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HEATING / VENTILATION / RENEWABLES

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# HI-SPEC J25SCA Warm Air Heater

System E-T Control &  
Eljan 4/SEA Water Circulator



USER'S INSTRUCTIONS

**J25SCA** AIR HEATER - G.C. No. 43-416-99

**ELJAN 4/SE-A** WATER CIRCULATOR - G.C. No. 43-417-58

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



**Johnson  
& Starley**



[www.johnsonandstarley.co.uk](http://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](http://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 Improvements.

**PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE STARTING THE INSTALLATION. ON COMPLETION LEAVE THESE INSTRUCTION WITH THE USER OR AT THE GAS METER.**

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.

If your service engineer indicates a problem in obtaining a spare part, advise him to contact Johnson and Starley Spares Department.

## 1. GENERAL INFORMATION

IT IS A STATUTORY REQUIREMENT THAT ALL GAS APPLIANCES MUST BE INSTALLED BY COMPETENT PERSONS, (i.e. CORGI REGISTERED INSTALLERS. CORGI MEMBERSHIP ENQUIRIES - TEL: 0800 915 0485) IN ACCORDANCE WITH THE GAS SAFETY (INSTALLATION AND USE) REGULATIONS (CURRENT EDITION). FAILURE TO COMPLY WITH THESE REGULATIONS MAY LEAD TO PROSECUTION.



### WARNING: THIS APPLIANCE MUST BE EARTHED.

- 1.1 Part of the installation and commissioning of this appliance is related to instructions for use by the heating engineer to the user where specific requirements may occur, see note below.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

### 1.2 IDENTIFICATION OF YOUR HEATER TYPE

- 1.2.1 Your heater will be a **System E-T** model, see list above.
- 1.2.2 System E-T model heaters are clearly identified on the front of the appliance and controlled by a Thermista-stat.

### 1.3 WHAT IS SYSTEM E-T?

- 1.3.1 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.
- 1.3.2 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.

FRONT VIEW

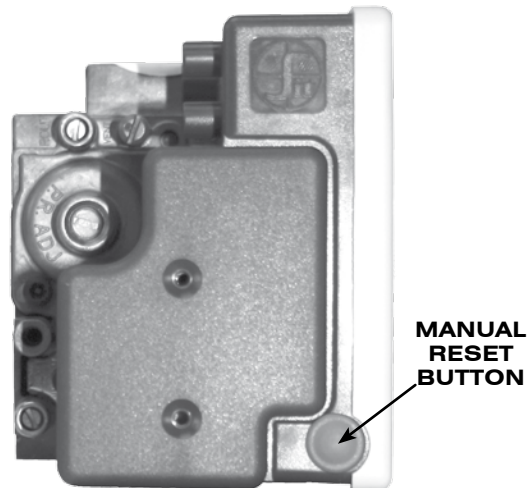


FIGURE 1. IGNITION CONTROL IN PLACE

- 1.3.3 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.
- 1.3.4 **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.
- 1.3.5 **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.

## 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 at minimum setting, and the electrical supply to the heater is **OFF**.

### 2.1 TO LIGHT YOUR AIR HEATER

- 2.1.1 Ensure that the gas supply to the heater is turned on.
- 2.1.2 Set both the "AIR HEATER" and "WATER HEATER" (if fitted) switches on the time control to the "OFF" position.
- 2.1.3 Turn the Thermista-stat (room temperature control) to position "9" (see Figure x).
- 2.1.4 Switch on the electrical supply to the heater.
- 2.1.5 Set the "AIR HEATER" switch on the time control to "CONT" After a period of 60 seconds the burner will ignite automatically. Shortly afterwards the air circulation fan will start.
- 2.1.6 Adjust the Thermista-stat to the desired setting (see Section 4).
- 2.1.7 The heater will now operate automatically under thermostatic control.
- 2.1.8 The ignitor will spark for a maximum period of 60 seconds during which time the ignition SHOULD ignite. After this time the igniter will stop and the main burner will light.
- 2.1.9 If, after carrying out the above instructions several times, the fails to light, contact your local service engineer.

### 2.2 LIGHTING YOUR WATER CIRCULATOR (if fitted)

- 2.2.1 Turn on the gas supply to the heater.
- 2.2.2 Set both the "AIR HEATER" and "WATER HEATER" switches on the time control unit to the "OFF" position.
- 2.2.3 Set the thermostat so that it reaches the maximum stop.
- 2.2.4 Turn on the mains power supply to the heater
- 2.2.5 Set the "WATER HEATER" switch on the time control to "CONT."
- 2.2.6 The ignitor will spark for a maximum period of 60 seconds after which time the ignition burner and main burner SHOULD ignite and the igniter will stop.
- 2.2.7 If the main burner fails to ignite, the red LED marked "LOCKOUT" will illuminate on the blue box.
- 2.2.8 Test for gas leakage at the supply, multifunctional control, ignition burner and main burner using proprietary detection fluid, sealing any leaks found.
- 2.2.9 Allow the circulator to operate for a minimum of 15 minutes to ensure stability.
- 2.2.10 Set the thermostat to the desired water temperature.
- 2.2.11 Set the time control to the desired "on" and "off" periods.
- 2.2.12 Set the "WATER HEATER" switch on the time control to "TIMED".

### 2.3 TO STOP YOUR AIR HEATER

#### 2.3.1 For short periods, e.g. weekends

Turn the "AIR HEATER" switch to the "OFF" position, or turn the thermista-stat anti-clockwise to its minimum setting. This will cause the burner to extinguish and the heater fan to stop once the heat exchanger has cooled. When you require the heating on again, turn to "AIR HEATER" switch to the "ON" position, or reset the thermista-stat to the desired setting.

#### 2.3.2 For longer periods, e.g. a week or summer shutdown

Turn the "AIR HEATER" switch to the "OFF" position, set the Thermista-stat to its minimum setting, then turn off the electricity supply to the heater.

**WARNING: Do not turn off the electrical supply when the main burner is lit, as this may cause damage to the heater.**

- 2.3.3 **IMPORTANT** - If summer air circulation is required, the electrical supply to the heater must remain on.

### 2.4 TO STOP YOUR WATER CIRCULATOR (if fitted)

#### 2.4.1 For short periods, e.g. weekends

Turn the "WATER HEATER" switch to the "OFF" position, This will cause the burner to extinguish. When you require the Circulator on again, turn to "WATER HEATER" switch to the "ON" position.

#### 2.4.2 For longer periods, e.g. a week or summer shutdown

Turn the "WATER HEATER" switch to the "OFF" position then turn off the electricity supply to the heater.

## 3. TEMPERATURE CONTROL

### 3.1 TEMPERATURE CONTROL FOR THE AIR HEATER

The figures on the thermista-stat dial represent levels of warmth and when you select a dial number, the heater will operate automatically to maintain that level. You will soon find the setting at which you are most comfortable, but we recommend that you start at setting 5 and make adjustments up or down until a satisfactory level is reached.

***It is worth noting that best economy is achieved at the lowest setting that you find acceptable.***

### 3.2 TEMPERATURE CONTROL FOR THE WATER CIRCULATOR

3.2.1 Remove the front cover from the Air Heater in order to gain access to the thermostat.

3.2.2 The thermostat temperature can be set at any point between +50°C and +82°C by rotating the thermostat knob.

3.2.3 We recommend that you start at a mid point and slowly increase the setting until a satisfactory temperature is reached.

**NOTE: BECAUSE THE CIRCULATOR HEATS THE CONTENTS OF THE HOT WATER CYLINDER, THERE WILL BE SOME DELAY BETWEEN ANY CHANGE MADE AND A CHANGE IN THE TEMPERATURE OF THE HOT WATER**

## 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.

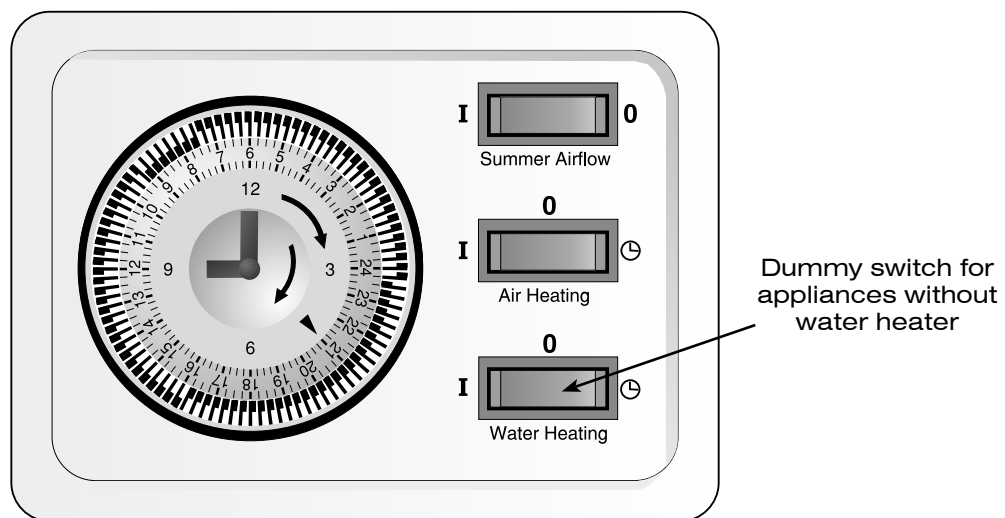


FIGURE 2. INTEGRAL TIME CONTROL

4.2 The SUMMER AIRFLOW switch allows the heater to be used for circulating unheated air in the home.

### 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

### 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 be made on your appliance(s) annually, 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.

## 6. TROUBLE SHOOTING

- 6.1 Check that the Thermista-stat and Time Control are set correctly to your requirements and that at least half of the warm air outlets are open, especially in the room where the Thermista-stat is located.
- 6.2 Check that the air filter is not clogged, if so clean as detailed in Section 5.
- 6.3 If the **LOCKOUT** is lit, wait for approximately 10 seconds and then press the **RESET** button.
- 6.4 If the heater will still not operate correctly, contact your local service engineer.

### SERVICE ARRANGEMENTS

- a. for new dwellings, servicing is usually supplied for a specific period under arrangements made by the building contractor.
- b. local Authorities often have their own special arrangements.
- c. if the above do not apply, contact your local service engineer, or the Service department at Johnson & Starley Ltd.

## 7. EMERGENCY POWER RESTRICTIONS (Power Cuts)

- 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. 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**

**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.**

### **IF YOU SMELL GAS**

**Turn OFF the gas**

**Ventilate the area.**

**DO NOT OPERATE ANY ELECTRICAL SWITCHES.**

**DO NOT SMOKE**

**Call your installer or local gas service engineer.**



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