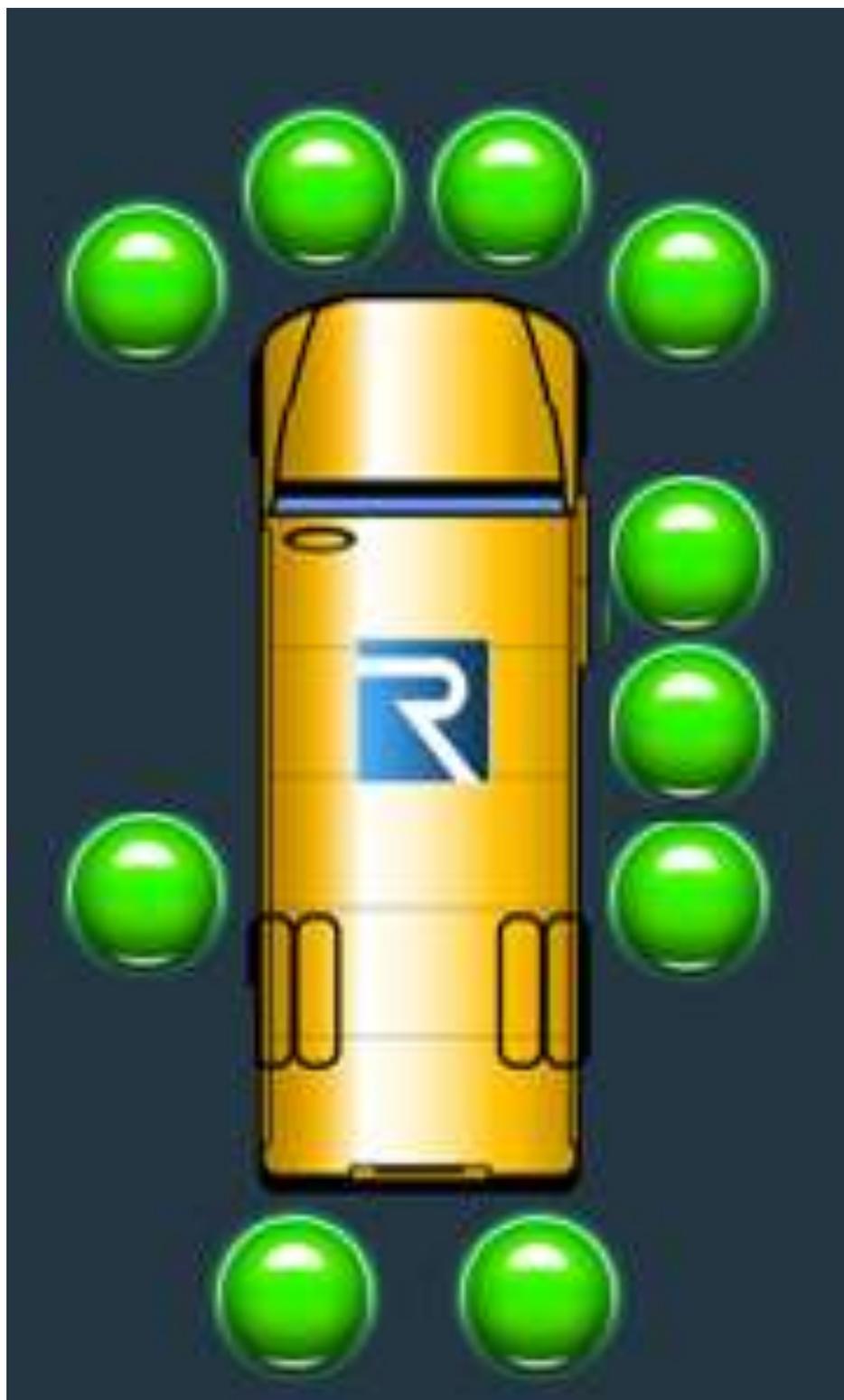


Rostra SDS Display Programming Manual



The Rostra SDS is a motion activated detection system that utilizes the principles of reflected radio waves to detect moving objects or stationary objects when the vehicle is moving. When an object is detected in any of the configured danger zones, an alarm that will sound to alert the driver of the bus. Corresponding markers on an LCD panel display indicate the location for the target by zone.

The Rostra SDS is designed as an aid to alert the driver of the vehicle to the presence of objects passing in front of up to 10 unique SDS sensors. The SDS can function as a ROSS™ system when connected to the reverse gear trigger. The ROSS™ system is a configurable for sensitivity, sensor position and zone intensity based on vehicle size and intended use/customer requirement.

Indicators



The SDS display unit and controllers are typically powered with ignition power. At power up the SDS runs a diagnostics check that takes just over 3 seconds. The configurable SDS zones are activated by a constant + 12Volt activation signal (IE Bus Stop Lights, Door Open/Close Switch ...etc.).



Once the SDS zones are active the green indicators on the SDS Display Unit will be ON. The areas of coverage will vary based upon installation of the sensor.



The audio alarm will beep for one second EVERY instance of object movement within any of the SDS zones and the corresponding green indicator will change to red. The red indicator will flash for a minimum of five seconds after the intrusion has cleared, or until activation signal is removed.



In the event of lost sensor communication 2 amber icons will begin to flash and the display will sound an audible alarm. This alarm will continue until the fault is cleared. This typically occurs when a sensor is damaged or harness is severed or shorted.



ROSS indicators are Green for no object detected, Amber for object intrusion and Red for Stop. Varying Beep Sound intensity will occur based on object position. Solid tone occurs when the Red Indicator is enacted and will not shut off until reverse trigger power is cycled on and off. Object size and velocity are determining factors in distance at which the indicators activate.

System Check - At Power –up the enabled sensors display their current status while a system check is performed. Any detected faults will result in an amber icon flashing (2 positions), alerting the operator to the location of the fault. The system check takes just over 3 seconds.

Sensor Display - The SDS Display programming functions are accessible when the system is powered up by press and holding the silver button at the base of the LCD.



General Display Button Functions

When in the home or sleep screen pressing the silver button will display the current status of all enabled sensors. Holding the Button for 5 seconds in the home screen will take you to the **Passcode Entry**.

When in the system menus, the button will be used for “Go Back” functionality. This will cancel any pending changes and go backwards to the nearest menu from the current screen. The farthest it will go back is to the System Menu screen. Once in the System Menu screen pressing the button does nothing.

Holding the button for more than 5 seconds exits menus and puts you back at the home screen.



Passcode Entry

The passcode must be entered to grant access to the System Menu screen. The title text is “Enter Passcode”. The information text is blank. The default passcode is “1234”. When no passcode digits are entered, the digit display shows “- - - -”. When a digit is entered, the digit shows “*”, starting from the left-most digit.

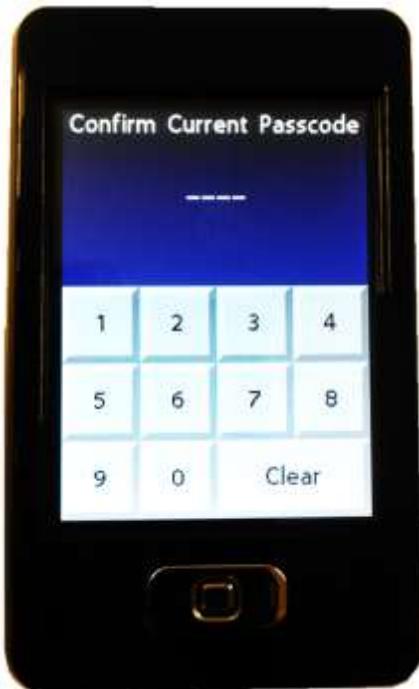
Actions

- The clear button removes any pending input
- When 4 digits are entered and the passcode is incorrect, the information text displays “Incorrect Passcode” and the input is cleared
- When 4 digits are entered and the passcode is correct, the System Menu screen is shown

System Menu

The System Menu screen is shown after successfully entering the passcode.

Each button enters a submenu for the item listed when touched.



Change Passcode

To change the passcode, the first screen will ask you confirm the current passcode. The title text is "**Confirm Current Passcode**". The information text is blank.

This behaves the same as the Passcode Entry screen. When the passcode is entered correctly, the **New Passcode** screen is shown.

Change Passcode

After entering the current passcode, a new passcode must be entered. The title text is "**Enter New Passcode**", the information text is blank, and the set button text is "Set". This behaves the same as the Passcode Entry screen, with one exception: in this screen, the digits are shown as they are being entered. (Note: **1.** Once the new passcode is entered, the set button must be pressed. **2.** If the set button is pressed and 4 digits are not entered, the information text displays, "**Enter four digits**" and the input is cleared. **3.** If the set button is pressed and 4 digits are entered, the **Confirm New Passcode** screen is shown.)

The new passcode must be confirmed before it is saved. The title text is "**Confirm New Passcode**". The information text is blank. This behaves the same as the Passcode Entry screen, with one exception: when the new passcode is entered correctly, the information text displays "**Passcode changed**", the buttons are disabled, and then the System Menu screen is shown after 3 seconds.





System Set-up

The System Setup screen is shown when it is selected from the **System Menu** screen. Each button enters a submenu for the item listed when touched.



Front Cross Gate Delay

The **front cross gate delay** is the amount of time the front (zone 1) sensors will remain off when the system is activated, to allow the crossing gate arm to swing out in front of the bus. The front sensors will also be turned off immediately for this period of time when the system is deactivated, to allow the crossing gate arm to retract. It is a configurable option that allows a time between 0 and 254 seconds to be entered. A value of 255 turns the function off until the system deactivates..

Notes:

- The clear button removes any pending input and resets the value back to the current value
- Digits are shown as they are entered, removing the current value display when the first digit is entered
- The set button disables the buttons, saves the value, changes the information text to "Value saved," and then the System Setup screen is shown after 3 seconds.



Front Dwell Time

The **front dwell time** is the total amount of time the front (zone 1) sensors will remain on when the system is deactivated, this includes the time taken to allow the crossing gate arm to close in front of the bus. (IE with Gate Delay Value set at 2 and Dwell Time at 4 at deactivation the front 2 sensors will come on for 2 seconds after gate closes) As noted in Front Cross Delay the front sensors will also be turned off immediately for a period of time when the system is deactivated, to allow the crossing gate arm to retract. It is a configurable option that allows a time between 0 and 254 seconds to be entered. A value of 255 turns the function off until the system deactivates.

Notes:

- The clear button removes any pending input and resets the value back to the current value
- Digits are shown as they are entered, removing the current value display when the first digit is entered
- The set button disables the buttons, saves the



Sensor Off Times

The **sensor time** is the total amount of time the selected sensor will remain on when the system is de-activated. Use the arrow keys to move up or down to desired sensor and press select. Key in the desired amount of time you want the sensor to stay on after system deactivation and then press set button to set time. It is a configurable option that allows a time between 0 and 254 seconds to be entered. A value of 255 turns the function off until the system deactivates..

Notes:

- The clear button removes any pending input and resets the value back to the current value
- Digits are shown as they are entered, removing the current value display when the first digit is entered
- The set button disables the buttons, saves the value, changes the information text to "Value saved," and then the System Setup screen is shown after 3 seconds.



Sensor Configuration

The **Sensor Configuration** menu allows you to change the configuration setup in the display to match the number of sensors mounted and location of each on the bus. Press Preset Configuration Button. Use arrows in in Zone Configuration screen to the desired configuration and press the "Set" button.

Notes:

- The clear button removes any pending input and resets the value back to the current value
- Digits are shown as they are entered, removing the current value display when the first digit is entered
- The set button disables the buttons, saves the value, changes the information text to "Value saved," and then the System Setup screen is shown after 3 seconds.



Sensor Sensitivity

Before changing sensitivity settings consult with Rostra Precision Controls Technical Service. Sensitivity settings are typically specified by the purchaser and set by the shipping factory or installation responsible party. Changing sensitivity settings may void usage agreement..

Notes:

- The clear button removes any pending input and resets the value back to the current value
- Digits are shown as they are entered, removing the current value display when the first digit is entered
- The set button disables the buttons, saves the value, changes the information text to "Value saved," and then the System Setup screen is shown after 3 seconds.

