TruckStop Express

Proximity Add-On Kit

INSTALLATION MANUAL

November 2008

Cansec Systems Ltd.

Cutting edge simplicity

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Introduction

TruckStop Express is an equipment-control system designed to prevent untrained and unauthorized personnel from using lift trucks. In addition, it provides a means to hold operators accountable for the manner in which lift trucks are used. The system consists of readers, credentials (such as iButton® user keys or proximity cards), a truck control unit, TruckStop Express software and a programming kit.

NOTE: Factory Default Mode
Cansec iButton® readers are shipped in uninitialized (factory default) mode. Before initialization, the LED indicator flashes red and green continuously and the BEEPER beeps continuously. This is normal. For a complete description of LED and BEEPER indicators, please see the *Truck Stop Express Operator Guide*.

Warranty

Controller: ..... One Year
Reader/Credentials: ..... Lifetime

Specifications

Power Requirements: ..... 12 VDC to 48 VDC
30 VDC maximum for resistive loads of 10 A

Ignition/Run Circuit Current: ..... 10 A maximum

Controller Current Draw: ..... 40 mA minimum
100 mA maximum

Cables:

- *Controller* ..... 5 x 16 AWG, 2.7 m *(9')* long
- *Cansec iButton® Reader* ..... 6 conductors, 22 AWG, 2.7 m *(9')* long
- *Proximity Reader* ..... 6 conductors, 22 AWG, 2.7 m *(9')* long

Controllers Supported: ..... 255 TruckStop Express Units

Reader Type: ..... iButton®/Proximity

Maximum Users per Controller: 100

External Automotive Relay (supplied): ..... 12 VDC, 40 A
SPST, 1 Form "A"

Dimensions:

- *Controller* ..... 113 mm x 126 mm x 44 mm
(4 7/16" x 4 15/16" x 1 11/16")
- *Cansec iButton® Reader* ..... 44 mm x 114 mm x 28 mm
(1 3/4" x 4 31/64" x 1 7/64")
- *Proximity Reader* ..... see manufacturer's specifications

Weight: ..... 840 g *(1.85 lbs)*

Operating Temperature: ..... -20 °C to 70 °C *(- 4 °F to 158 °F)*

Environment: ..... Indoor/Outdoor

Guidelines

ENGINE SPECIFICATIONS

TruckStop Express is compatible with both internal combustion and electric engines. Refer to the lift trucks specifications. You will need to know the type of engine, wiring diagrams, and any associated information. TruckStop Express wiring information for internal combustion and electric engines can be found in the *Controller Wiring* section.

BATTERY SPECIFICATIONS

TruckStop Express was designed to work in vehicles with a battery in the range of 12 VDC to 48 VDC. Before installation, verify the voltage of the battery on the lift to make sure it meets TruckStop Express specifications. To avoid damaging the electrical system during the installation, disconnect the negative (-) battery terminal before you begin the installation.

NOTE: If you are controlling a resistive load operating over 30 VDC, consult the manufacturer as the maximum allowed switched current decreases after 30 VDC.

INSTALLATION

Securely mount the reader in an easily accessible location. Install the controller in a suitable location that will not obstruct operation of the lift truck. Do not obstruct either of the following:

- mechanical operation of the lift
- lift truck controls
- operator mobility

WIRING

Route all wires so that they will not come in contact with any moving, sharp, or protruding parts and/or areas of high temperature. Extra precaution must be taken in these instances. Secure all wires with cable clamps, cable ties or adhesive tape.

- RED wire is for powering TruckStop Express. Connect to the positive terminal of the battery.
- **BLACK** wire will be connected to ground.
- BROWN wire, when powered, enables the controller to read keys. This wire should **NOT** be wired to the seat switch, dead-man switch, kill switch or the accessory circuit.
- BLUE wires connect the battery to the ignition/run circuit via internal relay upon presenting a valid user key. The current rating through this relay is 10 A @ 30 VDC max. If the current through the ignition/run circuit on the vehicle surpasses 10 A @ 30 VDC, a suitable external relay must be supplied by the customer.

Cansec iButton® Readers

Connect the reader wires into the six-pin connector. Plug the connector onto the header on the reader in the correct orientation. Place the reader onto the back-box ensuring the wires are not pinched between the reader/back-box and that the wires are clear of the two standoffs inside the back-box. When the reader is in position, fasten it to the back-box with the two screws provided. See the *Reader Wiring* section for more details.

Proximity Readers

Connect proximity reader as per manufacturer's colour code. Connect the proximity reader to the coloured wires on the **BLACK** cable (supplied by Cansec). Connect Wiegand signals accordingly. See the *Reader Wiring* section for more details.

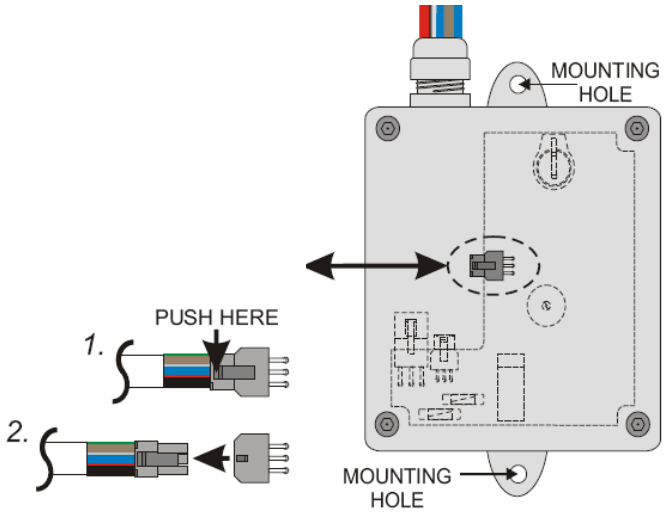
NOTE: no beeper signal is available for proximity readers.

NOTE: You cannot connect TruckStop Express directly to an AC (alternating current) source. In the instance where you are connecting TruckStop Express to AC controlled stationary equipment, the installation must be done by a licensed electrician who will determine what additional electrical equipment is required.

NOTE: If you are not using a proximity reader, remove the entire Wiegand cable from the controller. To disconnect the cable:

1. push on the tab
2. pull the connector out

This eliminates the possibility of the cable causing damage (such as short circuits) to the vehicle or to the TruckStop controller.



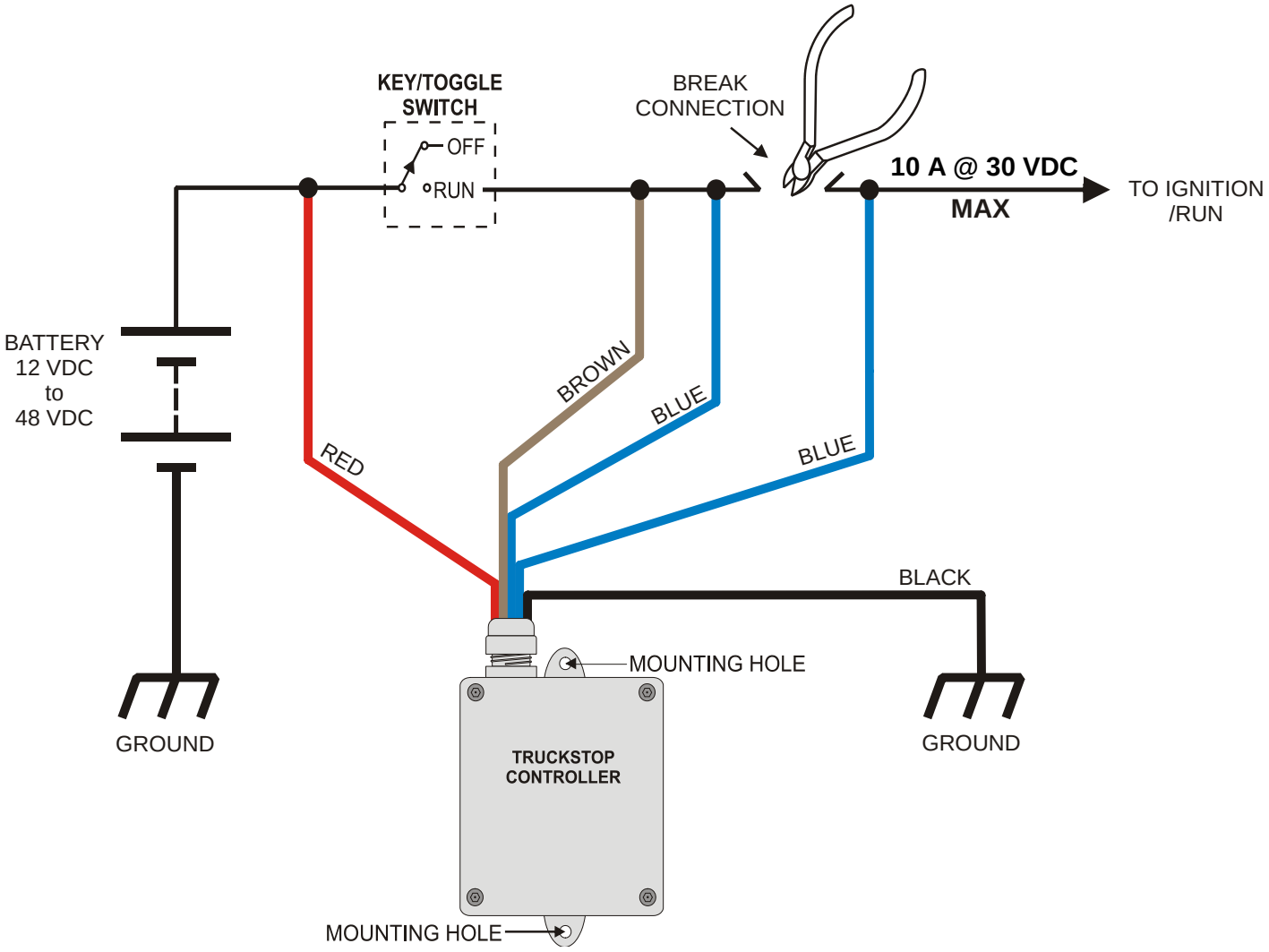
Controller Wiring

ELECTRIC ENGINES

!! IMPORTANT !!

Do **NOT** wire the TruckStop Express controller into the seat switch, dead-man switch, kill switch or accessory circuit.

If the current to the ignition/run circuit exceeds 10 A @ 30 VDC, a suitable external relay must be supplied by the customer.



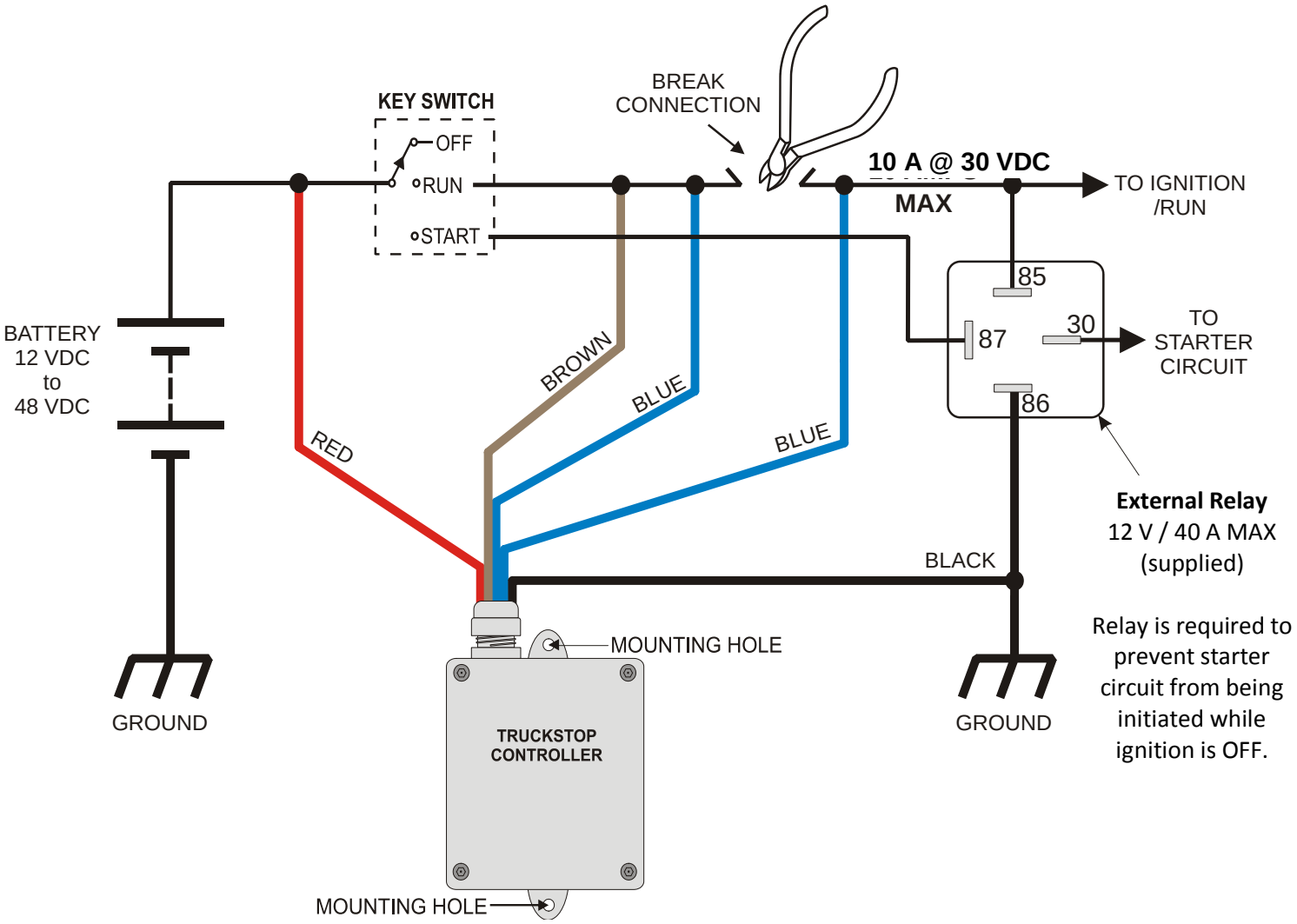
INTERNAL COMBUSTION ENGINES

!! IMPORTANT !!

Do **NOT** wire the TruckStop Express controller into the seat switch, dead-man switch, kill switch or accessory circuit.

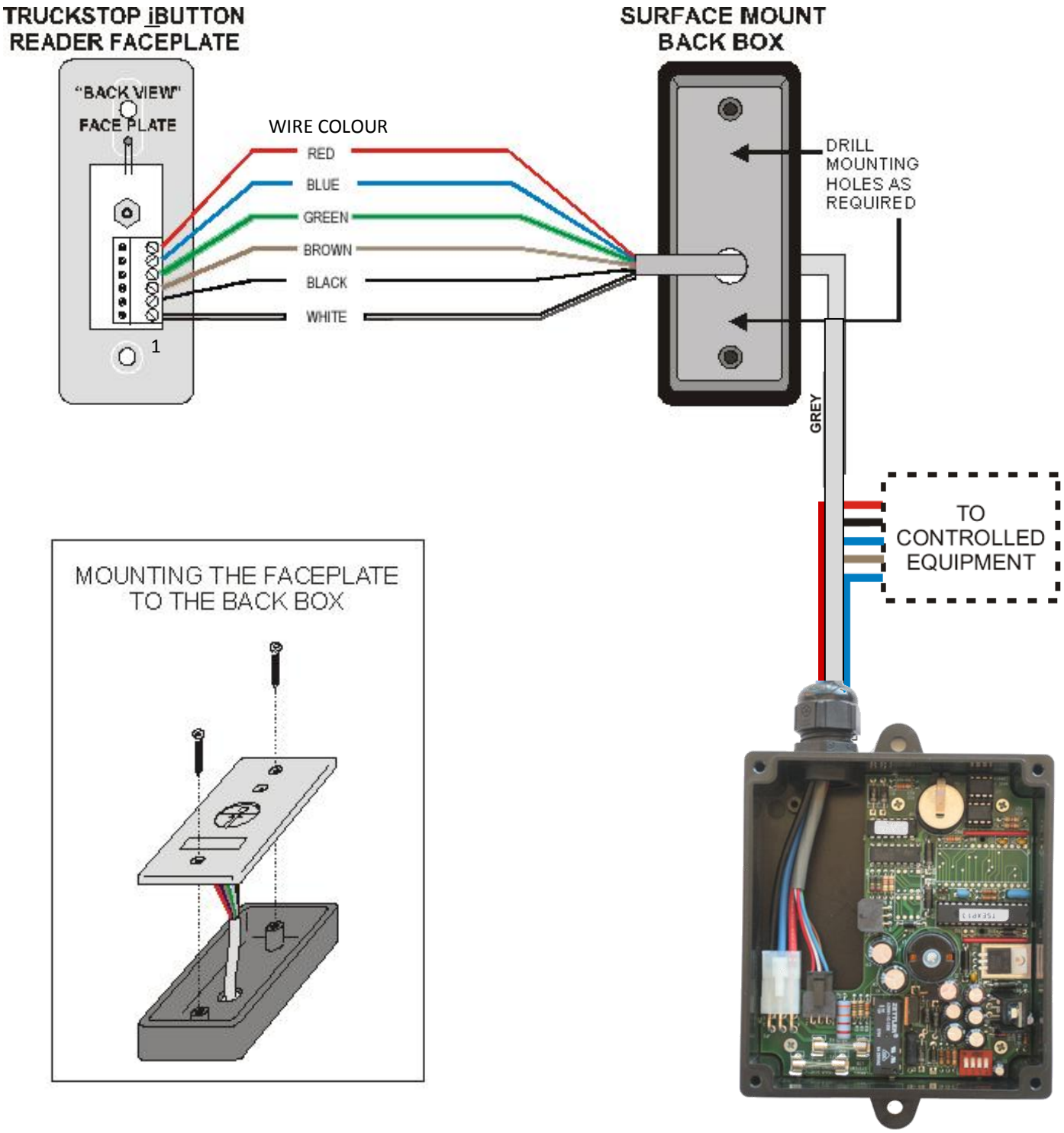
If the current to the ignition/run circuit exceeds 10 A @ 30 VDC, a suitable external relay must be supplied by the customer.

If the current to the starter circuit exceeds 40 A, the supplied external relay must be replaced by a suitable external relay supplied by the customer.

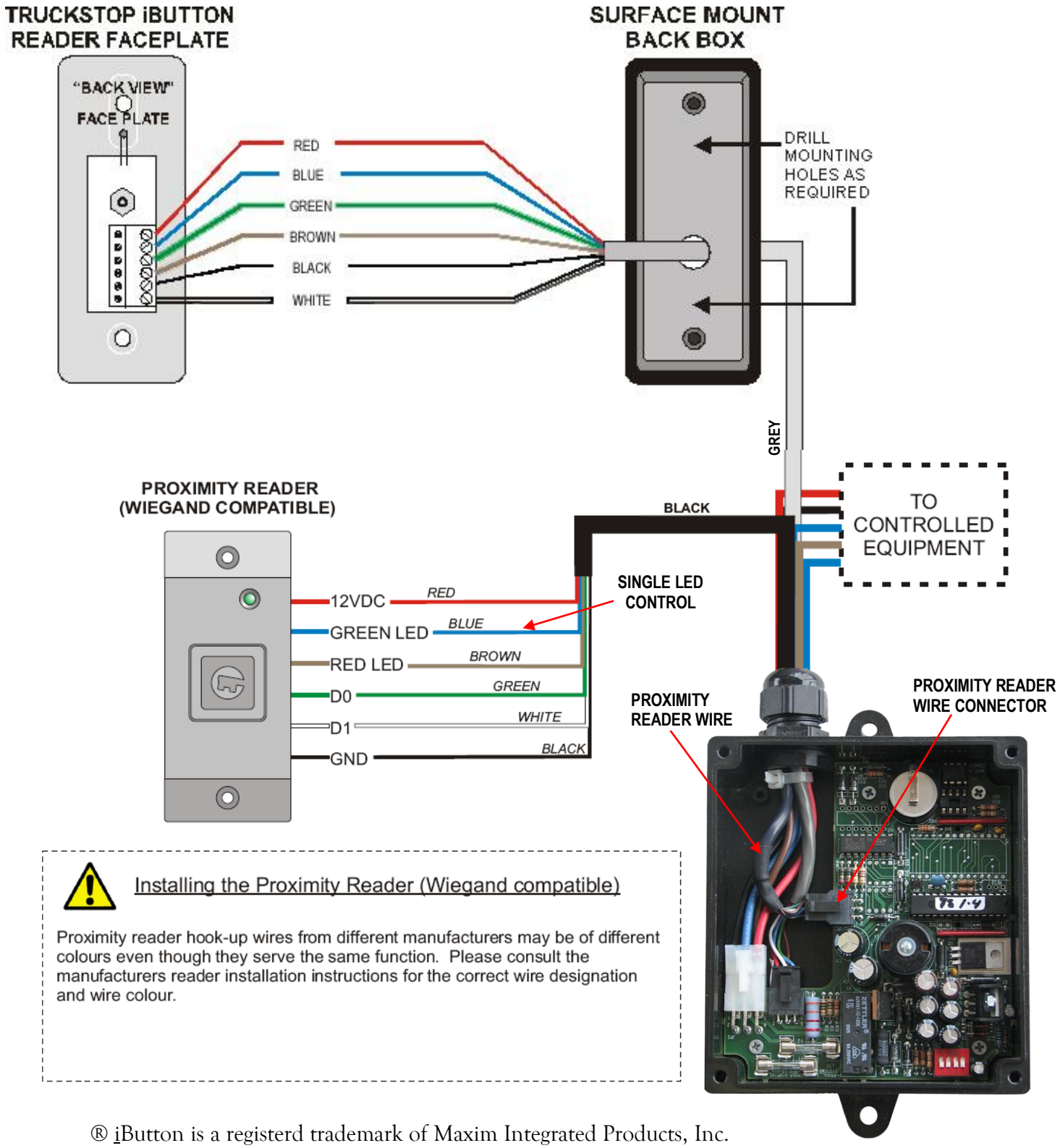


Reader Wiring

CANSEC iBUTTON® READERS



PROXIMITY READERS



Installing the Proximity Reader (Wiegand compatible)

Proximity reader hook-up wires from different manufacturers may be of different colours even though they serve the same function. Please consult the manufacturers reader installation instructions for the correct wire designation and wire colour.

® iButton is a registerd trademark of Maxim Integrated Products, Inc.