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HEATING

HOT WATER

VENTILATION

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Hi-Spec Warm Air Heaters

with System E-T & Basic Control



USERS INSTRUCTIONS

J25 - G.C. No. 42-416-99

J32 - G.C. No. 42-416-99

J32R - G.C. No. 42-416-99

J40 - G.C. No. 42-416-99

M31 - G.C. No. 42-416-99

These instructions are to be left with the User or adjacent to the Gas Meter

 **Johnson
& Starley**



www.johnsonandstarley.co.uk

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The Benchmark Scheme

Johnson & Starley Ltd is a licensed member of the Benchmark Scheme which aims to improve the standards of installation and commissioning of domestic heating and hot water systems in the UK and to encourage regular servicing to optimise safety, efficiency and performance.

Benchmark is managed and promoted by the Heating and Hotwater Industry Council. For more information visit www.centralheating.co.uk

Please ensure that the installer has fully completed the Benchmark Checklist on the inside back pages of the installation instructions supplied with the product and that you have signed it to say that you have received a full and clear explanation of its operation. The installer is legally required to complete a commissioning checklist as a means of complying with the appropriate Building Regulations (England and Wales).

All installations must be notified to Local Area Building Control either directly or through a Competent Persons Scheme. A Building Regulations Compliance Certificate will then be issued to the customer who should, on receipt, write the Notification Number on the Benchmark Checklist.

This product should be serviced regularly to optimise its safety, efficiency and performance. The service engineer should complete the relevant Service Record on the Benchmark Checklist after each service.

The Benchmark Checklist will be required in the event of any warranty work and as supporting documentation relating to home improvements in the optional documents section of the Home Improvement pack.

In the interest of continuous development Johnson and Starley reserve the right to change specification without prior notice. Johnson and Starley prides itself on it's ability to supply spare parts quickly and efficiently.

1. GENERAL INFORMATION

IT IS A STATUTORY REQUIREMENT THAT ALL GAS APPLIANCES MUST BE INSTALLED BY COMPETENT PERSONS, (i.e. GAS SAFE REGISTERED INSTALLERS. GAS SAFE MEMBERSHIP ENQUIRIES - TEL: 0800 408 5500) IN ACCORDANCE WITH THE GAS SAFETY (INSTALLATION AND USE) REGULATIONS (CURRENT EDITION). FAILURE TO COMPLY WITH THESE REGULATIONS MAY LEAD TO PROSECUTION.



1.1 IDENTIFICATION OF YOUR HEATER TYPE

- 1.1.1 Your heater will either be a **System E-T**, or **Non E-T** model.
- 1.1.2 System E-T model heaters are clearly identified on the front of the appliance and are controlled by a Thermista-stat, whilst Non E-T models are controlled by a room thermostat.

1.2 WHAT IS SYSTEM E-T?

- 1.2.1 System E-T is a control that is built into the warm air system, and which continuously adjusts the heaters' operation to maintain the comfort level that you have selected. It provides a continuous supply of warm air, at just the right amount, to keep the selected temperature at a very precise level.
- 1.2.2 By setting the Thermista-stat to the temperature (comfort level) you require, it constantly measures the actual room temperature and compares it with the required temperature, and tells the heater how much warm air to supply in order to maintain the comfort level you have selected. When the comfort level is reached, the burner will cycle on and off, whilst the fan operates at a varying speed to maintain the comfort level.
- 1.2.3 The Thermista-stat is usually situated in the living room where it provides very accurate comfort level control. Since the Thermista-stat controls the heater, it also controls the warm air delivery to other rooms. The warm air system should be 'balanced' to deliver the correct proportion of warm air to each room, and is usually carried out during installation. Adjustments can be made to individual registers (air outlets). By increasing the air flow, the temperature is increased, and conversely, for reduction in air flow the temperature is decreased.
- 1.2.4 **Economy:** If you wish to economise by cutting off heat to an unused room, simply close the register to that room. System E-T will automatically adjust the operation of the heater - and save gas.
- 1.2.5 **Quick warm up:** System E-T warms houses much quicker than radiator systems, however, if you turn on the warm air to a room when the rest of the house is already warm and the system is operating at less than full output, that room will warm up more slowly.

1.3 NON E-T MODELS

- 1.3.1 Non E-T model heaters operate under control of a room Thermostat. When the temperature falls below that set at the Thermostat, the main burner will ignite followed by the fan switching on. There will be a short delay from the burner ignition to the fan operation.
- 1.3.2 When the temperature reaches that set at the Thermostat, the main burner will extinguish followed by the fan switching off after the useful heat from the heater has been dissipated. Again there will be a short delay between the main burner extinguishing and the fan switching off.

2. STARTING AND STOPPING YOUR HEATER

IMPORTANT: BEFORE LIGHTING YOUR WARM AIR HEATER, open the warm air outlets in all rooms, ensure any taps in the gas supply to the heater are turned on, the Thermista-stat/Room Thermostat is at a minimum setting, and the electrical supply to the heater is **OFF**.

WARNING: If the pilot light is extinguished either intentionally or otherwise, no attempt should be made to relight the gas until at least 3 minutes have elapsed. Ensure the Electrical supply, time control and Selector switches are OFF.

2.1 TO LIGHT YOUR HEATER

- 2.1.1 Remove the heater lower front door.
- 2.1.2 Referring to Figure 1 & 2, identify the positions of the Multifunctional Control OPERATING CONTROL, the PILOT BURNER and IGNITION BUTTON.
- 2.1.3 Press and hold the OPERATING CONTROL (allowing gas to be supplied to the heater), then repeatedly press and release the LIGHTING button until the PILOT BURNER lights whilst still holding the OPERATING CONTROL depressed.

After 20 seconds, release the OPERATING CONTROL and ensure the PILOT BURNER is lit. If the PILOT BURNER does not remain lit, turn the OPERATING CONTROL in the direction of the arrow and allow at least 3 minutes to elapse before repeating the lighting procedure, holding the OPERATING CONTROL depressed for a longer period than before.

If the PILOT BURNER will not stay alight, consult your local gas service engineer.

NOTE: (except HI-SPEC J25RS and HI-SPEC J25SC heaters) If the igniter unit fails to generate a spark, the pilot burner may be ignited by applying a lighted taper whilst the OPERATING CONTROL is pressed.

Press and hold the OPERATING CONTROL and apply the lighted taper to the PILOT BURNER and ensure the PILOT BURNER lights. After 20 seconds, release the OPERATING CONTROL and ensure the PILOT BURNER remains alight.

- 2.1.4 Switch the electrical supply to the heater ON
- 2.1.5 Set the Time control to your required heating on periods.
- 2.1.6 Set the Thermista-stat/Room Thermostat to the required setting.
- 2.1.7 The heater will now operate under control of the Thermista-stat/Room Thermostat.
- 2.1.8 Refit the heater lower front door.

2.2 TO TURN OFF YOUR HEATER FOR PROLONGED PERIODS (i.e. week or summer shutdown)

- 2.2.1 Remove the heater lower front door.
- 2.2.2 Turn the OPERATING CONTROL clockwise in the direction of arrow approx a ¼ turn and ensure it fully resets (springs fully out).
- 2.2.3 Ensure the main burner and pilot burner are extinguished.
- 2.2.4 Turn the gas supply to the heater OFF at the gas cock.
- 2.2.5 Switch off the electrical supply to the heater.

2.2 TO TURN OFF YOUR HEATER FOR LIMITED PERIODS (i.e. weekend shutdown)

- 2.3.1 Set the Thermista-stat/Room Thermostat to a minimum setting or OFF. This action will prevent the main burner from igniting, but will keep the pilot burner alight. To reinstate your heating, simply set the Thermista-stat/Room Thermostat to the required comfort level.

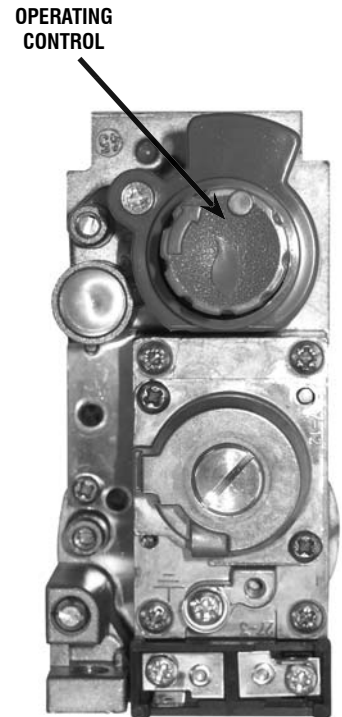


FIGURE 1.
HONEYWELL GAS VALVE

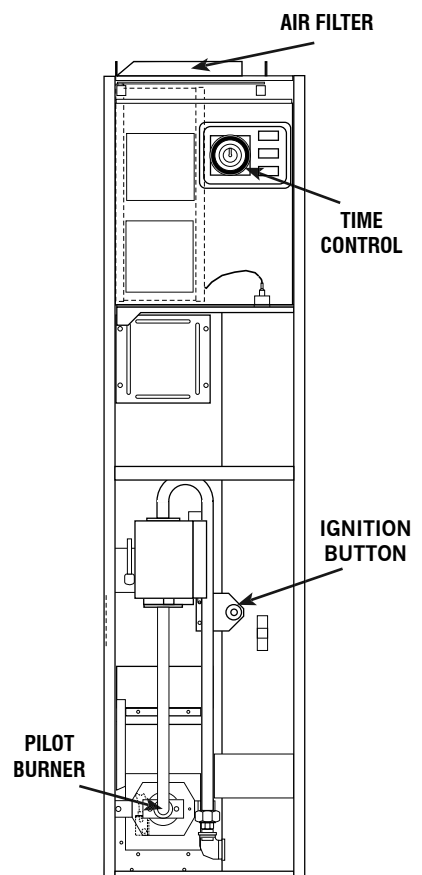


FIGURE 2.
TYPICAL HI-SPEC AIR HEATER

3. TEMPERATURE CONTROLS

3.1 SETTING THE THERMISTA-STAT (*System E-T models*)

3.1.1 The numbers on the Thermista-stat dial represent the levels of warmth, and when you select a number the heater operates automatically to maintain that level. You will soon find the setting at which you are most comfortable; we suggest that you start at mark 6. When the room has warmed up, make adjustments of ½ mark steps until you are satisfied. The best economy is achieved at the lowest setting you find comfortable.

NOTE: The Thermista-stat incorporates a switch at the extreme clockwise position of the knob. This is marked as 'SUMMER AIRFLOW'. With the knob in this position, the air heater fan will run continuously without the burner operating to provide circulation of unheated air.

3.2 SETTING THE ROOM THERMOSTAT (*Non E-T models*)

3.2.1 The Room Thermostat temperature of the air surrounding the Thermostat reaches the selected temperature, the Thermostat will switch the heater off. It will then automatically switch the heater on and off, several times an hour, to maintain the room temperature you have selected.

Careful use of the Room Thermostat saves money.

3.3 CONTROLLING YOUR HEATING SYSTEM

3.3.1 You can control the heat to each room by opening and closing the warm air outlets, but you should never close more than half of them at the same time. Warm air outlets in the room where the Thermista-stat/Room Thermostat is fitted should always be open to make sure that the heating system is controlled properly.

3.3.2 During average winter weather, warm air outlets in rooms not having a Thermista-stat or Room Thermostat should be opened only as much as is necessary to bring the room to the desired temperature. In prolonged severe weather, it is better to set the air heater time control to ON ALL TIME overnight, and reduce the setting of the Thermista-stat or Room Thermostat. Resetting the Thermista-stat/Room Thermostat on rising will quickly raise the room temperature. This will provide general background heating. Recommended settings for these temperature controls are:

- a. Thermista-stat Mark 4
- b. Room Thermostat 13°C (55°F)

IMPORTANT: If at any time the main burner should not extinguish when there is no demand for heat, the gas valve OPERATING CONTROL should be reset. A safety device will prevent the Pilot burner from being relit for a period of 1 minute.

4. TIME CONTROLS

- 4.1 The integral time control (Figure 2) enables continuous or timed operation of your air heater and water heater (if fitted), either individually or together.
- 4.2 The SUMMER AIRFLOW switch allows the heater to be used for circulating unheated air in the home.

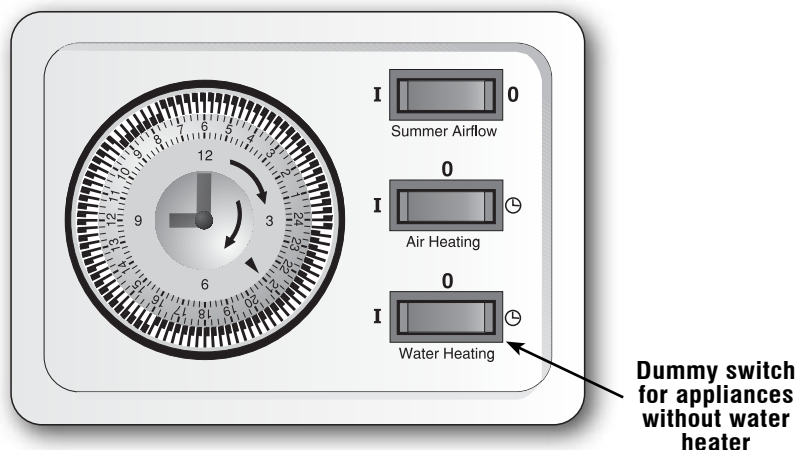


FIGURE 3. INTEGRAL TIME CONTROL

4.3 TIMED OPERATION

- 4.3.1 To set TIMED operation ON and OFF times:
- ON times are set by moving tappets IN towards the centre of the dial to show the orange band.
 - OFF times are set by moving tappets OUT away from the centre of the dial to show the black band.
- 4.3.2 The minimum time set is 15 minutes (single tappet).
- 4.3.3 **EXAMPLE:** The ON times wanted are 07.30 am to 09.00 am, and 4.30 pm to 11.15 pm.
- Move all tappets between 07.30 to 09.00 and 16.30 to 23.15 **IN**.
 - Move all other tappets **OUT**.
 - Set the correct time of day by turning the dial **CLOCKWISE** to align the correct time numbers with the black pointer (each hour is divided into 15 minute markings).
 - Set the air heater and/or water heater switches to '**TIMED**'.
 - Set the Thermista-stat/Room Thermostat to the position required.

4.4 OTHER OPERATING CONDITIONS:

- 4.4.1 The heaters can be made to operate during the day (i.e. weekends) by setting the switches to '**ON ALL TIME**'. (**I**) Room and hot water temperatures will be controlled automatically.
- 4.4.2 To return to the usual 'ON' and 'OFF' times (i.e. overnight or during weekdays), set the switches to '**TIMED**'.
- 4.4.3 If heating is NOT WANTED, set the switches to the '**OFF**' position.

5. MAINTENANCE & SERVICE

5.1 AIR FILTER

- 5.1.1 **IMPORTANT:** The air filter should be cleaned every 2 weeks during the heating season. To clean the air filter, withdraw it from the heater, clean with a soft brush or vacuum cleaner and refit. **DO NOT** allow the filter to become clogged or the heater output will become greatly reduced and fuel will be wasted. In **NEW HOUSES**, clean the filter once a week for the first month or two to clear builders' dust etc.

5.2 MAINTENANCE AND GAS TARIFF

- 5.2.1 It is recommended that a full maintenance check should be made on your appliance(s) annually by a GAS SAFE registered installer and that a service contract is taken out when the guarantee period ends. Your installer will give you details of arrangements for this service. If your installer has difficulty in providing this information, please contact Johnson and Starley Service Department, who will provide information of suitable service companies.
- 5.2.2 On completion of the service the installer should fill in the Service Record section in the benchmark Checklist.
- 5.2.3 All installers registered with GAS SAFE carry an identification card, this card will have an ID number which should be recorded in the Benchmark Checklist.
- 5.2.4 If you have any queries regarding your installer you can contact GAS SAFE by telephone on 0800 408 5500



6. TROUBLE SHOOTING

6.1 AIR HEATER NOT WORKING

- 6.1.1 Check that the Thermista-stat/Room Thermostat and time controls are set correctly for your requirements, and that at least half of the warm air outlets are open, especially in the room where the Thermista-stat/Room Thermostat is fitted.
- 6.1.2 Check that the Pilot burner is alight. If not, follow the lighting procedure as described in Section 2.
- 6.1.3 Check if the air filter is clogged. Clean as instructed in Section 5.

- 6.1.4 If your heater still does not work, call for expert advice. Johnson and Starley Service Department can provide details of suitable companies to carry out servicing and maintenance.
- 6.1.5 For new houses, service is usually supplied for a specific period under arrangements made by the local building contractor.
- 6.1.6 Housing Associations and Local Authorities will have arrangements for their own servicing arrangements.

IMPORTANT: When replacing a mains fuse, the fuse rating MUST NOT EXCEED 5 amps.

7. EMERGENCY POWER RESTRICTIONS

- 7.1 If you experience an electrical power cut, the gas control on your heater, being electrically operated, will close. The main burner will go out but the Pilot burner will remain alight. When the electrical supply returns, the air heater will work normally again.
- 7.2 If your heating system is controlled by an electrical time control, it will be necessary to reset the clock dial as described in Section 4.

8. IMPORTANT GAS SAFETY INFORMATION

FOR YOUR HEATER TO WORK EFFICIENTLY AND FOR YOUR HEATING SYSTEM TO PERFORM SATISFACTORILY, IT IS ABSOLUTELY ESSENTIAL TO OBSERVE THE FOLLOWING:

- 8.1 **This air heater is installed in a ventilated area. DO SEEK ADVICE from your Gas Service Centre before making any alterations likely to reduce the supply of fresh air to the heater.**
- 8.2 **DO KEEP CLEAN, and make sure you DO NOT OBSTRUCT any grilles on the heater, in the heater compartment, or in any walls, windows or doors of the building.**
- 8.3 **DO CLEAN AND REFIT the air filter (if fitted) at least once per month or to the manufacturers instructions.**
- 8.4 **DO NOT PLACE ANYTHING (clothing, linen etc.) in contact with the air heater or its flue pipe.**
- 8.5 **DO NOT USE the heater compartment for storage or airing.**
- 8.6 **DO NOT turn off the mains electricity supply to the air heater until the gas supply has been turned off.**
- 8.7 **IF YOU SMELL GAS:**

GAS LEAK

**DO NOT OPERATE ANY ELECTRICAL SWITCHES, OR USE A NAKED FLAME.
TURN OFF THE GAS SUPPLY.
VENTILATE THE AREA BY OPENING DOORS AND WINDOWS.
CONTACT THE NATIONAL GAS EMERGENCY SERVICE ON 0800 111999**



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