

# TIMEGUARD®

## *Supply***MASTER**

24 Hour /7 Day  
Fused Spur  
Time Switch

Model: FST77N



Installation & Operating Instructions

# 1. General Information

These instructions should be read carefully and retained for further reference and maintenance.

**Note:** Timeguard reserve the right to alter these instructions at any time. Up to date instructions will always be available for download at [www.timeguard.com](http://www.timeguard.com)

## 2. Safety

- Before installation or maintenance, ensure the mains supply to the timer is switched off and the circuit supply fuses are removed or the circuit breaker turned off.
- It is recommended that a qualified electrician is consulted or used for the installation of this timer and install in accordance with the current IEE wiring and Building Regulations.
- Check that the total load on the circuit including when this timer is fitted does not exceed the rating of the circuit cable, fuse or circuit breaker.
- To clean use a clean dry cloth only. Do not use liquid cleaners.

## 3. Technical Specifications

- Mains Supply: 230V AC 50Hz
- Fused: Supplied with BS1362  
13A Fuse
- Switch Rating: 13A Resistive (3kW),  
750W Incandescent / Halogen  
200W LED Lighting,  
100W Compact Fluorescent

- Contact Type: Normally Open
- Minimum Wall Box Depth: 25mm
- Boost Times: 30, 60, 90, 120 minutes
- Power Status Indicator: Red LED
- Output Status Indicator: Green LED
- Operating Temperature: 0°C to +40°C
- Power Reserve: Up to 672 Hours (28 Days)
- Standby Consumption: <0.91W
- CE / UKCA Approved
- Dimensions (H x W x D): 85mm x 85mm x 31mm

**Note: Not suitable for use with Discharge Lighting.**

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Illuminated screen

Sets programmes

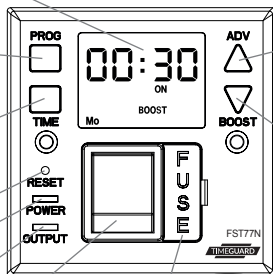
Sets time and date

Reset button

Power LED

Output LED

Double pole switch



Override until next programme change and increases the displayed value during time and programme setting

Boosts for 30, 60, 90 or 120 minutes and decreases the displayed value during time and programme setting

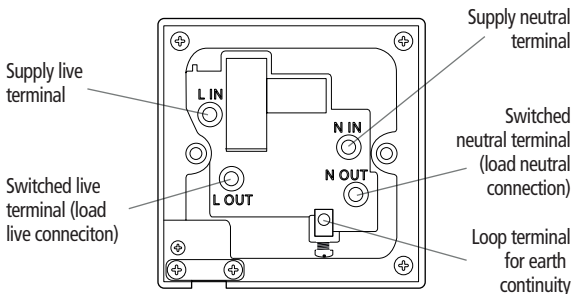
BS 1362  
(1" x 1/4") fuse

## 4. Installation

- Ensure the mains supply is switched off and the circuit supply fuses are removed or the circuit breaker turned off.
- Connect the incoming 230V 50Hz supply and outgoing load cables to the relevant terminals ensuring correct polarity is observed and that all bare conductors are sleeved (see section 5. Connection Diagram).
- A front cable exit cut-out is provided with a pre-installed removable cover.
- If the front exiting cable cut-out is required:
  1. Undo the 2 fixing screws and remove the blanking plate (you can discard the blanking plate at this stage but keep the 2 fixing screws).
  2. Remove the cable grip from the accessory pack.
  3. Using the 2 fixing screws previously removed from the blanking plate, secure the load cable to the unit.
- Finally secure the unit to the back box with the fixing screws provided, forming the cables during installation to avoid any entrapment and cable damage.

## 5. Connection Diagram

The terminals are marked as follows on the rear of the switch;



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### Supply

Live (Brown or Red) to

**L IN**

Neutral (Blue or Black) to

**N IN**

### Load

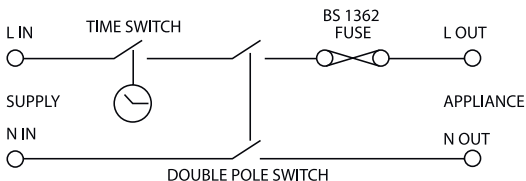
Switched Live (Brown or Red) to

**L OUT**

Neutral (Blue or Black) to

**N OUT**

### Internal Schematic



## 6. Battery

- The unit has an in built non replaceable, rechargeable battery, which will keep the programmed times during power down situations for up to 4 weeks.
- If the screen goes blank, once power is restored, and 4 hours have elapsed (to give a working battery charge), Reset must be pressed, and times/programmes re-entered.
- Before programming for the first time, connect the unit to the mains for at least 15 minutes prior to pressing the Reset button and programming the unit.
- If the display is not visible or very faint, charge for 4 hours prior to pressing Reset and programming.

## 7. Reset

The unit must be reset before programming for the first time, or after subsequent discharge for more than 5 days, and following a 4 hour period of charging.

- Press the Rst button once using a pointed object e.g. a pencil or a paper clip.
- The display will show all characters/digits and then will clear to show the following;  
ASCO = Automatic Summer/  
Winter Change Over.
- Use the Adv/Ovr button to change between ON and OFF for the automatic summer time adjustment and proceed to section 9.



## 8. Setting The Clock

- Press and hold the Time button for 3 seconds, the word Hold will show on the screen.
- After 3 seconds release the Time button and the screen will show the year;
- Use the Adv/Ovr to increase (or the Boost buttons to decrease) the value and set to the correct year.
- Press the Time button once to save the year, and the screen will show the month;
- Use the Adv/Ovr or boost button to set the correct month.
- Press the Time button once to save the month, and the screen will show the day;
- Use the Adv/Ovr or boost button to set the correct day. Press the Time button once to save the day, and the screen will show the time – hour first; Note: The hour is in 24 hour format.
- Use the Adv/Ovr or boost button to adjust to the correct hour.
- Press the Time button once to save the hour, and the minutes can then be adjusted.
- Use the Adv/Ovr or boost button to adjust to the correct minutes.
- Press the Time button once to exit the Time/date entry mode.



- The display should now show the correct time/day of the week, with the output status showing as OFF for example;



## Modifying the date and time of day

If for any reason the display requires an adjustment for the displayed current time press and hold the time button for 3 seconds and repeat the same process described in this section. You can ignore values such as the year, month and the correct day of that month (1st to 31st) by pressing the time button to skip editing these values unless a correction is also needed for that value.

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- Use Adv/Ovr or Boost to either increase or decrease the value of the year, month, day, hour or minute values.
- The value eligible for making adjustments will be indicated by flashing on the display.
- Once the changes have been made press the time button until the minutes are shown on the display and are flashing then press the time button once more to return to operating mode after any changes have been made (if any).

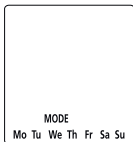
## 9. Programming ON/OFF times

The FST77N has 8 independent ON/OFF periods available for programming each day. There is a choice of programming options, including 7 days the same (24 hours), 5 + 2 days (where the weekdays are the same, and the two weekend days are the same), and 7 individual days where each day can have an independent ON/OFF time specific to that day of the week.

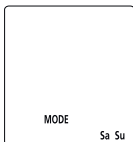


**Note:** Programmes can be omitted either by leaving dashes in all the locations for ON/OFF times for that day or group of days. Alternatively, leaving the programme entry mode before filling in all the ON/OFF times will leave the remaining times blank.

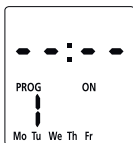
- Press and hold the Prg button for 3 seconds, the word Hold will show on the screen.
- After 3 seconds release the Prg button and the MODE screen will be displayed;
- Use the Adv/Ovr or Boost buttons to change the day grouping mode. This will step through the following options;



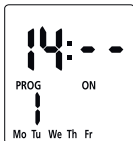
24 hour: Mo Tu We Th Fr Sa Su  
 5 day: Mo Tu We Th Fr (followed automatically in programming by 2 day – Sa Su)  
 Individual day: Mo (followed automatically in programming by each of the other days of the week)



- Once the desired day grouping is selected, press Prg button once to set and move onto programming the ON/OFF times.
- The display will show Prog 1, with dashes for the hours and minutes; Note: the example shown is for 5 day + 2 day programming.



- Use Adv/Ovr or Boost button to set the hour for the first ON period.
- Press the Prg button once to set and move you to the minutes.



- Use Adv/Ovr or Boost button to set the minutes for the first ON period.
- Press the Prg button once to set and move you to the Programme 1 OFF time.



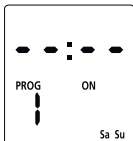
- Use Adv/Ovr or Boost button to set the hour for the first OFF period.
- Press the Prg button once to set and move you to the minutes.



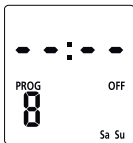
- Use Adv/Ovr or Boost button to set the minutes for the first OFF period.



- Press the Prg button to scroll through Programme 2 ON, Programme 2 OFF, Programme 3 ON, Programme 3 OFF etc; adding in times as required. Note: If further times are not required, leave the dashes in place and scroll past the rest of the programs using the Prg button.



- After Programme 8 has been entered, then next day grouping will follow e.g. In this example the day grouping will change to 2 day – Sa Su Programme 1 ON.



- Programme the ON/OFF times as before.
- After the last OFF time for programme 8 has been set, press the Prg button once to exit the programme mode.

**Note:** At any stage in programming, if the Prg button is pressed and held for 3 seconds, the timer will return to normal operating mode.

- The display will now show the correct time and day as per this example;
- At this stage the output ON/OFF indicator may not reflect the current programme status accurately.
- If the time switch should be OFF now, leave as it is the unit will automatically turn ON at your next desired ON time and resume programming as normal.



- If the unit should be ON now, press the Adv button once and set it to ON ADVANCE. The time switch will now automatically turn OFF at your next desired OFF time, and will resume the next programme as normal.



## Programming across midnight

- Enter the required programme 1 ON time.
- Set the programme 1 OFF time to 00:00 (i.e. midnight)
- Set the programme 2 ON time to 00:00 as well.
- Enter the required programme 2 OFF time for the next day



Prog 1 ON  
22:00



Prog 1 OFF  
00:00



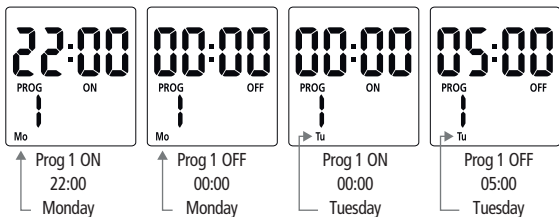
Prog 2 ON  
00:00



Prog 2 OFF  
05:00

The above example would allow the unit to switch ON at 22:00 and switch OFF at 05:00 daily, as Monday to Sunday are highlighted on the display.

If programming across midnight is required to repeat once a week vs daily, set as below.



The above shows switching ON at 22:00 every Monday evening and OFF at 05:00 every Tuesday morning only.

## Modifying or adding programmes

- Press and hold the Prg button for 3 seconds, the word Hold will show on the screen.
- After 3 seconds release the Prg button and the MODE screen will be displayed.  
Note: This will automatically display the mode in which it was last programmed. For instance, if it was programmed in 5 + 2, then it will show Mo Tu We Th Fr.
- Either – Accept this by pressing the Prg button once, and review the programmed times for this mode by pressing Prg to move through the times.
- Or – Press the Adv/Over or Boost button to change the mode, and then press the Prg button to review the times.

**Note:** If you wish to change the mode at this stage, doing so will result in programmes being lost and they will need to be re-entered.

- Review times and adjust as necessary as described at the start of section 9.

## 10. Advance/Override button

In normal operating mode the Adv/Ovr button advances the programme to the next time change.

- If the output is currently OFF, it will change the output to ON ADVANCE, until the next programmed OFF time.
- If the output is currently ON, it will change the output to OFF ADVANCE, until the next programmed ON time.
- A second push of the Adv/Ovr button selects a permanent ON mode, ON OVERRIDE, where the output is ON irrespective of the programming.
- A third push of the Adv/Ovr button selects a permanent OFF mode, OFF OVERRIDE, where the output is OFF irrespective of the programming.
- A fourth push of the Adv/Ovr button returns the unit to normal operating mode, where the output will conform to the programming.

## 11. Boost button

- One press of the boost button will provide 30 minutes of boost.
- Two presses of the boost button will provide 1 hour of boost.
- Three presses of the boost button will provide 1 hour, 30 minutes of boost.
- Four presses of the boost button will provide 2 hours of boost.
- A fifth press of the boost button will cancel any boost period and return you to normal operating mode.

If a boost period should overlap a scheduled ON time, the programme will continue to run as normal and the programmed OFF time will switch OFF as expected. The example below assumes a programme of 22:00 ON and 05:00 OFF being used with a 30 minute boost.



At 21:45 Boost  
is pressed



Boost duration  
of 30 mins has  
started



Boost time has ended.  
Any remaining overlapping  
ON time remaining  
has priority



Scheduled OFF time  
switches OFF  
as expected

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If a boost period should overlap a scheduled OFF time, the remaining boost period will continue to run after the scheduled OFF time as elapsed. The example below assumes a programme of 22:00 ON and 05:00 OFF being used with a 30 minute boost.



At 04:45 Boost  
is pressed



Boost duration  
of 30 mins has  
started



Boost time has ended.  
There is no scheduled  
ON time remaining,  
resulting in the unit  
switching OFF at 05:15

If a boost period should overlap both a scheduled ON and OFF time, the boost will have priority and the FST77N will switch off once the remaining boost period comes to an end. The example below assumes a programme of 05:00 ON and 05:30 OFF being used with a 1 hour boost.



At 04:45 Boost  
is pressed



Boost duration  
of 1 hour has  
started



Boost time has ended.  
Overlapping any scheduled  
ON time that was remaining,  
resulting in the unit switching  
OFF at 05:45

If you experience problems, do not immediately  
return the unit to the store.

Email the Timeguard Customer Helpline:

**HELPLINE**

**helpline@timeguard.com**

or call the helpdesk on 020 8450 0515

Qualified Customer Support Coordinators will be online  
to assist in resolving your query.



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