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Sun Boss Solar Powered Tap Timer

A newly designed, solar powered tap timer for garden watering.

Your Sun Boss Solar Powered Tap Timer gives you the convenience of never having to replace the battery (provided the unit is located where it can get plenty of direct sunlight). The programmable timer controls water flow using an internal solenoid valve.



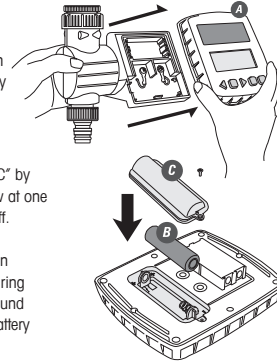
Key Features

- Easy to install and program
- Set up to 6 different automatic watering cycles
- Conveniently removable Programming Unit
- Attaches directly to your garden tap
- Fits 3/4" and 1" taps
- Rain stop feature (rain sensor not included)
- Powered by a rechargeable Li-Ion battery
- Battery is charged by the sun

Installing the Battery

The Sun Boss uses a rechargeable battery which is charged by the sun. Typically, two hours of direct sunlight will provide enough energy to power the timer for two weeks. A fully charged battery will power the timer for about one month without recharging.

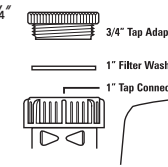
1. Remove the Programming Unit "A" which is a push-on attachment to the main body and pulls off easily
2. Remove the Battery Cover "C" by unscrewing the single screw at one end and prising the cover off.
3. Insert the rechargeable Li-ion battery "B" (included), ensuring that it is the correct way around (+ to +), and replace the battery cover and holding screw.
4. Push the Programming Unit back onto the main body of the timer. **PRESS MENU** will flash on the display.
5. Press the **[Menu]** button and then the **[Man]** button and check that **MANUL ON** and **001** are flashing. This verifies that the battery has been inserted correctly and that the timer is working.
6. Also displayed is a battery symbol which shows the state of charge of the battery. The symbol indicates that the battery is flat. The symbol indicates a fully charged battery. If the battery does not show some level of charge, it will be necessary to put the Sun Boss in direct sunlight until the battery is sufficiently charged to power the timer.



Using the Sun Boss Timer

The timer must be fitted to a tap so that it stands vertical, in a location where plenty of direct sunlight can fall on the solar panel.

1. After programming the timer, push the Programming Unit back onto the timer body.
2. Fit the Sun Boss to your garden tap. For 3/4" (20mm) taps, use the supplied adaptor. Hand tighten the connections but do not over tighten. Do not use tools to tighten.
3. Attach a hose and turn on the water. Leave the water turned on. The Sun Boss solenoid valve will control the water flow to the hose.
4. If the battery goes flat and cannot power the timer, the solenoid valve will close automatically.



Setting Time and Date

1. Press the **[Menu]** button which will cause **TIME SET** to flash. Press **[OK]** which will cause **HOURLY SET** to flash. Note that the Sun Boss uses 24 hour time, so 1:00pm is displayed as 13:00.
2. Use the **[Left]** and **[Right]** buttons until the correct hour is displayed and press **[OK]** to set the hour. This will cause **MIN SET** to flash.
3. Use the **[Left]** and **[Right]** buttons until the correct minute is displayed and press **[OK]** to set the hour. This will cause **DAY SET** to flash.
4. Use the **[Left]** and **[Right]** buttons until the correct day of the week (Su, Mo, Tu, We,Th, Fr or Sa) flashes and press **[OK]** to set the day. This will cause **PROG SET** to flash.

Programming Watering Cycles

Up to six different and independent watering programs can be set (P1 to P6).

1. Press the **[Menu]** button repeatedly until **PROG SET** flashes. **[OK]**
2. Press **[OK]** and **PROG SET, P1** and **ON** will flash. If you now press **[OK]**, you will move to the next step in programming P1. However, if you want to skip programming P1, press **[Left]** or **[Right]** and **PROG SET, P1** and **OFF** will flash. If you now press **[OK]**, the program P1 will be skipped and **P2** and **ON** will start flashing.
3. To program P1, with **ON** flashing, press **[OK]** and **START TIME** and the hour will flash. Use the **[Left]** and **[Right]** buttons until the hour of the required start time is displayed and press **[OK]** to set the hour. This will cause the minute to flash.
4. Use the **[Left]** and **[Right]** buttons until the minute of the required start time is displayed and press **[OK]** to set the minute. This will cause **HOW LONG** to flash.
5. Use the **[Left]** and **[Right]** buttons to set the number of minutes of watering time you require (up to a maximum of 120 minutes), and press **[OK]** to set watering duration. This will cause **SKIP DAY** to flash.
6. Use the **[Left]** and **[Right]** buttons to select the number of days to skip watering (up to a maximum of 6 days). For example, skip 0 days will water every day, skip 1 day will water every second day and skip 6 days will water once per week. Press **[OK]** to set the number of days to be skipped. This will cause **P2** and **ON** to flash.
7. To program P2, P3, P4, P5 and P6, repeat steps 2 to 6.
8. After programming all 6 programs, **DEMO PROG** will flash.

Program Demo

In this mode, the details of all programs are displayed.

1. Press the **[Menu]** button repeatedly until **DEMO PROG** flashes.
2. Press **[OK]** and all set programs (start time, watering duration and skipped days) will be displayed sequentially, starting with P1.

Turning Off the Timer

If the timer is not required for a long period of time, it may be turned off to conserve battery energy, whilst retaining the time and date and all watering programs.

1. Press the **[Menu]** button repeatedly until **TURN OFF** flashes. Press **[OK]** to turn off the timer and **OFF** will be displayed.
2. To turn the timer on again, press the **[Menu]** button once. **WAKE UP** will flash. Press **[OK]** to turn on the timer and resume all stored programs.

Resetting the Timer

Press the **[Menu]** button repeatedly until **RESET** is displayed. Press **[OK]** and **SURE** will be displayed. Press **[OK]** again to delete all watering programs. The current time and date are not affected.

Manual Watering

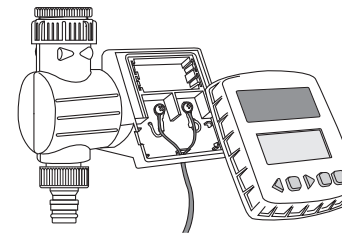
To manually water outside the programmed automatic watering cycles, press the **[Man]** button which causes **MANUL ON** and **001** to flash. Use the **[Left]** and **[Right]** buttons to set the required manual watering time (up to 120 minutes) and press **[OK]** to start watering after a short delay.

Care and Maintenance

1. Only use the supplied rechargeable 3.7V Li-ion battery.
2. Ensure that the Programming Unit is pushed firmly onto the body of the timer.
3. Periodically clean out the filter mesh in the timer water inlet as accumulated debris from the water supply will reduce water flow.
4. Do not disassemble the timer. Doing so will void all warranties.
5. To prevent corrosion, always remove the battery when the timer is not in use for long periods of time.

Rain Sensor

The timer is compatible with a "normally closed" rain sensor (electrical contacts open when rain is sensed), such as those made by Toro and Hunter. The external rain sensor (not supplied) must be connected to the Sun Boss timer. Pull the Programming Unit off the body of the timer, to reveal the two connection points.



In order to use the Rain Sensor function, it must be turned on.

1. Press the **[Menu]** button repeatedly until **SENSOR** is displayed.
2. Press **[OK]** and **OFF** will flash. To turn the Sensor function on, use the **[Left]** or **[Right]** button to toggle the display to **ON**. Press **[OK]** to confirm the selection and **RAIN** will be displayed.
3. To turn off the Rain Sensor function, press the **[Menu]** button repeatedly until **SENSOR** is displayed, press **[OK]** then use the **[Left]** or **[Right]** button to toggle the display to **OFF** and press **[OK]** to confirm the selection.

Performance Specifications

1. Recommended water pressure: 150 kPa to 800 kPa. In areas with water pressure greater than 800 kPa, use a pressure reducer on the tap.
2. Water source: cold mains water only. This product is not suitable for use:
 - If you use bore or unfiltered water
 - If you use any kind of pump to draw water
 - If you use any liquid that is flammable, explosive or corrosive
 - If the water supply is unstable.
3. Recommended operating temperature range: 4°C to 60°C. The tap timer should not be subjected to freezing temperatures or frosts.
4. Battery: 1 x 3.7V Li-ion rechargeable battery (included).

Troubleshooting

If watering is not occurring when expected:

1. Check that the tap is turned on.
2. Check that the SUN BOSS is not set to **TURN OFF** mode.
3. Check that the Programming Unit is firmly pushed onto the main body of the timer. If it is not, the error message **CON BAD** will flash when the timer attempts to turn on.
4. Use Program Demo mode to verify that the programs P1 to P6 are set and correct.