Technical Specifications

Physical Specification	
Power Supply:	Plug-top power supply providing 6V at 1A, with 4 international wall adapters (UK, EU, US and AUS) and 5m lead to bare ends.
Power Input:	5-7V DC
40cm Sign:	500mA max
Input Connector:	4 way screw terminal block
Control Inputs:	2 x pull-down to 0V
Perspex Dimensions:	Single: 40cm (W) x 8cm (H)
Equipment Type Single Flush Mounting Signs (20cm):	
LD-20F1REC	20cm 'RECORD' Sign
LD-20F1ONA	20cm 'ON AIR' Sign
LD-20F1MCL	20cm 'MIC LIVE' Sign
Single Flush Mounting Signs (40cm):	
LD-40F1REC	40cm 'RECORD' Sign
LD-40F1ONA	40cm 'ON AIR' Sign
LD-40F1MCL	40cm 'MIC LIVE' Sign
LD-40F1PHN	40cm 'PHONE' Sign
LD-40F1TRF	40cm 'TRAFFIC FLAG ON' Sign
LD-40F1ADB	40cm 'AD BREAK' Sign
LD-40F1REH	40cm 'REHEARSAL' Sign
LD-40F1DOR	40cm 'DOOR' Sign
LD-40F1OBT	40cm 'OBIT' Sign
LD-40F1NOE	40cm 'NO ENTRY' Sign
LD-40F1EXIT	40cm 'EXIT' Sign
LD-40F1SIL	40cm 'SILENCE PLEASE' Sign
LD-40F1MET	40cm 'MEETING IN PROGRESS' Sign
LD-40F1INT	40cm 'INTERVIEW IN PROGRESS' Sign
Twin Flush Mounting Signs (2 x 20cm):	
LD-40F2TX-REH	2 x 20cm 'TX' & ' REH' Sign
LD-40F2ONA-MCL	2 x 20cm 'ON AIR' & 'MIC LIVE' Sign
Double Sided End Mounting Signs (40cm):	
LD-40E1REC	40cm 'RECORD' Sign
LD-40E1ONA	40cm 'ON AIR' Sign
LD-40E1MCL	40cm 'MIC LIVE' Sign
Mounting Kits:	
LD-KE1	End Mounting Kit For 40cm Or 20cm Flush Mounting Signs
LD-IT	LED Sign End Mounting Installation Tool

Weights & Boxed Dimensions:

Sign Type	Width (cm)	Depth (cm)	Height (cm)	Gross Weight (kg)	Nett Weight (kg)
LD-20F1 style signs	39	20	11	1.0	0.65
LD-40E1 style signs	60	20	11	1.1	0.75
LD-40E2 style signs	60	20	11	1.1	0.75
LD-40F1 style signs	60	20	11	1.1	0.75
LD-40F2 style signs	60	20	11	1.1	0.75

Note : Weights are approximate and based on a sign supplied with the PSU.

SignalLED LD-E1, LD-E2 & LD-KE1
User Handbook

This handbook is for use with the following stock codes:

LD-40E1MCL	SignalLED double sided end mounting 40cm MIC LIVE sign
LD-40E1ONA	SignalLED double sided end mounting 40cm ON AIR sign
LD-40E1REC	SignalLED double sided end mounting 40cm RECORD sign
LD-40E2	SignalLED twin double sided end mounting 2 x 20cm sign
LD-IT	SignalLED end mount sign installation tool
LD-KE1	SignalLED conversion kit, single flush mount to end mount

Revision 1.0, March 2009

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SIGNALLED STUDIO ILLUMINATED SIGNS

Warranty Information

This product is supplied with a 12 month back to base warranty. For further details, please refer to the Sonifex website: http://www.sonifex.co.uk/company/terms/index.shtml

In order to register the date of purchase so that we can keep you informed of any design improvements or modifications, it is important to complete the warranty registration document that is enclosed and return it to Sonifex Ltd in the UK.

For your own records you should write down the serial number of the SignalLED sign.

Serial Number	TL.....

Introduction

The SignalLED Sign is a new elegant approach to illuminated displays and signage. Using the latest technology and components, the SignalLED sign can be simply configured onsite for colour and mode.

- Choose from white, green, red, blue, yellow, orange, cyan and magenta.
- Choose from a large range of different sign text.
- Four illumination modes: constant, flashing, pulsing and off.
- Two control pull-low inputs.
- Single or twin signs with separate controls.
- DC input power supply provided.
- Flush to the wall or end mounted.
- Double sided end mounting available for use in corridors.
- Simple to install.
- Custom signs can be made to order.

Safety Information

CE This equipment has been designed to meet the safety regulations currently advised in the country of purchase and it conforms to the safety regulations specified by use of the CE Mark. This equipment operates in a horizontal position.

Installation Notes

The SignalLED sign should be installed in an area which is not subject to excessive heat or cold. Also, you should avoid installing it in atmospheric conditions which are dusty, smoky, or dirty, or where there is moisture or vibration. The sign is for internal use only. The unit is not sealed and cannot be used outside or in very damp or humid environments.

Do not use any solvents to clean the sign. Use a soft dry brush or a clean cloth moistened with water or mild detergent.

Avoid using the SignalLED sign close to strong sources of electromagnetic radiation such as video monitors or high power electric cabling.

In all cases the SignalLED sign should be installed and serviced by qualified personnel.

SIGNALLED STUDIO ILLUMINATED SIGNS

2. Setting Which Side (Segment) of Your Sign Illuminates

a) Ensure all the switches are set to the Off position.
b) Set SWT 2 and 3 to modify the relevant input state:

Function	SWT2	SWT3
Program resting state (when no signalling inputs are active)	Off	Off
Signalling Input 1 active state	On	Off
Signalling Input 2 active state	Off	On
Signalling Input 1 and Input 2 active state	On	On

c) Set SWT 6 to 8 as follows:

Side (Segment)	SWT6	SWT7	SWT8
Master (section of the sign nearest the connection block)	Off	Off	Off
Slave (section of the sign furthest from the connection block)	On	Off	Off
Whole Sign	Off	On	Off

d) Set SWT 1 On, and return it to Off - this saves the side or segment.

3. Setting the Illumination Mode of Your Sign

a) Ensure all the switches are set to the Off position.
b) Set SWT 2 and 3 to modify the relevant input state:

Function	SWT2	SWT3
Program resting state (when no signalling inputs are active)	Off	Off
Signalling Input 1 active state	On	Off
Signalling Input 2 active state	Off	On
Signalling Input 1 and Input 2 active state	On	On

c) Set SWT 5 to On to indicate that you are about to set the Mode.
d) Set SWT 6 to 8 as follows:

Illumination Mode	SWT6	SWT7	SWT8
On constantly	Off	Off	Off
Flashing	On	Off	Off
Pulsing	Off	On	Off
Follow mode**	On	On	On

****Note: Follow mode can be assigned when both inputs are active. It will illuminate the two halves of the sign according to the modes set for input 1 and input 2.**

e) Set SWT 1 On, and return it to Off, this saves the illumination mode.

There is a 3 step procedure to configure the sign for each particular input state, e.g. if you want to set the sign to be a certain colour when signalling input 1 is used and then to change colour when signalling input 2 is used, then you'll need to go through this procedure twice.

Important Note: If you are using a twin sign with signalling input 1 to control one side of the sign and signalling input 2 to control the other side of the sign, you need to run through this procedure three times:

1. To define what happens when signalling input 1 is used.

2. To define what happens when signalling input 2 is used.

3. To define what happens when signalling inputs 1 & 2 are both used at the same time. In the SignalLED, this is treated as a different programmable state and so, if you want the signs to react normally, this procedure would use the Follow Mode when configuring the illumination modes.

1. Setting the Colour of Your Sign

a) Ensure all the switches are set to the Off position.
b) Set switches 2 and 3 to select the relevant input state, e.g. if you want to use Signalling input 1 to control the sign, then set the SWT2 to On and SWT3 to Off:

Function	SWT2	SWT3
Program resting state (when no signalling inputs are active)	Off	Off
Signalling Input 1 active state	On	Off
Signalling Input 2 active state	Off	On
Signalling Input 1 and Input 2 active state	On	On

c) Set SWT 4 On to indicate that you are about to set the colour.
d) Set SWT 5 to 8 as follows:

Colour	SWT5	SWT6	SWT7	SWT8
Off	Off	Off	Off	Off
Red	On	Off	Off	Off
Green	Off	On	Off	Off
Blue	On	On	Off	Off
Cyan	Off	Off	On	Off
Magenta	On	Off	On	Off
Yellow	Off	On	On	Off
White	On	On	On	Off
Orange	Off	Off	Off	On
Dual colour mode*	On	On	On	On

***Note: Dual colour mode can be assigned when both inputs are active - it will illuminate the two halves of the sign according to the colours set for input 1 and input 2 modes.**

e) Set SWT 1 On, and return it to Off - this saves the colour.

Sign Dimensions & Mounting Positions

The SignalLED sign consists of an aluminium centre section with plastic end mouldings for each of the signs. The end mounting signs are fastened to a secure surface using a slotted wall mount plate that locates into another hanger plate mounted in the SignalLED assembly. The dimensions for the LED signs below include the mouldings and trim. Please note that the mounting sizes are for reference only and should be checked with your particular sign.

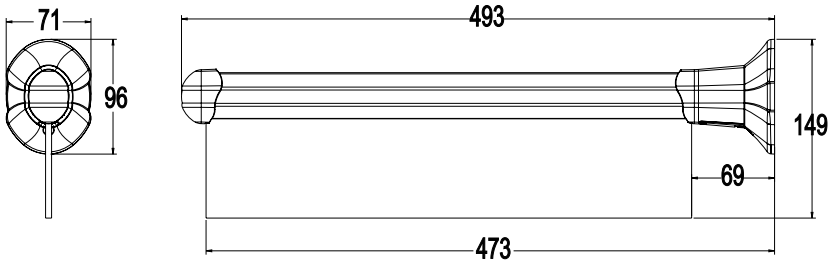


Fig 1: LD-40E1 Style Sign Dimensions (mm)

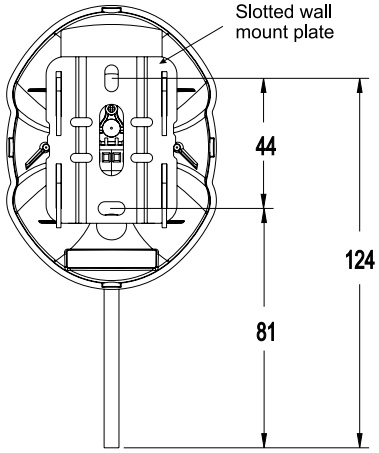


Fig 2: LD-40E1 Style Mounting Hole Positions (mm)

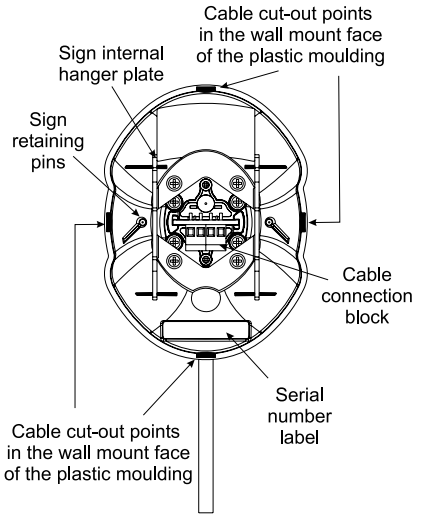


Fig 3: Cable Routing Cut-Outs

Mounting & Connecting The LD-40E1 Style Sign

The LED sign should be mounted on a flat and firm solid surface. To assist the correct mounting the sign is supplied with a mounting kit comprising 2 x wall plugs (for mounting into brick, concrete, breeze block or stone) and 2 x large flange screws.

Note: You'll need the following tools to mount the sign: an electric drill fitted with a 6mm diameter masonry drill bit, a No.1 Pozi-drive screwdriver and a spirit level.

Mounting The Wall Plate

To create an attractive invisible-fixing finish the SignalLED assembly is clipped into a wall mount plate. The wall mount plate must be securely fitted to a smooth, solid surface before attempting to fit the SignalLED assembly.

It is recommended to route the signal and power supply cables before finalising the mounting of the sign. These cables can be routed either through the central aperture in the wall mount plate, or through the cable cutouts in the back of the wall mount moulding. Use a sharp knife to remove the thinner areas of the moulding in the positions shown in Fig 3 if you need to route the cables this way.

- Drill 2 holes, 34mm deep, using a 6mm diameter masonry drill at the pitch shown on the drawing Fig 2.
- Insert the wall plugs flush with the surface.
- Position the wall mount plate vertically and fix to the wall using the large flange screws. Do not substitute other fixings because they may not fully support the sign and may invalidate the warranty.
- Use a spirit level on the wall mount plate to set the sign level and vertical before fully tightening.

The screws can also be used for fixing into wood. For correct fitting drill a small pilot hole into the wood before fitting the screw.

Connecting The Power & Signal Connections

It is recommended that the LD-IT SignalLED end mount sign installation tool is used to assist the termination of the power and signal connections. The tool is designed to hold the sign on the pre-fitted wall mount plate leaving both hands free to make the connections, as shown in Fig. 4.

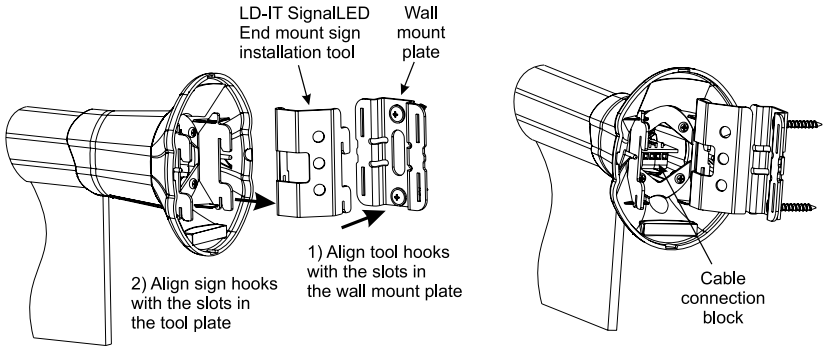


Fig 4: LD-IT End mount sign installation tool

9) This combination is then fixed to the left hand flush mount assembly end moulding with the 4 supplied No.4 x ¾ self tap screws. Do not substitute any other screws in these positions and do not reuse the screws removed from these positions because they will not support the sign correctly.

10) Please refer to the installation notes for the LD-40E style signs to complete the final fitting and colour/configuration set-up.

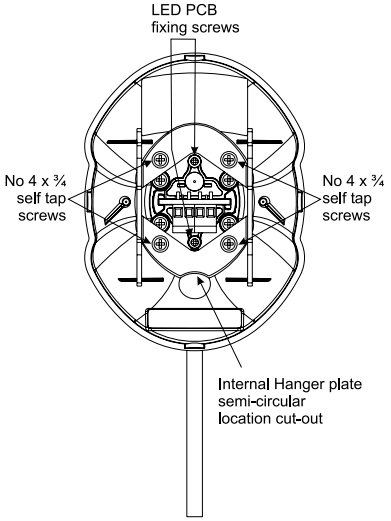


Fig 14: Left Hand Conversion Re-assembly

Setting The Colour & Display Mode(s) of The Sign

Each side of the sign can be separately controlled and can show a different colour by 2 signalling inputs if you require, or the whole sign can be controlled from one signalling input. The sign can also be configured for different states, so that with no signalling input present, the sign can illuminate and then be in a different state when 1, 2 or both signalling inputs are applied. Thus the appearance of the sign can be made extremely versatile if you wish.

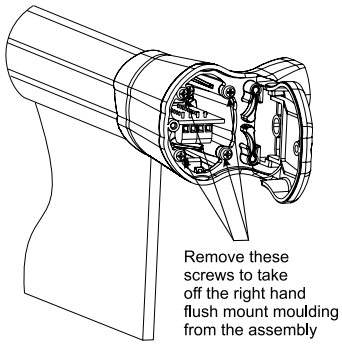


Fig 12: Removing the Right Hand Flush Wall Moulding

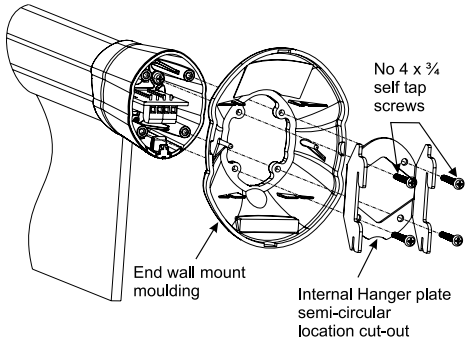


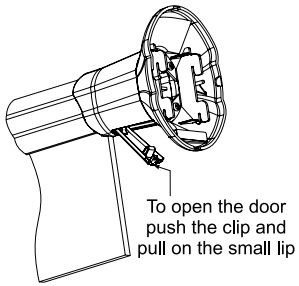
Fig 13: Right Hand Conversion Re-assembly

Left Hand Side Fitting of the Conversion Kit

Note: With this conversion you will be removing the PCB from the sign so full anti-static precautions must be taken to protect the PCB from damage. Failure to do so may result in the sign not working and invalidating the warranty.

1) Open the end cover on the right hand flush mount assembly by removing the self-tapping screw with a No.1 pozi-drive screwdriver.
2) Remove the 2 small screws that hold the PCB into the right hand flush mount assembly and withdraw the PCB. Place the PCB on an antistatic surface.
3) Remove the right hand flush mount assembly by unscrewing the 4 screws that fix the end moulding to the aluminium tube. These are located inside at the bottom of the end moulding.
4) Align the 4 pins of the extrusion end cover with the screw holes in the exposed end of the aluminium tube. Note the orientation of the cut-out with the clear sign board and press fit the end cover fully onto the aluminium tube.
5) Open the end cover on the left hand flush mount assembly by removing the self-tapping screw with a No.1 pozi-drive screwdriver.
6) Remove the flush wall mount moulding from the end moulding by unscrewing the 4 screws visible under the cover.
7) Replace the PCB into the left hand end moulding aligning the PCB edge with the guide tracks in the aluminium extrusion. Refit the 2 small screws that hold the PCB, taking care not to over tighten and strip the plastic.
8) Fit the internal hanger plate into the end wall mount moulding. Align the semi-circular cut-out in the hanger plate with the raised section above the serial number label, which indicates the bottom of the assembly. Also make sure that the hanger plate fits into the slots in the wall mount moulding.

To get access to the cable connection block and the mode switches, which are on the PCB inside the sign, the door on the underside of the end plastic moulding must be opened.



To open the door push the clip towards the sign and pull down on the small lip. See Fig 5. Do not attempt to remove the door from the end moulding. Access to the connection block and the mode switches is possible with the door fully open.

Fig 5: Opening The Access Door

The sign can be connected and powered either with the supplied DC power supply, or with a regulated DC supply rated 5V to 7V DC, 0.5mA minimum. On the supplied DC power supply, the +6V is indicated with a dashed white line on one of the cables. Before fitting the international wall adapters to the power supply the fitted connector cover must be removed.

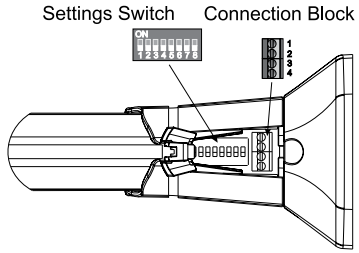


Fig 6: Mode Settings & Connection Block

Mounting The Sign To The Wall Plate

The sign is fitted by locating the four internal hanger plate hooks into the four slots in the wall mount plate.

Once located, hold the sign around the end moulding of the SignalLED assembly (where the door is fitted) and press down into its final position. The sign retaining pins will clip into the indentations on the side of the wall mount plate and this should result in a click as the plastic pins move into their final position. See Figs. 7 & 8.

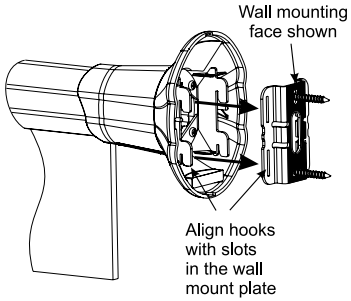


Fig 7: Align The Sign to The Wall Plate

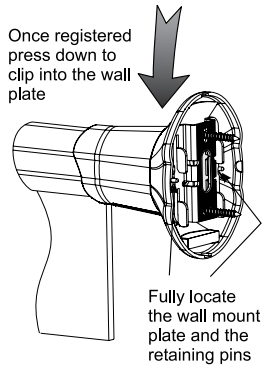


Fig 8: Fitting The Sign to The Wall Plate

Note: a reasonable amount of force is needed to fully connect the LED sign assembly to the wall plate.

The sign can be removed from the wall mount plate by holding around the end moulding, as close to the wall as possible, and pushing up on the sign until the retaining pins unclip. This will take more force to achieve than when fitting the sign.

Note: do not clip and unclip the sign repeatedly as this can damage the retaining pins and cause the sign to be a loose fit on the wall mount plate.

LD-KE1 SignalLED Conversion Kit, Single Flush Mount to End Mount

To convert the LD-20F & LD-40F style flush mount single sided signs into single sided end mount signs you will need to fit the LD-KE1 conversion kit. Please follow these instructions carefully.

Note: You'll need the following tools to use the conversion kit:, a No. 0 and No.1 Pozi-drive screwdriver.

Take care not to damage the clear surface of the sign board. The surface will be marked by swarf or rough surfaces, so please use a clean cloth to hold the sign.

Because the sign is single sided the text will only be correctly viewable from one side. If the text must be viewed from one particular side this must be chosen initially as it will affect the disassembly and subsequent re-assembly of the sign

As standard the SignalLED PCB is fitted into the right hand end of the LD-20F & LD-40F (see Fig 9). If you would like the sign to be viewable with the right hand side of the sign mounted onto the wall please use the 'Right Hand Side' fitting instructions.

If you would like the sign to be viewable with the left hand side of the sign mounted onto the wall, please use the 'Left Hand Side' fitting instructions.

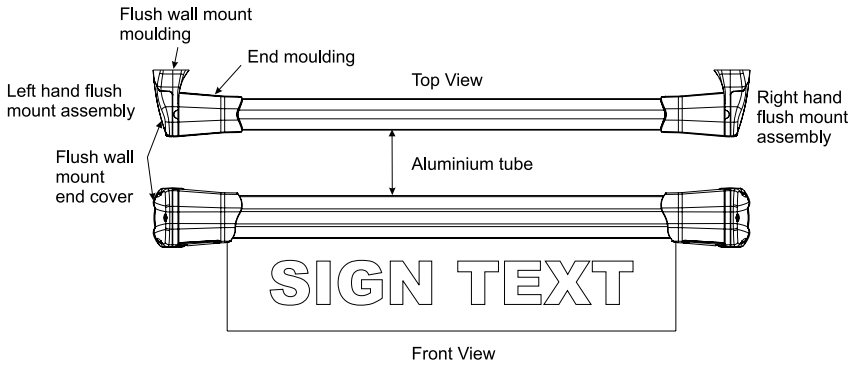


Fig 9: Sign Components to be Converted

Right Hand Side Fitting of the Conversion Kit

1) Open the end cover on the left hand flush mount assembly by removing the self tapping screw with a No.1 pozi-drive screwdriver.
2) Remove the left hand flush mount assembly by unscrewing the 4 screws that fix the end moulding to the aluminium tube. These are located inside at the bottom of the end moulding. See Fig 11.
3) Align the 4 pins of the extrusion end cover with the screw holes in the exposed end of the aluminium tube. Note the orientation of the cut-out with the clear sign board and press fit the end cover fully onto the aluminium tube.
4) Open the end cover on the right hand flush mount assembly by removing the self-tapping screw with a No.1 pozi-drive screwdriver.
5) Remove the flush wall mount moulding from the end moulding by unscrewing the 4 screws visible under the cover See Fig 12.
6) Fit the internal hanger plate into the end wall mount moulding. Align the semi-circular cut-out in the hanger plate with the raised section above the serial number label, which indicates the bottom of the assembly. Also make sure that the hanger plate fits into the slots in the wall mount moulding.
7) This combination is then fixed to the right hand flush mount assembly end moulding with the 4 supplied No.4 x ¾ self tap screws. See Fig 13. Do not substitute any other screws in these positions and do not reuse the screws removed from these positions, because they will not support the sign correctly.
8) Please refer to the installation notes for the LD-40E style signs to complete the final fitting and colour/configuration set-up.

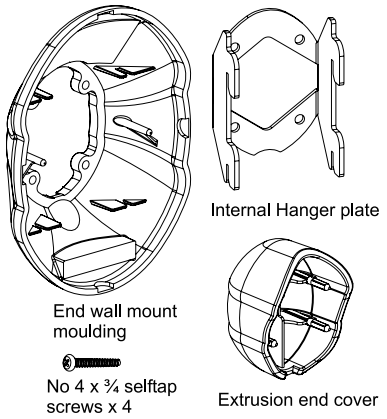


Fig 10: Kit Components Used for the Conversion

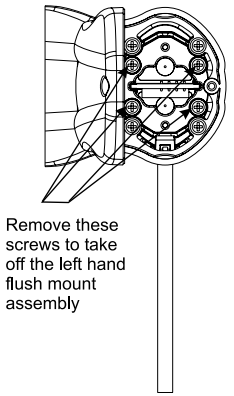


Fig 11: Removing the Left Hand Assembly