Air Source Heat Pump

User Guide

Changing Electricity Tariff

If you previously had storage heaters or electric wet heating then you would be on a dual tariff such as Economy 10 or Economy 7, or Total Heat Total Control tariff (THTC). With the new heat pump heating system it is recommend that you change to a standard single rate tariff. Contact your electricity supplier and ask them to change your supply to standard single rate tariff. This may require the supplier company changing the meter.

Defrost Cycle

During cold weather, when the outside air temperature is around zero or below, the heat pump will automatically perform a defrost cycle to melt any frost that builds up on the outdoor unit. This process may produce a small pool of water under the heat pump and some water vapour in the air around it.

Hot Water

Hot Water all year from the heat pump

The heat pump will generate hot water all year round. It is setup to automatically heat the hot water to 50degC. It waits until the hot water tank temperature drops below 40degC before it reheats it to 50dgeC.

Manually reheating hot water

If for example you are planning on running a bath or washing up and require it to be at 50degC then the hot water can be manually reheated by pressing (for 3 seconds) the tap button on the thermostat. The time to reheat the water will normally be about 30-40 minutes.

Anti Legionella Hot Water Cycle

The heat pump is setup to automatically heat the hot water in the cylinder to 60degC once a week. It is normally programmed to perform this overnight at 3am. This is required in order to ensure that any Legionella bacteria cannot survive in the hot water cylinder.

Heating

Setting the heating Mode

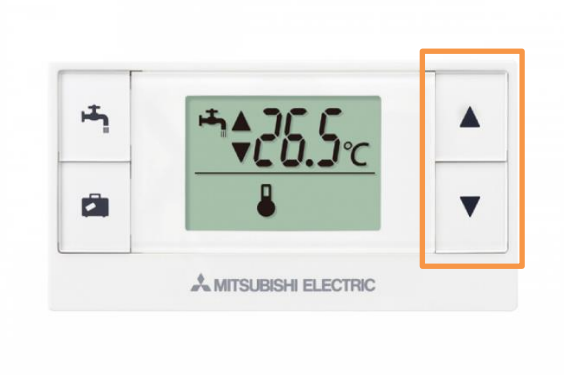
There are 3 heating modes:

- ON constantly (adjust room temperature at thermostat)
- OFF
- Scheduled Timer (automatic temperature changes, user can also adjust room temperature at thermostat)

To select one of these heating modes, first access the option screen on controller by pressing F4, then press F3 to select the desired mode.

Thermostat

To adjust the room temperature setpoint, push the up or down arrows buttons on the thermostat. The top number is the actual room temperature, the bottom number is the target setpoint temperature.



Heating Scheduled Timer

To achieve high comfort levels, quicker heat-up times and low running costs it is recommended to not turn the heating off and on but to keep it on and let the heating timer function vary the room temperature between 17 and 21degC.

The Scheduled heating timer function of the heat pump allows the user to set the room temperature to automatically change at certain times during the day and night.

Recommended Schedule Timer Settings

In all day

If you are normally in all day and night, then an example optimum settings would be to have the room temperature set to be 21degC from 7am and set back to 17/18degC at 10pm.

Out all day

If you are normally out all day then an example optimum settings would be to have the room temperature timer set to: 21degC at 7am, 18degC at 9am, 21degC at 5pm, 17/18degC at 22pm.

Setting the Scheduled Timer

It is recommended that you contact Perth & Kinross council's Housing Improvements -Technical Officer – Paul Foote on 01738 475735 to arrange for him to come and set the timer to your preference and to check the other system settings are correct. To set the timer yourself please refer to the instructions in Appendix 1 below.

Thermostatic Radiator Valves (TRV)

Every radiator apart from one has a temperature controller called a Thermostatic Radiator Valve (TRV) for setting the maximum preferred temperature for the room. This is manually adjusted by turning the end of the TRV, aligning the desired numeral (0, I, II, III, IIII) with the marker.

To improve heat pump efficiency, it is recommended that all the TRVs apart from bedrooms be set fully open (numeral IV). If you turn off certain radiators in rooms that are not frequently used, then the heat pump may operate inefficiently.

Appendix 1

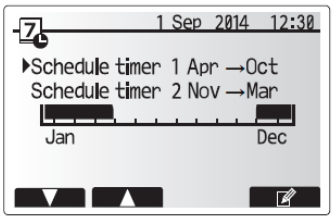
Schedule timer

Scheduled timer can be set in two ways, for example; one for summer and the other for winter. (Refer to as "Schedule 1" and "Schedule 2" respectively.) Once the term (months) for the Schedule 2 is specified, rest of the term will be specified as Schedule 2. In each Schedule, an operational pattern of modes (Heating / DHW) can be set. If no operational pattern is set for Schedule2, only the pattern for Schedule 1 will be valid. If Schedule 2 is set to full-year (i.e. March to Feb.), only the operational pattern for Schedule 2 will be valid.

The schedule timer is activated or deactivated in the option screen. (See 'General Operation' section)

<Setting the Schedule period>

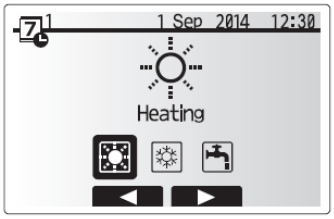
1. From the main settings menu use F2 and F3 to highlight the schedule icon then press CONFIRM.
2. The Schedule period preview screen is displayed.
3. To change the Schedule period, press F4. button.
4. The time bar edit screen is displayed.
5. Use F2/F3 button to point at a starting month of the Schedule2, then press CONFIRM.
6. Use F2/F3 button to point at an ending month of the Schedule2, then press CONFIRM.
7. Press F4 to save settings.



Schedule2 period preview screen

<Setting the Schedule timer>

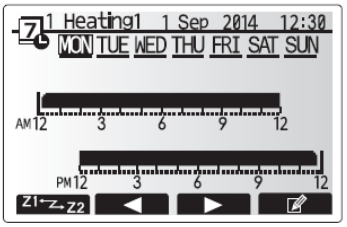
1. From the main settings menu use F2 and F3 to highlight the schedule icon then press CONFIRM.
2. From the schedule 2 period preview screen use F1 and F2 to scroll through the selecting each subtitle in turn by pressing CONFIRM.
3. The schedule timer sub menu will be displayed. The icons show the following modes;
   - Heating
   - Cooling
   - DHW
4. Use F2 and F3 buttons to move between mode icons press CONFIRM to be shown the PREVIEW screen for each mode.



Schedule1 mode select screen

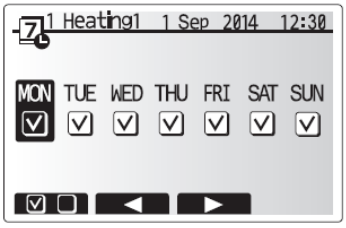
The preview screen allows you to view the current settings. In 2-zone heating operation, press F1 to switch between Zone1 and Zone2. Days of the week are displayed across the top of the screen. Where day appears underlined the settings are the same for all those days underlined.
Hours of the day and night are represented as a bar across the main part of the screen. Where the bar is solid black, space heating/cooling and DHW (whichever is selected) is allowed.

5. In the preview menu screen press F4 button.



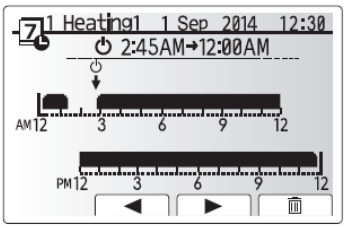
Preview screen

6. First select the days of the week you wish to schedule.
7. Press F2/F3 buttons to move between days and F1 to check or uncheck the box.
8. When you have selected the days press CONFIRM.



Day of week select screen

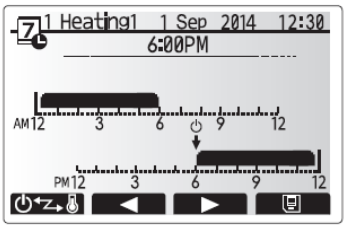
9. The time bar edit screen will be displayed.
10. Use buttons F2/F3 to move to the point at which you do not want the selected mode to be active press CONFIRM to start.
11. Use F3 button to set the required time of inactivity then press CONFIRM.
12. You can add up to 4 periods of inactivity within a 24 hours interval.



Time of period setting screen 1

13. Press F4 to save settings.

When scheduling heating, button F1 changes the scheduled variable between time and temperature. This enables a lower temperature to be set for a number of hours e.g. a lower temperature may be required at night when the occupants are sleeping.



Time of period setting screen 2

Note:

- **The schedule timer for space heating/cooling and DHW are set in the same way. However for DHW only time can be used as scheduling variable.**
- **A small rubbish bin character is also displayed choosing this icon will delete the last unsaved action.**
- **It is necessary to use the SAVE function F4 button to save settings. CONFIRM does NOT act as SAVE for this menu.**