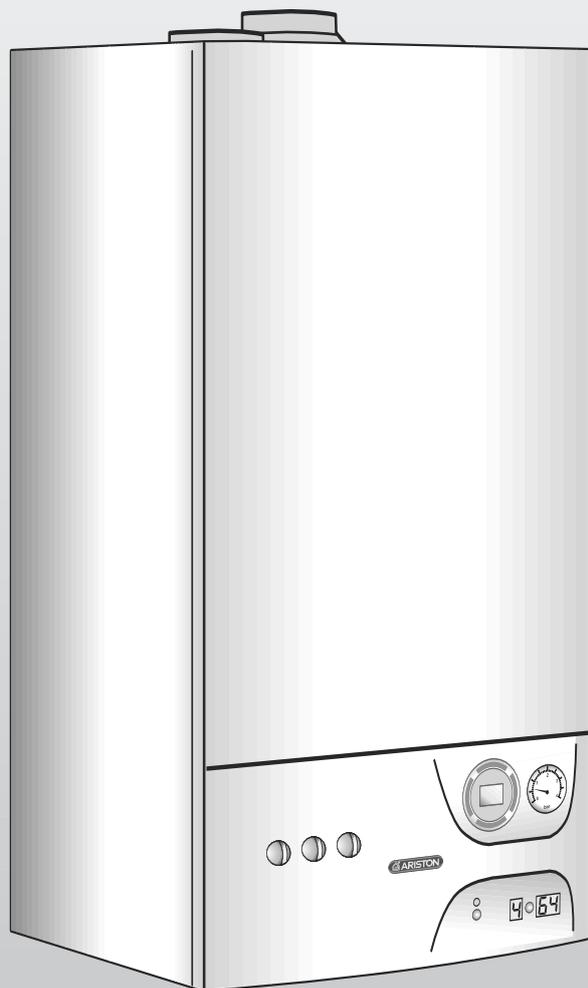


**micro** CONDENS

## End User Manual

*ecoCOMBI 27 MFFI*  
*ecoSYSTEM 27 RFFI*



# ARISTON



*The code of practice for the installation,  
commissioning & servicing of gas fires and wall heaters*

Country of destination: GB/IE

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*Dear Customer,*

*Thank you for choosing an ARISTON boiler.*

*We guarantee that your boiler is a reliable and technically sound product.*

*This manual provides detailed instructions and recommendations for proper installation, use and maintenance.*

*Remember to keep this manual in a safe place for future reference i.e. by the gas meter.*

*Your local MTS Servicing Centre is at your complete disposal for all requirements.*



### **GUARANTEE**

The guarantee on this appliance is valid for 24 months from the first day of installation.

Repairs to the electric, water or gas circuits may be carried out only by your local authorised MTS Servicing Centre.

### **IMPORTANT!**

Please read this manual carefully.  
For additional information, please consult the "Installation and Servicing Instructions."

Make sure to keep the manuals provided with the appliance so that they can be used by the end-user, installer or our authorised engineer.

*Every attempt has been made to avoid errors of any kind in this manual, the Management invites customers to inform of any inaccuracies which they may find. This will help to improve our service.*

		27 MFFI	27 RFFI
<b>GENERAL DATA</b>			
Thermal Capacity C.H.W. min/max	kW	8.9 / 26.7	8.9 / 26.7
Thermal Capacity D.H.W. min/max	kW	8.9 / 30	-----
Power for Hot Water Production min/max	kW	7.8 / 23.6	-----
Efficiency at Nominal Thermal Capacity (30/50°C)	%	94.0	94.0
<b>CENTRAL HEATING</b>			
Temperature min/max (High Temperature range)	°C	48 / 82	48 / 82
Temperature min/max (Low Temperature range)	°C	30 / 75	30 / 75
Maximum Heating Pressure	bar	3	3
Expansion Vessel Capacity	l	6	6
<b>DOMESTIC HOT WATER</b>			
Temperature min/max	°C	36 / 56	-----
Pressure of Water for Domestic Use min/max	bar	0.2 / 6	-----
Flow Rate ΔT=30	°C	11.1	-----
Flow Rate ΔT=35	°C	9.7	-----
<b>ELECTRICAL DATA</b>			
Electrical Supply	V/Hz	230 / 50	230 / 50
Power Consumption	W	135	135
Protection of Electrical System	IP	24D	24D
<b>CATEGORY</b>			
Nominal Pressure/Natural Gas (G20) (boiler at maximum)	mbar	20	20
Nominal Pressure/LPG (G30-31) (boiler at maximum)	mbar	30	30

## 1. GENERAL INFORMATION

MTS (GB) Limited support the *benchmark* initiative. Your installer will give you, and show you how to use, a Log Book which will give you important information about your boiler, and heating system. Please have this Log Book to hand whenever you contact a service engineer or us.

**All CORGI Registered Installers carry a CORGI ID card, and have a registration number. Both should be recorded in your boiler Log Book. You can check your installer is CORGI registered by calling CORGI direct on :- (01256) 372300.**

The ecoCOMBI is a combined appliance for the production of Central Heating (C.H.) and Domestic Hot Water (D.H.W.) and the ecoSYSTEM is a heating only boiler.

This appliance **must be used only** for the purpose for which it is designed.

The manufacturer declines all liability for damage caused by improper or negligent use.

**Do not allow** children or inexperienced persons to use the appliance without supervision.

If you smell gas in the room, **do not turn on** light switches, use the telephone or any other object which might cause sparks.

Open doors and windows immediately to ventilate the room.

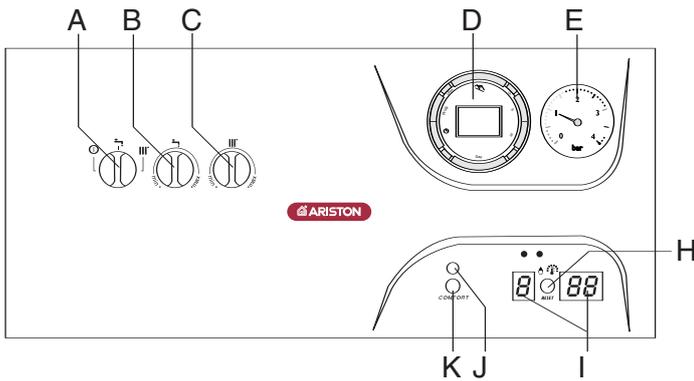
Shut the gas mains tap (on the gas meter) or the valve of the gas cylinder and call your Gas Supplier immediately.

If you are going away for a long period of time, remember to shut the mains gas tap or the gas cylinder valve.

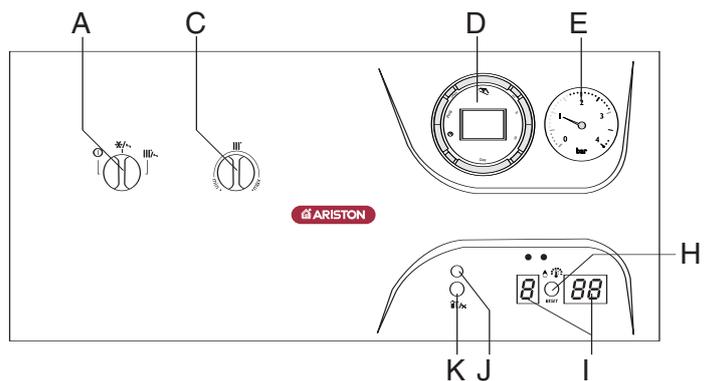
**Before any intervention within the boiler it is first necessary to isolate the electrical power supply by turning the external switch to “OFF”.**

## 2. CONTROL PANEL

**eco Combi 27 MFFI**



**eco SYSTEM 27 RFFI**



- A. ON/OFF knob/selecter knob for Summer/Winter
- B. Domestic Hot Water Temperature Adjustment Knob
- C. Central Heating Temperature Adjustment Knob
- D. Time Clock
- E. Heating System Pressure Gauge
- H. Reset Button
- I. Multi-function Display
- J. "COMFORT" Function L.E.D./heating only (RFFI SYSTEM)
- K. "COMFORT" Function Push-button/heating only (RFFI SYSTEM)

## 3. OPERATING INSTRUCTIONS

### CAUTION!!

*Installation, start-up, adjustments and maintenance must be performed by a competent person only in accordance with the current Gas Safety (Installation & Use) Regulations and the instructions provided. Improper installation may cause damage or injury to individuals, animals and personal property, for which the manufacturer will not be held liable.*

*To ensure efficient and safe operation it is recommended that the boiler is serviced annually by a competent person.*

*If it is known or suspected that a fault exists on the appliance, it must not be used until the fault has been corrected by a competent person.*

### Helpful Suggestions

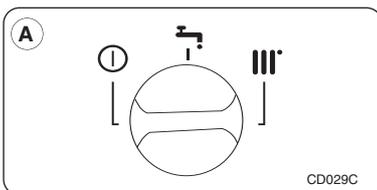
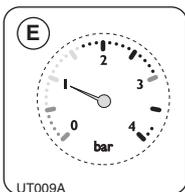
To get the most out of your boiler, we have provided you with some useful advice on proper use and maintenance:

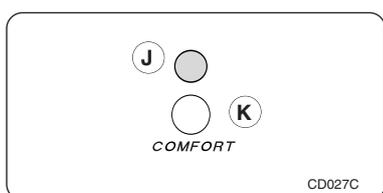
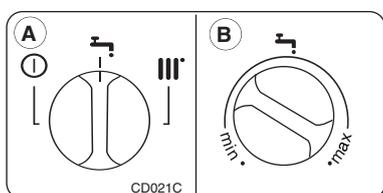
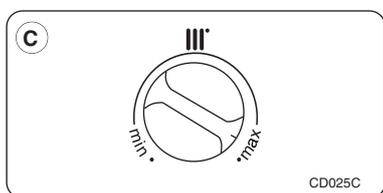
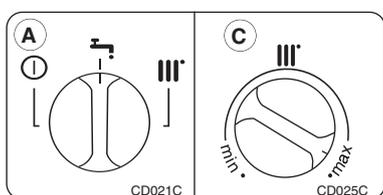
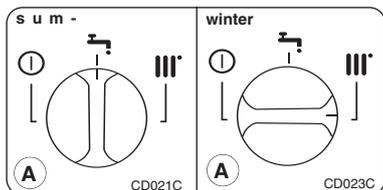
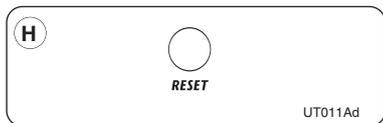
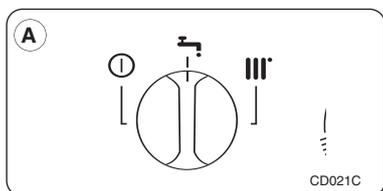
- Periodically check the system pressure using the pressure gauge "E" and make sure that the pressure is between 1.0 and 1.5 bar (the blue part of the gauge) when the system is off and cool. If the pressure is below the minimum recommended value, the pressure must be brought into the acceptable range. Consult your installer for checking and refilling the system. If the pressure level drops on a frequent basis, it is likely that there is a water leak in the system. If this is the case, your installer must inspect the system.
- The outer panels of the boiler's case must only be cleaned with a damp cloth, do not use abrasive cleaners. The Control panel can be wiped with either a damp or dry cloth. Spray polishes must not be used on the control panel surface or knobs. Care must be taken in preventing any liquid entering the appliance.
- If the water is exceptionally hard, install a water softener so that the efficiency of the boiler remains the same over time, as this will consume less gas.
- To improve comfort levels and take full advantage of the heat produced by the boiler, it is necessary that an external thermostat and an outdoor sensor be installed.
- When the boiler is not in use for prolonged periods shut it down by turning the knob "A" to the off position and close the gas and water isolation valves.

**(IMPORTANT!)** This will disable the anti-frost device - if the period of disuse is very cold it will also be necessary to drain the heating system of water.

If you wish to leave the anti-frost device active, it is necessary to leave the boiler on: this will not safeguard from possible "blocks" which may impair this function.

- It is good practice to clean and service the appliance and Central Heating System every year. Call a **CORGI** registered gas installer.





### Start-up Procedure

Before starting the boiler, check the following:

- The water pressure on the pressure gauge “E”;
- That the gas cock and the inlet for domestic water are open.

These models are equipped with electronic ignition which utilises contact ionisation. To make switch the boiler on, turn the knob “A” in summer “❄️” or winter “☀️” position a centralised electronic control unit will automatically light the main burner when needed without any intervention from the outside. If the burner does not light within the pre-set safety time limit, the display will show an error code.

To reset the ignition system, the reset button “H” must be pressed. Should the system fail to light a second time, check to make sure that the gas cock is open. If the problem persists, contact one of our Authorised Service Centres.

### Winter and Summer Operating Modes

The boiler is fitted with a selector knob “A” which allows you to switch between winter “☀️” and summer “❄️” operating modes and vice versa

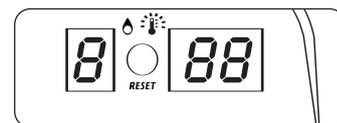
When the knob is set to “☀️”, the boiler can serve the dual purpose of providing heat or hot water for domestic use. The supply of domestic hot water always takes precedence over central heating.

When the knob is set to “❄️”, the boiler cuts out the heating system and only provides domestic hot water (when needed).

### Turning on the Heating

Turn the “A” selector knob to “☀️”;

Regulate the temperature of the heating system water in the boiler by turning the “C” knob. The temperature can vary between 42°C and about 82°C; The temperature of the heating system water in the boiler can be regulated on the alpha-numerical display. With this type of installation, the heating thermostat acts on ambient temperature directly.



### Installation with an external thermostat:

Turn the “A” selector knob to “☀️”;

Turn the thermostat knob “C” to the highest temperature setting.

In this instant the boiler is controlled by a time clock and outdoor sensor; COMO (programmable thermostat) with or without an outdoor sensor; CCM with or without outdoor sensor i.e depending on internal or external temperature. At that point, the main burner will turn off and the circulation pump will stop (if a pump overrun period has not been set, see section 3.6.6. of the “INSTALLATION INSTRUCTIONS”).

### Production of Domestic Hot Water

Turn on the power to the boiler turning the knob “A” to the summer “❄️” position

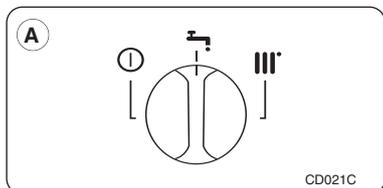
Turn the “B” knob to select the temperature for the hot water (between 44°C and about 56°C depending on the flow rate of the water).

It is recommended that the temperature knob for the domestic hot water is not set to a high temperature and then mixed with cold water. Setting the thermostat to medium temperature is preferable

### Comfort Function (27 MFFI)

The supply of water for domestic use can become more convenient by means of the “COMFORT” function, which maintains the secondary exchanger at a pre-set temperature when the boiler is not running; thereby allowing a quicker delivery of domestic water when required. This function is activated by pressing the “K” button on the control panel. When the function is on, a green L.E.D. “J” on the control panel will illuminate.

**Note:** If the “COMFORT” function is on during the pump overrun period, it will be temporarily deactivated. The green L.E.D. “J” will remain on to indicate that the boiler will resume the “COMFORT” mode once the pump overrun period is complete.



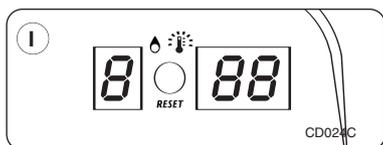
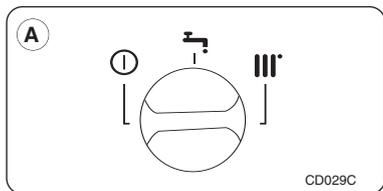
## Turning Off the Heating

### Installation without an external thermostat:

To turn off the heating, turn the “A” selector knob to “”. The boiler will still provide domestic hot water.

### Installation with an external thermostat:

To turn off the heating, turn the “A” selector knob to “”. The boiler will still provide hot water for domestic use. With an external thermostat, there are a number of ways to turn off the heating. For additional information, please consult the relative manual.



## DISPLAY: Viewing Normal Functions

When the system is operating, i.e. while the boiler is fulfilling its normal functions, the left-hand display will show a series of letters indicating the following functions:

Diagnostics Stage (precedes all other functions):

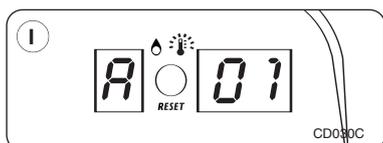
- 0** No Request for Heat
- C** Heating, Burner Off
- C.** Heating, Burner On
- c** Pump Overrun for Heating
- d** Water for Domestic Use, Burner Off
- d.** Water for Domestic Use, Burner On
- h** Pump Overrun for Water for Domestic Use
- b** Storage Cylinder, Burner Off (SYSTEM version)
- b.** Storage Cylinder, Burner On (SYSTEM version)

**NOTE:** the **flashing dot** on the left-hand display always indicates “burner off”; the **still dot** indicates “burner on”.

The right-hand display (two-digit) shows:

- in heating mode: temperature of heating system flow;
- in domestic hot water mode: temperature domestic hot water.

## 4. USEFUL INFORMATION



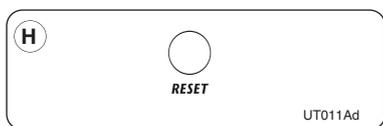
### Boiler Shutdown

The boiler is equipped with safety devices which intervene in certain situations to shutdown the boiler. Some of these situations are signalled by the boiler and can be corrected by the user.

#### Shutdown Due to Ignition Failure

This anomaly is indicated by “A01” on the display. To reset the boiler, press and then release the “H” button.

At this point, the electronic ignition system will attempt to light the burner again. **Should the boiler fail to ignite a second time, check that the external gas cock is open. If the problem persists, contact an Authorised Service Centre.**

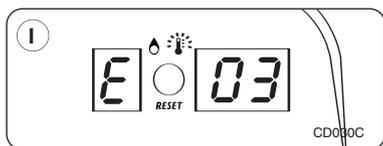


#### Shutdown Due to Overheating

This anomaly is indicated by “E03” on the display. The boiler has shutdown because the safety thermostat detected that the boiler temperature has exceeded the maximum limit.

To reset this state, wait until the boiler has cooled and press the button “H”.

If the safety thermostat operates on a frequent basis, contact one of our Authorised Service Centres.

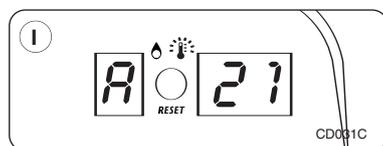


#### Shutdown Due to Insufficient Water Circulation

This anomaly is indicated by “A21” on the display.

One of the possible causes of this shutdown situation could be the lack of water in the boiler or water circulation failure in the primary heating circuit.

Check the system pressure on the pressure gauge “E” and, if it is less than 0.5



bar, try bringing the system pressure up to a mean value of 1.0 bar by opening the water inlet valve. Then reset by turning the boiler off and then back on by pressing the button “H”.

### Other Shutdown Situations

Should a shutdown situation indicated on the display by the following letters and figures occur, E04, E05, E08, E20, E21, E22, E23, E56, E64, E66, E74, E99 contact one of our Authorised Service Centres.

If instead the display shows one of the shutdown situations indicated by the following letters and figures, A02, A03, A07, A19, A20, A22, A99, try resetting the boiler by pressing the reset button “H”. If the boiler shuts off again, contact one of our Authorised Service Centres.

## 5. OPERATING THE TIME SWITCH

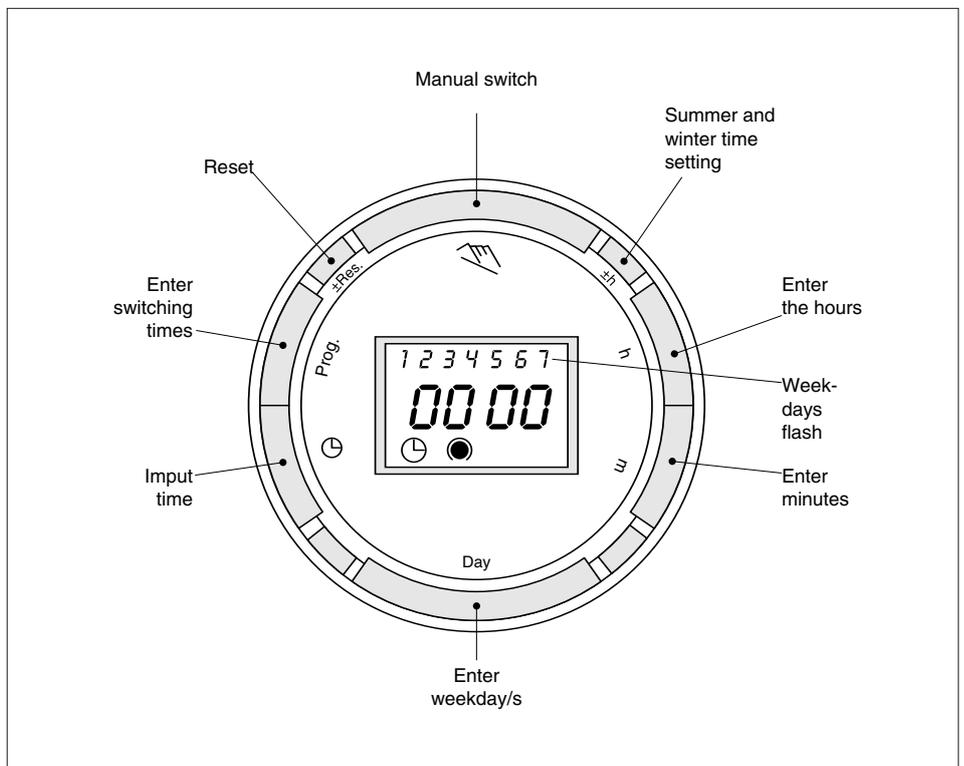
The step marked with the symbol “▶” are necessary to carry out a switching program.

### 5.0 Preparing for Operation

▶ **5.1** Activate the “Res” switch (=RESET) to reset the time switch to its default setting (activate using a pencil or similar pointed instrument). Do this:

- every time you wish to “reset” the time switch
- to erase all switching times and the current time of day.

After approximately two second the following display appears:



### ▶ 5.2 Enter current time and weekday

- Keep the “⌚” key pressed down
- During the summer time period press the +/- 1h key once.
- Enter the hour using the “h” key
- Enter the minutes using the “m” key
- Enter the day using the “Day” key
- 1 = “Monday”.....7 = Sunday
- Release the “⌚” key

The colon now blinks once a second.

#### Notes:

If you keep the “h” and “m” keys pressed down for more than 2 seconds, the display will enter fast-forward scroll mode.

### ► 5.3 Entering the switching times

You have 20 memory locations available. Each switching time takes up one memory location.

Keep pressing the “Prog” key until a free memory location is shown in the display “- -: -”.

Programme ON or OFF with the “” key:

“” = OFF; “” = ON

Enter the hour using “h”

Enter the minutes using “m”

If a switching command is to be carried out every day (1 2 3 4 5 6 7) then store using the “” key, otherwise select the day(s) it is to be carried out by using the “Day” key.

When the day selection is left blank, the programmed switching instruction operates at the same time every day

1 2 3 4 5 6 = Monday – Saturday

1 2 3 4 5 = Monday – Friday

6 7 = Saturday – Sunday

Selection of single days: 1 = Mon. .... 2 = Tues.

Save the switching time with the “” key.

The time switch enters the automatic operating mode and displays the current time of day.

Begin any further entry of a switching time with the “Prog” switch. If your entry is incomplete, the segments not yet selected will blink in the display.

After programming is completed, and you return the timeswitch to the current time display with the “” key, the timeswitch will not activate any switching instruction required for the current time. You may need to manually select the desired switching state with the “” key. Thereafter, as the unit encounters further switching instructions in the memory in real time, it will correctly activate all subsequent switching instructions.

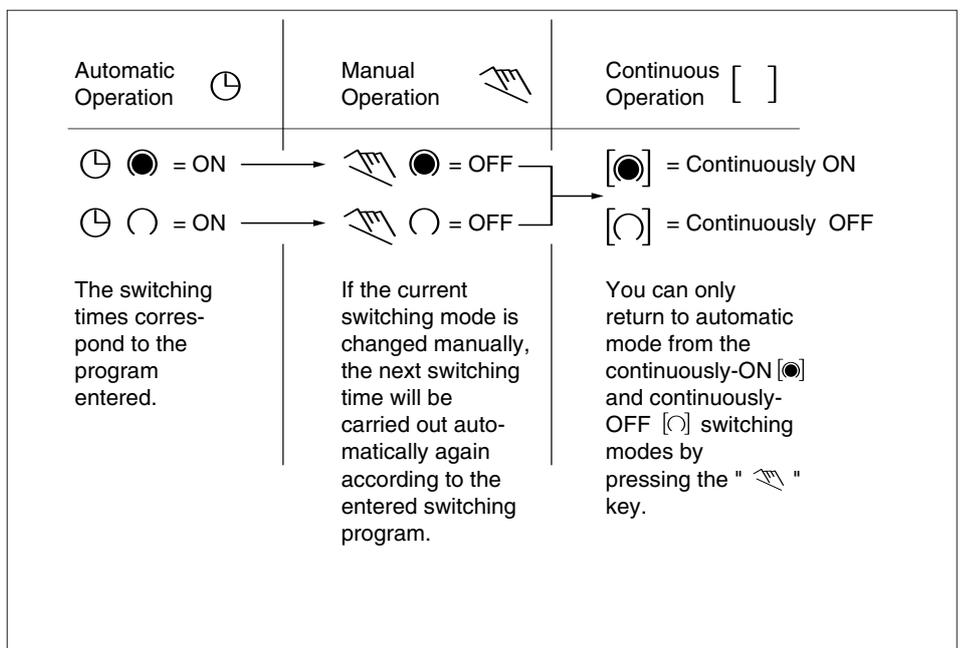
## 6.0 ADDITIONAL FUNCTIONS

### 6.1 Switching from summer time to winter time and vice versa

Press the “+/-1 h” key once

### 6.2 Manual Override Switch “”

With the “” you can change the current switching setting at any time. The switching program already entered is not altered.



### 6.3 Reading the programmed switching times

Pressing the “Prog” key displays the programmed switching times until the first free memory location appears in the display “— : —”.

If you now press the “Prog” key once again, the number of free memory locations will be displayed, e.g. “FR18”. If all memory locations are occupied, the display “FR” appears.

### 6.4 Changing the programmed switching times

Press the “Prog” key repeatedly until the switching time you want to change is displayed. You can now enter the new data. See point 4.3.

#### Notes on storing switching times:

If you end your entry of the switching times by pressing the “Prog” key, then the switching time you have entered will be stored and the next memory location displayed. Entry of further switching times is also carried out as described in point 4.3.

In addition, a complete switching command is stored **automatically** after around 90 seconds provided **no other** key is pressed. The time switch then enters the automatic operating mode and displays the current time again.

### 6.5 Deleting individual switching times

Press the “Prog” key repeatedly until the switching time you wish to delete is shown in the display. Then set to “—” using the “h” or “m” key and keep the “⊖” key pressed down for around 3 seconds. The switching time is now erased and the current time is displayed.

### 6.6 AM / PM time display

If you press the “+/-1h” and “h” keys at the same time, the time display switches into the AM/PM mode (mostly used in English-speaking countries).

### 6.7 Technical data

Connection	see unit imprint
Switching capacity	see unit imprint
Ambient temperature	-10°C to +55°C
Running reserve	5 h at + 20°C
Memory locations	20
Shortest switching time	1 min.
Programmable	every minute





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