take one of these actions.
  - If you have a single switch setup, then perform the procedure "Installing the Timer with a Single Switch Setup".
  - If you have a 3-way switch setup, then perform the procedure "Installing the Timer with a 3-way Switch Setup".



### Installing Switch Timer with a Single Switch Setup

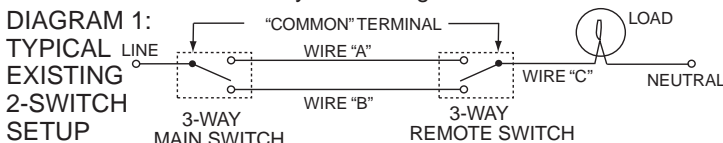
1. Connect the LINE (Hot) wire from the wall to the black wire from the switch timer with the twist connectors provided.
2. Connect the LOAD wire from the wall to the blue wire from the switch timer with the twist connectors provided.
3. NOTE: Cap the RED wire, which is not used in single-switch installations, with a twist connector.
4. Connect the BARE COPPER wire to the grounding screw in the box. If a plastic box, connect to ground as supplied.
5. Connect the NEUTRAL (White) wire from the wall to the WHITE wire from the timer.
6. Gently tuck wires into the timer wall box leaving room for the timer.
7. Using screws provided, mount the switch timer into the wall box, then install the wall plate.
8. Turn the power back on at the service panel.
9. Go to "Intro to Programming: Read Before you Begin."



### Installing the Timer with a 3-Way Switch Setup

#### NOTE:

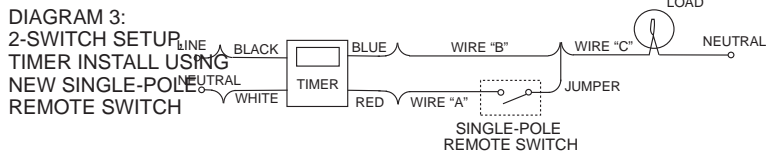
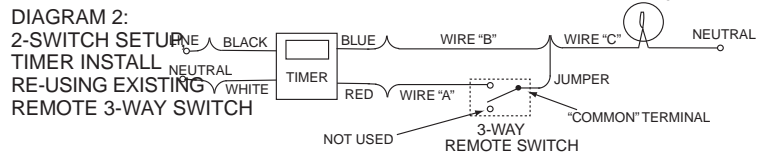
1. Using diagram #1 below, identify the LINE wire previously connected to the COMMON terminal of the old 3-way main switch.
2. Connect the BLACK wire from switch timer to the LINE wire, using a twist connector.
3. Connect the other two wires from the old switch to the BLUE and RED wires from the switch timer.
4. Connect the BARE COPPER wire to the grounding screw in the box. If a plastic box, connect to ground as supplied.
5. Connect the NEUTRAL (White) wire from the wall to the WHITE wire from the timer.
6. Using diagram #1 below, identify and remove wire "C" from the "COMMON" terminal of your existing remote switch.



### RATINGS:

- 4 JOHNSON M UH B O H D T U B M M B U J P O T
- 5 V O H T U F N O Q 8 4 J O H M O H F N E J O J ° C (295 cm³)
- 14 Amp, Single Ganged, minimum 12.5 in³ (205 cm³)
- 12 Amp (1440 W) Multi-Ganged
- # B M M B T U
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7. Using diagram #2 remove and reconnect wires "B" and "C" to the "COMMON" terminal of your remote switch, using the supplied piece of jumper wire, if necessary.  
NOTE: For new construction or to replace a dimmer switch, a lighted switch, or a 3-way switch without screw terminals, a single-pole switch should be used at the remote location, as shown in diagram 3.



NOTE: If the building's wiring colors don't allow you to tell wire "A" from "B", just pick one of the two wires and connect as if it is wire "B". After the installation is complete, if the controlled light or device will not turn on properly, simply reverse wires "A" and "B". See Steps 11 through 14 below for how to check.

8. Gently tuck wires into the timer wall box leaving room for the timer.
9. Using screws provided, mount the switch timer into the wall box, then install the wall plate.
10. Turn the power back on at the service panel.
11. Make sure the switch timer displays "MAN" mode. Perform the test in Step 12 with the remote switch in each of its 2 positions.
12. Press the NEXT/ON/OFF button on the switch timer several times. Each time that you push the NEXT/ON/OFF button, the controlled light or device (the "load") should turn on or off. If so proceed to Step 14.
13. If the controlled light or device does not turn on or off, take one of these actions.
  - If the timer clicks but the load does not operate, re-check your wiring and make sure the load is functional.
  - If the timer clicks but the load only operates when the remote switch is in one of its 2 positions, you need to turn off the power at the service panel, then reverse wires "A" and "B". You can reverse wires "A" and "B" at the remote switch wall box, or you can reverse wires "A" and "B" where they connect to the red and blue wires of the switch timer. Then turn power back on at the service panel and repeat Step 12.
14. Verify that the controlled load turns on or off each time that the remote switch is operated. Your timer is ready to be set.
15. Proceed to Intro to Programming.

## Intro to Programming: Read Before You Begin

button to rotate through the timer's modes: CALendar, CLock, ProGraM, AUTO, AUTO RANDDom, and MANual.

to the end.

are automatically saved.

NOTE: See section "Selecting Auto, Auto Random or Manual Operation" for description of each mode.

### Clear Existing Programming

Before you program the timer, be sure to perform these instructions.

1. Open the control door.
2. Simultaneously press and hold RESET and NEXT ON/OFF buttons.
3. Release RESET 5IF TDSFFO JOJUJBMJ[FT UIFO á BTIF
4. Release NEXT ON/OFF. All previous settings are deleted.

### Set the Calendar Information

In order for the timer to automatically adjust for seasonal changes in sunrise and sunset and adjust for Daylight Saving Time, the CAL-NDAR must be set correctly. Follow this procedure to set Calendar Info.

NOTE: If you go too far, Press the button to scroll back around. For the year, you can also press the YEAR+ button to scroll through the years.

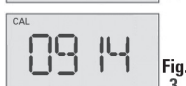
1. Press MODE to display CAL and the year. The time screen displays YEAR (Fig. 1).



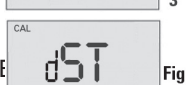
2. Press YEAR+ or YEAR- as necessary to scroll to the correct year.



3. Press NEXT ON/OFF. The screen alternately displays DATE and month.



4. Press M+ to scroll to the correct month (Fig. 3).
5. Press DAY/DST to scroll to the correct date (Fig. 3). The calculated day of the week appears beneath the DATE.



6. Press NEXT ON/OFF to set Daylight Saving and AUTO (Fig.4).



7. Press DAY/DST to select AUTO (dST on) or MAN (dST off).

Note: - If your area uses dST, select AUTO (Fig. 5).  
- If your area does not use dST, select MAN.

8. Press NEXT ON/OFF to save the DST setting. The screen alternately displays ZONE and CENTr (Fig. 5).

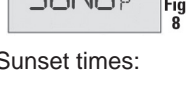


9. Press ZONE+ BT OFFEFE UP TFEDU B (P, N, S) (SOUTH, NORTH, and CENTr). Use the map (Fig. 6) to select your zone.



NOTE: 5IJT GFBUVSF USBDLT DPOHFT JO sunrise and sunset times.

10. Press NEXT ON/OFF. The display alternates between SUNUp and an AM time (Fig. 8).



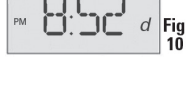
11. Take one of these actions:
  - If you DO NOT want to set exact Sunup and Sunset times: Go to "Set Time of Day".
  - If you want to set exact Sunup and Sunset times: Go to step 12.

12. Press HOUR + as necessary to set the correct SUNUp hour (Fig. 9).



Note: 5IF TNBMMFS MFUUSF iE %BZMJHIU 4BWJOH 5JNF JT

13. Press M+ to scroll to the desired minute.
14. Press NEXT ON/OFF to advance to setting exact SNSEt time (Fig. 10).



15. Press HOUR + as necessary to set the correct SNSEt hour.

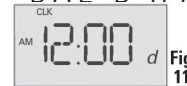
16. Press M+ as necessary to set the correct SNSEt minute.

## Set Time of Day

time, 12:00 AM á BTIFT 'JH

1. Press HOUR + to scroll to desired hour.
2. Press MIN+ to scroll to the desired minute.

NOTE: Make sure AM or PM is correct. Time and Date are



### Set an ON/OFF Program at Specific Times

The display shows dashes if no time was set (Fig. 12) or shows a time if previously set (Fig. 13).

2. Press DAY/DST. The screen displays a time and days of the week.
3. Press DAY/DST again to scroll to the desired day(s) that you want the ON program to operate. (Fig. 13). If you need to skip this ON program, scroll to dashes (Fig. 12) and proceed to step 6.



See Choices below:

- everyday
- weekdays only (Fig. 13)
- weekends only

NOTE: If you go too far, keep pressing DAY/DST to loop back to the desired choice.

4. Press HOUR+ to scroll to the hour desired to activate the load.(Fig. 14). Note: Make sure AM or PM is correct.
5. Press M+ to scroll to the desired minute to activate the load (Fig. 14).



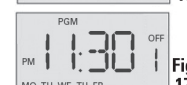
6. Press NEXT ON/OFF to scroll to the PGM OFF screen (Fig. 15).



7. Press DAY/DST. The screen displays a time and some days of the week. (Fig. 16).



8. Press DAY/DST to scroll to the desired day(s) you want this OFF program to operate. (Fig. 16). If you need to skip this OFF program, scroll to dashes (Fig. 15) and proceed to step 11.



9. Press HOUR+ to scroll to the hour when you want the load to turn off. (Fig. 17).

NOTE: Make sure AM or PM is correct.

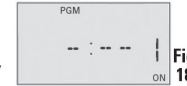
10. Press M+ to scroll to the minute when you want the load to turn off (Fig. 17).

11. Take one of these actions:

- If all the required programs are set, press MODE to exit.
- If another program needs to be set, press NEXT ON/OFF and repeat steps 2 through 10.

### Set an ON/OFF Program for Sunrise/Sunset

1. Press MODE to scroll to the PGM ON screen. Display shows dashes 1st time (Fig. 18) or shows the screen of Fig. 19 or 20 if previously set.



2. Press DAY/DST. The screen displays a time and days of the week. (Fig. 19 or 20).



3. Pressing DAY/DST to scroll to SNST ON screen (Fig. 20).



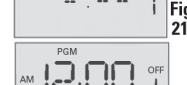
Pressing DAY/DST to select the day(s) you want this SUNSET ON program to operate. (Fig. 20). See below for a list of choices:

- everyday (MON - SUN)
- weekdays only (Fig. 19) MON - FRI)
- weekends only (SAT - SUN)



NOTE: If you go too far, Press DAY/DST to scroll around to the desired setting.

4. Press NEXT ON/OFF to scroll to PGM OFF screen. (Fig. 21, 22, or 23).



5. Press DAY/DST to scroll to SNUP OFF screen (Fig, 23).



6. Press DAY/DST to select the day(s) when you want this SUNUP OFF program scroll to dashes (Fig.21) and proceed to step 7.

7. Take one of these actions:

- If all the required programs are set, press MODE to exit and go to Selecting AUTO, AUTO/RANDom, or MANUAL Operation.
- If another SUNSET or SUNUP program needs to be set, press NEXT ON/OFF and repeat steps 2 through 6. The program number next to "ON" or "OFF" will increase to help you keep track of multiple programs.
- Go to 4 F U U J O H 4 V O T F U 0 / 4 Q F D J m D 5 J N F 0 ' ' .

### Setting Sunset ON/Speci c Time OFF

NOTE: Sunset ON / Speci c Time OFF is the most common setting for the switch timer. As a convenience, here is the full step by step.

1. Press MODE to scroll to PGM On screen (Fig. 24, 25 or 26).
2. Press NEXT ON/OFF to scroll to a PGM ON screen that has a dashed line for time (Fig. 24).
3. Press DAY/DST to scroll to SNST (Fig. 26).
4. Press DAY/DST to select the days you want the program to activate. See the choices below:
  - everyday (MON - SUN)
  - weekdays only (MON - FRI)
  - weekends only (SAT - SUN)



B T Q F D J à D E B Z P G U I F X F F L

NOTE: If you go too far, Press DAY/DST to scroll around to the desired command.

5. Press NEXT ON/OFF to scroll to a PGM OFF screen that has dashed lines (Fig. 27).
6. Press DAY/DST. A time and some days will be displayed (Fig. 28).
7. Press DAY/DST to select the day(s) on which you want the OFF program to operate. (Fig. 28). NOTE: Because you are setting a speci c OFF



U J N I P P Q F S B U F J O D P O K V O D U J P O X J U I B 4 6 / 4 & 5

ON program that you already programmed in step 4, choose the same day(s) as selected in step 4 above.

8. Press HOUR+ to set the hour you want the program to turn OFF.
9. Press M+ to set the minute you want the program to turn OFF (Fig. 29).



NOTE: Make sure AM or PM is correct.

10. Take one of these actions.:
  - If all the required programs are set, press MODE to exit.
  - If another program needs to be set, repeat steps 2 through 9.

### To Review or Revise Program Settings

1. Press MODE to scroll to PGM screen.
2. Press NEXT ON/OFF repeatedly to view the programs (ON 1-7 and OFF 1-7). Dashes indicate that program is skipped.
3. Repeat the programming steps above to make any desired changes.
4. Press MODE to select AUTO, AUTO RANDom or MANUAL mode as described below.

### Selecting AUTO, AUTO RANDom, or MANUAL Operation

After the timer programming is complete, select the controller mode.

1. Open the timer front cover.
2. Press MODE to select the desired MODE. Review the choices below.
  - r AUTO - uses the timer settings you have programmed
  - r AUTO RANDom - gives your home a "lived-in" look by varying your settings by a random amount of +\_20 minutes or so.
  - r MANUAL - maintains your settings but operates the timer like a standard ON/OFF switch. Press on the door of the timer for ON, press again for OFF.
3. Close the timer door and then press the door.

Note: Once the door is closed it operates as an ON/OFF switch.

### Battery Memory Backup

Your timer contains a built-in, non-replaceable, rechargeable battery to maintain the date and time of day information for at least 4 consecutive days of AC power interruption. All other user settings are N B J O U B J O F E J O E F à O J U F M Z X J U I P V U " \$ Q P X F S Q P X F S P V U B H F J G U I F E J T Q M B Z J T á B T I J O H re-enter the CALENDAR and TIME of DAY information.

### Manual Override

To override a program (ON/OFF time) until the next scheduled time:

- Press the control door (over the programming buttons), or open the control door and press NEXT ON/OFF.

## Troubleshooting Guide

Observed Problem	Possible Cause	Solution
Timer is blank until a button is pushed and display changes between ON and OFF when pressing door, but light stays OFF or flickers.	No power (fuse or circuit breaker blown) or loose wiring connection.	Make sure fuse is not blown and circuit breaker is on. Replace fuse if necessary.
Timer does not switch but display is normal.	Timer not in AUTO, AUTO RAND(om), or MAN(ual) mode.	Press MODE to select the desired operating mode.
Timer works manually but does not follow scheduled program.	Timer not in AUTO or AUTO RAND(om) mode.	Press MODE to select AUTO RAND.
Timer will not enter the AUTO or AUTO RAND modes when MODE is pressed.	Time of day and/or switching times are not programmed.	Make sure time of day and at least one scheduled program are programmed. See Set an ON/OFF Program.
Timer switches at incorrect times or skips some switching times.	Programmed schedule(s) are incorrect.	Review ALL 7 ON/OFF switching time pairs by repeatedly pushing NEXT ON/OFF while in PGM mode and revise as necessary.
	Timer is in AUTO RAND(om) mode (varies switching times up to $\pm 15$ minutes).	Press MODE to select AUTO mode.
When using a combination of Astronomic and specific switching times, the timer switches at unexpected times or does not switch when expected.	There are conflicting Astronomic and specific switching time settings. Your timer automatically skips any conflicting ON EVENTS as summer approaches to prevent unwanted operation of lights. See the next column if you wish to identify and remove conflicting settings.	<ol style="list-style-type: none"> <li>1. Complete the steps under "Setting the Calendar".</li> <li>2. Temporarily change your timer's calendar setting to June 21st.</li> <li>3. Review the SUNUP and SNST times by pressing NEXT/ON/OFF.</li> <li>4. Make sure your specific ON or OFF time settings will not interfere with these Astronomic switching times.</li> <li>5. Be sure to change the date when you are done.</li> </ol>
Load state does not match programmed state immediately after programming the time or schedule.	The timer does not "catch up" to the programmed load state. Instead, the load will remain in its current state prior to entering the PGM mode. The timer will then begin following the scheduled program at the next contrary ON/OFF time.	After entering your schedule or the time, then returning to the AUTO modes, push NEXT/ON/OFF to change the load state if necessary.
Load only operates when the remote (3-way) switch is in one position or timer ignores the remote switch.	Remote switch is wired incorrectly.	Verify the wiring is installed correctly, including the jumper.
Timer ignores remote (3-way) switch even though it is wired correctly.	Excessive length of wire (greater than 100 feet) or buried wiring to the remote switch.	Eliminate condition by replacing the buried cable or doing without the remote switch. Consult factory for other options.
	Remote switch is defective or worn out.	Replace the remote switch.
Load turns off immediately after being turned on.	Remote switch or timer wired incorrectly, excessive length of wire (greater than 100 feet) or buried wiring to remote switch, or defective timer.	If the problem persists with the timer's red wire disconnected or with a remote switch temporarily connected right at the timer, replace the defective timer. Otherwise try the above remedies.



### LIMITED ONE-YEAR WARRANTY

If within the warranty period specified, this product fails due to a defect in material or workmanship, Intermatic Incorporated will repair or replace it, at its sole option, free of charge. This warranty is extended to the original household purchaser only and is not transferable. This warranty does not apply to: (a) damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use; (b) units which have been subject to unauthorized repair, opened, taken apart or otherwise modified; (c) units not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) sealed lamps and/or lamp bulbs, LED's and batteries; (f) the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear; (g) transit damage, initial installation costs, removal costs, or reinstallation costs.

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This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased or (b) completing a warranty claim online at [www.intermatic.com](http://www.intermatic.com). This warranty is made by: Intermatic Incorporated, Customer Service 7777 Winn Rd., Spring Grove, Illinois 60081-9698. For warranty service go to: <http://www.intermatic.com> or call 815-675-7000.

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