

Installation Instructions

101124-100



FIRST LIGHT
SAFETY PRODUCTS

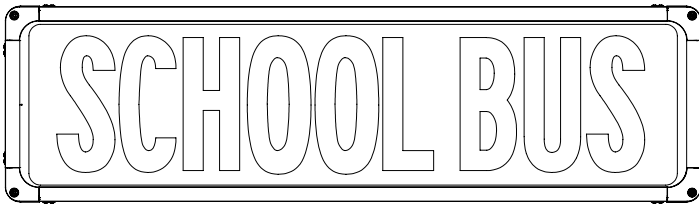
ILLUMINATED SCHOOL BUS SIGN THOMAS BUILT BUSES HDX/EFX SOLID CAVITY



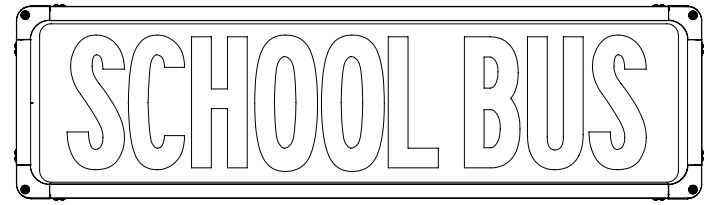
THOMAS BUILT BUSES HDX/EFX SOLID CAVITY - FRONT



THOMAS BUILT BUSES HDX/EFX SOLID CAVITY - REAR



Fully Assembled Sign Unit - Front (Curved)
A1 x 1



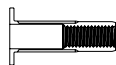
Fully Assembled Sign Unit - Rear (Flat)
A2 x 1



Electrical Panel to Bulkhead Harness
D x 1



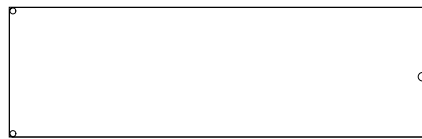
2FT Sign Main Power
Wire Harness
E x 2



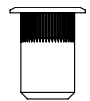
#10-32
Plus Nut
F x 5



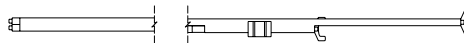
Front Leg Wire
Harness
G x 1



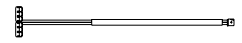
Backsheet Template - Rear
B x 1



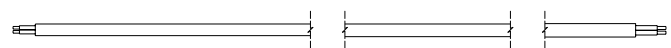
#10-32
Rivet Nut
C x 5



Electrical Panel to Bulkhead Harness
D x 1



2FT Sign Main Power
Wire Harness
E x 2



Back Leg 39Ft Wire Harness
H x 1

BILL OF MATERIALS

THOMAS BUILT BUSES SOLID CAVITY - SET - FRONT AND REAR	QTY	REF	SIDE
Fully Assembled Sign Unit - Front (Curved)	1	A1	Front
Fully Assembled Sign Unit - Rear (Flat)	1	A2	Rear
Backsheet Template	1	B	Rear
#10-32 Rivet Nut*	5	C	Rear
Electrical Panel to Bulkhead Harness	1	D	Front
2Ft Sign Main Power Wire Harness	2	E	F/R
#10-32 Plus Nut*	5	F	Front
Front Leg Wire Harness	1	G	Front
Back Leg 39Ft Wire Harness	1	H	Rear

* One extra Plus Nut and Rivet Nut provided as spare.

**BOM will differ if purchasing only front or rear sign.

REQUIRED TOOLS

- Marker
- 1/8" Allen keys
- Drill
- Drill bits - size R, 25/64" and 3/4"
- Screwdriver set
- Rivet nut installation tool* * Available for Purchase.
Part Number: 100521
- 7/8" Wrench
- 11/16" Wrench or socket

DISCLAIMER

IMPORTANT: PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING, FAILURE TO DO SO MAY CAUSE PERSONAL INJURY OR DAMAGE TO PRODUCT AND/OR PROPERTY.

This manual has been created for basic informational purposes only. The activities described herein can be dangerous unless proper safety precautions are taken. If you are not comfortable or are inexperienced with the processes and tools described in this manual, you should not attempt to install the product. These instructions do not purport to cover all details or variations in the equipment and do not claim to provide for every possible contingency met in connection with the installation. Installation of this product should always be performed by a qualified technician and in accordance with safe work procedures. First Light Safety Products (a division of Smartrend Supply Ltd., hereinafter "First Light Safety Products") shall not be held responsible for any errors or omissions respecting installation as they are the responsibility of the installing technician and/or the customer. First Light Safety Products does not make any representation, warranty, guarantee or condition respecting third-party installation or any other service provided by a third-party, and any such representations perceived by the reader/customer are hereby fully disclaimed.

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Visit our website for video instructions and additional supporting documentation:



If further help is needed, please contact us:

Technical Support

Monday - Friday, 8 a.m. to 5 p.m. CST

E: techsupport@firstlightsafety.com

P: 866.216.2605

STEP 1 - USE BACKSHEET TEMPLATE (B) TO MARK HOLES

- i. Locate the Backsheet Template (B) to the cap where the Sign Unit (A1) will go.
- ii. Ensure the Backsheet Template (B) is level and secure in place using masking tape.
- iii. Mark the location of the harness and mounting holes.
- iv. Remove Backsheet Template (B) once holes are marked.



STEP 2 - DRILL HOLES AND INSTALL PLUS NUTS (F) AND RIVET NUTS (C)

- i. Before drilling any holes, ensure the electrical power to the vehicle is disconnected.
- ii. *Front only* - drill the mounting holes for the Plus Nuts (F) to 11/32" (can use drill size R). Drill the harness opening hole to 3/4". If the bus contains an overhead storage compartment, ensure the flanges of the Plus Nut (F) are gripping only the fiberglass of the bus shell and not the sheet metal of the compartment. Ensure any holes into the storage compartment are deburred.
- iii. *Rear only* - drill the mounting holes for the Rivet Nuts (C) to 25/64". Drill the harness opening hole to 3/4".
- iv. Using the Rivet nut installation tool, install the supplied Plus Nuts (F) for the front sign and the Rivet Nuts (C) for the rear sign.

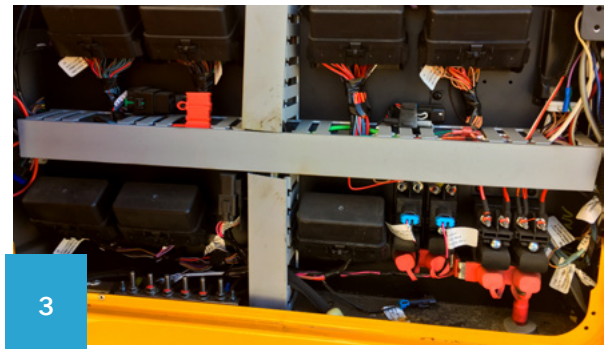
NOTE: For Rivet Nut installation instructions refer to our resources page:
www.firstlightsafety.com/resources



STEP 3 - POWER HARNESS INSTALL

- i. Connect the spade terminal on the black wire from the Electrical Panel to Bulkhead Harness (D) to the ground location in the fuse panel.
- ii. Run the wires from the Electrical Panel to Bulkhead Harness (D) up the column behind the fuse panel to the bulkhead above the driver.
- iii. Connect the spade terminal on the white wire from the Electrical Panel to Bulkhead Harness (D) to the switched accessory power (+12V) location (ensure power has remained off after drilling holes).

NOTE: The sign should turn on and off with ignition. If it does not, confirm that the white wire is connected to switched power and not to a permanent 12V supply.



STEP 4 - HARNESS INSTALLATION

A - FRONT SIGN HARNESS INSTALL

NOTE: Keep harnesses away from sharp edges, secure harnesses with tie wraps as needed, and maintain white (power) and black (ground) wire color code.

- i. Above the B pillar, connect the Front Leg Wire Harness (G) to the Fuse Panel to Bulkhead Harness (D).
- ii. Run the Front Leg Wire Harness (G) behind the drivers overhead compartment into the front overhead compartment.
- iii. Inside the front overhead compartment, connect the 2Ft Sign Main Power Wire Harness (E) to the Front Leg Wire Harness (G). Route the end with the connector through the hole drilled previously for the harness so it is accessible outside the bus.

B - REAR SIGN HARNESS INSTALL

NOTE: Keep harnesses away from sharp edges, secure harnesses with tie wraps as needed, and maintain white (power) and black (ground) wire color code.

- i. Above the B pillar, connect the Back Leg 39Ft Wire Harness (H) to the Front Leg Wire Harness (G).
- ii. Run the Back Leg 39Ft Wire Harness (H) inside the bulkhead panels on the drivers side, all the way to the rear and into the rear overhead compartment.
- iii. Inside the rear overhead compartment, connect the 2Ft Sign Main Power Wire Harness (E) to the Back Leg 39Ft Wire Harness (H). Route the end with the connector through the hole drilled previously for the harness so it is accessible outside the bus.

STEP 5 - CONNECT HARNESS TO SIGN UNIT (A1/A2)

- i. Sign Unit (A1/A2), connect the signs to the previously prepared harnesses and ensure the connector lock is engaged. Ensure the sign remains fully supported and does not hang from the harness.

STEP 6 - CABLE WEATHER SEAL

- i. *Front only* - ensure the foam seal seats fully against the cap to form a weather resistant seal. On the rear, ensure the grommet is properly seated in the harness hole and the foam sits against the grommet.

STEP 7 - MOUNT SIGN UNIT (A1/A2)

- i. Mount the Sign Unit (A1/A2) using the frame's integrated screws.

NOTE: Recommended torque is 25 - 40 in-lbs.

STEP 8 - TURN ON SIGN UNIT (A1/A2)

- i. Ensure no wiring has been damaged and once safe, restore electrical power to the vehicle. Turn the vehicle on first then turn the switch on, and ensure the Sign Unit (A1/A2) illuminates.

