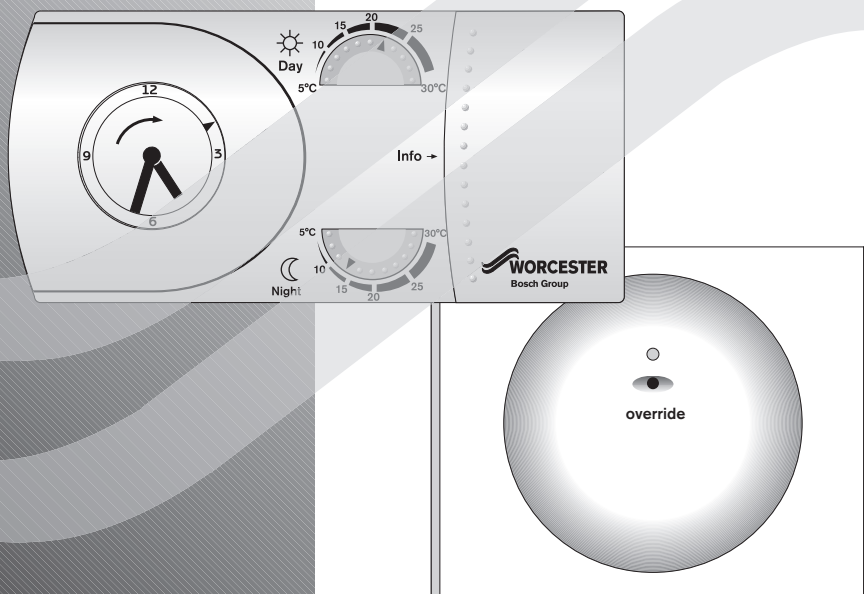


MT10RF/MECHANICAL RF THERMOSTAT

Radio frequency controlled single channel mechanical timer and room thermostat with receiver

7-716-192-037 FOR GREENSTAR i, GREENSTAR Si
and GREENSTAR CDi MODELS



 **WORCESTER**
Bosch Group

INSTRUCTION MANUAL
FITTING & OPERATING INSTRUCTIONS

CONTACT INFORMATION

WORCESTER, BOSCH GROUP:

TECHNICAL: 08705 266241
SERVICE: 08457 256206
SPARES: 01905 752571
LITERATURE: 01905 752556
TRAINING: 01905 752526
SALES: 01905 752640
WEBSITE: www.worcester-bosch.co.uk

MANUAL INFORMATION

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE STARTING.

THESE INSTRUCTIONS ARE APPLICABLE TO THE WORCESTER PRODUCT MODEL(S) STATED ON THE FRONT COVER OF THIS MANUAL ONLY AND MUST NOT BE USED WITH ANY OTHER MAKE OR MODEL OF APPLIANCE.

THE INSTRUCTIONS APPLY IN THE UK ONLY AND SHOULD BE FOLLOWED EXCEPT FOR ANY STATUTORY OBLIGATION.

IF YOU ARE IN ANY DOUBT CONTACT WORCESTER TECHNICAL SUPPORT HELPLINE.




THIS ACCESSORY MUST BE FITTED BY A COMPETENT PERSON. FAILURE TO COMPLY COULD LEAD TO PROSECUTION.

LEAVE THESE INSTRUCTIONS WITH THE USER OR AT THE APPLIANCE.

ABBREVIATIONS:

| | | | |
|------------|-----------------------|-----------|--------------------|
| CH | Central Heating | m | Metre |
| HW | Domestic Hot Water | IP | Ingress Protection |
| RF | Radio Frequency | V | Volts |
| LED | Light Emitting Diode | mA | MilliAmps |
| | | ms | milliseconds |
| PCB | Printed Circuit Board | °C | degrees Celcius |

SYMBOLS:

| | |
|---|-------------|
|  | Day Time |
|  | Night Time |
|  | Timer clock |

CONTENTS

ACCESSORY INFORMATION

| | |
|---------------------|---|
| GENERAL INFORMATION | 2 |
|---------------------|---|

| | |
|----------------|---|
| TECHNICAL DATA | 3 |
|----------------|---|

INSTALLATION & COMMISSIONING

| | |
|----------------------|---|
| FITTING THE RECEIVER | 4 |
|----------------------|---|

| | |
|---|---|
| TRANSMITTER RADIO LINK SETUP & LOCATION | 5 |
|---|---|

| | |
|---------------------------------|---|
| TRANSMITTER CLEARANCES & FIXING | 6 |
|---------------------------------|---|

USER INSTRUCTIONS

| | |
|----------------------|---|
| TRANSMITTER CONTROLS | 7 |
|----------------------|---|

| | |
|--------------------|---|
| RECEIVER FUNCTIONS | 8 |
|--------------------|---|

| | |
|---------------------|---|
| BATTERY REPLACEMENT | 9 |
|---------------------|---|

SERVICING & SPARES

| | |
|---|----|
| TRANSMITTER/RECEIVER MAINTENANCE & SPARES | 10 |
|---|----|

CONTENTS

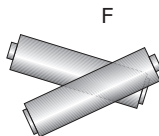
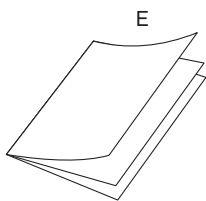
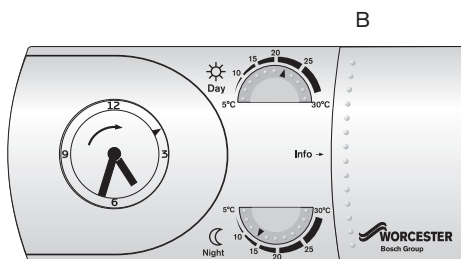
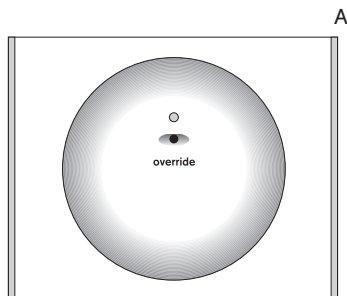
ACCESSORY
INFORMATION

INSTALLATION &
COMMISSIONING

USER
INSTRUCTIONS

SERVICING
& SPARES

GENERAL INFORMATION



STANDARD PACKAGE:

- A - Receiver for the Greenstar i, Greenstar Si and Greenstar CDI models.
- B - Transmitter.
- C - Screws (x2).
- D - Wall Plugs (x2).
- E - Instructions.
- F - Batteries (x2).

SPECIFICATIONS:

Transmitter:

- Single channel, radio frequency central heating timer.
- Mechanical timer with in-built RF Transmitter.
- Built-in battery housing.
- 2 AA alkaline LR6 batteries included.
- Low battery warning.
- Max. signal range approx. 25 metres (this may vary according to the building construction).

Receiver:

- RF Receiver module with LED receiver status indicator and setup/manual override button.
- Pre-wired with PCB connector.

| DESCRIPTION | UNITS | TRANSMITTER | RECEIVER |
|-------------------------------|---------|--------------------|----------------|
| Dimensions | mm | H158xW75xD36.5 | - |
| Operating voltage | - | 2xLR6/AA batteries | 24v DC |
| Ambient operating temperature | °C | -5 to +45 | -5 to +45 |
| Class of protection | - | II | II |
| Degree of protection | IP | 20 | 20 |
| Accuracy | sec/day | ±2.5 @ 25°C | - |
| Battery life | year | 1 approx. | - |
| Shortest switching period | minutes | 15 | - |
| Temperature regulation range | °C | +5 to +30 | - |
| Regulator | - | Electronic | - |
| Transistor switching capacity | mA | - | 5mA @ 24 VDC |
| Switching contact | - | - | Open collector |

ACCESSORY
INFORMATION

Related Standards:

BS EN60730-1:2001

BS EN60730-2-7:1992

Electro Magnetic Compatibility and Radio Spectrum Matters (ERM); Short Range Devices (SRD) ETSI EN 300 220-1

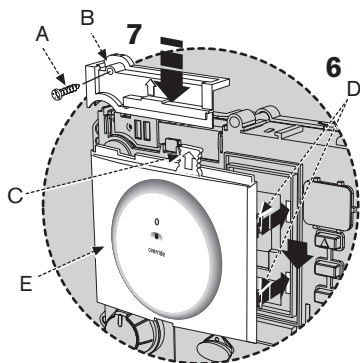
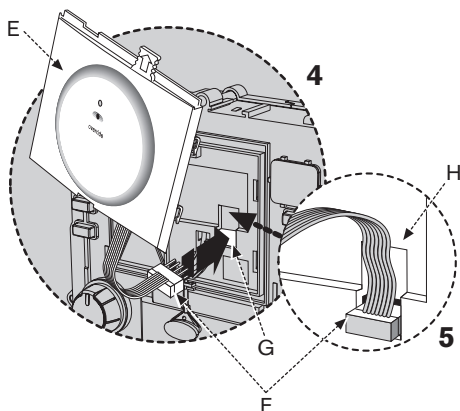
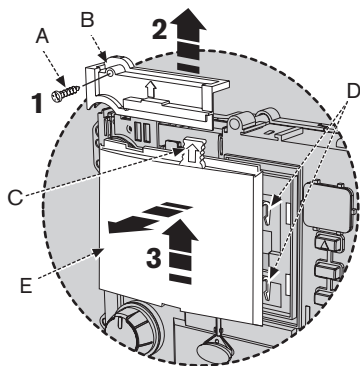
EC Directives:

European Union Law Directive 2000/84/EC

Low Voltage Directive (73/23/EEC)

Electro Magnetic Compatibility Directive (89/336/EEC)

CE Marking Directive (93/68/EEC)



FITTING THE RECEIVER

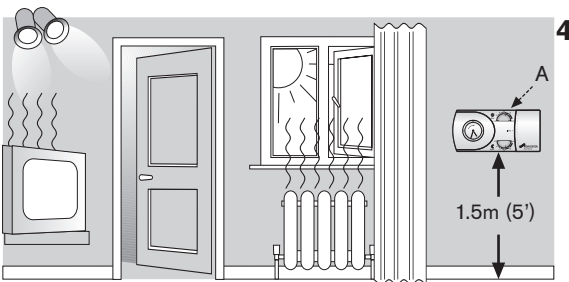
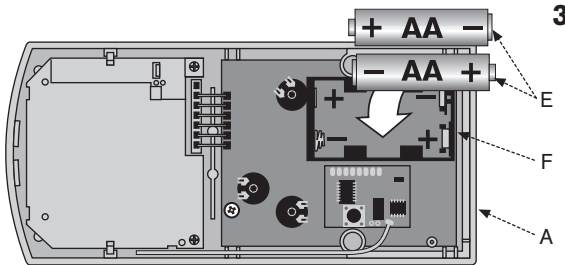
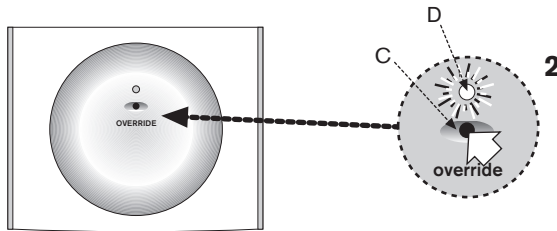
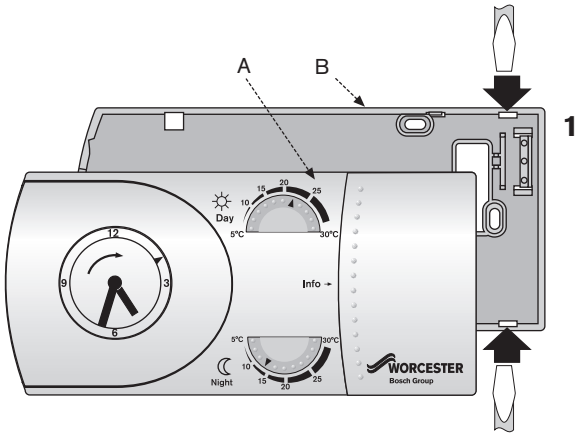
DANGER - 24V & 230V:
DO NOT TOUCH THE ELECTRICAL COMPONENTS OR CIRCUITS.

CAUTION: ISOLATE THE MAINS ELECTRICITY SUPPLY BEFORE STARTING ANY WORK AND OBSERVE ALL RELEVANT SAFETY PRECAUTIONS.

OBSERVE ELECTRONIC STATIC DISCHARGE PRECAUTIONS. DO NOT TOUCH THE PCB CIRCUITS

- ▶ **Important: Switch off boiler.**
- ▶ Remove boiler outer casing and control panel fascia to gain access to the heatronic control panel.
- 1 ▶ Release securing screw (A).
- 2 ▶ Pull cover panel (B) upwards to remove.
- 3 ▶ Grip tab (C), pull upwards to disengage clips (D) and pull forwards to remove blanking plate (E) or existing programmer.
- 4 ▶ Align connector pins (F) into receptors (G) in the circuit board and push fully home.
- 5 ▶ Feed the ribbon cable (G) into recess (H).
- 6 ▶ Align programmer (E) and locate clips (D), push into slots then downwards to secure using grip tab (C).
- 7 ▶ Locate cover panel (B) and secure with screw (A).
- ▶ Replace fascia cover and outer casing before switching on the electricity supply and boiler.
- ▶ Switch boiler on when completed.

TRANSMITTER RADIO LINK SETUP & LOCATION



Radio Link setup:

First remove the transmitter baseplate:

- 1 ▶ Locate a flat bladed screwdriver into the slots in the baseplate (B), as shown and twist to lift the transmitter top (A) away from the baseplate (B).

Establishing a radio link:

- 2 ▶ Press and hold button (C) down on the receiver for approximately 5 seconds to the enter setup mode with the LED (D) continuously on.

The receiver is now ready to accept a setup signal from the transmitter for up to 2 minutes.

- 3 ▶ Fit the batteries (E) correctly into the battery compartment (F) to enable the transmitter to send a setup signal to the receiver.

When a radio link has been established the LED briefly flashes twice and extinguishes. This link then remains in the event of a power loss.

However, if a radio link has not been established, remove the batteries from the transmitter and wait 10 seconds before repeating the setup procedure.

Transmitter Location:

- 4 ▶ Position the transmitter (A) as close to the main living area as possible on an inside wall, approx. 1.5m (5') above the floor within the max. signal range of the appliance receiver.

Keep the transmitter away from:

- light and heat sources
- enclosures and curtains
- direct draughts, including fans, air vents, windows and doors
- damp and condensation.

TRANSMITTER CLEARANCES & FIXING

TRANSMITTER CLEARANCES:

See diagram opposite for minimum area (shown in mm) required for operation.

SAFETY: All relevant safety precautions must be undertaken. Protective clothing, footwear, gloves and safety goggles must be worn as appropriate.

TRANSMITTER FIXING:

1 ▶ Hold baseplate (B) level to mark securing points (C) and remove baseplate (B).

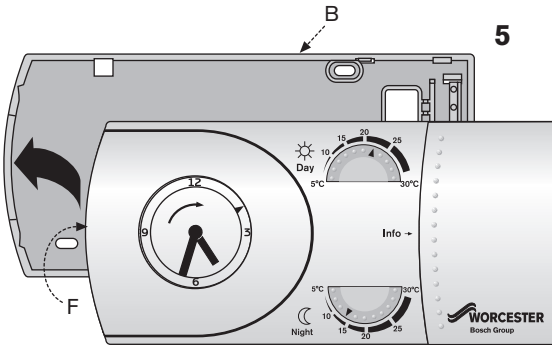
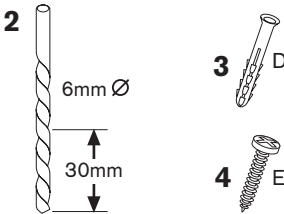
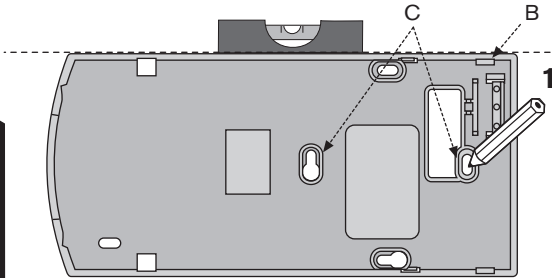
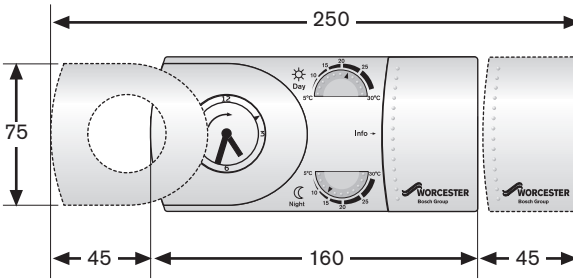
CAUTION: Ensure there are no pipes, electric cables or other hazards before drilling.

2 ▶ Drill holes, where marked, 30mm deep using a 6mm diameter drill bit.

3 ▶ Push one wall plug (D) into each hole.

4 ▶ Reposition baseplate (B), check level and secure with screws (E).

5 ▶ Align outer edge and internal lugs (F) of transmitter to baseplate (B) and push fit to secure.



TRANSMITTER CONTROLS

INFORMATION:

- ▶ Slide open panel (A) to expose quick reference user instructions (B).

SETTING THE 24 HOUR CLOCK:

- ▶ Slide cover (D) off the transmitter (C).
- ▶ Rotate outer ring (E) in direction of arrow (clockwise) until the clock hands and the 24 hour pointer (F) display the correct time.

Note: Do not rotate anti-clockwise or damage may occur to the unit.

SETTING HEATING TIMES:

- ▶ Using the 1 to 24 hour marks on the outer ring (G) move the segments (H):
 - ☀ inwards for daytime setting.
 - ☾ outwards for night setting.

Note; each segment represents 15 minutes.

SETTING HEATING TEMPERATURE:

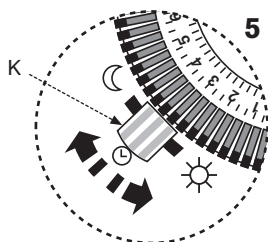
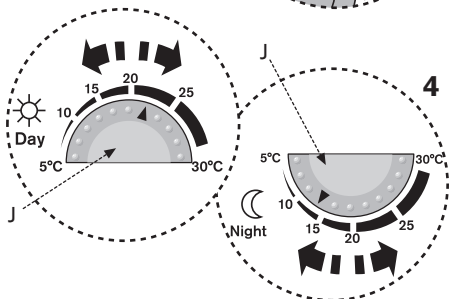
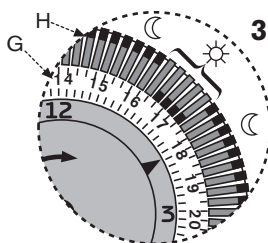
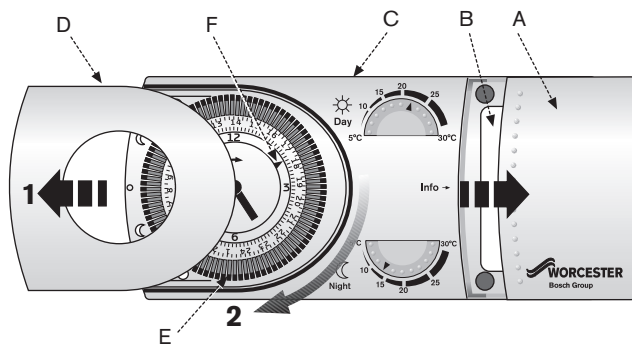
- ▶ Rotate the dials (J) to set the room temperature required:
 - ☀ 5-30°C for daytime.
 - ☾ 5-30°C for night time.

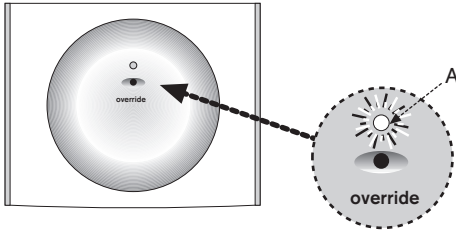
Typical day and lower night temperature settings are shown opposite.

Frost protection is automatically set at 5°C.

SELECTING PROGRAMS:

- ▶ Move the selector switch (K) to set:
 - ⌚ automatic (uses day/night timer & both temperature settings).
 - ☀ day override (continuously on using day temperature setting).
 - ☾ night override (continuously on using night temperature setting).
- ▶ Replace cover (D) when finished.





1

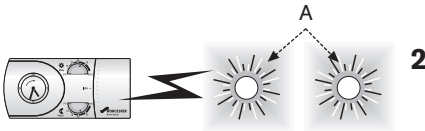
1 NORMAL OPERATION:

- ▶ LED (A) is continuously on when there is a demand for heating and continuously off when there is no demand for heating.

Note: The LED is briefly interrupted each time a signal is received.

2 SIGNAL RECEIVED:

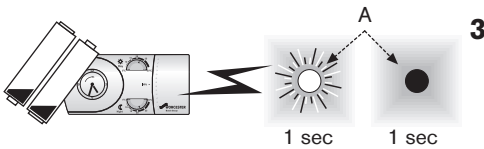
- ▶ LED (A) flashes twice each time a signal is received from the transmitter.



2

3 LOW BATTERY STATE:

- ▶ LED (A) flashes slowly, on for one second and off for one second.
- ▶ Replace the transmitter batteries as shown under 'Battery Replacement' and the receiver will revert back to normal operation.

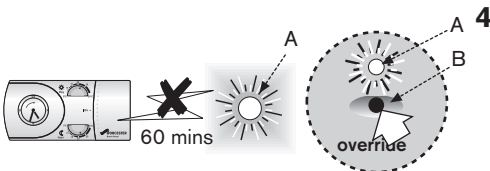


3

4 EMERGENCY MODE:

- ▶ If a signal is not received for 60 minutes LED (A) continues to flash rapidly and the CH is switched OFF.
- ▶ Press button (B) and release for manual override and to switch the CH ON. Press again to switch the CH OFF.

Once a signal is received from the transmitter the receiver and heating will revert back to normal operation.



4

BATTERY REPLACEMENT

1 TO REPLACE THE BATTERIES: Do not use rechargeable batteries.

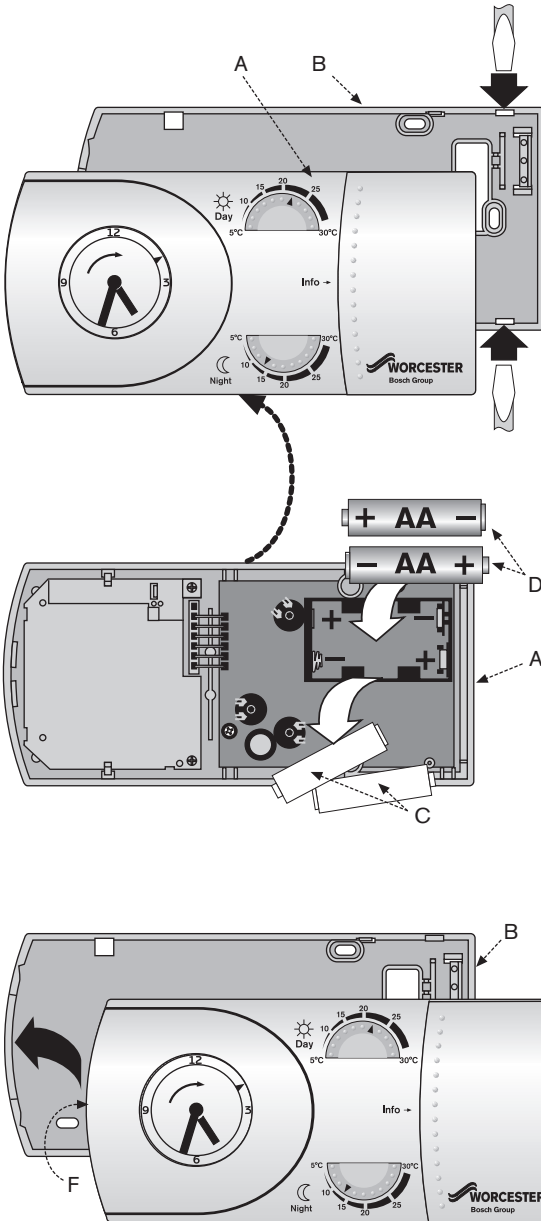
1 ▶ Locate flat bladed screwdriver into slots and twist to lift top of transmitter (A) away from baseplate (B).

2 ▶ Remove existing batteries (C) and dispose of safely, do not touch the circuits inside the transmitter.

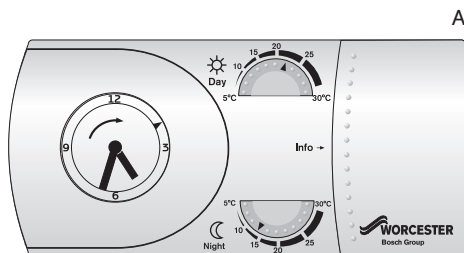
▶ Replace batteries with the same type (D) and check they are correctly fitted to the transmitter (A).

3 ▶ Align outer edge and internal lugs (F) of transmitter to baseplate (B) and push fit to secure.

The receiver will revert back to normal operation after the transmitter batteries are successfully replaced.



TRANSMITTER/RECEIVER MAINTENANCE & SPARES



A

Transmitter maintenance:

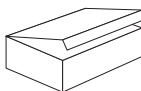
- ▶ Wipe outer casing (A) with a clean dry cloth, do not use polish or detergents.
- ▶ Do not touch any circuits inside the transmitter.

Receiver maintenance:

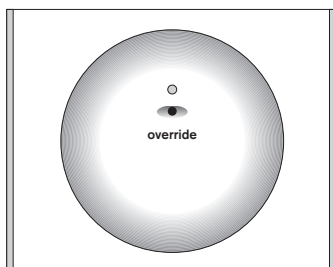
- ▶ The receiver unit (B) requires no maintenance and has no serviceable components.

Servicing:

- ▶ These units cannot be serviced.
- ▶ Should the existing unit fail to function correctly, check:
 - ▶ receiver times and program settings are correct.
 - ▶ the RF signal link is set up.
 - ▶ transmitter batteries are the correct type and are correctly fitted.



B



Replacement parts:

- ▶ Transmitter (A):
part Number: 8-716-106-191-0
- ▶ Receiver for the Greenstar i, Greenstar Si and Greenstar CDi:
part Number: 8-716-106-664-0