

Clip Replacement.

For components with contacts on their face, e.g. Ohmeda

Pad and diode preparation.

If original clip is cracked, broken and unusable remove the diodes (LED/IR and Photodetector) and dispose of the broken clip. Test the component function.

Desolder the diodes to leave clean contacts.

Check that the diodes will fit into the led and sensor pads accordingly. If the diodes are too large to fit into the space provided the pads will have to be modified using a knife (Taking care not to cut through the face of the pad).

Cable preparation.

Feed the cable through the MCI strain relief and leave approximately 3" of cable to work with. The protective casing of the cable can now be removed. Once removed the cable shield will be visible this should also be removed. This should leave 4 wires visible as well as a separate protective cover which contains a black wire and a white wire plus another shield. The 4 wires should be:

Red
Orange
Yellow
Blue

Any unnecessary wires should be removed, and the remaining wires should be cut down to 1.5cm and tinned.

The second protective cover and the shield surrounding the black and white wires should be removed 1.5cm from its end. The black wire and the white wire can then be tinned.

Clip Assembly.

The wires should now be soldered to the appropriate diodes using the wiring diagrams. Once the diodes have been wired, the diodes should be glued to the 'H' shaped pad support, making sure the actual emitter part/ detector part of the components are directly below where the window will be. Superglue around the edge of the rubber pad, placing it onto the pad support, and holding gently in place until the pad is fixed. Carefully introduce silicone rubber through the window onto the component, until the cavity is filled. Take off any excess silicone, using the tip of a screwdriver, leaving a smooth flat surface. Repeat the process for the other component, then leave to air dry, usually overnight.

The spring can now be attached, ensuring the wires to the photo-diode are not trapped underneath it.

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On the inside of the LED shell a 'V' shaped groove should be cut into the plastic ridges to leave a channel for the photodiode wires.

The pad supports can then be placed into the shell along with the strain relief (in the appropriate place). Each corner of the support pads should be pushed down until they click into place behind their retainers.

The side tabs and strain relief can now be glued into place and the clip should then be wiped clean.

Clip Replacement.

For components with contacts on their reverse, e.g. Datex

Pad and diode preparation.

If original clip is cracked, broken and unusable remove the diodes (LED/IR and Photodetector) and dispose of the broken clip. Test the component function.

Desolder the diodes to leave clean contacts.

Check that the diodes will fit into the led and sensor pads accordingly. If the diodes are too large to fit into the space provided the pads will have to be modified using a knife (Taking care not to cut through the face of the pad).

Apply non corrosive clear silicone on to the face of one of the diodes and place face down into the pad, (This will leave the contacts visible from the back of the pad). The silicone will start to seep out of the window on the face of the pad. Holding the pad flat at eye level, use a screw driver to remove the excess silicone. This can be achieved by gently touching the silicone (which is seeping out of the pad window) with the end of the screw driver and slowly drawing it away. The silicone will stretch away with the screw driver and eventually break free from the screw driver, it will then slowly return to the pad window. This process should be repeated until the silicone is flush with the pad. (Care must be taken to ensure no silicone sticks to the face of the pad itself). Lifting the pad above eye level the diode can be seen through the window of silicone, at this stage the diode can be adjusted to ensure it is straight in the pad.

This process should then be repeated with the second diode. Once complete the pads can be left to dry over night.

Cable preparation.

Feed the cable through the MCI strain relief and leave approximately 3" of cable to work with. The protective casing of the cable can now be removed. Once removed the cable shield will be visible this should also be removed. This should leave 4 wires visible as well as a separate protective cover which contains a black wire and a white wire plus another shield. The 4 wires should be:

Red
Orange
Yellow
Blue

Any unnecessary wires should be removed and the remaining wires should be cut down to 1.5cm and tinned.

The second protective cover and the shield surrounding the black and white wires should be removed 1.5cm from its end. The black wire and the white wire can then be tinned.

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Clip Assembly.

The wires should now be soldered to the appropriate diodes using the wiring diagrams. Once the diodes (which are already set into the pads) have been wired, up the pads can be glued onto the pad supports.

The spring can now be attached, ensuring the wires to the photo-diode are not trapped underneath it.

On the inside of the LED shell a 'V' shaped groove should be cut into the plastic ridges to leave a channel for the photodiode wires.

The pad supports can then be placed into the shell along with the strain relief (in the appropriate place). Each corner of the support pads should be pushed down until they click into place behind their retainers.

The side tabs and strain relief can now be glued into place and the clip should then be wiped clean.