
SYSTEM
WIRING GUIDE
15SBi & 24SBi
System Boilers

THESE INSTRUCTIONS SHOULD BE USED
IN CONJUNCTION WITH THE MAIN
INSTALLATION INSTRUCTIONS.

ONLY COMPONENTS SUPPLIED BY
WORCESTER HEAT SYSTEMS MUST BE USED

**ONLY COMPETENT PERSONNEL MUST
CARRY OUT THE INSTALLATION**

1. Gas Safety Regulations

Gas Safety (Installation and Use) Regulations 1998: All gas appliances must be installed by a competent person, in accordance with the above regulations. Failure to install the appliance correctly could lead to prosecution. The manufacturers notes must not be taken, in any way, as overriding statutory obligations.

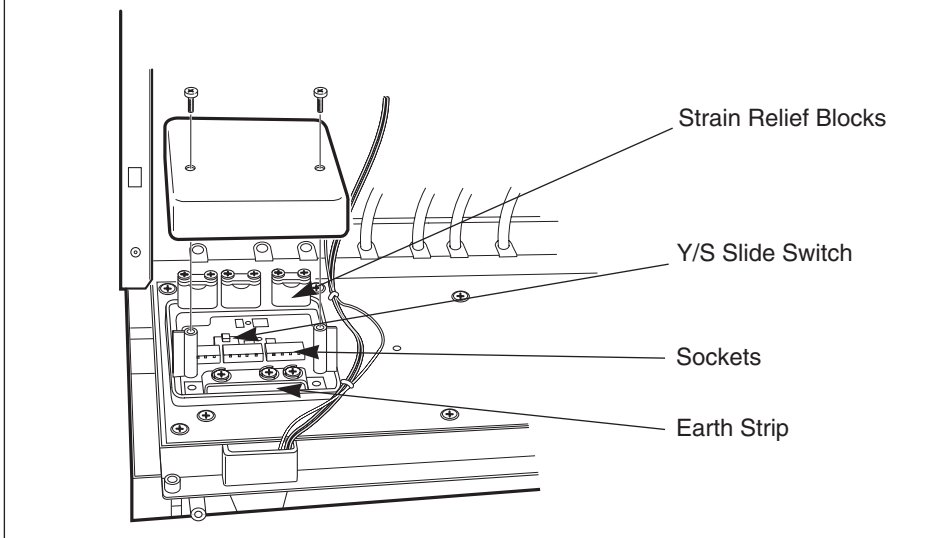
IMPORTANT: Read these instructions carefully in order to get the best from your appliance.

WARNING: This appliance must be earthed and protected by a 3A fuse if a 13A plug is used, or, if any other type of plug is used, by a 5A fuse either in the plug or adaptor or at the distribution board.

2. Boiler Electronic Control Board & Wiring Centre

In addition to fully controlling the System Boiler (see main installation book), the control board also uniquely provides for the connection of the electrical components of any Y or S plan system, either pre-wired remotely from the boiler or wired directly to the boiler. This is provided by a group of three plugs arranged at the rear of the control board, referred to as the 'internal wiring centre'. The Y/S slide switch is selected depending on the system installed.

Fig. 1. Internal Wiring Centre.



3. Gaining Access to the Wiring Centre

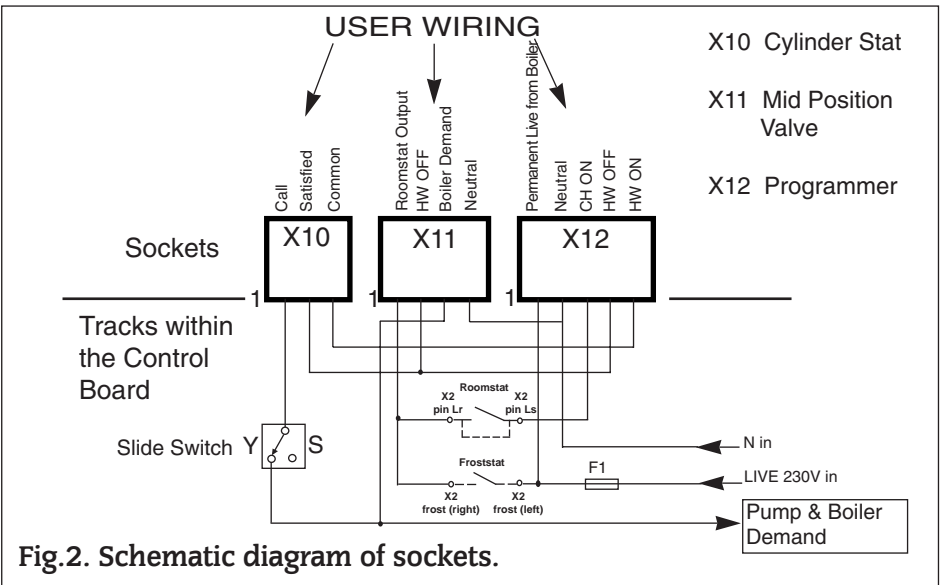
Isolate the boiler electrical mains supply. Remove cabinet front panel. Unscrew the two upper screws and hinge down the fascia into the service position (take care not to damage the pressure gauge capillary tube). Remove the water splash cover and the electrical box cover on the rear of the fascia to reveal the three connector plugs.

4. Wiring Centre Details.

- 4.1 The plugs must be removed from the sockets when the wires are being fitted. This avoids damage to the sockets or the control board.
- 4.2 Support the fascia when connecting earth wires to the earth strip. This avoids damage to the fascia hinges.
- 4.3 The strain relief blocks must be used to secure all cables entering the internal wiring centre. This is designed for maximum cable diameter of 8.5mm.

5. Schematic Diagram of Sockets.

It may be useful to understand how the three sockets on the rear of the control board (internal wiring centre) are interconnected with each other and the roomstat etc.



6. Wiring to your System.

- 6.1 The following diagrams show the wiring options for your system. Any other combinations of wiring are not recommended as it would increase complexity of the system. Please also follow wiring instructions of any proprietary system. Worcester Heat Systems cannot be held responsible for any incorrect wiring external from the boiler.
- 6.2 Mains electrical supply - The boiler should be connected to the mains supply as described in Section 10 of the main installation book. This also provides the electrical supply to the system through connector X12. **NOTE: IN ALL CASES THIS MUST BE THE ONLY ELECTRICAL SUPPLY TO THE SYSTEM.** This ensures the safety of a single fused supply.

6.3 Pump - the boiler is fitted with an internal pump. Any other system pump must be disconnected and removed.

6.4 These diagrams show connection details of two popular proprietary systems (Honeywell and Siebe, formerly ACL), for systems from other manufacturers, refer to manufacturers instructions or contact Worcester Technical Services 0990 266241 for assistance.

Pre-wired Remote Y Plan or S Plan System

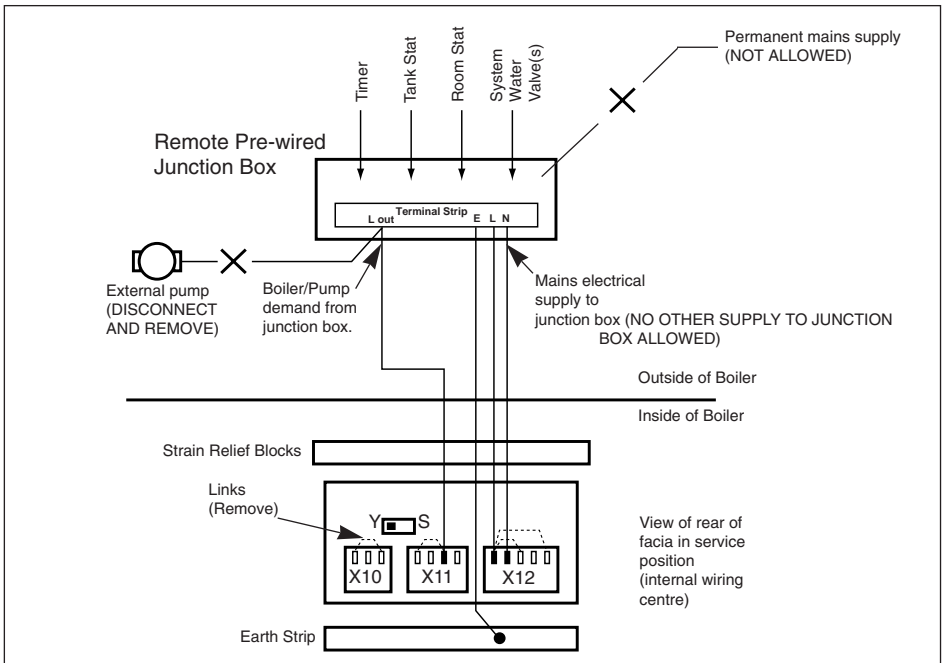
If the system is fully pre-wired at a junction box remotely from the boiler, it can be easily connected back to the Worcester System Boiler.

Drop down the fascia and gain access to the boiler wiring centre as described in Section 3.

Connect the junction box as shown:

IMPORTANT NOTES:

- Observe wiring details given in Section 4 and 6.
- Remove all pre-fitted links from the three plugs.
- The position of the Y/S slide switch is not important.
- If a room thermostat is required, it must be wired to the remote junction box according to the proprietary instructions.
- If a frost thermostat is required, it can be wired to the remote junction box OR connector X2 on the boiler control board according to Fig.12 of the main installation book. In this case the link at X11 must be fitted.



Y Plan System (Boiler used as wiring centre)

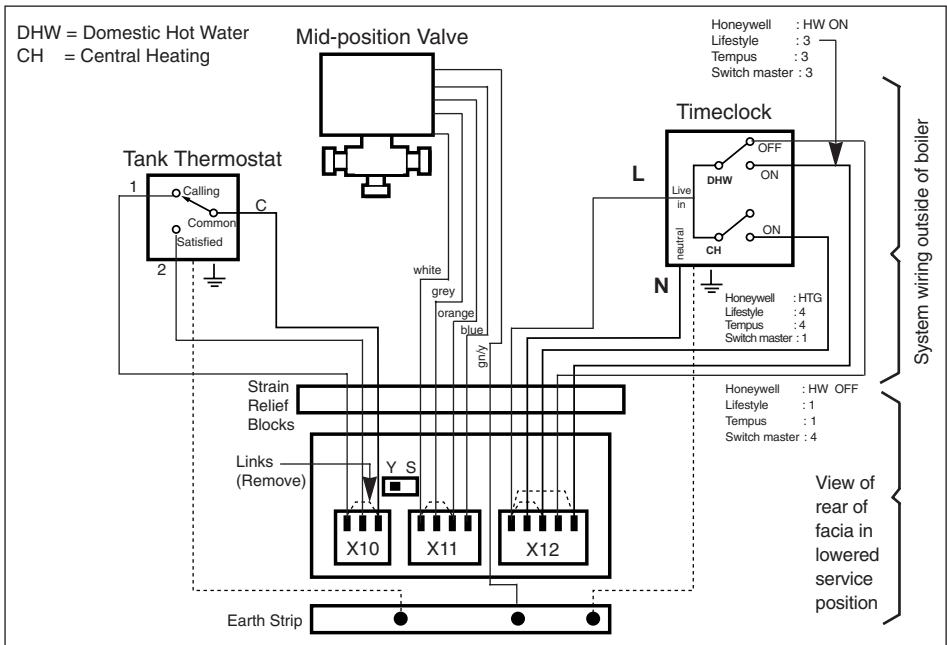
If it is required to use the boiler as a wiring centre for a Y plan system (mid position valve, tank stat, room and/or frost stat, programmer), the following diagram shows how this can be done. If the Worcester optional valve and timeclock are used, these simply plug into sockets X11 and X12.

Drop down the facia and gain access to the boiler wiring centre as described in Section 3.

Connect the system as shown:

IMPORTANT NOTES:

- Observe wiring details given in Section 4 and 6.
- Remove all pre-fitted links from the three plugs.
- The Y/S slide switch must be in the Y position.
- The HW OFF wire from the timeclock is only needed if the system is to have independent CH time control.
- If a room thermostat is required, this should be wired to connector X2 at the lower front section of the control board as shown in Fig.12 of the main installation book. If it is not required, then a link must be fitted at X2 across pins Ls and Lr.
- If a frost thermostat is required, this should be wired to connector X2 at the lower front section of the control board as shown in Fig.12 of the main installation book.
- Dotted lines show routing of earth wires which may be required.
- A tank stat is recommended for this application. But if it is not required, fit the link at X10.
- If a timeclock is not required, fit the two links at X12.



S Plan System (Boiler used as wiring centre)

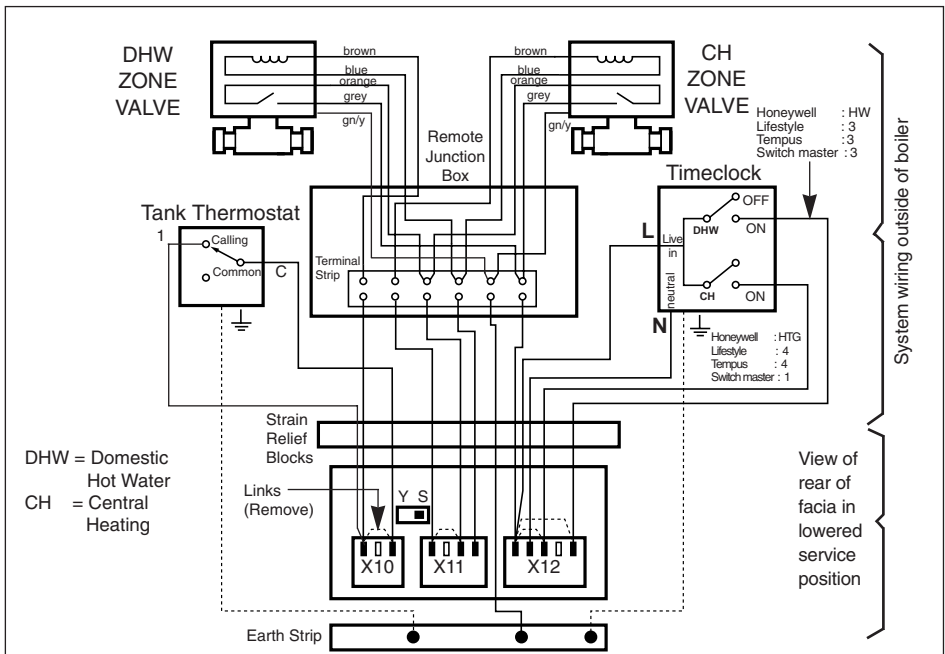
If it is required to use the boiler as a wiring centre for an S plan system (two zone valves, tank stat, room and/or frost stat, programmer), the following diagram shows how this can be done. In order to simplify wiring at the boiler, it is suggested that the two zone valves are pre-wired remotely from the boiler in a separate junction box as shown, and a six core cable run to the internal wiring centre.

Drop down the fascia and gain access to the boiler wiring centre as described in Section 3.

Connect the system as shown:

IMPORTANT NOTES:

- Observe wiring details given in Section 4 and 6 as before.
- Remove all pre-fitted links from the three plugs.
- The Y/S slide switch must be in the S position.
- If a room thermostat is required, this should be wired to connector X2 at the lower front section of the control board as shown in Fig.12 of the main installation book. If it is not required, then a link must be fitted at X2 across pins Ls and Lr.
- If a frost thermostat is required, this should be wired to connector X2 at the lower front section of the control board as shown in Fig.12 of the main installation book.
- Some zone valves may have a white wire. If so, this must be electrically isolated.
- Dotted lines show routing of earth wires which may be required.
- A tank stat is recommended for this application. But if it is not required, fit the link at X10.
- If a timeclock is not required, fit the two links at X12.





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