

INTERMATIC® MODEL HB880R

Operating and User Instructions

Outdoor 7 Day Digital Timer

! WARNING Risk of Fire or Electrical Shock

- Connect only to an outdoor receptacle protected by a Ground Fault Circuit Interrupter (GFCI).
- Connect only to an outdoor receptacle with a "while in use" weatherproof cover.
- Mount at least 24 inches (0.6 meters) above ground level with receptacles facing downward.
- Unplug timer power cord before opening the battery compartment.
- Replace battery cover and retaining screw before plugging in timer cord.
- Do not use timer if battery cover and/or retaining screw is missing or damaged.
- Do not exceed rated capacity of connected extension cord or timer.

Specifications

- Input Voltage: 120 VAC, 60 HZ
- 15 Amps General Purpose
- 1000 Watts Tungsten
- 1/2 Horsepower
- 8.3 Amps Ballast (Standard) (Inductive)
- 500 VA Electronic Ballast

Description

The HB880R Time Switch is a programmable digital timer for outdoor applications. Astronomic settings adjust for seasonal changes. Automatic Daylight Saving Time adjustment. Follow these instructions to complete the programming for the HB880R time switch.

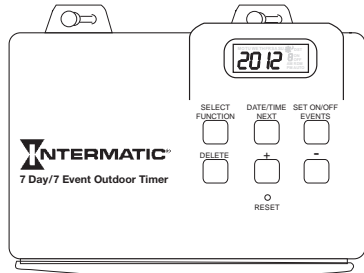


Figure 1
The HB880R Time Switch

Enable the Battery

1. On the back of timer, pull out the pull tab (if present) from the battery holder. See Figure 2.
2. Verify that the controller display activates.
3. Take one of these actions.

IF THE DISPLAY
Activates

THEN...
Go to *Setting the Calendar,
Clock and Astro Time*
Replace Battery. See
Replacing Battery on page 2.

Does not activate

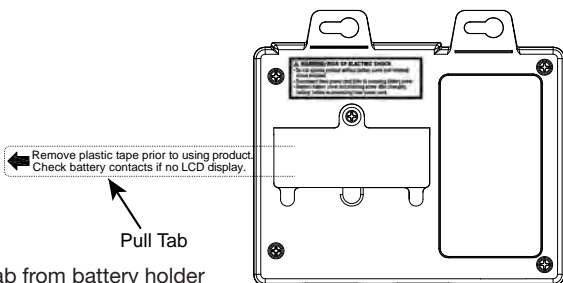


Figure 2
Removing pull tab from battery holder

Setting the Calendar, Clock and Astro Time

NOTE: The timer does not have to be plugged in to set the timer.

1. Press **DATE/TIME/NEXT**. The year flashes.



2. Press **+** or **-** to scroll to the current year, then press **DATE/TIME/NEXT**. The month digit flashes.
NOTE: The months start with 01 (Jan) through 12 (Dec).
3. Press **+** or **-** to select the current month, then press **DATE/TIME/NEXT**. The day of the month digit and the corresponding day of the week flashes.
4. Press **+** or **-** to select the current day of the month and then press **DATE/TIME/NEXT**.
5. From the DST (Daylight Saving Time) screen, press **+** or **-** to set the DST function to **Auto (ON)** or **OFF**, then press **DATE/TIME/NEXT**. The hour digit in the current time flashes on the screen.
6. Press **+** or **-** to set the current hour (AM/PM), then press **DATE/TIME/NEXT**. The minute digit flashes.
7. Press **+** or **-** to set the current minute, then press **DATE/TIME/NEXT**. A flashing "nor" and the Astro icon appears.
8. Using the map in Figure 3 as reference, press **+** or **-** to select your Astro zone then press **DATE/TIME/NEXT** to save the zone. The **AM sunrise** screen appears.
NOTE: **nor** denotes NORTH, **CEN** denotes CENTER, and **SOU** denotes SOUTH.



Figure 3
Astro zone map

9. From the **AM sunrise** screen, press **+** or **-** to set the sunrise time, then press **DATE/TIME/NEXT**. The PM Sunset screen appears.
NOTE: The setting range is a maximum of +/- 2 hours.
NOTE: Press **DELETE** to restore calculated sunrise time.
10. Press **+** or **-** to set the sunset time, then press **DATE/TIME/NEXT**. The time of day screen (flashing colon) appears.
NOTE: The setting range is a maximum of +/- 2 hours from the automatically calculated sunrise time.
NOTE: Press **DELETE** to restore calculated sunset time.

Setting Events

This section provides instructions for setting pairs of ON/OFF events. To set an event pair, you must first set the ON event and then repeat the procedure to set the OFF event. You can set up to seven pairs of ON/OFF events (14 total) in the timer. Follow this procedure to set timer events.

1. Press **SET ON/OFF EVENTS**. Dashed lines appear to indicate no event is set for the event number.



2. Press **DATE/TIME/NEXT** to set an ON event. The screen displays 1200 AM 1 ON (for ON event 1).
3. Press **+** or **-** to scroll to the days of the week that the event will run.
NOTE: To set the event to run every:
- Week: Select **MO, TU, WE, TH, FR, SA, SU**
- Weekday: Select **MO, TU, WE, TH, FR**
- Weekend: Select **SA, SU**
Press **DATE/TIME/NEXT**. The hour flashes.
4. Press **+** or **-** to scroll to the desired hour or **AM Sunrise** or **PM Sunset** for the event.
NOTE: The hour can be set with the 12-hour AM/PM format or at Sunrise or Sunset.

- Take one of these actions.
IF YOU SELECTED... THEN...
A specific hour, Sunrise or Sunset, Go to step 6.
Press **SET ON/OFF EVENTS** to advance to setting OFF time for event and go to step 8.
- Press **DATE/TIME/NEXT**. The minute digit flashes.
- Press + or - to set the minute for the event.
- Press **SET ON/OFF EVENTS** to set the OFF Event. Dashed lines appear to indicate no event is set for the event number.
- Press **DATE/TIME/NEXT**. The screen displays 12:00 AM 1 OFF (OFF Event 1).
- Press + or - to scroll to the days of the week that the program will run.
- Press **DATE/TIME/NEXT**. The hour flashes.
- Press + or - to scroll to the desired hour or AM Sunrise or PM Sunset for the event.
- Take one of these actions.
IF YOU SELECTED... THEN...
A specific hour, Sunrise or Sunset, Go to step 14
Sunrise or Sunset, Go to step 16
- Press **DATE/TIME/NEXT**. The minute digit flashes.
- Press + or - to set the minute for the event.
- If you want to set another ON/OFF pair, repeat steps 1 to 16.
- If you are finished setting events, press and hold **SET ON/OFF EVENTS** until the time of day screen appears.
NOTE: If you leave the timer idle in Calendar or Event setting modes for 5 minutes, the timer will automatically switch to AUTO operating mode after saving your settings.

Daily Operation

Once the initial settings are completed, follow this procedure to select the operation mode in the timer.

Mode	Description
AUTO	Switches ON/OFF events at programmed times.
RDM (Random)	Varies each event up to 30 minutes from the programmed time
MANUAL	Programmed events are ignored but are saved in memory.

- Press **SELECT FUNCTION** to scroll to the desired operation mode. See Table 2 for selection of modes.
NOTE: In order for the time switch to run the programmed events, the operation mode must be set to **AUTO** or **RDM**.

Mode	Description
ON	Load is ON permanently in MANUAL mode.
ON AUTO	AUTO has been selected, load is ON, and will stay ON until the next scheduled OFF event.
ON RDM	RDM mode has been selected, load is ON, and will stay ON until the next scheduled RDM OFF event
OFF	Load is OFF permanently in MANUAL mode
OFF AUTO	AUTO mode is selected, load is OFF, and will stay OFF until the next scheduled ON event.
OFF RDM	RDM mode has been selected, load is OFF, and will stay OFF until the next scheduled RDM ON event.

Reviewing or Modifying an Event

Follow this procedure to modify an event.

- Press **SET ON/OFF EVENTS** to scroll to the desired event.
- Press **DATE/TIME/NEXT** to select the event setting that you want to modify.
- Press + or - to adjust the setting, then press **DATE/TIME/NEXT** to save and advance to the next setting.
- Repeat step 3 as needed for this event.
- If you want to modify another event, press **SET ON/OFF EVENTS** to scroll to the desired event.

- When the modifications are complete, press **SET ON/OFF EVENTS** to scroll through all 7 ON/OFF events (including blank events) and return to the time of day screen (flashing colon).

Deleting an Event

Follow this procedure to delete an event.

- Press **SET ON/OFF EVENTS** to scroll to the unwanted ON or OFF event.
- Press **DELETE**. The screen displays dashes to indicate the ON or OFF event is deleted.
NOTE: If necessary, repeat this procedure to delete both ON and OFF settings for the event.
- When the modifications are complete, press **SET ON/OFF EVENTS** to scroll through all 7 ON/OFF events (including blank events) and return to the time of day screen (flashing colon).

Resetting the Timer

In case of a time malfunction or to delete all previous settings, the unit can be reset.

To reset the timer, use a pen or blunt object to Press **RESET**. The timer resets and **deletes all the settings in the unit**.

Replacing the Battery

One AA size alkaline battery is needed to complete this procedure.

- Unplug the timer power cord.
- From the rear of the timer, remove the retaining screw and battery cover.
- Install the new AA battery (observe polarity).
- Verify that the controller display activates.
- Take one of these actions.
IF THE DISPLAY... THEN...
Activates Go to step 6.
Does not activate, Make sure the battery is not dead and is installed with the proper polarity.
Adjust as needed to get the screen to activate.
- Replace the battery cover and retaining screw.
- Go to *Setting the Calendar, Clock and Astronomic Time*.
NOTE: If the timer is going to be stored for an extended period of time, it is recommended to remove the battery to preserve the life of the battery.

Troubleshooting

Symptom	Possible Cause	Solution
The timer is losing settings	Low battery not holding memory	Replace the battery. See <i>Replacing the Battery</i> .
Output does not switch or output switches at wrong time	Auto or RDM mode is not properly selected.	Select the desired mode. See <i>Daily Operation</i> .
	There are extra or incorrect event settings.	Press SET ON/OFF EVENTS to scroll through the events to find the event that needs to be changed or deleted. See <i>Reviewing or Modifying an Event</i> .
	Astro Events have seasonally adjusted beyond fixed time.	Make sure the fixed timed events are not set anywhere in the range of earliest to latest sunrise and sunset.

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 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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