



## INSTALLATION INSTRUCTIONS TG-LDA-BB

### TG-LDA-BB DOOR FRAME MOUNTED TAILGATE SYSTEM INSTALLATION NOTES CARD IN / FREE EXIT OPERATION

The system consists of 3 components. The control panel, the door frame mounted bounce back infrared sensor, and the single gang display plates.

**The control panel** fits directly into a 12 x 12 x 6 electrical enclosure. The control panel monitors the sensor, door position switch, an optional system bypass input and the access granted signals from the card reader system. The control panel provides outputs for the display plates, normally closed tailgate alarm outputs, and a DPDT lock output relay.

**The bounce back infrared sensor** mounts on the door frame. The field of view is 2 meters or less. It is factory preset for a 36 inch door way. If it is to be mounted on a wider doorway, refer to the adjustment instructions for the sensor.

**The single gang display plates** are mounted at the card readers. The RED LED indicates that the system is armed. The GREEN LED indicates that access is granted. The LED's flash when the system is in bypass. The sounder is on when the system is in alarm. The tailgate system will operate without the display if a silent alarm is required.

**Sensor mounting** should be about 17 to 20 inches from the floor, on the side opposite of the door swing. Close attention should be given to the exact sensor placement. The side of the housing with the black plexiglass is the sensor window and it should face the doorway.

**System connections** should be made and verified before applying power to the system. Refer to the system drawings for wiring details.

#### Control Board

Remove the control board from the shipping packaging. The Card In / Free Exit unit consists of one control board. It is on a 10.5" x 10.5" plate that fits in a 12 x 12 electrical enclosure.

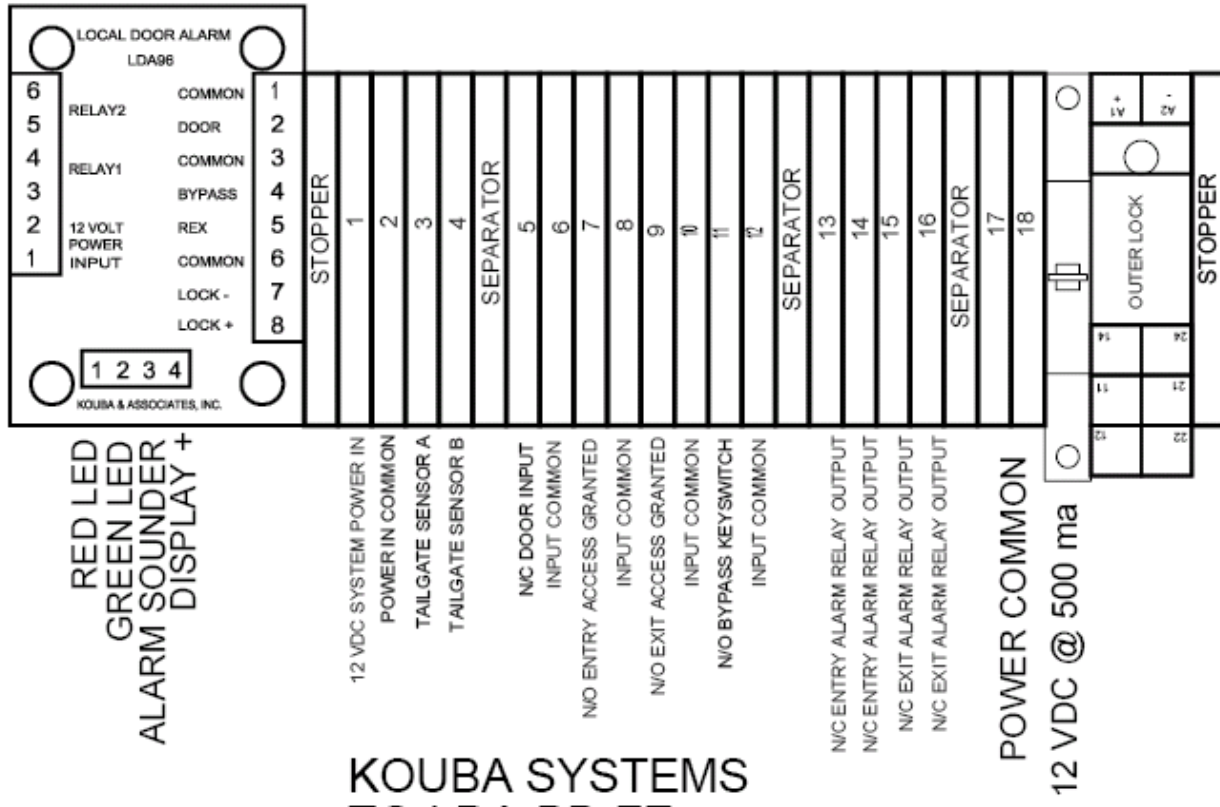
The control board can be mounted above the door or within an equipment closet. It is recommended that the unit be placed within a ventilated enclosure in a secure area protected from the elements.

#### Display Plates

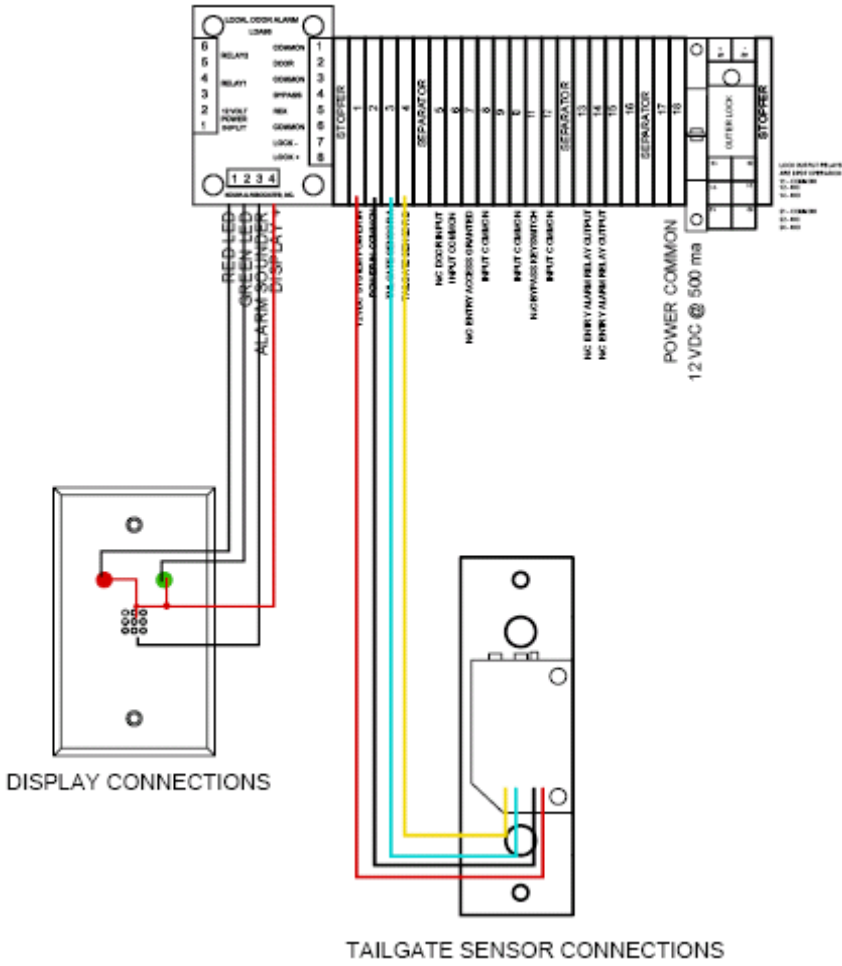
The display plates are manufactured to mount on a standard one gang electrical box and should be mounted adjacent to the card reader.

Card In / Free Exit units require one display plate and Card In / Card Out requires two display plates.





**KOUBA SYSTEMS**  
**TG-LDA-BB-FE**  
**Tailgate System with Lock Output relay**



## **Operation Verification (Card in / Free Exit)**

**VERIFY JUMPER SETTINGS:** The jumpers on the control board are factory set, and should not be changed. J1 is installed, J2 & J3 are removed, J4 is at the outer position, and J5 is at the inner position. The valid card input should be a normally open dry contact.

**INITIAL POWER UP:** Verify that the valid entry output from the access control system is open and that the door locking mechanism is unlocked. After this is verified, apply 12 VDC to the control panel and turn the switch ON. The main control board and sensors should power up and the green LED on the display plate should illuminate for approximately 5 seconds. After this the red LED on the control plate should illuminate.

**SENSOR TEST:** The sensor contains a pair of bounce back sensors. The sensors consist of two LED's (red and green) and adjustment potentiometers. When powered and nothing is in the field of view, the green LED should only be illuminated. The green and red LED's are only illuminated at the same time if there is something in the field of view.

**FIRST WALK THROUGH TEST:** Verify that the display plate mounted adjacent to the card reader is illuminated red. If this is so, walk through the doorway in both the entry and exit direction and verify that an alarm condition occurred in the entry direction only (buzzer and alarm contact change state). If the alarm condition occurs in the exit direction reverse the exit sensor signal wire with the entry sensor signal wire at the control board terminal strip. Walk through again to verify operation.

**SECOND WALK THROUGH TEST:** Present a valid card to the entry reader. The display plate mounted adjacent to the card reader should illuminate green and the lock output relay should activate if the door is closed. Walk through the doorway in the entry direction. An alarm condition should not occur. Walking through in the exit direction should not generate an alarm.

**THIRD WALK THROUGH TEST:** Present a valid card to the entry reader, and have two people walk through the sensing area close together. An alarm should be generated. Repeat this several times varying the distance between the two people. At some point of closeness, an alarm will not be generated. The tailgate sensitivity adjustment is provided to set the alarm distance between people (refer to Figure 2 for the tailgate sensitivity adjustment). The other potentiometers on the control board are not used.

**ADJUSTMENTS:** The tailgate sensitivity adjustment potentiometer located on the lower control board (under the word LOCAL printed on the upper board) has 180 degrees of rotation. The maximum sensitivity is with the potentiometer set toward the programming jumpers or counterclockwise. Minimum sensitivity is with the potentiometer set away from the jumpers.

The sensor distance adjustment potentiometers are located on the top of the sensors. It is labeled NEAR / FAR. The sensors are pre-adjusted for a 36" doorway opening. If the doorway is wider than that, then place a flat white surface perpendicular facing the sensors at the other side of the door opening. Adjust the sensors so that the indicator LED's light up, and then back down the adjustment so that the sensors do not see the white surface, but do see everything up to 2 inches from the white surface.

**INSTALL SENSOR HOUSING:** After system has been verified and adjustments made, place cover on the sensor chassis, secure the cover with the flat head screws.