Fogmaster.

2239 REPEATING CYCLE TIMER

Overview

The 2239 timer lets you operate a fogger or other electrical appliance on a programmed schedule. Just plug the 2239 into a nearby outlet, and plug the fogger into the outlet receptacle of the 2239.

A seven-day clock controls timing events. During each event, the fogger can operate continuously or intermittently. Output contacts are rated 10A.

The unit is available in two voltage ranges:

Model	Voltage
223910	100-120V, 1ø
223920	220-240V, 1ø

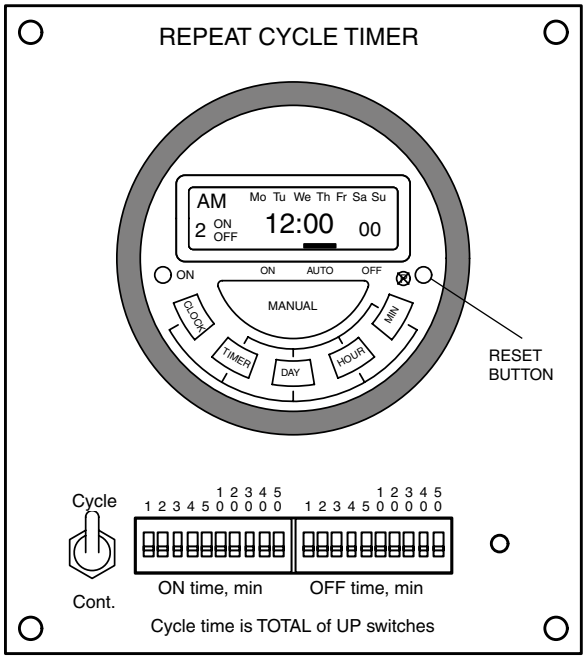
The CYCLE/CONT switch determines if the receptacle is powered continuously (switch = CONT) or in repeated on-off cycles (switch = CYCLE).

Repeating Cycle Module

When cycling is enabled (CYCLE/CONT switch set to CYCLE), the fogger turns on and off until the end of the event.

Dip switches specify ON and OFF cycle lengths with time values of (left to right): 1, 2, 3, 4, 5, 10, 20, 30, 40, and 50 minutes. Add switch values to get the total fogging time. The minimum cycle length is one minute, and the maximum is 165 minutes (all switches on = 1+2+3+...+50 = 165).

As an example, for a cycle of 3 minutes on and 17 minutes off, set all switches on the left switch bank down except “3”, and all switches on the right bank down except “10”, “5” and “2” [10+5+2=17 minutes]. You could use 8+9, or 4+6+7 for the same result.



Clock Module

The clock module stores start and stop times and the repeat frequency for up to six events. Event frequency can be:

- Every day (Sun - Sat);
- Every weekday only (Mon - Fri);
- Every weekend only (Sat - Sun); or
- A specific day of the week.

If the unit is unplugged, a 3V rechargeable lithium battery (CR2032) will maintain clock and event settings for about a month.

Clock Operation

The clock has two modes: Program, and Operate. In program mode, the display shows event data (day, start and stop time); in operate, it shows the current time and day.

- Press TIMER to enter program mode and display or enter events.
- Press CLOCK to put the unit into operate mode.

Press RESET with a pencil or ball point pen to clear all memory data, including day and time.

In operate mode, pressing the MANUAL button repeatedly shifts the unit to **on**, **off** or **auto** as indicated by a small bar above the text:

- **On**. Output is energized
- **Off**. Output is deenergized
- **Auto**. Output is energized according to the event schedule in clock memory.

Press MANUAL repeatly to shift the clock to its next state (**on** -> **auto** -> **off** -> **auto** ->).

When output is energized, the red LED is lit and control is transferred to the CYCLE/CONT switch.

- If the switch is set to CONT, the receptacle is energized directly.
- If the switch is set to CYCLE, the repeating cycle (dip switch) timer is enabled. It powers the receptacle during the "on" cycle only. In cycle, therefore, power to the receptacle requires both the red LED to be lit **and** the dip switch timer be in an "on" phase.

To set clock day and time

Push and hold CLOCK and press the DAY button to advance the day setting. Release both buttons to set.

Push and hold CLOCK and press the HOUR button to advance the hour. Release both buttons to set.

Push and hold CLOCK and press the MIN button to advance the minute. Release both buttons to set.

To display, enter or change events in memory

Press TIMER button to enter program mode. The display shows "1ON" – the scheduled start time of event 1. Small bars show the days of the event.

Press the HOUR and MIN buttons to set or change the event start time.

Press DAY repeatedly to rotate among available day options: Su thru Sa (all 7 days); Mo thru Fr (weekdays only); Sa thru Su (weekends only); or a single day (Su; Mo; Tu; We; Th; Fr; or Sa only).

Press TIMER again to save "1ON" start data and show the "1OFF" setting. Use the HOUR, MIN and DAY buttons as above to change the Event 1 end time.

Press TIMER again to access Event 2 start. Repeat for all events. When finished, press CLOCK to exit program mode.

To enable automatic operation

Press CLOCK, then press MANUAL to enter the **auto** setting.

- If you enter **auto** from **on** (**on** -> **auto**), output remains **on** until the next scheduled Off time;
- If you enter **auto** from **off** (**off** -> **auto**), output remains off until the next scheduled On time.

To clear timer memory

Press RESET button to clear time and day settings and all programs.

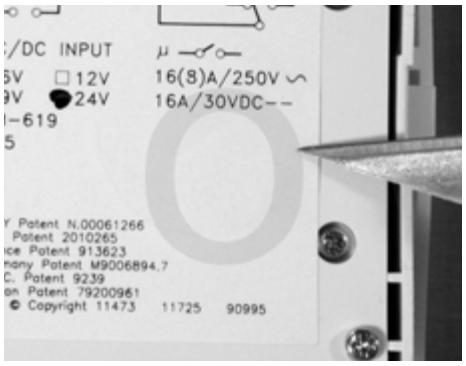
To override program settings

To stop fogging during a program event, press the MANUAL button to the **off** position.

To begin fogging outside a program event, press the MANUAL button to the **on** position.

To replace the battery

Open the box cover, unscrew four large-head screws and lift the unit out from the enclosure. Turn unit over. The circular cover of the battery enclosure is beneath the circuit diagram approximately as shown.



Remove the label, or cut along the outline of the cover with a sharp knife. Twist the cover to release. Replace with 3V CR2032 battery.

SUMMARY OF OPERATION

The 2239 offers great flexibility of output styles – manual control, program control, or "one-shot" countdown timer control.

Output can be continuous or intermittent in any operating style depending on the position of the CYCLE/CONT switch.

Manual Operation

For *steady output*, put the CYCLE/CONT switch in the CONT position (for continuous output) and press MANUAL button to **on**.

For *intermittent output*, set the length of the 'on' and 'off' cycles in the dip switches. Set CYCLE/CONT switch to CYCLE. Press the MANUAL button to **on**.

Programmed Operation

Fogging occurs during each program event.

Scheduled event: continuous output

Enter event days and times into the Day/Week timer memory.

Set CYCLE/CONT switch to CONT (continuous output). Press MANUAL button to **auto** to begin program operation.

Scheduled event: intermittent output

Enter event days and times into the Day/Week timer memory. Choose on and off cycle lengths and enter settings in dip switches.

Set CYCLE/CONT switch to CYCLE (repeating cycle operation). Press MANUAL button to **auto** to initiate program operation.

Countdown Operation

To make the 2239 can act like a countdown timer, program a single event of the desired length.

Press RESET to clear all events from timer memory, then set the clock to the current day and time. Set cycle times on the dip switches and the CYCLE/CONT switch as desired.

Enter a single event into memory (see above). Specify the proper day for the event as well as the start and stop times.

Press CLOCK to return to operating mode.

The event can begin immediately, or after a delay:

- For an immediate start, press MANUAL to **on** -> **auto**. The unit will turn off at the programmed end time.
- For a delayed start, press MANUAL to **off** -> **auto**. The unit will start at the designated start time and turn off at the end time.

NOTE: When the single event has finished, turn off the timer (**auto** -> **off**), delete the programmed event, or RESET the clock. Otherwise the event will repeat at its next programmed time.

SPECIFICATIONS

Model	Voltage 50/60Hz, 1ø	Plug/Outlet Configuration
223910	110-120V	NEMA 5-15
223910J	100V	UC831A
223920	220-240V	NEMA 6-15
223920E	220-240V	Schuko
223920U	220-240V	UK
223920A	220-240V	Australia/China
Contact Rating	10A @ 240V (inductive load)	
Cycle Time	1-100 minutes, adjustable	

SUMMARY OF CONTROLS AND FUNCTIONS

Control	Function
On LED	When illuminated, output circuit of clock module is active. Power to the outlet receptacle depends on the setting of the CYCLE/CONT switch (see below)
CLOCK	Press to enter operating mode Hold down and press DAY, HOUR or MIN to set clock
TIMER	Press to enter program mode
DAY	Advances day of week when setting clock or entering events. Values are: weekdays only; weekends only; all days; Monday; Tuesday; Wednesday; Thursday; Friday; Saturday; or Sunday.
HOUR	Advances hour (including am/pm) when setting clock or entering events. Hold down to advance rapidly.
MIN	Advances minute when setting clock or entering events. Hold down to advance rapidly.
RESET button	Press briefly to erase event settings. This also resets clock to Sunday, 12:00:00 AM
Dip Switches	Set duration of 'on' and 'off' cycles. Move switch 'up' to enable. Switches have values of 1, 2, 3, 4, 5, 10, 20, 30, 40, and 50 minutes. Cycle time is the total value of enabled switches.
CYCLE/CONT	Toggle switch directs output from the clock module. CONT position – power is applied continuously to the output receptacle CYCLE position – control is delegated to the cycle timer. It delivers power to the output receptacle during its 'on' cycles.

Warranty

This product is warranted for one year from the purchase date against defects in materials and workmanship. If you have a warranty claim, return the unit freight prepaid to The Fogmaster Corporation. We will repair or replace (at our option) any defective parts and return the unit to you.

Motor brushes and tank gaskets are not covered under warranty.

This warranty does not apply to any unit which has been: subject to misuse, neglect or accident; used for a purpose for which it is not designed; altered in any manner; serviced by unauthorized parties; or subjected to any but the specified voltage.

This warranty is limited to the original purchaser only, and does not include claims for incidental or consequential damages resulting from the non-function or malfunction of this product or for breach of any express or implied warranties.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion 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 Limited Warranty notice replaces any other warranty or guarantee information accompanying this product or appearing in any literature referring to this product. Any implied warranties, including merchantability or fitness for a particular purpose, shall not extend beyond the warranty period.

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