# HenSafe
### Automatic Chicken Coop Door Opener Instructions
## Time, Lux, Both, Use of Manual Button

## FITTING BATTERIES AND INITIAL SETUP

First, undo the 4 screws on the front of the box and remove the lid.  Install 4 x 'C' type alkaline, heavy duty batteries (suitable for motorised devices and not rechargeable). Fit the snap connector to the battery box and ensure the batteries are seated correctly.
HenSafe will boot up and you will then see a display similar to that on page 1 which will time-out after 10-15  seconds.
Refit the lid, being careful not to over-tighten the screws and over-compress the seal – but tight enough to form a weather seal.

## TIME SETUP. First you must set up the ACTUAL TIME OF DAY at your location (24 hour clock).
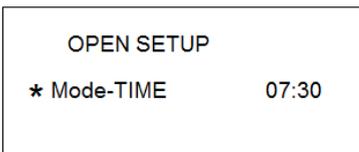
```
TIME SETUP

*19:30
```

- Press Menu until **TIME SETUP** is displayed.
- Press ➜ button once and use Set button to scroll up through hours.
- Press ➜ button again and use Set button to scroll up through minutes.
- Press ➜ button once more to place the star ( * ) at the beginning of the Display.
- In this example the time is set to 19:30 or 7.30pm

**Note**: The Display will time-out after 10-15 seconds if no buttons are pressed

## QUICK START:  SETTING UP HenSafe TO OPERATE IN TIME MODE
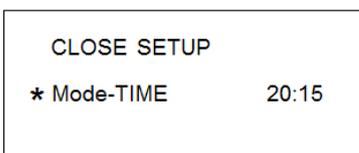
### STEP 1 – Open Setup: TIME Mode
**Note: All door operations (Time, Lux, Both) must be within the following time zones:  Open: 0300 to 1059.  Close: 1400 to 2359**

```
OPEN SETUP

* Mode-TIME      07:30
```

- Press Menu button until Open Setup is displayed.
- Press ➜ button once until cursor is underneath **TIME**
    (use Set button if required, to toggle between TIME/LUX/BOTH).
- Press ➜ button again and use Set button to scroll up through hours.
- Press ➜ button again and use Set button to scroll up through minutes.
- Press ➜ button once more to place the star ( * ) at the beginning of the Display.
- In this example HenSafe will open your door at 07:30, or 7.30 am.

### STEP 2 – Close Setup: TIME Mode

```
CLOSE SETUP

* Mode-TIME      20:15
```

- Press Menu button until Close Setup appears.
- Press ➜ button once until cursor is underneath **TIME**
    (use Set button if required to toggle between TIME/LUX/BOTH).
- Press ➜ button again and use Set button to scroll up through hours.
- Press ➜ button again and use Set button to scroll up through minutes.
- Press ➜ button once more to place the star ( * ) at the beginning of the Display.

In this example HenSafe  will close your door at 20:15, or 8.15 pm.

## Tips:
You might wish to set your closing time to be 5 to 20 minutes after your hens go to roost in case of stragglers the next evening.
If you set your HenSafe to operate in TIME Mode remember that sunrise and sunset will change significantly from week to week.
This is where LUX Mode comes in – see next section.

# SETTING UP *HenSafe* TO OPERATE IN LUX MODE

In this Mode *HenSafe* will open and close your door only when the ambient light (LUX) levels exceed those which you calibrate.
You can add up to 90 minutes delay to the Closing LUX level which will help late-to-roost hens not to be locked out.
Two lux levels are stored by *HenSafe* one for opening and one for closing. **You must calibrate both LUX levels even if you are only using one of them** so that *HenSafe* knows the difference between morning and evening light levels.
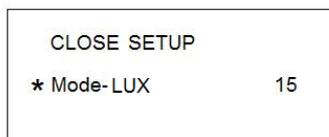
## STEP 1 – Calibrating your Close LUX Levels

In the evening, watch your hens go to roost and ensure they are inside their house.
- Press and hold the Green Manual Button.
- Your door will start to close and after approx. 10 seconds you will see **CALIBRATING** appear on the Display.
- Release the Green Manual Button.
- Your door will continue to close. During this time do not obstruct the ambient light from reaching *HenSafe*.
- When the motor has stopped and your door has closed the Display Backlight will go out and *HenSafe* will remember the LUX level for use with future Close times.
- After successful calibration the Display will illuminate for a few seconds and **OK** will appear to confirm your setting.
- An unsuccessful calibration will result in the message **BAD LIGHT LEVEL ABORTED** being displayed (please see the section on Display Messages to rectify).

## STEP 2 – Selecting the Close Setup Mode to operate on LUX

Now go to Close Setup via the Menu as before and change from TIME Mode to LUX Mode, adding up to 90 minutes delay if needed, using the ➔ button and SET button.

```
CLOSE SETUP

* Mode-LUX          15
```

In this example, *HenSafe* will close your door at the LUX level you have calibrated, PLUS 15 minutes extra – so you can cater for stragglers

## STEP 3 – Calibrating your Open LUX Levels

With the door closed, press and hold the Green Manual Button to calibrate it opening.
If your door is already open before you start then just close it with the Manual Button first.

## STEP 4 – Selecting the Open Setup Mode to operate on LUX

Now go to Open Setup via the Menu as before and change from TIME Mode to LUX Mode. There is no time delay option for Opening.

> **IMPORTANT**
> To enable light sampling to take place *HenSafe* will operate within 5 minutes of the calibrated light level being detected. This prevents spurious operation due to transient light sources. Dark clouds, car headlights, torch beams etc. which last *less than 5 minutes* will not be registered and will not affect the opening or closing of your door.

## Tips:

You can recalibrate the LUX levels at any time by pressing and holding the Green Manual Button as above.
Your LUX levels will stay in memory until you calibrate again, no matter which Mode of operation is selected.

**Unwanted Light Sources**:

If you have outside lights, stack yard floodlights, streetlights etc. nearby then this may cause *HenSafe* to operate early/late.
Remember that overnight snow and bright sunshine will increase ambient light levels for the morning opening.
To overcome this you can set *HenSafe* to operate in TIME Mode or BOTH Mode – see next section.

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# Setting up *HenSafe* to operate in BOTH Mode

**With this Mode, BOTH time and lux parameters set by you must be met before *HenSafe* operates your door.**
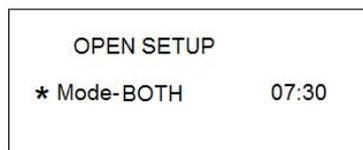This Mode is particularly useful as the seasons and light levels change. Using LUX Mode on its own in Summer for opening and closing may result in your door opening very early and closing very late, exposing your hens to predators - BOTH Mode enables you to set a time with a light level backstop, or a light level with a time backstop.

## Using BOTH Mode to Open *HenSafe*

**STEP 1 –** Install *HenSafe* and set it up in TIME Mode with your preferred Open and Close times.

**STEP 2 –** Calibrate your Open LUX Level **AND** your Close LUX level.

**STEP 4 –** Set the Mode to BOTH on the Open Setup menu

```
OPEN SETUP

* Mode-BOTH       07:30
```

In this example *HenSafe* will open at 07:30 as long as it is lighter than your calibrated Opening LUX level. Useful when sunrise is at 4am!

## Using BOTH Mode to Close *HenSafe*

Your actual calibrated Closing LUX level will apply: If you have previously added any minutes for LUX closing then these will not be available for the BOTH setting but *HenSafe* will remember them if you want to switch back to LUX mode at any time.

```
CLOSE SETUP
* Mode-BOTH        20:15
```

In this example, *HenSafe* will close after 20:15 as long as it is darker than your calibrated Closing LUX level.

## Examples when BOTH Mode is particularly useful:

- **If your coop is in a dark area (e.g. inside an open-fronted barn).** Provided you are not opening and closing the barn door or parking things in front of it in the evenings (i.e. artificially changing the light levels significantly) then you would just calibrate the LUX levels to operate at a lower ambient light. You would calibrate your closing light level and set an earliest closing time. So, provided it is darker than the light level you have calibrated AND it is after the time you have set, then the door will shut, i.e. both parameters have been met. Likewise for mornings you would calibrate your opening light level and set an earliest opening time.
- **In winter if you are expecting overnight snow, which will reflect more ambient light:** If you calibrated a light level for opening and woke up to snow on the ground, in LUX mode your door may open too early. BOTH mode would add your time backstop for opening.
- **Unexpected dark thunderstorms in the afternoon:** If you calibrated a light level for closing and then had an afternoon storm where it got very dark, then in LUX mode your door would shut early. BOTH mode would add your time backstop for closing.

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## THREE WAYS TO USE THE GREEN MANUAL BUTTON – PUSH AND RELEASE ONCE THE MOTOR STARTS

### 1. To Close then Open your door
For example if you need to keep the hens out while cleaning the coop or collecting eggs.
Push it once to close, release when motor starts. (If you were to push the Menu button you would see "MAN" on the display against the down arrow). Once you have finished the cleaning out push the Manual button again to Open the door. ( If you were to push the Menu button the "MAN" would have disappeared and the display reverts back to the Mode you have set). So, using the button twice like this during the day will revert the unit back into automatic mode for the next programmed operation, i.e. closing at night.

### 2. To Open then Close your door
For example if you need to check on your hens at night.
If you use the button before 23.59 to Open your door: The unit has been factory set to close within 1 minute as a failsafe.
If you use the button after 23.59 to Open your door: You will need to push the button again to close manually.
In both of these cases the unit will revert back into automatic mode for the next programmed operation, i.e. opening in the morning.

### 3. To Override the next Programmed Operation
Example 1: If you need to shut them in early in the evening then push the button once. It will open as normal in the morning.
("MAN" will appear against the Down arrow if you push the Menu button to read the display.)
Example 2: If you need to open your door earlier in the morning than programmed you can push the Manual button.
("MAN" will appear against the Up arrow if you push the Menu button to read the display.)

## Tips:
1. The Green Manual button is inoperable when the Display is active. Wait for it to time-out first.
2. If when you press the Green Manual button the motor does not operate and you see the wording:
"HenSafe Ver .. .. .."  (some numbers where the dots are) then it means that *HenSafe* has rebooted.
In this case please check your batteries. Likely causes: A faulty battery, batteries not fitted snugly or seated correctly, snap connector is not secure, or you are using the wrong type of battery.
You must use 4 x 'C' type alkaline, heavy duty batteries (suitable for motorised devices and not rechargeable).

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## Quick Tip for Unmounting *HenSafe*

If at any stage you need to remove the unit from your coop then please make sure that the cord is wound fully in (i.e. in the "door up" position) and that the batteries are taken out. This will prevent spurious operation and problems with cord tangles.

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