

# Installation Instructions

100541-000



**FIRST LIGHT**  
SAFETY PRODUCTS

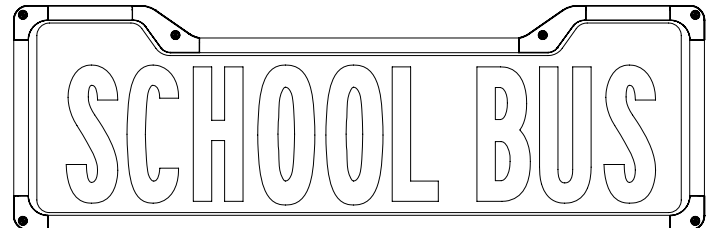
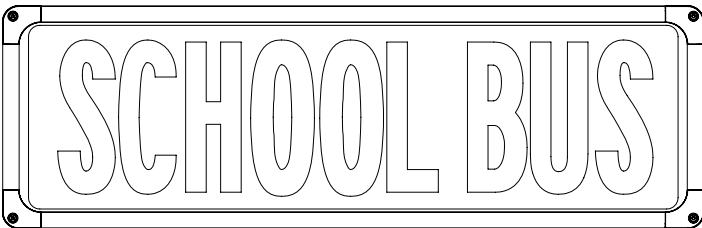
# ILLUMINATED SCHOOL BUS SIGN

## BLUE BIRD SOLID CAVITY



### BLUE BIRD SOLID CAVITY - FRONT

### BLUE BIRD SOLID CAVITY - REAR



Fully Assembled Sign Unit - Front  
A1 x 1

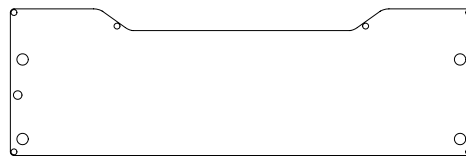
Fully Assembled Sign Unit - Rear  
A2 x 1



Backsheet Template - Front  
B1 x 1



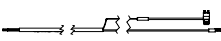
#10-32 Rivet Nut  
C x 5



Backsheet Template - Rear  
B2 x 1



#10-32 Rivet Nut  
C x 7



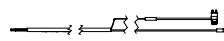
ATO/ATC Fuse Panel  
Wire Harness  
D x 1



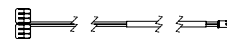
2Ft Sign Main Power  
Wire Harness  
E x 1



Front Leg Wire Harness  
F x 1



ATO/ATC Fuse Panel  
Wire Harness  
D x 1



2Ft Sign Main Power  
Wire Harness  
E x 1



Back Leg 35Ft Wire  
Harness w/ Connectors  
G x 1

### BLUE BIRD SOLID CAVITY - SET - FRONT AND REAR



Back Leg 35Ft Wire Harness (Replacement for G)  
H x 1

# Blue Bird Solid Cavity

## BILL OF MATERIALS

BLUE BIRD SOLID CAVITY - FRONT	QTY	REF
Fully Assembled Sign Unit - Front	1	A1
Backsheet Template - Front	1	B1
#10-32 Rivet Nut*	5	C
ATO/ATC Fuse Panel Wire Harness	1	D
2Ft Sign Main Power Wire Harness	1	E
Front Leg Wire Harness	1	F

BLUE BIRD SOLID CAVITY - REAR	QTY	REF
Fully Assembled Sign Unit - Rear	1	A2
Backsheet Template - Rear	1	B2
#10-32 Rivet Nut*	7	C
ATO/ATC Fuse Panel Wire Harness	1	D
2Ft Sign Main Power Wire Harness	1	E
Back Leg 35Ft Wire Harness w/ Connectors	1	G

BLUE BIRD SOLID CAVITY - SET - FRONT AND REAR	QTY	REF
Fully Assembled Sign Unit - Front	1	A1
Fully Assembled Sign Unit - Rear	1	A2
Backsheet Template - Front	1	B1
Backsheet Template - Rear	1	B2
#10-32 Rivet Nut*	11	C
ATO/ATC Fuse Panel Wire Harness	1	D
2Ft Sign Main Power Wire Harness	2	E
Front Leg Wire Harness	1	F
Back Leg 35Ft Wire Harness	1	H

\* One extra Rivet Nut provided as spare.

## REQUIRED TOOLS

- Marker
- 5/32" and 1/8" Allen keys
- 25/64" and 3/4" Drill
- Rivet nut installation tool\*
- 7/8" Wrench
- 11/16" Wrench or socket
- Screwdriver set

\* Available for Purchase.  
Part Number: 100521

## 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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[www.firstlightsafety.com/resources](http://www.firstlightsafety.com/resources)



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NORTH AMERICA

If further help is needed, please contact us:

### Technical Support

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# Blue Bird Solid Cavity

## STEP 1 - USE BACKSHEET TEMPLATE (B1/B2) TO MARK HOLES

- Locate the Backsheet Template (B1/B2) to the cap where the Sign Unit (A1/A2) will go.
- Ensure the Backsheet Template (B1/B2) is level and secure in place using masking tape.
- Mark the location of the harness and mounting holes.
- Remove Backsheet Template (B1/B2) once holes are marked.



1

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

- Drill the mounting holes for the Rivet Nuts (C) to 25/64".
- Using the Rivet nut installation tool, install the supplied Rivet Nuts (C).
- Drill the harness opening hole to 3/4".

**NOTE:** For Rivet nut installation instructions refer to our resources page: [www.firstlightsafety.com/resources](http://www.firstlightsafety.com/resources)



2

## STEP 3 - INSTALL FUSE TAP INTO FUSE PANEL

- Disconnect electrical power to the bus before continuing. The fuse tap from the ATO/ATC Fuse Panel Wire Harness (D) should be installed into a circuit that is powered by the ignition switch (destination sign circuit recommended).

**NOTE:** If space allows, the fuse tap should be installed with the fuse pointing up (see figure 3.ii).

The Sign Unit (A1/A2) can be wired in two ways:

- Directly to a 12V circuit powered by the ignition switch.  
OR
- Through a manual switch to a 12V circuit powered by the ignition switch.

Please check with your local state/province for requirements.



3.i



3.ii

## STEP 4 - CONNECT GROUND LUG TO GROUND

- Secure the ground fork from the ATO/ATC Fuse Panel Wire Harness (D) to a ground stud. Ensure a quality ground connection is made.
- Run the remaining end of the ATO/ATC Fuse Panel Wire Harness (D) up the b-post and into the interior of the vehicle.



4

# Blue Bird Solid Cavity

## STEP 5 - HARNESS INSTALLATION

### A. FRONT SIGN HARNESS INSTALLATION (D, E, F)

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

- Inside the drivers overhead compartment/closing panel, connect the Front Leg Wire Harness (F) to the ATO/ATC Fuse Panel Wire Harness (D).
- Run the Front Leg Wire Harness (F) through the drivers overhead compartment/closing panel into the front overhead compartment.
- Inside the front overhead compartment, connect the 2Ft Sign Main Power Wire Harness (E) to the Front Leg Wire Harness (F).

### B. REAR SIGN HARNESS INSTALLATION (G/H, D/F, E)

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

- Rear only* - Inside the drivers overhead compartment/closing panel, connect the Back Leg 35Ft Wire Harness w/ Connectors (G) to the ATO/ATC Fuse Panel Wire Harness (D).
- Front and rear set* - Inside the drivers overhead compartment/closing panel, connect the Back Leg 35Ft Wire Harness (H) to the Front Leg Wire Harness (F).
- Run the Back Leg 35Ft Wire Harness (G/H) behind the closing panels on the drivers side, all the way to the rear and into the rear closing compartment.
- Inside the rear closing compartment, connect the 2Ft Sign Main Power Wire Harness to the Back Leg 35Ft Wire Harness (G/H).

## STEP 6 - CONNECT HARNESS TO SIGN UNIT (A1/A2)

- Run the 2Ft Sign Main Power Wire Harness (E) through the previously drilled harness opening hole and connect it to the Sign Unit (A1/A2).

## STEP 7 - SEAT GROMMET

- Ensure grommet seats fully against the cap to form a weather resistant seal.

## STEP 8 - MOUNT SIGN UNIT (A1/A2)

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

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

## STEP 9 - TURN ON SIGN UNIT (A1/A2)

- Ensure no wiring has been damaged and once safe, restore electrical power to the vehicle.
- If wired directly to a 12V circuit powered by the ignition switch: turn the vehicle on and ensure the Sign Unit (A1/A2) illuminates.
  - If wired through a manual switch to a 12V circuit powered by the ignition switch: turn the vehicle on, turn the switch on, and ensure the Sign Unit (A1/A2) illuminates.

