

# **Bus-Scan 300 HW Installation Guide Operation Guide**



**ROBOTICS** \_\_\_\_\_  
**TECHNOLOGIES, INC**

Joliet, IL Made in U.S.A

[www.roboticstech.com](http://www.roboticstech.com)

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## ***Return Policy***

For Warranty Service, call Robotics Technologies, Inc. Customer Service to obtain an RMA (Return Materials Authorization), and then return the product postage prepaid to Robotics Technologies, Inc. The RMA number should be written clearly on the outside of the box. Please enclose a brief explanation of the problem, so that we can more efficiently diagnose your item and ensure timely service.

## ***Contact Information***

**For support, please contact Robotics Technologies, Inc. or a Robotics Technologies Authorized Dealer.**

**Robotics Technologies, Inc.**

**20655 Burl Court**

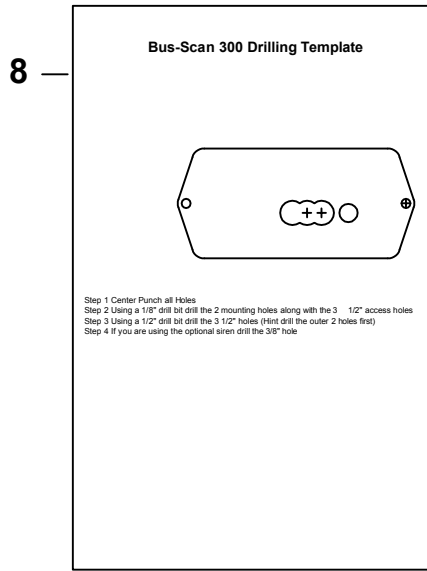
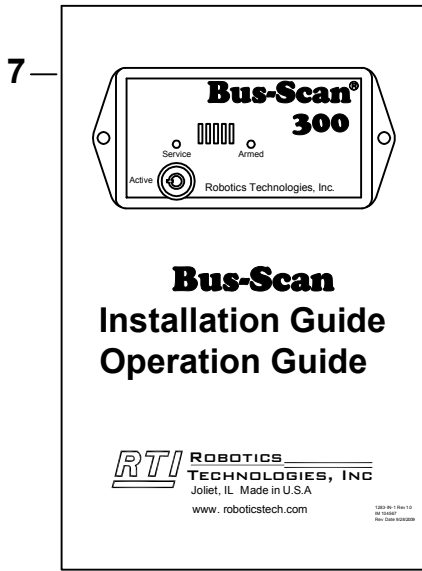
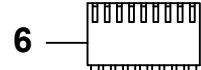
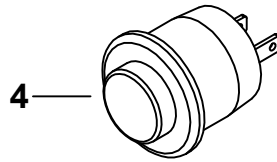
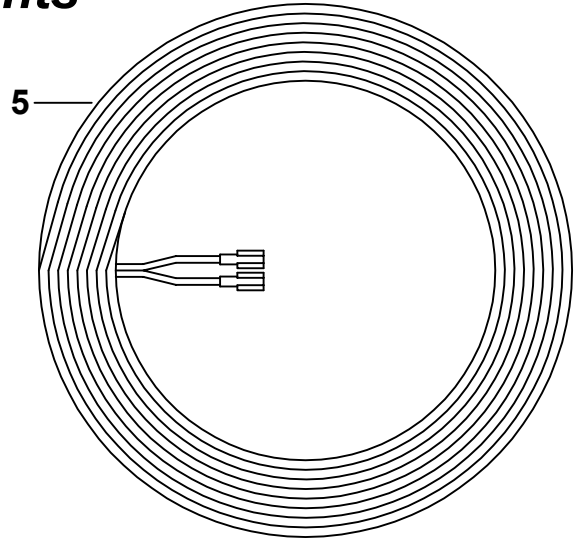
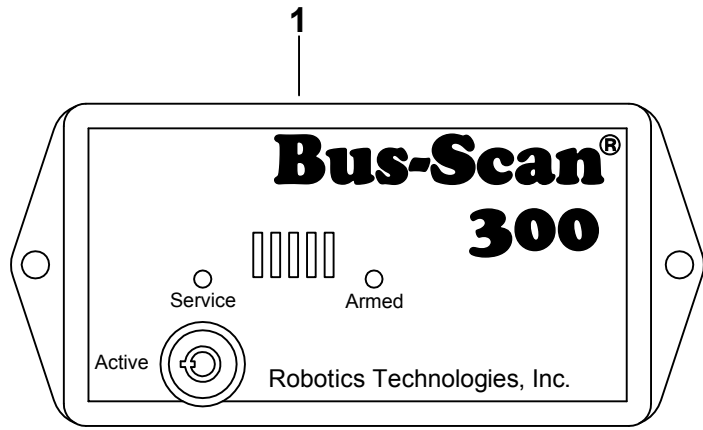
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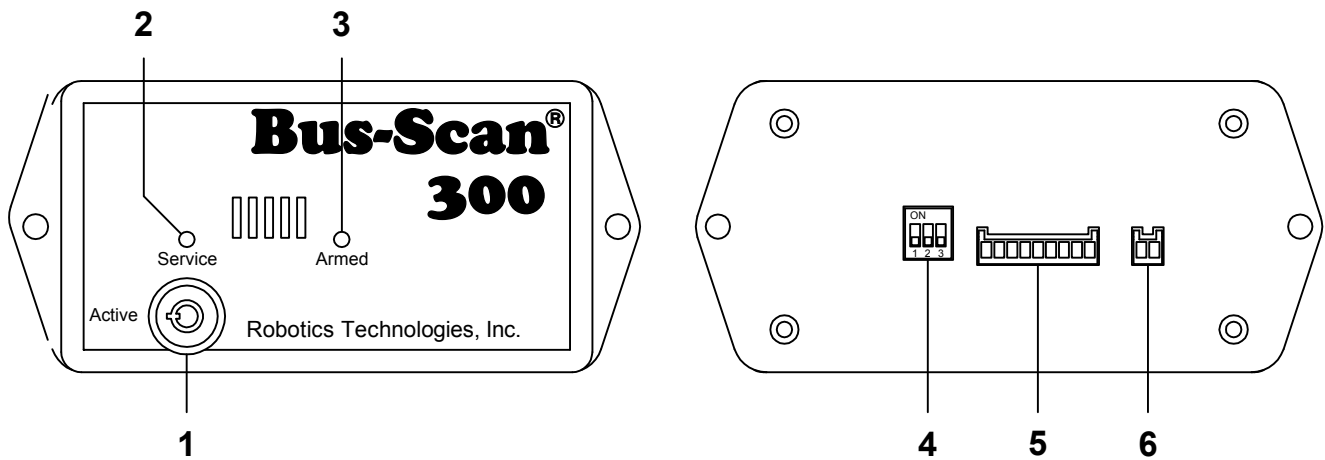
# Supplied Components



The following components are included with the **Bus-Scan 300**

- 1 **Bus-Scan** 300 Control Unit
- 2 # 8 x 3/8" sheet metal screws (2)
- 3 Service override key
- 4 Deactivation Pushbutton
- 5 Deactivation Pushbutton Harness
- 6 Wiring harness
- 7 **Bus-Scan** 300 installation and operations guide
- 8 Drilling template

# Bus-Scan 300 Features and Functions



## **1 Service Switch**

Deactivates the **Bus-Scan** 300. This feature is used when the vehicle is being serviced. The key removes only in the active position

## **2 Service indicator light**

Blinks when the **Bus-Scan** 300 is in the service mode

## **3 Armed indicator light**

Lights when the system is armed

## **4 Option Select Switches**

Selects different time-out lengths and controls the operation the RF receiver

## **5 Main Harness Receptacle**

## **6 Optional Siren Receptacle**

# **Bus-Scan 300 System Operation**

The **Bus-Scan** 300 system operates in the following sequence:

- 1) The bus is started and the route begins.
- 2) After the route is completed and the bus is turned off, the **Bus-Scan** 300 emits a reminder tone.
- 3) The driver proceeds to the rear of the bus, checking for sleeping children.
- 4) The driver pushes the deactivation push-button.
- 5) The **Bus-Scan** 300 is deactivated.
- 6) The driver exits the vehicle.

If the driver exits the vehicle without deactivating the **Bus-Scan** 300, the horn will sound after the preset time-out. (Alarm Condition).

## **To Cancel the Alarm**

- 1) The driver must cycle the Ignition off to on to off.
- 2) The driver must follow the proper deactivating sequence (steps 3-6 above)

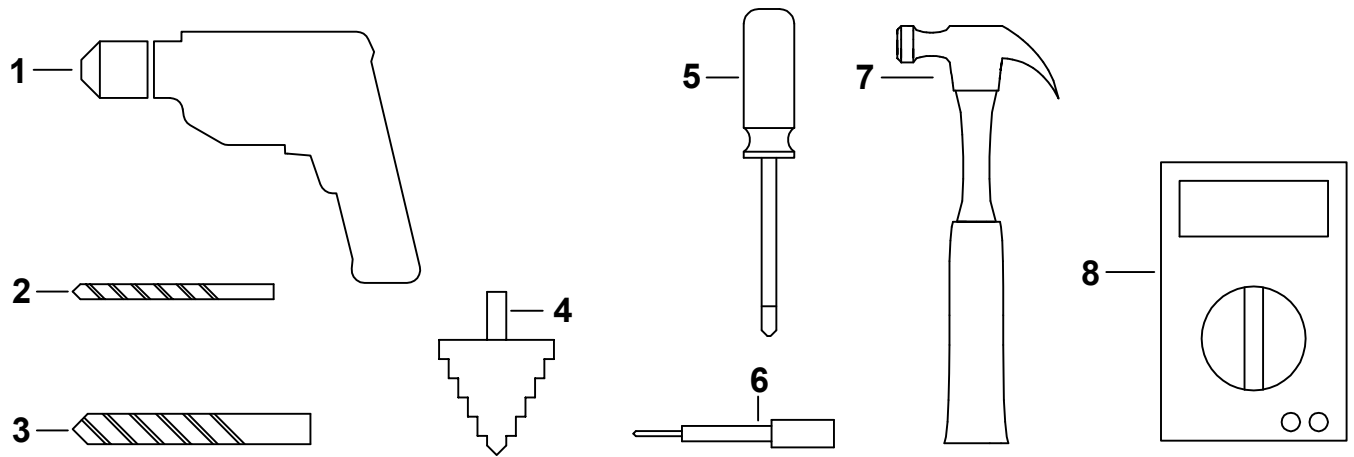
The **Bus-Scan** 300 is equipped with a tamper feature that will alarm if the deactivation push-button is tampered with.

A tamper condition exists if the deactivation push-button is activated during the cycling of the ignition from on to off.

## **To Cancel the Tamper Alarm**

- 1) The Tamper condition must be removed
- 2) The driver must cycle the Ignition off to on to off
- 3) The driver must follow the proper deactivating sequence (steps 3-6 above)

## Required Tools



The following tools are required to install the **Bus-Scan 300**

- |                  |                             |
|------------------|-----------------------------|
| 1 Electric drill | 5 Phillips head screwdriver |
| 2 1/8" drill bit | 6 Center punch              |
| 3 1/2" drill bit | 7 Hammer                    |
| 4 Step Drill     | 8 Multi meter               |

## Installation Instructions

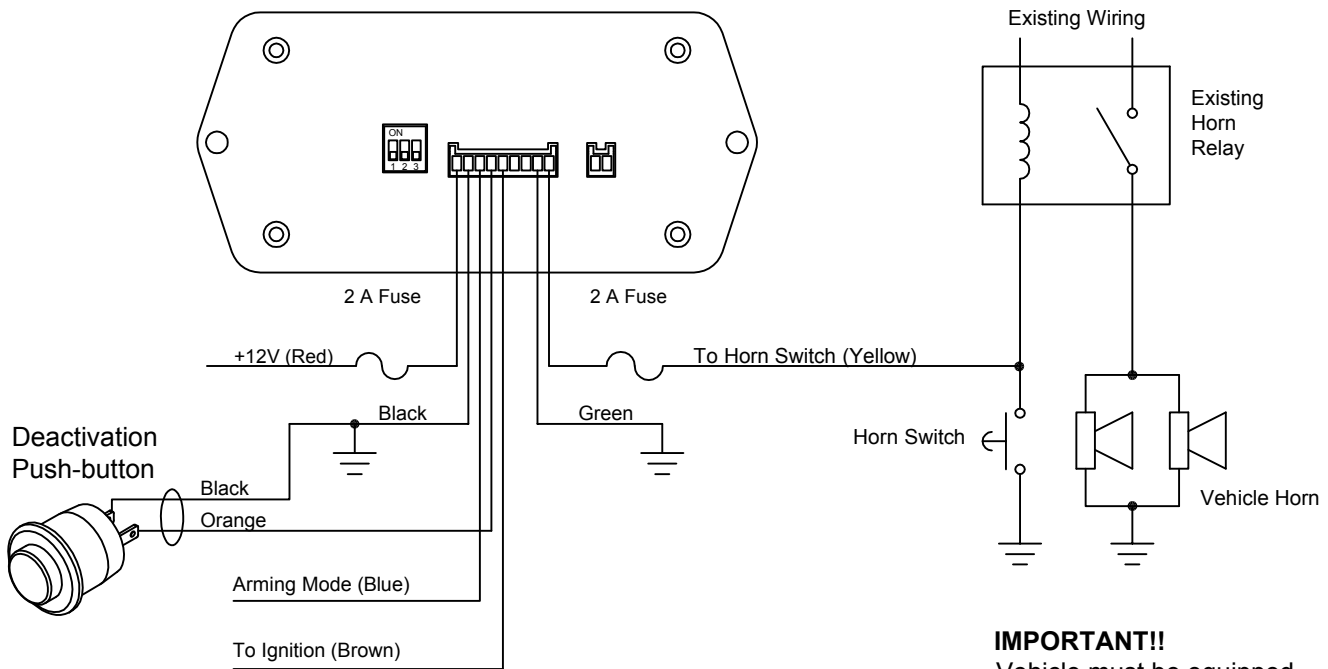
### Mounting the **Bus-Scan 300**

- 1 Locate a suitable location near the driver's compartment
- 2 Using the supplied Drilling Template, center punch and drill according to the template
- 3 Wire the **Bus-Scan 300** according to the wiring instructions
- 4 Attach the **Bus-Scan 300** to the bus using 2 #8 x 3/8" sheet metal screws.

### Mount the Deactivation Pushbutton

- 1 Locate an area in the rear of the vehicle with a minimum depth clearance of 1-1/2" and a clear path to run the cable.
- 2 Drill an 11/16" hole at the selected location
- 3 Run the cable from the switch to the **Bus-Scan** Unit
- 4 Connect the Orange side of the cable to the Orange wire on the **Bus-Scan**.
- 5 Connect the Black side of the cable to Ground
- 6 Connect the connectors to the pushbutton
- 7 Push the pushbutton into the 11/16" hole, the pushbutton will snap in place.

# Bus-Scan 300 Wiring Instructions



**IMPORTANT!!**  
 Vehicle must be equipped with a **Horn Relay**. If your Vehicle does not have a Horn Relay, a Horn Relay Kit Part No. 102893 is available.

- 1) Connect the Red wire to a constant +12v.
- 2) Connect the Black wire to chassis ground.
- 3) Connect the Brown wire to the ignition circuit.
- 4) Connect the Green wire to chassis ground.
- 5) Connect the Yellow wire to the horn switch (button).
- 6) Connect the Orange wire of the Deactivation Push-button Harness to the Orange wire of the Wiring Harness
- 7) Connect the Black wire of the Deactivation Push-button harness to Ground
- 8) Connect the Blue wire (Arming Mode)
  - a) Connect the Blue wire to +12v for **Bus-Scan** Classic operation (Armed whenever the Ignition is on)
  - b) Connect the Blue wire to the stop arm activation switch for Stop Arm Arming. The system will be Armed after the stop arm has been activated.

# ***System Testing***

## ***Normal Test***

- 1) Turn the Ignition on and wait for the Armed Led to illuminate
- 2) Turn the ignition off and the reminder tone will sound
- 3) Deactivate using Remote Transmitter the reminder tone and Armed LED will shut off.

## ***Alarm Test***

- 1) Repeat Steps 1 and 2 above
- 2) Wait for 60 seconds then the horn will sound
- 3) Recycle Ignition and deactivate using Remote Transmitter

# ***Troubleshooting***

## ***Reminder tone not sounding after ignition on/off cycle***

- 1 Check Red wire for a constant +12v
- 2 Check Brown wire
  - a) +12v when Ignition is on
  - b) 0v when ignition is off
- 3 An arming mode other than Classic has been selected:
  - a) The Blue wire is disconnected
  - b) The Blue wire is connected to the stop arm control (Stop Arm Arming)

## ***Horn Sounds when ignition is turned off***

- 1 Tamper Condition.
  - a) Deactivation pushbutton is pushed during ignition cycling.

## ***Alarm will not sound horn***

- 1 Horn Switch Wire (Yellow) improperly wired.
- 2 Horn Switch Wire (Yellow) Fuse open.
- 3 Horn Ground Wire (Green) improperly wired.

## ***Horn Switch Fuse Blows***

- 1 Vehicle does not have a Horn Relay.
  - a) Install Horn Relay Kit Part No. 102893.
- 2 Horn Switch Wire (Yellow) improperly wired.



# Troubleshooting Continued

## **Reminder Tone Sounds 5 times whenever the vehicle is turned on**

This is normal when the **Bus-Scan** 300 is in service mode. The beeps remind the driver that the **Bus-Scan** 300 is in service mode.

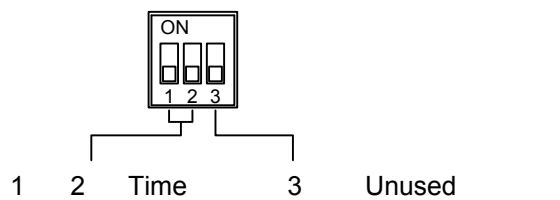
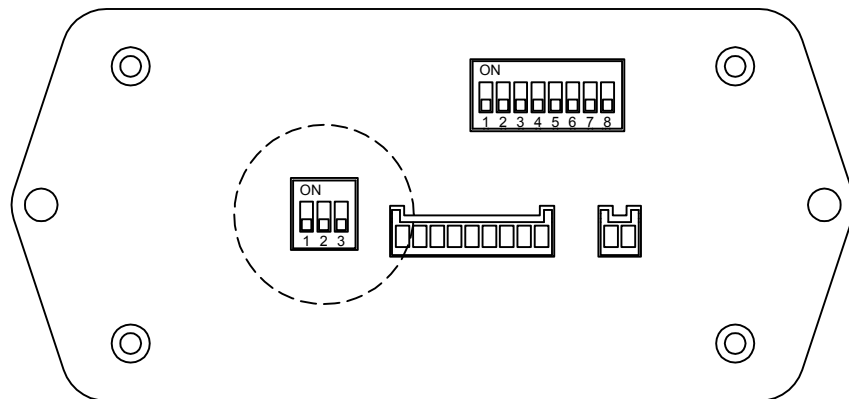
## **I want a longer or shorter time-out**

The **Bus-Scan** 300 can be set for a 1,2,3,or 5 minute delay.

- 1 To change the delay
  - a) Locate the Option Dip Switch (3 Position Switch) on the back of the Bus-Scan 300
  - b) Slide switches #1 and #2 on the to the desired value.  
Reference the diagram and chart below

## **Bus-Scan 300 Option Setting**

To change the time-out delay and receiver option, change the dip switch settings according to the chart



1 2 Time 3 Unused

Off	Off	1 Minute
On	Off	2 Minutes
Off	On	3 Minutes
On	On	5 Minutes

## ***Specifications***

### **Bus-Scan 300 Control Unit**

Dimensions: Length 4.25" Width 2.25" Height 1.5"  
Enclosure Material: Flame Retardant ABS Plastic UL 94-5VA  
Electrical System: 12v Negative Ground Fused @ 2A  
Horn Activation: Form A Contact Fused @ 2 Amp

## ***Replacement Parts and Accessories***

<b><i>Part No.</i></b>	<b><i>Description</i></b>
104629	<b>Bus-Scan</b> 300 HW Control Unit
103543	<b>Bus-Scan</b> Service Switch Lock
102799	<b>Bus-Scan</b> Service Switch Key
104631	<b>Bus-Scan</b> 300 HW Wiring Harness
103547	<b>Bus-Scan</b> 300 HW Deactivation Switch
105568	<b>Bus-Scan</b> 300 HW Deactivation Switch Harness
104630	<b>Bus-Scan</b> 300 HW Parts Kit
104583	<b>Bus-Scan</b> 300 HW Installation and Operations Guide
102893	<b>Bus-Scan</b> Horn Relay Kit
104533	<b>Bus-Scan</b> Siren

## **Warranty**

Robotics Technologies, Inc. (RTI) warrants its products to be free from defects in materials and workmanship for a period of one (1) year from the date of purchase. Its obligation under this warranty is limited to repairing or replacing at its own sole option any such defective products. To obtain service under this warranty you must obtain a Return Material Authorization (RMA) number from RTI. Products must be returned to RTI with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment that has been damaged by accident, negligence or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser.

The Bus-Scan® Seat Check Reminder is not a security or detection device. It is used as a reminder for the driver to physically check seats.

It is the responsibility of the customer to ensure secure mounting and the continued maintenance thereof. Customer will indemnify RTI and hold it harmless from all actions or litigation arising from misuse of or improper mounting of the Bus-Scan®.

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EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL RTI BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, RTI is not liable for any costs such as loss of profits or revenue, loss of service, loss of equipment, costs of substitutes, and claims by third parties or otherwise. This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

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