

# INSTALLATION INSTRUCTIONS

0996/091/00

Issue 01

## BRITON 996 FIG.1

### ELECTRO MAGNETIC HOLD OPEN/FREE SWING DOOR CLOSER 24VDC

#### SURFACE FIXED TO 'PULL' (HINGE) SIDE OF DOOR.

**SIZE 3** closer suitable for doors up to 950mm wide and 60kg in weight

**SIZE 4** closer suitable for doors up to 1100mm wide and 80kg in weight

**SIZE 5** closer suitable for doors up to 1250mm wide and 100kg in weight

This closer unit incorporates an electro magnet which is normally interfaced with a detector/alarm system. In an emergency or a power failure, the electro magnet when de-energised will cause the closer to close the door into its frame. A 13mm A/F spanner is required to carry out adjustments to arm set or convert from hold open to free swing function.

Hold open function enables unit to hold door open until automatically released or pulled closed manually. Angle of hold can be adjusted from 85° to 95° approx. and 103° to 110° approx.

Free Swing function setting allows door to be independent of closer control. When unit is automatically released the door will be driven closed from whatever position it may have been left open. Adjustment of catch plate provides for a free swing variance of 85° to 95° approx. Door can open to approx. 110° max. subject to hinge projection and surrounding structure.

**Warning:** When Briton 996 is used in the free swing mode the door is not under the control of the damping action and will slam in windy or draughty conditions.

THIS CLOSER UNIT IS EASILY CONVERTED TO SUIT EITHER HAND OF DOOR, for conversion instructions see diagram 4.

#### IMPORTANT

Door must swing freely and close firm into its rebate to enable the closer to operate efficiently. This is particularly important for fire/smoke doors and we recommend that doors be hung on ball bearing butt hinges to BS EN 1935 and that latches and smoke seals be of a type that offer minimum resistance to closing. Failure to address these requirements may result in an ineffective fire/smoke door installation.

DOOR STOP MUST BE FITTED TO PREVENT DOOR FROM OPENING JUST BEYOND SET ANGLE OF HOLD OPEN OR FREE SWING SETTING.

Under no circumstances should the door closer be dismantled.

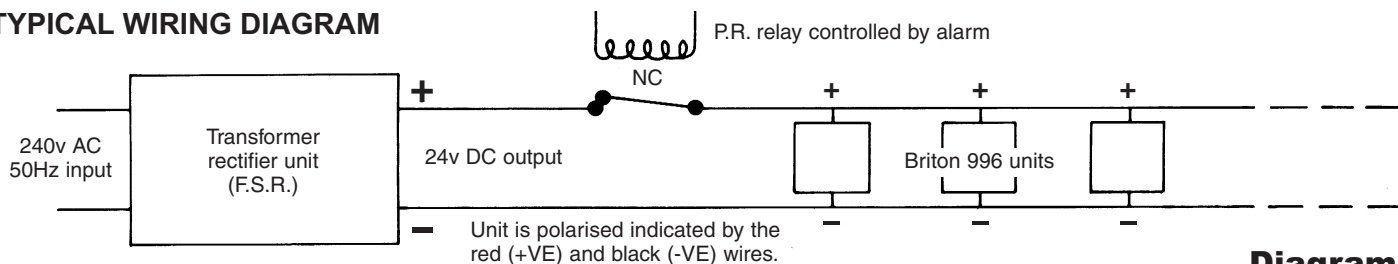
## ELECTRICAL INFORMATION

**SPECIFICATION** Electro-magnet continuous rating: 2.35 watts max at 26v DC.  
Power Requirements: 24v DC - 90 mA nominal.

**TESTING** Check that voltage is within specified range at each unit after installation.  
It is recommended that the equipment is tested at weekly intervals for correct function.

**NOTE: Power for ancillary devices must not be drawn from the alarm system except under alarm conditions and then must not reduce the reliability of the supply. (BS.5839 Pt. 1).**

#### TYPICAL WIRING DIAGRAM



**Diagram 1**

**NOTE:** Power supply feed to electro magnet is through flexible armoured loop.

#### IMPORTANT

This closer should be installed by a competent fixer who must pass these instructions onto the site or maintenance manager once the closer unit has been satisfactorily fixed, wired and tested.

**No Responsibility** can be accepted by the manufacturers if these installation instructions are disregarded.

# APPLICATION

Briton 996 unit fixed to top rail of door.  
Arm bracket fixed to head frame.

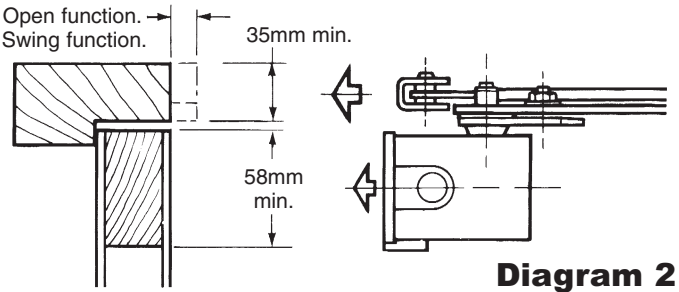
## See Diagram 2

### \*Note:

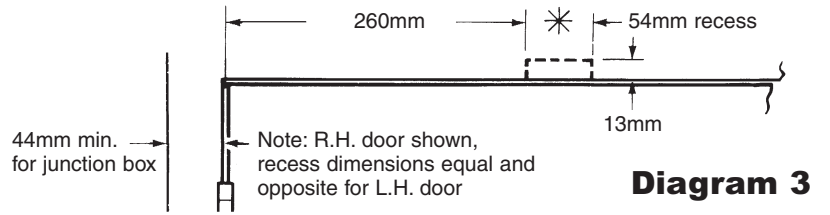
Head frame will need to be recessed locally to clear claw and catch plate on unit if head frame projects from door face.

## See Diagram 3

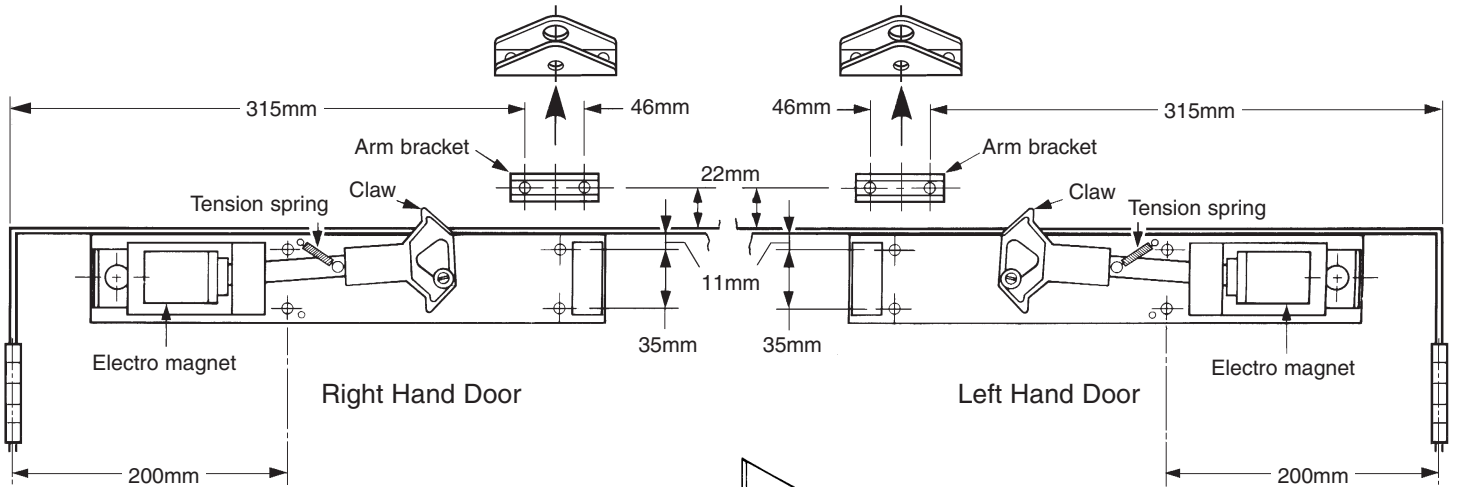
30mm max. head projection for Hold Open function.  
20mm max. head projection for Free Swing function.



**Diagram 2**

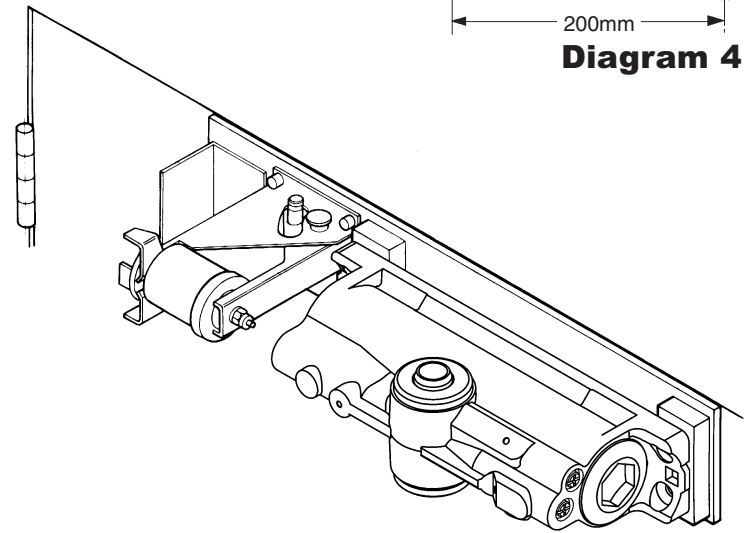


**Diagram 3**

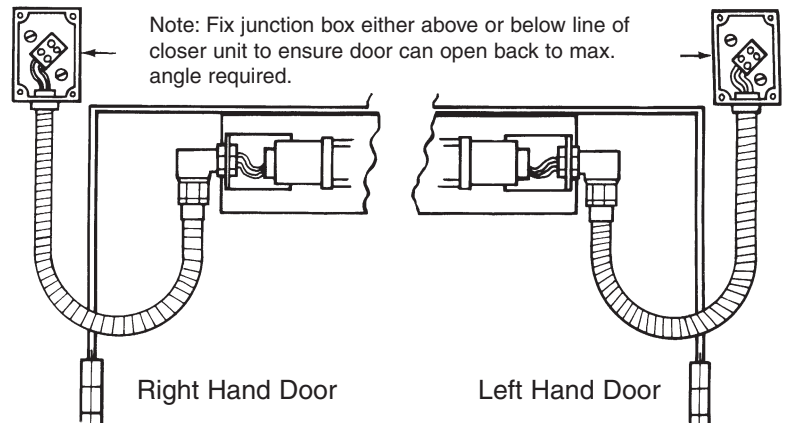


**Diagram 4**

- 1) Remove closer from backplate.
- 2) Securely fix back plate **level** with top edge of door ensuring electro magnet is **nearest** hinge for either hand of door.  
**See Diagram 4**
- 3) Attach free end of tension spring to upper peg ensuring end locates into groove.  
**See Diagram 4**  
Depress claw and check for free return.
- 4) Securely fix arm bracket assembly to head frame.  
**See Diagram 4**
- 5) Re-fix closer securely to backplate ensuring hexagon recessed end of closer is **furthest** from hinges.  
**See Diagram 5**
- 6) Fix junction box complete with box plug and armoured loop to door jamb. Attach elbow end to angle bracket on back plate. Connect wiring to electro magnet terminals.  
**See Diagram 6**
- 7) Complete wiring installation, refer to diagram 1. Refix cover plate to junction box.
- 8) DETERMINE WHETHER UNIT IS TO HOLD DOOR OPEN OR ALLOW IT TO 'FREE SWING' AND AT WHAT ANGLE FOR EITHER FUNCTION, THEN PROCEED AS FOLLOWING PAGE.



**Diagram 5**



**Diagram 6**

# SETTING ARM SET FOR HOLD OPEN

Couple main arm of arm set to catch plate by inserting bolt centrally within middle slot.

**See Diagram 9**

## 85° to 95° RANGE OF HOLD OPEN

- 1a) Insert arm set spindle into top of closer at 90° to backplate and secure with arm retaining screw.

**See Diagram 7**

Proceed as paragraph 2 below.

OR

## 103° to 110° RANGE OF HOLD OPEN

- 1b) Insert arm set spindle into top of closer with arm **towards** hinge and **60° to back plate**. (Check for correct angle using template on back page.) Secure Spindle with arm retaining screw.

**See Diagram 8**

Remove catch plate nut, bolt and washers and swing arm away from hinge until bolt can be re-inserted in end slot.

**See Diagrams 9 and 10**

Proceed as paragraph 2 below.

- 2) Untighten nut, pull main arm **towards** hinge until bolt is restricted and tighten nut. (THIS WILL GIVE MINIMUM HOLD OPEN POSITION).

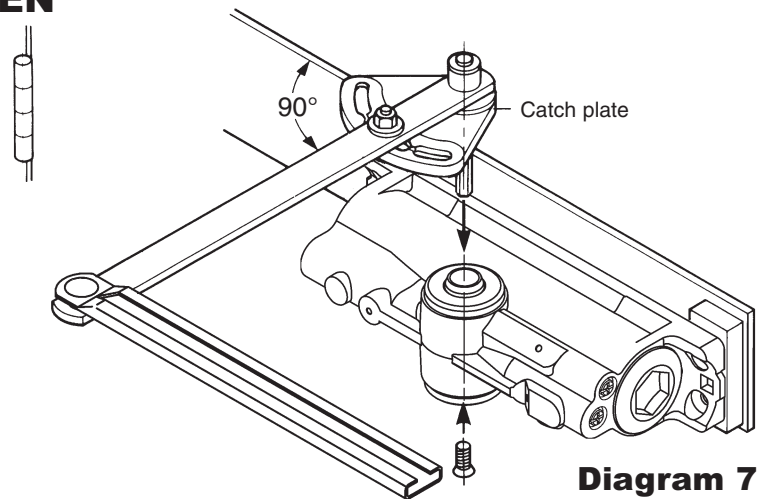
- 3) Open door to engage secondary arm strip and tube. Close door and set secondary arm at 90° to door face. Securely tighten arm clamp bolt.

**See Diagram 11**

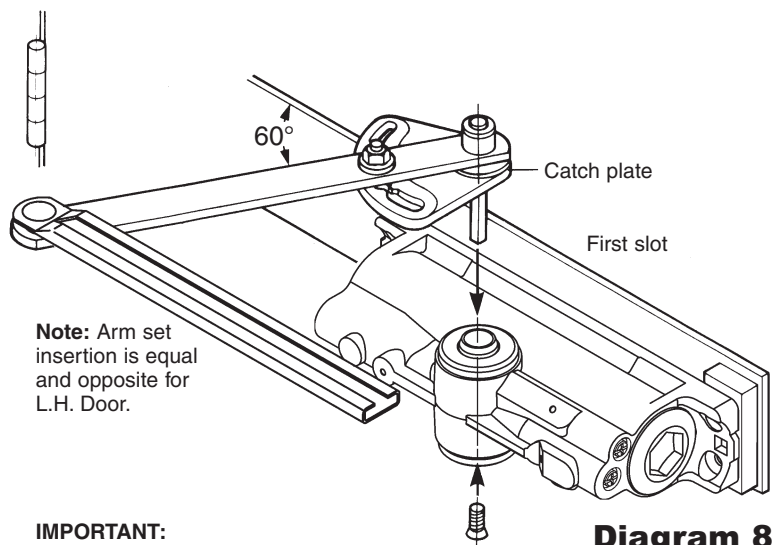
4. Switch power on to energise unit magnet and open door until hold open is achieved.

5. Slacken nut and move door to required hold open angle, then **securely** re-tighten nut.

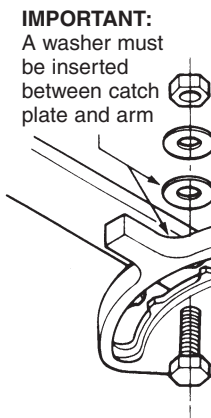
6. Check that door will be released from this angle by de-energising the unit magnet.



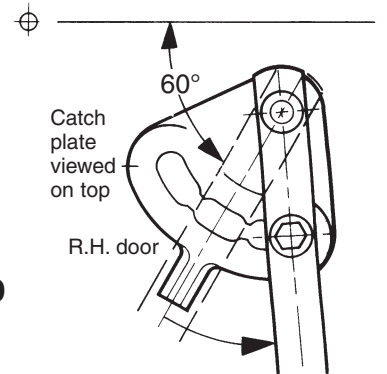
**Diagram 7**



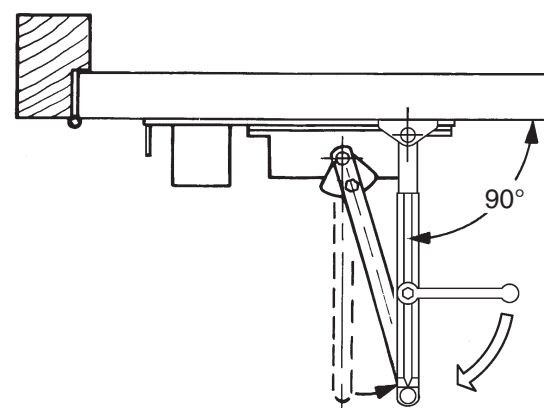
**Diagram 8**



**Diagram 9**



**Diagram 10**



**Diagram 11**

# SETTING ARM SET FOR FREE SWING

(85° to 95° VARIANCE)

1c) Insert arm set spindle into top of closer at 90° as paragraph 1a.

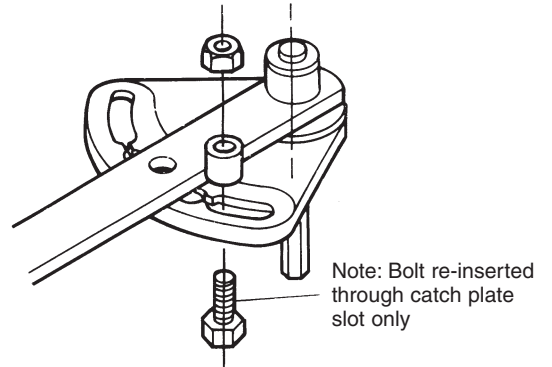
2c) Remove catch plate nut, bolt and washers. Discard both washers and re-insert bolt into elongated slot **furthest** away from hinge. Place spacer over bolt and retain with nut. Pull main arm **towards** hinge and lock spacer down in the 85° position.

**See Diagrams 12 and 13**

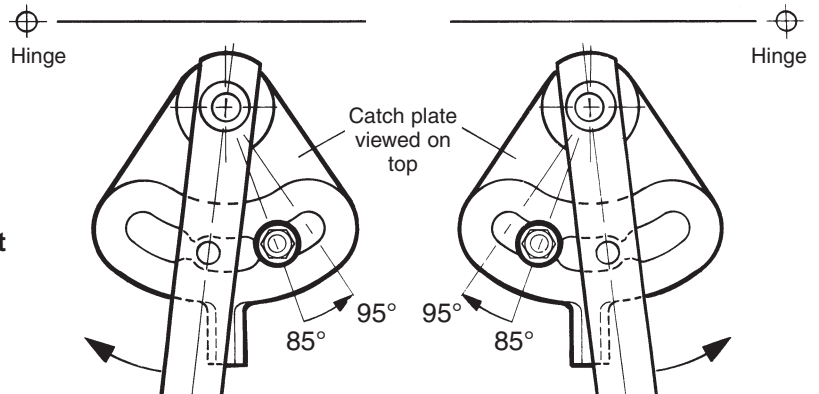
3c) Assemble secondary arm and set length, connecting arm to arm bracket all as para. 3.

4c) Open door until catch plate engages claw and door free swings. **To increase free swing angle**, slacken nut, hold door at required free swing angle. **Ensure spacer is bearing against side of arm** before securely re-tightening nut.

5c) De-energise unit magnet and check that claw releases catch plate causing door to close into its frame rebate.



**Diagram 12**



**Diagram 13**

## ADJUSTMENT TO CLOSER

### Closing speed and Latch Action Adjustment.

Turn regulator for suitable closing speed  
+ faster or – slower.

Turn regulator for suitable latch speed  
+ faster or – slower.

**See Diagram 14**

**WARNING: REGULATORS MUST NOT BE UNSCREWED BEYOND SURFACE OF BODY**

### TESTING UNIT

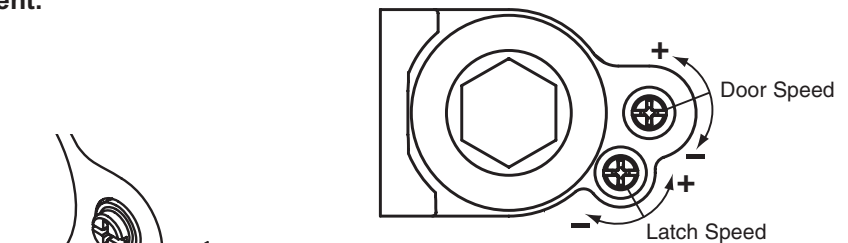
Switch on power supply to apply 24vDC to unit. Open door until either hold open or free swing function has been achieved. Switch off power to de-energise unit and observe that closer returns door, under check control, firmly into frame.

Hold cut out trim in position behind lower spindle boss of closer butting up against back plate of door. Slide cover over unit ensuring trim is retained. Finally secure cover with two small screws.

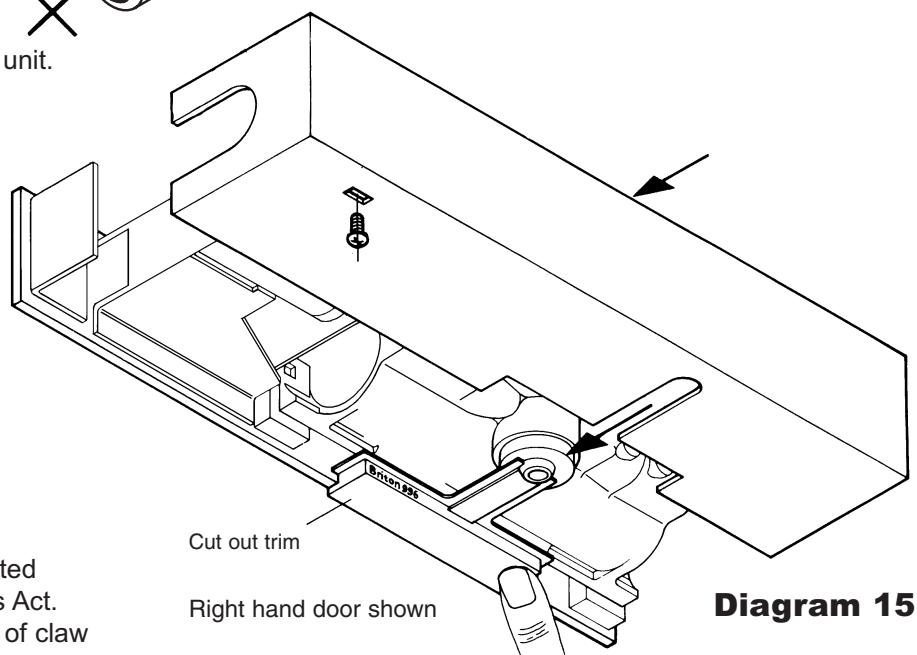
**See Diagram 15**

### MAINTENANCE

Keep free from dust and dirt. Unit to be tested weekly in accordance with Fire Precautions Act. Periodically apply grease to projecting part of claw and a small quantity of oil to arm joints and door hinges.



**Diagram 14**



**Diagram 15**

**PLACE AGAINST FACE OF HEAD FRAME**

