



# HORSTMANN

## User Operating Instructions

### Horstmann 425 Tiara/Diadem Electro-mechanical Programmers

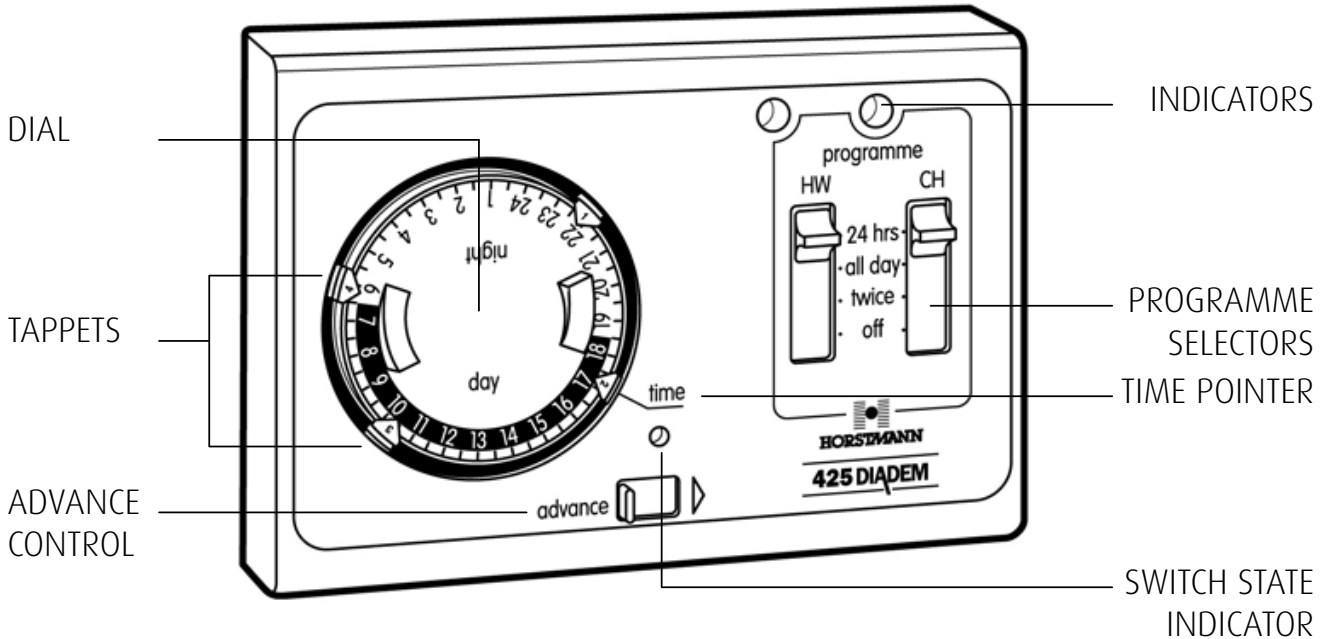


The Horstmann 425 Tiara and Diadem programmers are 2 circuit central heating and hot water programmers able to switch ON and OFF twice every 24 hours. An advance switch is provided to make temporary overrides to the ON or OFF periods and a selector switch gives a further choice of programmes.

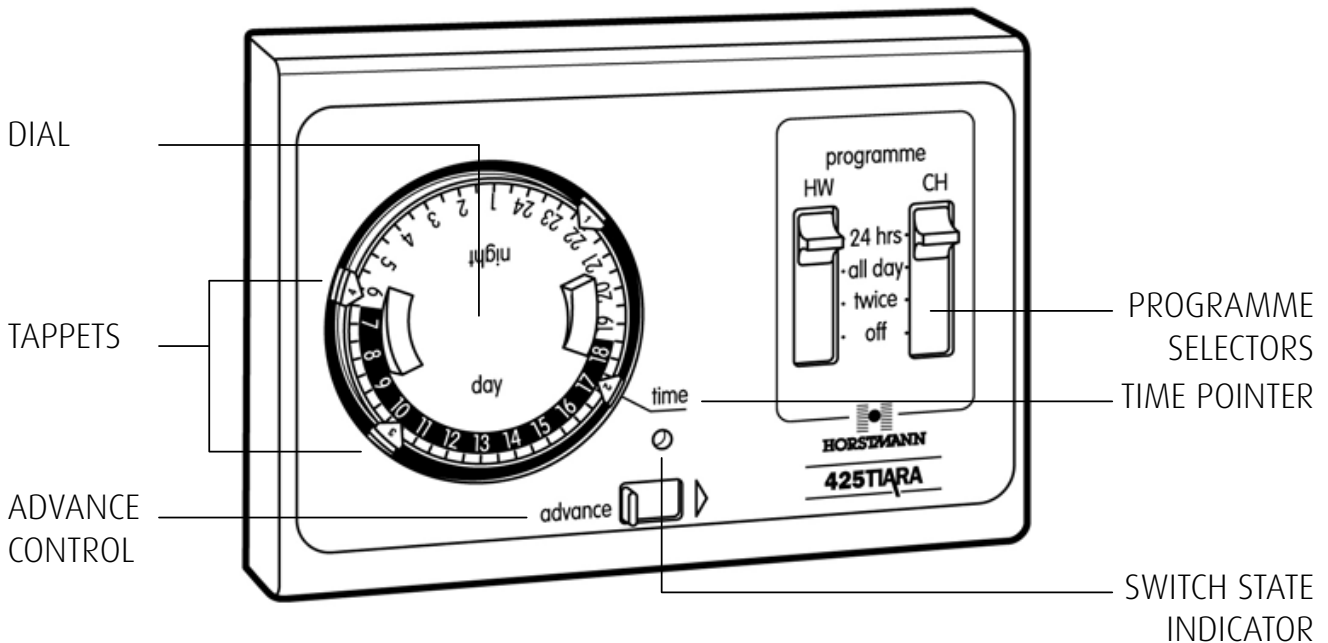
# The 425 Tiara/Diadem Programmer

The simple instructions contained in this user guide are designed to help with the programming and operation of these units.

## 425 DIADEM

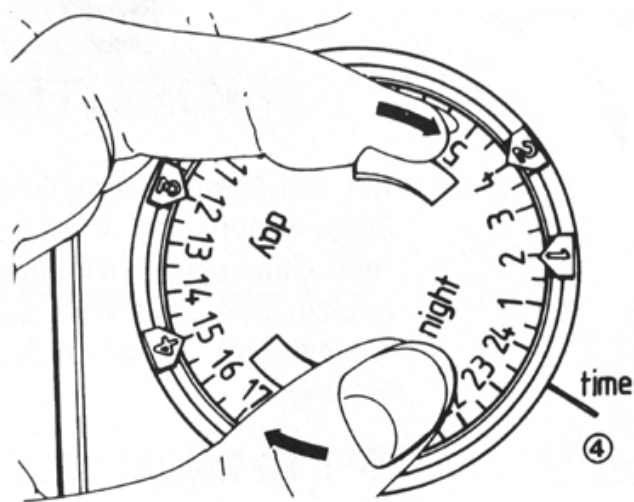


## 425 TIARA



## SETTING THE TIME OF DAY

The dial rotates clockwise and makes one complete revolution every 24 hours. To set the correct time turn the dial clockwise by hand (using the levers on the clock face) until the correct time of day is against the line marked TIME. (See diagram opposite)



## SETTING THE ON/OFF TIMES

The four setting tappets, coloured red and blue, are moved around the circumference of the dial to set your required ON and OFF times.

These tappets work in pairs to switch the system ON and OFF.

- No 1 (red) 1st ON and No 2 (blue) 1st OFF
- No 3 (red) 2nd ON and No 4 (blue) 2nd OFF

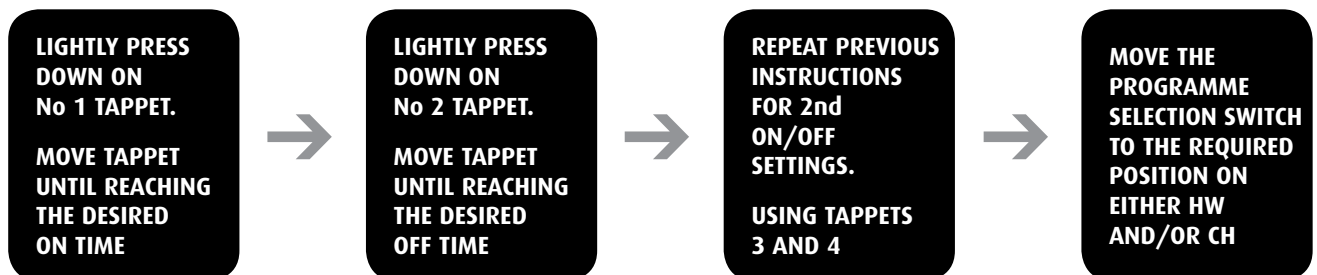
The tappets may be moved in either direction. (See diagram)

Please ensure that you press and hold down any tappet that is to be moved, release tappet only once correct time position has been reached.

Tappets cannot be moved across the Time line. The position of the dial may have to be altered to set the initial ON/OFF time.



Please ensure the clock is set to the correct current time after altering the ON/OFF settings.



# Manual Overrides

## ADVANCE CONTROL

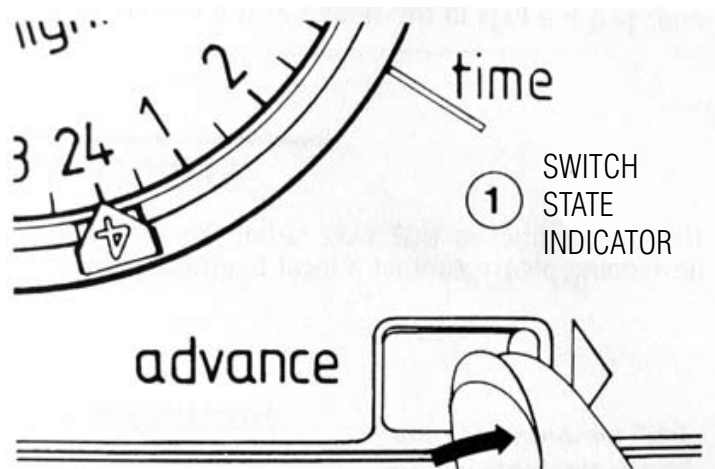
The advance control allows you to start an ON or OFF period early without altering the tappet, time or programme selection settings. Moving the advance control to the extreme right brings forward the operation of the next tappet. The switch state indicator then changes to the appropriate number. When the next tappet passes the time line, normal operation returns.

When the programme selector is in the All Day position, tappets 2 and 3 do not operate. If you require switching the system OFF for the day, after the morning switch ON, you will need to step forward with the advance switch until the number 4 is shown in the switch state indicator.

If you wish to switch ON and OFF by hand or vice versa, before the next automatic switching operation, the advance control must be operated until the switch state indicator is returned to the correct automatic sequence.

EXAMPLE: If you turn the system ON again after the preset night shut down time, when you turn it OFF before retiring make sure to operate the advance switch again until the number 4 is displayed in the switch state indicator so that the red tappet number 1 will switch the system ON in the morning.

**DO NOT OPERATE THE ADVANCE SWITCH WHEN A TAPPET IS AGAINST THE TIME LINE.**



## SWITCH STATE INDICATOR

Located above the ADVANCE switch, the switch state indicator shows you the number of the tappet which operated last.

Eg. If the system was switched ON by tappet 1 at 7:00am and it is now 9:00am, providing that no further tappets operations have past, a number 1 should show in the aperture.

If the switch state indicator does not agree with the programme set on the dial, rotate the dial one whole turn and reset to the correct time of day. This will ensure that the switch state corresponds to the last tappet operation.

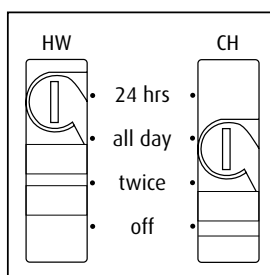
## PROGRAMME OVERRIDE FACILITIES

The hot water (HW) or central heating (CH) may be individually overridden as shown below: (options are limited on gravity systems)

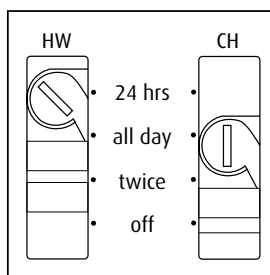
- 24 Hrs -** The system will be permanently ON
- All Day -** The system will switch ON from tappet 1 (red) and OFF at tappet 4 (blue)  
Tappets 2 and 3 are ignored
- Twice -** The system switches ON at tappet 1 (red), OFF at tappet 2 (blue), ON at tappet 3 (red) and OFF at tappet 4 (blue)
- off -** The timer continues to operate but the system will be permanently OFF

## FULLY PUMPED OR GRAVITY SYSTEMS

**Fully Pumped -** On this type of installation the selectors are not interlocked, as illustrated on the right, and hot water and central heating programmes can be set independently of each other.



**Gravity -** On this type of system it is possible to have hot water without central heating, but not central heating without hot water. In this case the installer would have interlocked the select switches as illustrated on the right.



## INDICATORS - DIADEM ONLY

The indicators will illuminate when the appropriate hot water and/or central heating circuits of the time control are ON, even if the circuit is switched OFF by the Thermostats. However, with certain fully pumped systems, the neon indicator may remain lit when the time control is in the OFF position. This does not affect the normal operation of the unit.

## What is a programmer?

### ... an explanation for householders.

Programmers allow you to set 'On' and 'Off' time periods. Some models switch the central heating and domestic hot water on and off at the same time; while others allow the domestic hot water and heating to come on and go off at different times.

Set the 'On' and 'Off' time periods to suit your own lifestyle. On some programmers you must also set whether you want the heating and hot water to run continuously, run under the chosen 'On' and 'Off' heating periods, or be permanently off.

The time on the programmer must be correct. Some types have to be adjusted in Spring and Autumn at the changes between Greenwich Mean Time and British Summer Time. You may be able to temporarily adjust the heating programme, for example, 'Override', 'Advance' or 'Boost'. These are explained in the manufacturer's instructions.

The heating will not work if the room thermostat has switched the heating off. And, if you have a hot-water cylinder, the water heating will not work if the cylinder thermostat detects that the hot water has reached the correct temperature.

## Service and Repair

This programmer is NOT user serviceable. Please do not dismantle the unit. In the event of a fault developing please contact a local heating engineer or a qualified electrician



HORSTMANN

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