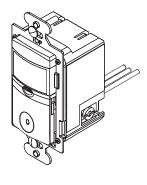
RT-200

Astronomical Time Switch



SPECIFICATIONS

Voltage	120VAC, 60Hz
Load (Single Pole)	
	0-800W tungsten or ballast, 1/6HP
	Indoor Use Only
Operating Temperature	32° to 131° F (0° to 50° C)
Humidity	95% RH, non-condensing
Tools Needed	
Insulated Screwdriver	
Wire Strippers	

ONLINE LONGITUDE/LATITUDE LOCATOR TOOL - GO TO WWW.WATTSTOPPER.COM/RT-200

Watt Stopper®

Santa Clara, CA 95050

Please read all instructions before installing

DESCRIPTION AND OPERATION

The RT-200 is an astronomic time clock that controls the connected light or fan either manually or through user programmed times.

Upon installation the user enters the correct longitude/latitude coordinates, date, and local time. (See SETUP.) This ensures that once the schedules are programmed, the load turns ON/OFF at the correct local times.

Lighted Switch

To help locate the switch button in a dark room, an amber LED illuminates the ON/OFF button while the controlled load is OFF. When the load is ON, the LED is OFF.

INSTALLATION & WIRING

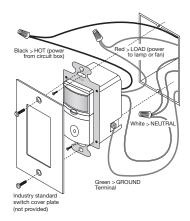


Prepare the switch box

After the power is turned OFF at the circuit breaker box, remove the existing wall plate and mounting screws. Pull the old switch from the wall box.

2. Identify the type of circuit

In a single pole circuit, two single wires connect to two screws on the existing switch. A ground wire may also be present and connected to a ground terminal on the old switch. A neutral wire should also be present in the wall box.

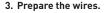


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WARNING

Only connect the RT-200 to a Single Pole Circuit. The RT-200 is not suitable for 3-way switching.

If the existing wiring does not match the description for a Single Pole Circuit, you should consult with a qualified electrician.



Tag the wires currently connected to the existing switch, so that they can be identified later. Disconnect the wires. Make sure the insulation is stripped off the wires to expose their copper cores to the length indicated by the "Strip Gage" (approximately ½ inch).



4. Wire the time switch.

Twist the existing wires together with the wire leads on the RT-200 as indicated in the table below. Cap them securely using the wire nuts provided.

Power wire from the circuit (hot)	to	Black wire on RT-200
Power wire from the lamp or fan (load)	to	Red wire on RT-200
Neutral wires from the circuit	to	White wire on RT-200
Ground wire from the circuit	to	Ground terminal on RT-200

Put the RT-200 in the wall box with the display positioned above the ON/OFF button.

Secure it to the wall box with the screws provided.

6. Install cover plates.

Install industry standard decorator wall switch cover plate (not included).

7. Restore power to the circuit.

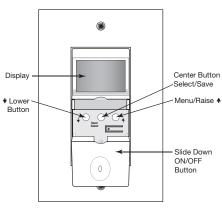
Turn on the breaker or replace the fuse.

SETUP

To access the programming buttons, place the tip of a flat head screwdriver behind the lip at the top of the ON/OFF button and pull the button toward you. Slide the ON/OFF button down over the wallplate.

Buttons

The three programming buttons are used to set up the astronomic time switch according to the user's preferences and location.





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RT-200 Menu Options

From the standard display, known as the "MAIN PAGE" press and release the \uparrow button to enter **SETUP** menu.

Press the \downarrow button to move to desired **SETUP** menu option.

When the option that you want to program is highlighted, press the **CENTER** button.







Once in the SETUP menu if there is no activity for 10 minutes, the unit automatically exits out to the MAIN PAGE.

SET TIME AND DATE MENU

Within the **SET TIME AND DATE** menu you will enter the correct time, date and Daylight Savings Time (DST) start and end days. The unit is shipped with the correct DST start and end dates already programmed.

Setting	Steps
TIME	
Hour	 From the SETUP menu highlight SET TIME AND DATE and press the CENTER button. TIME should be highlighted. Press the CENTER button to highlight hour. Press the ↓ button to decrease the hour or the ↑ button to increase the hour. Press the CENTER button to save hour setting and move highlighted cursor to minute.
Minute	 Press the ↓ button to decrease the minute or the ↑ button to increase the minute. Press the CENTER button to save time setting.
DATE	1. Press the ↓ button to highlight DATE .
Month	 Press the CENTER button to highlight month. Press the ↓ button to decrease the month or the ↑ button to increase the month. Press the CENTER button to save month setting and move highlighted cursor to day.
Day	 Press the ↓ button to decrease the day or the ↑ button to increase the day. Press the CENTER button to save day setting and move highlighted cursor to year.
Year	 Press the ↓ button to decrease the year or the ↑ button to increase the year. Press the CENTER button to save year setting.
DST (DAYLIGHT SAVINGS TIME)	Factory Default Setting: DST ENABLED (The unit will automatically adjust for Daylight Savings Time). Press the \$\$ button to highlight DST
DST When enabled, DST appears in the upper right corner of the MAIN PAGE.	Press the CENTER button to highlight ENABLED. Press the ↑ button to switch between ENABLED and DISABLED. Press the CENTER button to save DST setting.
Start - Week (Input week when DST starts)	 Press the ↓ button to highlight START. Press the CENTER button to highlight 1st. Press the ↓ button to decrease the week of the month or the ↑ button to increase the week of the month. Press the CENTER button to save the week and move highlighted cursor to the month.
Start – Month (Input month when DST starts)	 Press the ↓ button to decrease the start month or the ↑ button to increase the start month. Press the CENTER button to save month.
End – Week	 Press the ↓ to highlight End. Follow same steps for Start – Week.
End – Month	Follow same steps for Start - Month.

To exit **SET TIME AND DATE** menu, press the ψ button to highlight **PREVIOUS** menu. Press the **CENTER** button to select and return to the **SETUP** menu.

LOCATION MENU

Within the **LOCATION** menu you will be required to enter the local longitude/ latitude coordinates and time zone. If you do not know this information, we have included a list of the major US cities on page 6. You can also go to our website for a more detailed list at www.wattstopper.com/RT-200.

Setting	Steps
TIME ZONE	 From the SETUP menu highlight LOCATION and press the CENTER button. TIME ZONE should be highlighted. Press the CENTER button to select the time zone. Press the ↓ button to decrease the time zone or the ↑ button to increase the time zone. Press the CENTER button to save time zone setting.
LONGITUDE	 Press the ↓ button to highlight LONGITUDE. Press the CENTER button to select the longitude Press the ↓ button to decrease the longitude or the ↑ button to longitude the time zone. Press the CENTER button to save longitude setting.
LATITUDE	 Press the ↓ button to highlight LATITUDE. Press the CENTER button to select the latitude. Press the ↓ button to decrease the latitude or the ↑ button to latitude the time zone. Press the CENTER button to save latitude setting.

To exit the **LOCATION** menu, press the \checkmark button to highlight **PREVIOUS MENU**. Press the **CENTER** button to select and return to the **SETUP** menu. Once the location information is entered, return to the **MAIN PAGE** and press the left button. This will display the sunrise and sunset times. Use this as a check to validate that the location information has been entered in correctly.

PREFERENCES

The **PREFERENCES** menu allows the user to customize the unit's features including the time/date format, sound and flash.

- Time format choose between a 12-hour or 24-hour format
- Date format choose between MM/DD/YY or DD-MM-YY
- Sound When SOUND is enabled the RT-200 will beep every 5 seconds
 when the load is going to be turned OFF in less than a minute. It will also
 beep each time the user presses the ↑, the CENTER, or the ↓ button. A
 small ear icon will appear on the MAIN PAGE when sound is enabled.
- Flash When FLASH is enabled the RT-200 turns OFF the load for 1 second and then turns it back ON to warn the user that the load is turning OFF in 1 minute. When flash is enabled, a lightening bolt icon will appear on the MAIN PAGE.

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Setting	Steps				
TIME FORMAT	 From the SETUP menu highlight PREFERENCES and press the CENTER button. TIME FMT should be highlighted. Press the CENTER button to select time format. Press the ↑ button to change format. Press the CENTER button to save time format setting and to move highlighted cursor back to TIME FMT. 				
DATE FORMAT	Press the ↓ button to highlight DATE FMT. Press the CENTER button to select date format. Press the ↑ button to change format. Press the CENTER button to save date format.				
SOUND «	 Press the ↓ button to highlight SOUND. Press the CENTER button to select the sound setting. Press the ↑ button to enable or disable sound. Press the CENTER button to save setting. 				
FLASH	 Press the ↓ button to highlight FLASH. Press the CENTER button to select the flash setting. Press the ↑ button to enable or disable flash. Press the CENTER button to save setting. 				

To exit the **PREFERENCES** menu, press the \checkmark button to highlight **PREVIOUS MENU**. Press the **CENTER** button to select and return to the **SETUP** menu.

SCHEDULING

The RT-200 has 8 programs allowing the user flexibility in setting schedules to turn the connected load ON/OFF.

Setting	Steps				
PROGRAM	 From the SETUP menu highlight SCHEDULING and press the CENTER button. PROGRAM should be highlighted. Press the CENTER button to select program #. Press the ↓ button to decrease the program and the ↑ button to increase the program #. Press the CENTER button to save the program #. 				
Day(s) - Set the days of the week the lights will turn ON for that particular program	 Press the ↓ button to highlight DAY(s). Press the CENTER button to select the days when the program will operate. Press the ↑ to choose the day(s); choices include: None (program is not in use). All (program turns ON the connected load every day). Mon - Fri (program turns ON the connected load Monday through Friday). Weekends (program turns ON the connected load Saturday and Sunday. Each individual day of the week (choose the day of the week that the connected load should turn ON). Press the CENTER button to save setting. 				
ON – Program the time the connected load turns ON	 Press the ↓ button to highlight ON. Press the CENTER button to select what time the load will turn on. Press the ↑ to set the ON time; choices include: TIME (program a specific time to turn ON the load). DUSK (program up to 99 minutes before or after dusk for the load to turn ON. Note: this is one of the reasons that it is important that the correct time zone, longitude/latitude coordinates are entered so that the time switch can determine when dawn and dusk will take place). DAWN (program up to 99 minutes before or after dawn for the load to turn ON. Press the CENTER button to save setting. 				
OFF – Program the time the connected load turns OFF	 Press the ↓ button to highlight OFF. Press the CENTER button to select what time the load will turn off. Press the ↑ to set the OFF time; choices are the same as for the ON time. Press the CENTER button to save setting. 				

Follow the same steps to set Programs 1-8.

To exit the **SCHEDULING** menu, press the ψ button to highlight **PREVIOUS** menu. Press the **CENTER** button to select and return to the **SETUP** menu.

VIEWING SETTINGS

Once the RT-200 has been completely set up, it is possible to see the various programs without needing to enter the **SETUP** menu. From the **MAIN PAGE** press and hold the ON/OFF button. After 5 seconds the display changes to show the sunrise and sunset time. Continue to press and hold the ON/OFF button. The display will cycle through the 8 programs. Once the RT-200 has completed this cycle, it will continue to cycle through the programs as long as the button is being pressed.

MANUAL-ON

When the lights are turned ON manually, the word MANUAL appears on the bottom left corner of the display. The load stays ON until it is manually turned OFF or until a scheduled program turns the load off. For example, if the load was scheduled to be turned OFF at a set time, such as 10:00 PM, and it was manually turned ON before 10:00, then at 10:00 the load automatically turns OFF and the program number that turned it OFF will replace MANUAL on the display.

When the load is on the light bulb on the lower right corner of the display on the **MAIN PAGE** will have light beams surrounding it. When the connected load is off, the light beams will disappear.

TROUBLESHOOTING

Lighted switch is OFF, no load response to ON/OFF button press:

· Make certain that the circuit breaker is on and functioning.

Lighted switch is ON, no load response to ON/OFF button press:

• Check the light bulb and/or motor switch on the fan mechanism.

If load does not respond properly after following troubleshooting, turn OFF power to the circuit then check wire connections or call technical support.

POWER FAILURE

In the event of a loss of power to the RT-200, the unit will maintain the correct time, location and settings for 72 hours.

PRODUCT RESET

The RT-200 has a reset button located under the ON/OFF button. If the unit has lost power for an extended period of time (more than 72 hours) and the unit appears to be functioning abnormally (the display is not on or lights are not turning ON/OFF according to the appropriate schedule), it may be necessary to reset the unit. Press and release the reset button. The display will reset so that the Watt Stopper logo appears as it does upon initial power up. At this point, the user will be able to set the date, time and location and reset the programs.



COVER PLATES

WattStopper RT wall switches fit behind industry standard decorator style switch cover plates.

TOP MAJOR US CITY LOCATIONS

CITY, STATE	GMT	LAT	LONG	CITY, STATE	GMT	LAT	LONG
Albuquerque, NM	-7	35	-107	Memphis, TN	-6	35	-90
Arlington, TX	-6	32	-97	Mesa, AZ	-7	33	-111
Atlanta, GA	-5	34	-84	Miami, FL	-5	26	-80
Austin, TX	-6	30	-98	Milwaukee, WI	-6	43	-88
Baltimore, MD	-5	39	-77	Minneapolis, MN	-6	45	-94
Boston, MA	-5	42	-71	Nashville, TN	-6	36	-87
Charlotte, NC	-5	35	-81	New Orleans, LA	-6	30	-90
Chicago, IL	-6	42	-88	New York, NY	-5	41	-74
Cleveland, OH	-5	41	-82	Oakland, CA	-8	38	-122
Colorado Springs, CO	-7	38	-104	Oklahoma City, OK	-6	35	-98
Columbus, OH	-5	40	-83	Omaha, NE	-6	41	-96
Dallas, TX	-6	33	-97	Philadelphia, PA	-5	40	-75
Denver, CO	-7	40	-105	Phoenix, AZ	-7	33	-112
Detroit, MI	-5	42	-83	Portland, OR	-8	46	-123
El Paso, TX	-7	32	-106	Raleigh, NC	-5	36	-79
Fort Worth, TX	-6	33	-97	Sacramento, CA	-8	39	-121
Fresno, CA	-8	37	-120	Salt Lake City, UT	-7	41	-112
Honolulu, HI	-10	21	-158	San Anotnio, TX	-6	30	-98
Houston, TX	-6	30	-95	San Diego, CA	-8	33	-117
Indianapolis, IN	-5	40	-86	San Francisco, CA	-8	38	-122
Jacksonville, FL	-5	30	-82	San Jose, CA	-8	37	-122
Kansas City, MO	-6	39	-95	Seattle, WA	-8	47	-122
Las Vegas, NV	-8	36	-115	Tucson, AZ	-7	32	-111
Long Beach, CA	-8	34	-118	Tulsa, OK	-6	36	-96
Louisville, KY	-5	38	-86	Virginia Beach, VA	-5	36	-75
Los Angeles, CA	-8	34	-118	Washington, DC	-5	39	-77

APPENDIX: NAVIGATION, USER OPTIONS & PROGRAMMING

When first powered up, the Watt Stopper logo appears.



Standard display, aka: **MAIN PAGE** when the RT-200 is powered and running:



Press and hold the ψ button to see sunset, sunrise, software version and date:





RT-200 MENU OPTIONS

From the **MAIN PAGE**, press and release the \uparrow button to enter **SETUP** menu.





General Notes: Once in **SETUP** menu, the \downarrow button moves to the previous menu or decreases the value, the \uparrow button moves to next menu or increases the value. The **CENTER** button confirms the selected variable.

SET TIME AND DATE

Setting the TIME

Press the **CENTER** button to highlight **TIME**.



Press the **CENTER** button to highlight the hour.



Press the \downarrow or the \uparrow button to decrease or increase the hour.



Once the hour is set, press the **CENTER** button to highlight minutes.



Press the \downarrow or the \uparrow button to decrease or increase the minutes.

SET T	IME AND			
TIME	: 05:	30 am		
DATE	: 03/	30/09		
DST	T: EN/	ABLED		
START	Γ: 1st	Sun Mar		
END): 1st	Sun Nov		
PREVIOUS MENU				
1				

Once the minutes are set, press the **CENTER** button to save the setting.



Setting the DATE

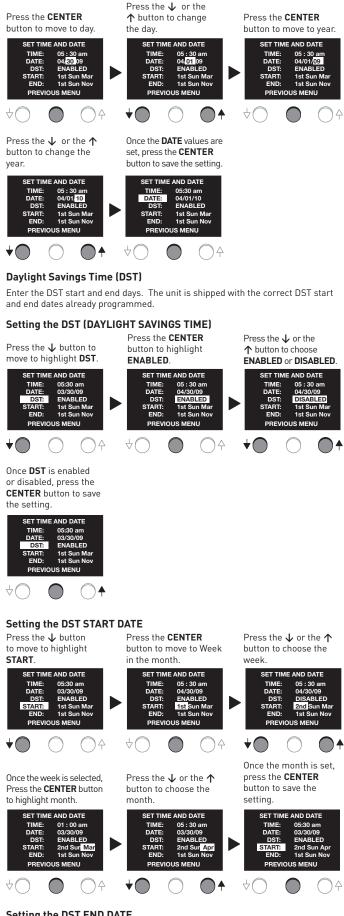


Press the **CENTER** button to highlight the month.



Press the \checkmark or the \uparrow button to change the month.





Setting the DST END DATE

Repeat the same process as setting the DST start date for setting the DST end date. Once the DST end date is set, press the ψ button to highlight PREVIOUS menu. Press CENTER button to return to the SETUP menu.

LOCATION

If the location information is unknown, visit our website at www.wattstopper.com/ RT-200 for detailed information.

Setting the TIME ZONE

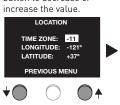




























Setting the LONGITUDE









Press the ↓ or the ↑ button to to decrease or increase the value. LOCATION



Once Longitude is set, press the **CENTER** button to save the setting.



LOCATION



Setting the LATITUDE

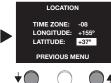




Press the CENTER button to highlight Latitude values.



Press the ↓ or the ↑ button to to decrease or increase the value.



Once Latitude is set, press the CENTER button to save the



Press the **J** button to highlight PREVIOUS menu



Once **PREVIOUS** menu is highlighted press the CENTER button to return to SETUP menu.



PREFERENCES

Setting the TIME FORMAT

Press the 🗸 button to highlight PREFERENCES.

SETUP SET TIME AND DATE LOCATION **PREFERENCES** SCHEDULING

MAIN PAGE

Press the ↓ or the ↑ button to switch between 12 hours and 24 hours PREFERENCES

24 HOURS MM/DD/YY TIME FMT: DATE FMT: SOUND: ENABLED DISABLED FLASH: PREVIOUS MENU

Press the CENTER button to highlight TIME FMT

PREFERENCES 12 HOURS TIME FMT: DATE FMT: SOUND: MM/DD/YY ENABLED FLASH: DISABLED PREVIOUS MENU

Press the **CENTER** button to highlight the time setting.

PREFERENCES 12 HOURS MM/DD/YY ENABLED TIME FMT: DATE FMT: SOUND: FLASH: DISABLED PREVIOUS MENU

Once time format is set, press the CENTER button to save the

PREFERENCES TIME FMT 24 HOURS DATE FMT: MM/DD/YY SOUND: ENABLED DISABLED FLASH: PREVIOUS MENU 4

setting.

Setting the DATE FORMAT

Press the 🗸 button to highlight DATE FMT.

PREFERENCES TIME FMT: DATE FMT: 12 HOURS MM/DD/YY ENABLED DISABLED SOUND: PREVIOUS MENU

TIME FMT: DATE FMT:

SOUND: FLASH:

Press the CENTER button to highlight month setting PREFERENCES

12 HOURS MM/DD/YY ENABLED DISABLED PREVIOUS MENU

Press the ↓ or the ↑ button to choose the month setting.

PREFERENCES TIME FMT: DATE FMT: 24 HOURS MM/DD/YY ENABLED DISABLED SOUND: FLASH: PREVIOUS MENU

Once month format is set, press the CENTER button

12 HOURS MM/DD/YY ENABLED DISABLED TIME FMT: DATE FMT: SOUND: PREVIOUS MENU



Setting the SOUND

Press the ψ button to

PREFERENCES

PREVIOUS MENU

12 HOURS

ENABLED DISABLED

highlight SOUND.

TIME FMT: DATE FMT:

LASH:



to save the setting. PREFERENCES

Press the CENTER button to highlight ENABLED.

PREFERENCES

TIME FMT: DATE FMT: SOUND: FLASH:

12 HOURS MM/DD/YY ENABLED DISABLED PREVIOUS MENU

Press the igspace or the ↑ button to choose ENABLED or DISABLED.

PREFERENCES 24 HOURS MM/DD/YY DISABLED TIME FMT: DATE FMT: SOLIND: FLASH: PREVIOUS MENU

Once sound preference is set, press the **CENTER** button to save the setting.

PREFERENCES 12 HOURS MM/DD/YY DISABLED TIME FMT: DATE FMT: SOUND: FLASH: DISABI ED PREVIOUS MENU

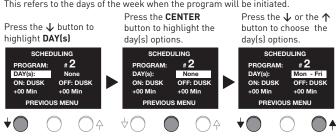


There are 8 different programs that can be set.

Setting the DAY(s)

PREVIOUS MENU

This refers to the days of the week when the program will be initiated.



PREVIOUS MENU

Press CENTER button to save the setting.

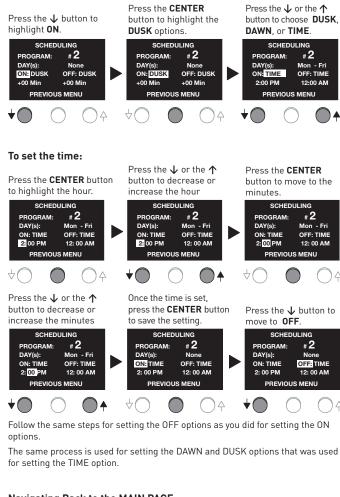


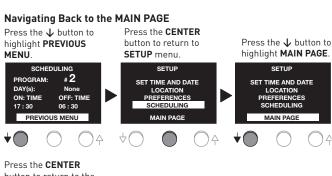
Options include:

None, All, Mon – Fri, Weekends, Sun, Mon, Tue, Wed, Thu, Fri, Sat.

Setting ON/OFF

This sets when the program will come on. The options for this setting are DUSK, DAWN, or TIME. The DAWN or DUSK option will program the number of minutes before or after dawn or dusk that program should take effect.





button to return to the MAIN PAGE



WARRANTY INFORMATION

WattStopper warranties its products to be free of defects in materials and workmanship for a period of five (5) years. There are no obligations or liabilities on the part of WattStopper for consequential damages arising out of, or in connection with, the use or performance of this product or other indirect damages with respect to loss of property, revenue or profit, or cost of removal, installation or reinstallation.

Watt Stopper

Recycle

Please