mi**cro** *GENUS II*

End User Manual

microGENUS II 24 MFFI
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microGENUS II 31 MFFI

CE

benchmark ™
COLLECTIVE MARK
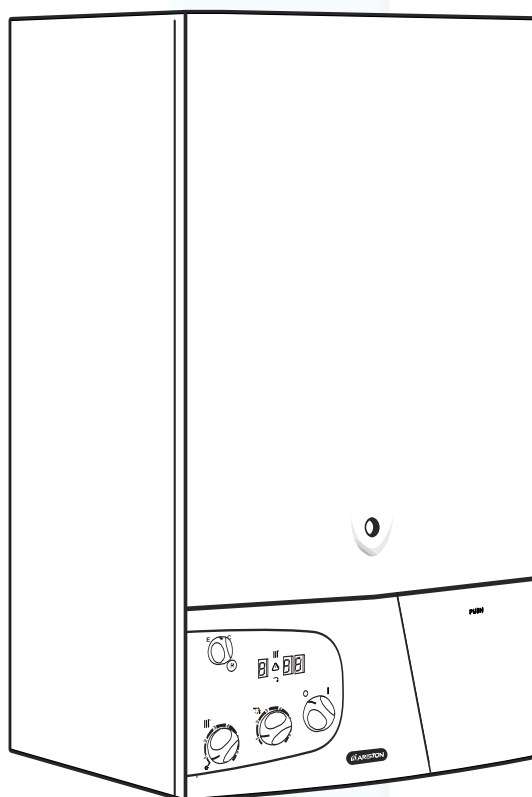
**The code of practice for the installation,
commissioning & servicing of central heating systems**

Country of destination: GB/IE

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.

MTS
G R O U P

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

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

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

TABLE OF CONTENTS

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.

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 Logbook. You can check your installer is CORGI registered by calling CORGI direct on :- (01256) 372300.
This is a combined appliance for the production of Central Heating (C.H.) and Domestic Hot Water (D.H.W.). 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 light switches on or off, 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 supply by turning the external switch to "OFF".

2

CONTROL PANEL
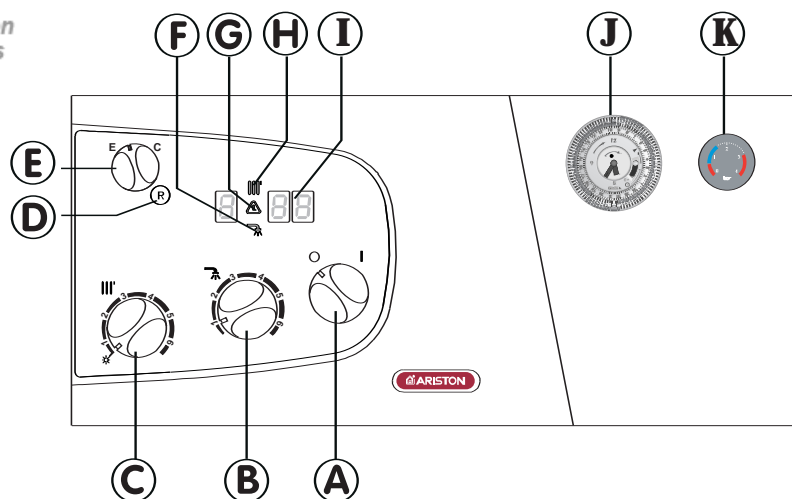
LEGEND:

A - On/Off Switch

B - Domestic Hot Water Temperature Adjustment

C - Central Heating Temperature Adjustment

D - Reset Button

E - Comfort Mode Selector

F - Hot Water (Summer Mode LED - Green)

G - Ignition/Overheat Lockout LED (Red)

H - Central Heating (Winter Mode) LED (Green)

I - Digital Display (Fault Code/Water Temperature)

J - Time Clock

K - Central Heating System Pressure Gauge

2. OPERATING INSTRUCTIONS
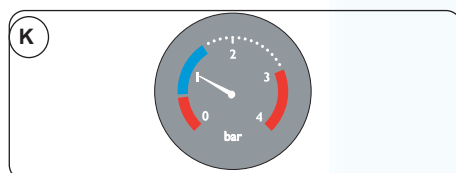
CAUTION

In the United Kingdom installation, start-up, adjustments and maintenance must be performed by a CORGI Registered Installer in accordance with the installation standards currently in effect, as well as with any and all local health and safety standards i.e.. CORGI.

In the Republic of Ireland the installation and initial start up of the appliance must be carried out by a Competent Person in accordance with the current edition of I.S.813 "Domestic Gas Installations", the current Building Regulations, reference should also be made to the current ETCI rules for electrical installation.

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 **"D"**, make sure that the pressure is at 1.5 bar when the system is off and cool. If the pressure is below the minimum recommended value (1 bar). To refill the system, open the two black handles connected to the silver flexible hose, once the pressure gauge **"K"** reads 1.5 bar close the valves again.

   NOTE: DO NOT UNDER ANY CIRCUMSTANCES USE THE APPLIANCE WITH THE PRESSURE GAUGE READING ZERO.

- The outer panels of the unit'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 to prevent any liquid from entering the appliance.

PRACTICAL TIPS

- If the water is very hard, it is recommended that a water softener be added to the system so as to reduce the formation of limescale in the boiler exchangers. This will

3

M

Appliance Gas
Cock Closed

N

Appliance Gas
Cock Open
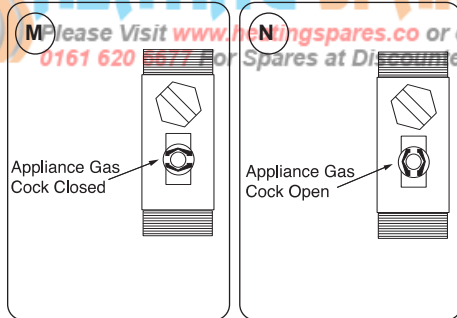
ensure that the efficiency of the unit remains the same over time, reducing gas consumption and maintenance costs.

- If the boiler should be out of use for a prolonged period, it is recommended that the electrical power supply be disconnected and that the external gas cock **"M"** and **"N"** be closed. If low temperatures are expected, the boiler and system pipe work should be drained in order to prevent frost damage.

- To improve comfort and take full advantage of the heat produced by the boiler, it is recommended that an external (room) thermostat be installed.

- It is good practice to clean and service the appliance and central heating system every year. Call an Authorised Service Centre.

IGNITION PROCEDURE

PL004D

Turn the selector knob **"A"** to the "I" position. After a short delay the display will indicate **"on"** indicating that the boiler is ready to operate. The electronic control unit will ignite the burner, without any manual intervention but in response to the request for Domestic Hot Water or Central heating. If, after approximately 10 seconds, the burner has not ignited, the boiler safety devices will shut off the gas and the display will indicate the fault code **AO1**. To reset the ignition system, the reset button **"D"** must be pressed and released. Should the boiler fail to ignite a second time, check that the external gas cock is open **"N"**. If the problem persists, contact an Authorised Service Centre.

A ○ I

PL004D
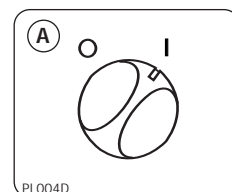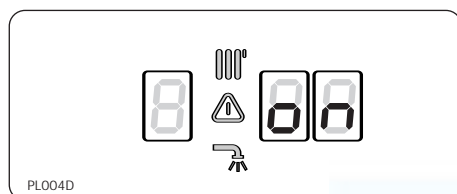
WINTER AND SUMMER OPERATING MODES

PL007D

R **D**

PL006C

In the 'winter' operating mode, the boiler will produce both Central Heating and Domestic Hot Water. In the 'summer' operating mode, the boiler will produce only Domestic Hot Water.

Using the knobs on the control panel, the user can select 'winter' or 'summer' operating mode.

Keeping the knob **"C"** at the " ☼ " position selects the 'summer' operating mode, the symbol " " will illuminate. 'Winter' operating mode may be selected by positioning the knob **"C"** between the min. and max. settings. The symbol " ||| " will illuminate.

summer

C

winter

C

PL007C

summer

PL009D

winter

PL009D
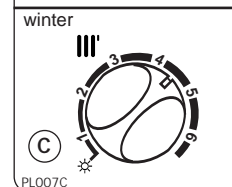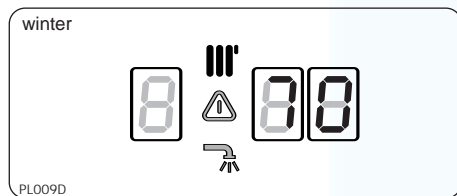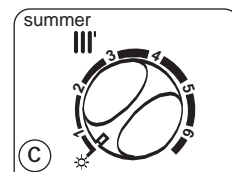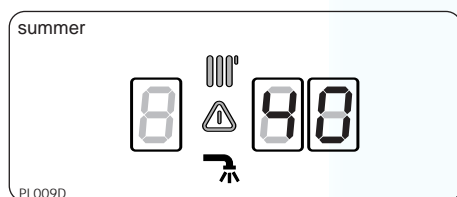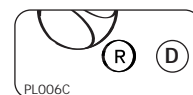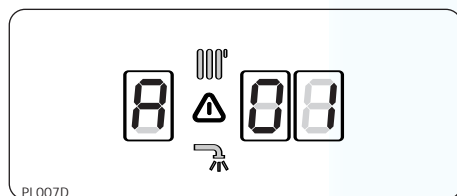
ADJUSTING THE HEATING

It is possible to set the temperature of the Central Heating system by adjusting the knob **"C"**. By positioning the indicator somewhere between min. and max., a temperature may be obtained which varies from approximately 42°C to about 82°C.
The water temperature in the Central Heating circuit may be checked on the display.

C

PL008D

EXTERNAL (ROOM) THERMOSTAT CONTROL

If an external (room) thermostat is installed, it is recommended that the temperature of the Central Heating system be set by means of the **"C"** knob, leaving it at max in order to obtain the best performance from the boiler and to allow the regulation of the external temperature to function efficiently.

C

PL008D

SETTING THE HOT WATER FOR DOMESTIC USE

Both in the winter and summer mode, the temperature of the Domestic Hot Water may be adjusted by using the **"B"** knob. A delivery temperature for the water may be chosen in a range from 36°C to about 56°C, depending on the flow rate of the water and the position of the knob between the min. and max. settings.
The water temperature in the primary circuit may be checked on the display.

NOTE: Should the hot water temperature be insufficientm turn the thermostat knob to maximum and reduce the flow rate at the tap. (A high flow rate will reduce the temperature.

B

4
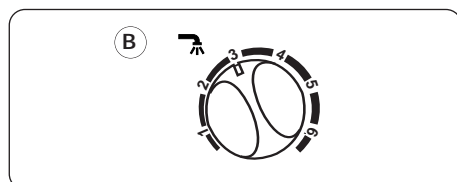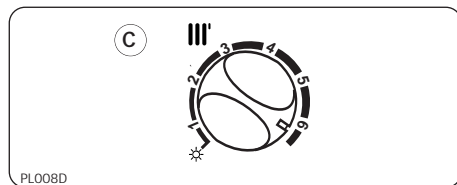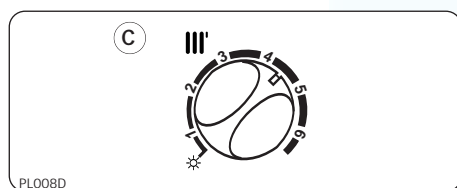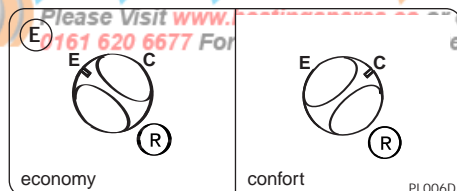
ECONOMY/COMFORT MODE

The selector knob **"E"** allows the user to choose the economy mode (position "E") or the comfort mode (position "C").

The economy mode is the normal state for the operation of the boiler, since the domestic water is heated up only when a tap is turned on.

The comfort mode is a special operating state, because the water contained in the secondary exchanger and in the primary exchanger is kept in a pre-heated condition, thereby allowing a quicker delivery of Domestic Hot Water when required.
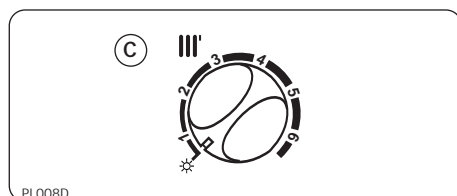
TURNING OFF THE CENTRAL HEATING

To turn off the Central Heating, rotate the **"C"** knob to the " ☼ " position.
The boiler will stay in 'summer' mode, providing Domestic Hot Water on request.
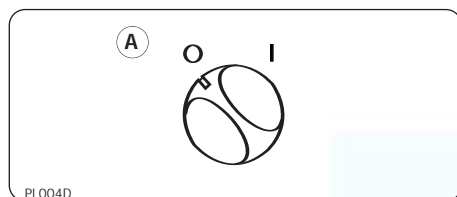
TURNING OFF THE BOILER

To turn the boiler off, rotate the selector knob **"A"** to the "0" position (OFF); the display will go off. Close the gas cock located under the boiler and turn the electricity supply switch (located outside the boiler) to the OFF position.

# 3. USEFUL INFORMATION AND TROUBLESHOOTING

BOILER SHUTDOWN SITUATIONS

The boiler is equipped with safety devices that intervene in certain situations and shut it off. Most of these situations are signalled by means of the L.E.D.s and in some circumstances the user may be able to remedy them.

SHUTDOWN DUE TO IGNITION FAILURE

This anomaly is indicated by **"A 01"** on the display. To reset the boiler, press and then release button **"D"**.

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.
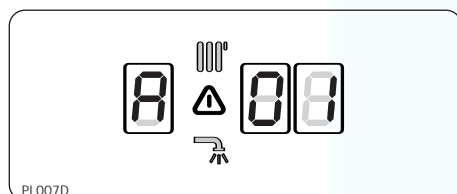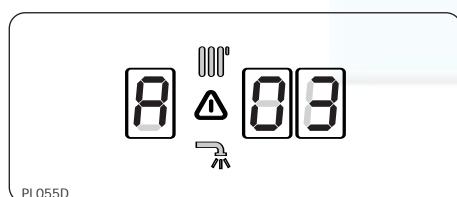
SHUTDOWN DUE TO OVERHEATING

This anomaly is indicated by **"A 03"** on the display. The boiler has shutdown because the safety thermostat detected that the boiler temperature has exceeded the maximum limit.

To reset, wait until the boiler has cooled and press button **"D"**.

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 **"E 02"** 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 **"K"** 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 as instructed on page 3. Then reset by pressing button **"D"**.
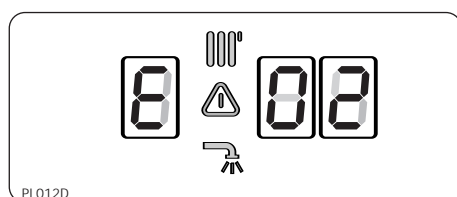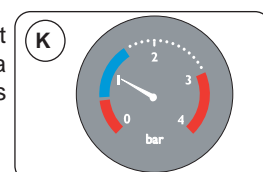
OTHER SHUTDOWN SITUATIONS

Should a shutdown situation indicated on the display by the following letters and figures occur, E04, E05, E06, E07, E08, E09, E20, E33, E34 contact one of our Authorised Service Centres.

If instead the display shows one of the shutdown situations indicated by the following letters and figures, A64, A97, A98, A99, try resetting the boiler by pressing the reset button **"D"**. If the boiler shuts off again, contact one of our Authorised Service Centres.

ANTI-FROST DEVICE

The boiler is fitted with a device which, in the event that the water temperature falls below 8˚C the pump activates and runs until a temperature of 18˚C is attained. In the event that the water temperature falls below 3˚C, the diverter valve switches to Domestic Hot Water and the burner fires and runs on minimum power until a temperature of 33˚C is attained. This device is only activated when the boiler is operating perfectly and
- the system pressure is sufficient;
- the boiler is powered electrically;
- gas is being distributed.

4. MAINTENANCE

Schedule an annual maintenance check-up for the boiler with a CORGI registered Service Engineer.
Correct maintenance always results in savings in the cost of running the system.

5. CHANGE OF GAS TYPE

Our boilers are designed to function either with Natural Gas (methane) or L.P.G. gas. If you need to changeover from one gas to the other, one of our Authorised Service Centres should be contacted.

6. MECHANICAL TIME CLOCK
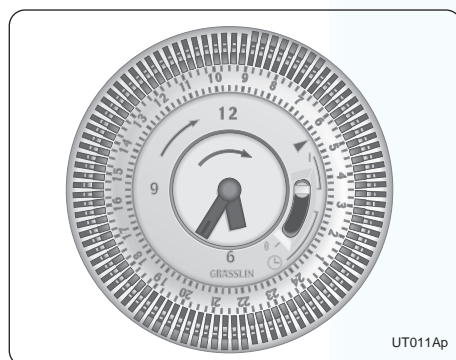
NOTE: the time clock is for central heating control only.
The time clock is provided with 96 switches, called riders, each of which covers a time interval of 15 minutes (four per hour).
When a rider is switched from the inside (off setting) to the outside of the clock border (on setting), the circuit is closed (switch on) for a period of 15 minutes and then the boiler starts if the room thermostat (if installed) or the heating thermostat require heat (heating function on).

EXAMPLE
To set the heating of your home in the time interval from 7.00 am to 9.30 am and from 7.00 pm to 10.00 pm every day:
- rotate the outer ring of the clock in a clockwise direction until the correct time of day (24h) lines up with the arrow on the clock (at approx. 2 o'clock position);
- **under no circumstances should the minute hand be moved manually**;
- make sure all the switches, i.e. the riders, are placed on the inside of the clock border;
- pull outward the riders for 7.00 am and 9.30 am, and then all riders between these two;
- repeat this for 7.00 pm and 10.00 pm.
Other heating intervals may be set in the same way.
The timer has approximately 150 hours of battery back up for power failure.

The clock is provided with a selector switch with three positions (see figure):

1. **Position "I"** CONSTANT: in this position, the clock circuit is always closed (switch on), therefore the boiler will constantly be on and will only shut off upon the request of the room thermostat (if installed) or the heating thermostat;
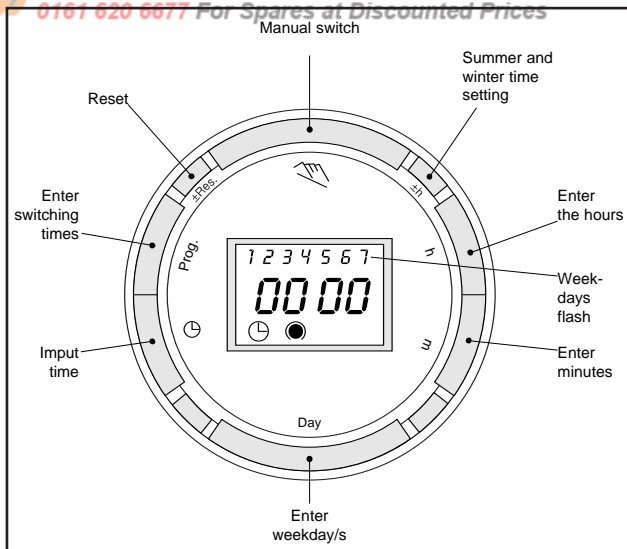
2. **Position "O"** HEATING OFF: in this position, the clock circuit is always open (switch off) and the boiler will therefore never ignite for heating;
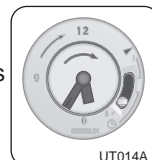
3. **"Central" Position** PROGRAMMING ACTIVE: in this position, the programming set by the user is active.

7. DIGITAL PROGRAMMER

Manual switch

Reset

Summer and winter time setting

Enter switching times

Enter the hours

Imput time

Week-days flash

Enter minutes

Day

Enter weekday/s

Automatic Operation ⏲	Manual Operation ✍	Continuous Operation [ ]
⏲ ● = ON	✍ ● = ON	[●] = Continuously ON
⏲ ○ = OFF	✍ ○ = OFF	[○] = Continuously OFF
The switching times correspond to the program entered.	If the current switching mode is changed manually, the next switching time will be carried out automatically again according to the entered switching program.	You can only return to automatic mode from the continuously-ON [●] and continuously-OFF [○] switching modes by pressing the " ✍ " key.

Operating the time switch

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

Preparing for Operation

▶ 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 seconds the following display appears:

▶ **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.

▶ **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.

7

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 time clock to the current time display with the "⏱" key, the time clock 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.

Manual Override Switch " ✎ "

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

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. "**18**". If all memory locations are occupied, the display "**00**" appears.

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 "**Entering the switching times**".

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.

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.

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.

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.