



## OPERATING INSTRUCTIONS FOR GUARDIAN-2 TIMER

Read this manual carefully in order to familiarize yourself with the product, the various parts you will be operating, correct usage of the product, its maintenance and important safety instructions.

This timer can be connected to any Gepaval Propane Cannon operating on L.P. gas. The timer enables you to start and stop the cannon at the hour you select.

**Warning:** To prevent gas leakage, please do not dismantle any parts in the valve assembly. The timer has certain components that can only be repaired or set by the technical service department or by an authorized dealer.

### General Information:

The timer is capable of making two switches per day, 1 x on and 1 x off (minimum on 9 hours, maximum on 19 hours).

The timer cannot be used at temperatures below -10° C. (14° F.).

The timer is a quality product built in a rain resistant housing. A Quartz drive unit operates the gas valve. Avoid rough handling, especially shocks and bumps.

Keep the gas hose and nipples free of dust etc. Dust can cause leakage.

Gas cannons are for outside use only.

Do not smoke when near or during operation.

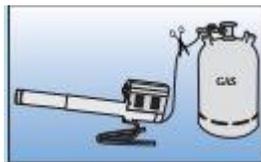
Wear ear protection when starting and operating the Gepaval Propane Cannon.

Please thoroughly read the operating instructions of the propane cannon.

***Please contact your dealer or the manufacturer in case of problems or for further information.***

### Installation:

With the gas bottle valve closed (***Important!***), cut the hose between gas bottle and propane cannon (fig. 1) at a distance of approx. 4" to 6" from the gas bottle. Remove the caps from the nipples of the timer.



(fig. 1)

Slide the hose clamps over the hose and fit the hose on the nipples. The hose coming from the gas bottle has to be fitted on the left nipple (marked “in”) and the hose coming from the propane cannon on the right nipple (marked “out”). Tighten both hose clamps with a screwdriver.

Make sure that the gas regulator is connected to the propane tank in such a way that a vertical position of the timer is secured (fig. 2).

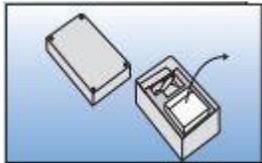


(fig. 2)

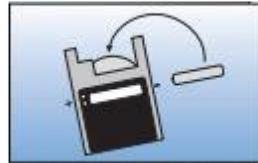
### Time setting:

Remove the front cover from the timer.

Remove the drive unit from the timer and insert a AA battery. (fig. 3 and 4).

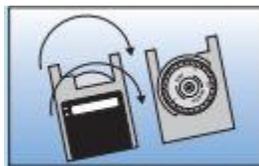


(fig. 3)



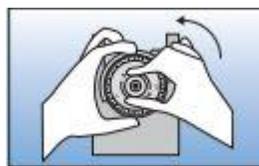
(fig. 4)

Flip the drive unit over so the dial becomes visible (fig. 5).



(fig. 5)

The dial revolves once per 24 hours counter-clockwise and is divided into a day and night time. To set the time, loosen the milled nut (fig. 6) while holding the dial.



(fig. 6)

Never loosen/remove the milled nut while holding the drive unit. This could damage the drive unit (fig. 7).



(fig. 7)

The regulating disc opens the gas valve by raising the internal lever as it turns. This will start operating the propane cannon.

When the regulating disc is in the “off” position, there should be a space of 3/8” to 5/8” between the lever and regulating disc. The proper function of the gas valve can be checked by pushing the lever upwards. Releasing the lever should stop the gas flow because of the spring pressure inside the gas valve.

Align the numbers on the day/night dial so that the actual time corresponds with the time pointer. **Note:** *The timer is based on “Military Time” so, as an example, “15” corresponds to 3:00pm.*

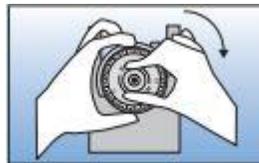
Turn the starting point of the upper regulating disc (beneath the day/night dial) to the required starting time (start) and turn the end point of the lower regulating disc to the required ending time (stop).

In the example below, the current time is 3:00 p.m. You want to operate the propane cannon between 9 a.m. and 6 p.m.



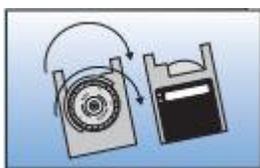
- I.- The time pointer points to the digit 15 on the Day/Night Dial (3 p.m.).
- II.- The starting point of the upper regulating disc points at the digit 9 (start) of the dial.
- III.- The end point of the lower regulating disc (stop) points at the digit 18 (6 p.m.).

After setting the times, tighten the milled nut (fig. 9) while holding the dial with two fingers.

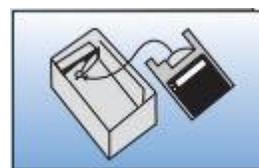


(fig. 9)

Flip over the drive unit (fig. 10) and insert it back in the housing while slightly tilting it. Be sure that the regulating discs are opposite to the lever of the gas valve (fig. 11).

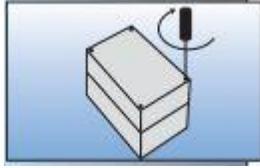


(fig. 10)



(fig. 11)

Put the lid back on the timer (fig. 12). For good rain protection, it is necessary that the 4 screws are tightened in such a way that lid and housing are tight to each other and that no space is visible.



(fig. 12)

Open the main valve of the gas bottle. The timer will operate now automatically.

### **Storage**

When the timer is not being used, remove the battery and protect the nipples by putting the caps back on to them. Store the timer in a dry and dust free place. At the beginning of the next season, a new battery should be inserted.