RECOMMENDATIONS FOR NEW INSTALLATIONS OF HALO BOLLARDS

1. SITING

(a) USING HALDO PREFABRICATED ISLAND SITE

(i) Rest Basebox on to mounting brackets ① with cable entry facing rear of island site.

(ii) Tighten clamps ② on to end flanges of Basebox.

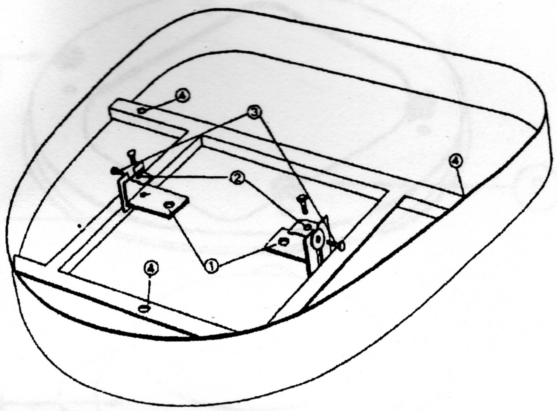
(iii) Loosen horizontal bolts ③ to adjust height of Basebox to ensure ground level mark indicated on Basebox is level with proposed surface level in centre of island site.

(iv) On sloping road surface ensure top of Basebox is level before tightening bolts ③.

(v) Pass electricity supply cable into the Basebox (with second cable looping out if required) and seal in accordance with paragraph 2 below. Do not energise.

(vi) Fill island site with concrete to ground line marked on Basebox.

NOTE: 1. Cable ducts should be preformed in concrete to facilitate cable repairs.



2. If it is felt desirable, the island site can be anchored into the road surface using rag bolts through holes ④ in the framework.

3. Rag bolts can similarly be used to anchor the Basebox into the concrete, using the holes in the base flange of the Basebox.

4. Concrete should be of adequate strength and durability to withstand salt. impact, frost and weathering and to retain any holding down bolts which should be corrosion resistant (e.g. galvanised to B.S. 729).

(b) USING A KERBED ISLAND SITE

(I) Position the Basebox so that the minimum distance between the base flange of the Basebox and the nose of a traffic island is 480mm, and from the kerbs to the side of the base flange of the Basebox 290mm. The bottom of the Basebox should be 160mm below the proposed surface level of the island site and the cable entry facing the rear of the island site. The top of the Basebox should be horizontal in both directions.

(ii) Pass electricity supply cable into the Basebox (with second cable looping out if required) and seal in accordance to paragraph 2 below. Do not energise.

(iii) In fill the island site with concrete to the ground line marked on the Basebox (See notes under section (a)(vi) above).

2. SEALING CABLE ENTRY (See overleaf for diagram of Basebox)

(a) USING HEAT SHRINK SEALABLE SLEEVE

(i) Pass a suitable drift up a cable lead-in tube at the rear of the Basebox and knock out the blank ① at the end of the tube. (Repeat for second tube if it is intended to loop out of the Basebox.)

(ii) Pass the service cable through a short length of suitable heat shrinkable sleeve and through the lead-in tube into the Basebox. (Remove the unwanted fibreboard blank.)

(iii) Strip back the outer sheathing and connect the cable into a Cut-Out, which should be screwed to the fuseboard ③, and connecting the earth braiding to the earth terminal ④.

(iv) Slide the heat shrinkable sleeve over the lead-in tube until its end abuts the wall of the Basebox before shrinking it first to the lead-in tube and to the cable in the normal manner.

NOTE: Heat shrinkable sleeves, cut to length, are available from your BASELITE supplier.

(b) USING COLD POUR COMPOUND

(i) Knock out the blanks as in 2(a)(i) above.

(ii) Drive red insert plugs into the outside end of the cable entry tubes and, using a screwdriver or similar tool, force a hole through one (or both if it is intended to loop out again).

(iii) Force sufficient length of service cable(s) through the red insert plug(s) to allow connection to a Cut-Out screwed on to the fuseboard in the Basebox.

(iv) Similarly puncture one (or both) of the other two red inserts, force the cable(s) through it (or them) and finally press the inserts home into the holes in the fibreboard blank.

(v) Fill the compound box ⑤ with cold pour compound in accordance with the instructions supplied with the compound.

NOTE: It is essential not to use the type of compound which sets rock hard and shrinks from the wall of the Basebox. Suppliers of the correct type are available from the supplier of your BASELITE Bollard.

(c) USING A GLAND FITTING

For those engineers who prefer the use of a gland fitting, order the type of Basebox without lead-in tubes for cable entry and knock out one (or both) 25mm diameter blanks to accept your gland fitting. Alternatively, a hole (or holes) can be drilled through any side (or the bottom) of the Basebox below the level of the light tray.

NOTE: Do not use brass fittings. These will cause electrolytic corrosion of the Basebox.

3. FINAL ASSEMBLY

(a) Connect line and neutral supply from the Cut-Out to the terminal block ⑥.

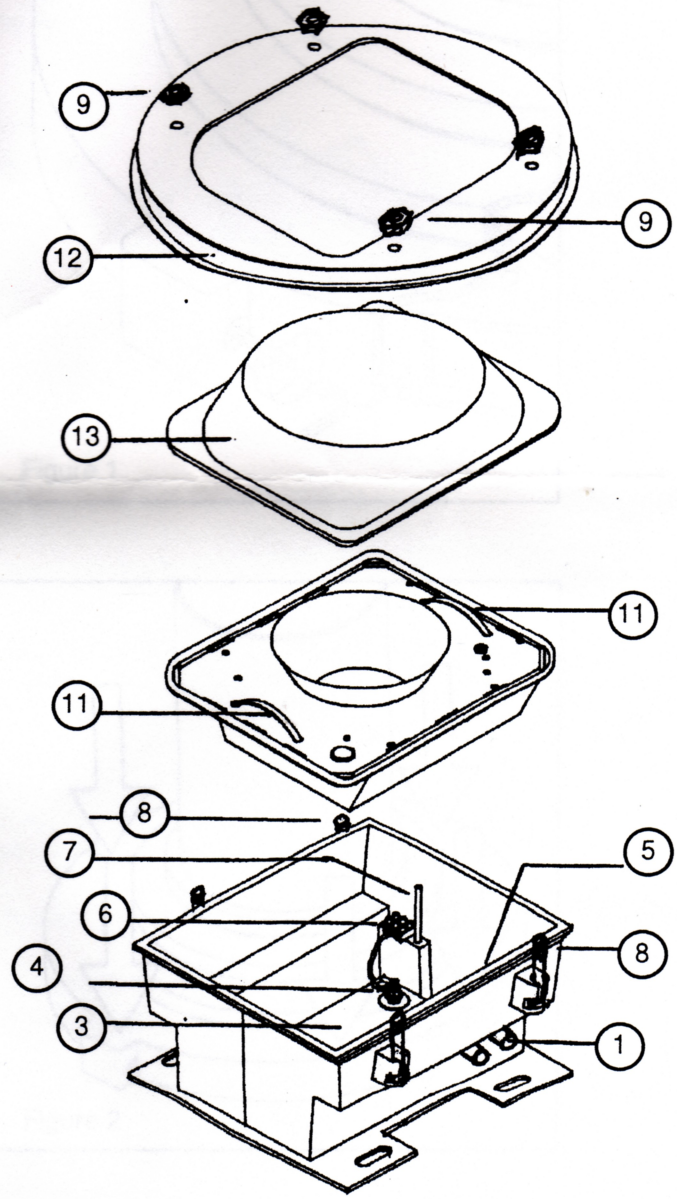
NOTE: Terminal will accept conductors up to 4mm².

The installation is now ready for the main supply to be energised.

(b) Slide the light tray over the vertical spring dowel pin ⑦ and so plug it in to the terminal block ⑥.

(c) Drop the Basebox Lid with the polycarbonate lens (13) over the four M10 bolts ⑧ and tighten the four retaining nuts ⑨ until the metal to metal contact is made between the Basebox and Lid. (Do not exceed 20ft/lbs torque.)

(d) Locate the Head and Stem assembly on top of the lid (see attached sheet).



4. MAINTENANCE

(a) TO GAIN ACCESS TO THE LIGHT TRAY

(i) Undo the screw accessible through the bulge on the base of the stem to its maximum to slacken off the fixing band.

(ii) Lift off the Head and Stem assembly by pulling the bulge upwards.

(iii) Unscrew four retaining nuts ⑨ and lift off the Basebox Lid. (A 17mm / M10 socket is recommended).

(iv) Hold plastic lifting straps (11) and lift Light Tray from Basebox. (This will disconnect it electrically.)

(v) Replace Light Tray with new lamps fitted, or with another Light Tray on which lamp replacement and/or other maintenance has already been carried out in the service van or workshop.

(b) TO RE-ASSEMBLE

Proceed as in Section 3(b)(c) & (d) above.

5. RETRO-REFLECTIVE BOLLARD INSTALLATION

(i) Provide the foundations for the bollard by preparing a 500mm wide x 500mm broad x 300mm deep hole.

(ii) Fill the excavation with concrete until surface level is reached.

(iii) Fix four M10x150 Rag Bolts and M10 Full Nuts into the four pre-drilled holes on the Cast Aluminium Base. (Ideally, no more than 5mm of thread should be showing above the top edge of the nut).

(iv) Situate Base and Rag Bolts into un-set concrete to required final position. (Underside of Base should sit on surface of concrete - DO NOT push any part of the Base unit into the foundation).

(v) Allow concrete to cure completely.

(vi) Follow instructions listed on sheet; 'Locating Halo Head and Stem' for final bollard siting.

LOCATING HALO HEAD AND STEM

A 6mm ALLEN KEY IS REQUIRED.

FOR EASE OF USE A BALL-NOSED OR RATCHET TYPE IS RECOMMENDED.

Procedure:

(a) Fully loosen the retaining band by turning the screw anticlockwise until it stops (Figure 1).

(b) Position the Head and Stem assembly on the aluminium lid.

(c) Using foot, press down gently around the edge of the Head and Stem assembly (Figure 2), to ensure that it locates flush against the aluminium lid (Figure 3).

NOTE: Ensure that the bulge locates correctly.

(d) Turn the Head and Stem assembly until it faces the required direction.

(e) Securely tighten the screw (do not exceed 10ft/lbs torque), ensuring that the bulge remains flush against the lid at all times.

(f) When complete, manually push bollard over to 45° in four directions to ensure correct installation.

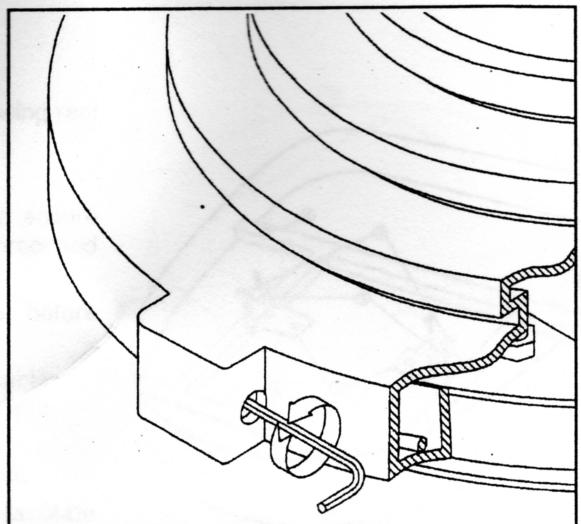


Figure 1

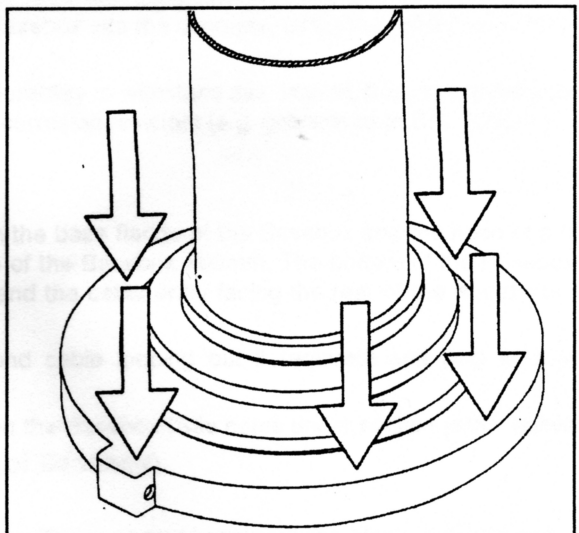


Figure 2

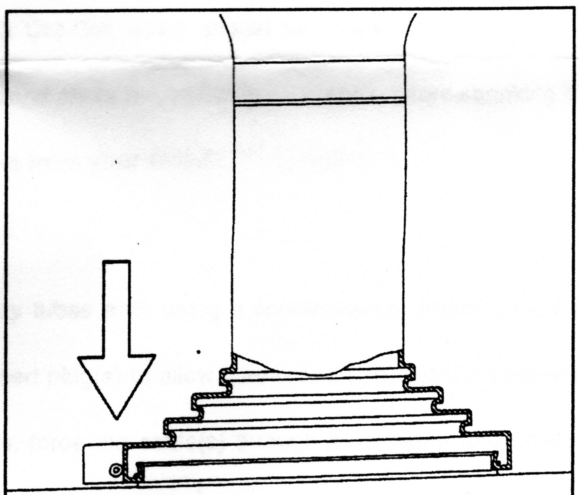


Figure 3