

# FLAMING RIVER®

## INSTALLATION INSTRUCTIONS KEYLESS START SYSTEM

PART NUMBER FR60001

Before beginning the installation, please review the most recent instructions at: <http://aftermarket.strattec.com>. For questions concerning installation or performance, please call 1-800-648-8022.

### SYSTEM OVERVIEW

The KEYLESS START SYSTEM replaces a standard automotive ignition switch with a radio frequency controlled secure passive start system. With the use of a security card located within 3 feet of the system antenna, the driver is able to control the accessory, ignition, and starter functions of the vehicle by the use of a dash mounted illuminated pushbutton.

The switching functions of the ignition switch, which in a standard automotive system are used to switch battery power to accessory, ignition, and starter circuits, are replaced by 3 relays controlled by the KEYLESS START SYSTEM. The individual relays are used to provide the system power to the accessory, ignition, and starter circuits.

### CONTENTS:

(1) Illuminated Blue LED Push Button and wire assembly



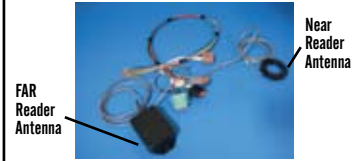
NEAR Reader Control Module Gray and Black headers



FAR Reader Control Module Green and Brown headers (Note: UHF Antenna attached)



Main wire harness with black, grey, brown and green Deutsch sockets, wired to antenna modules



Note: Not all the harness positions are filled depending on model number

3 Relay Bank with wiring assembly



Security card (Ignitor Key)  
2 are provided



Instruction sheet



### INSTALLATION - WIRING OVERVIEW

#### STEP 1

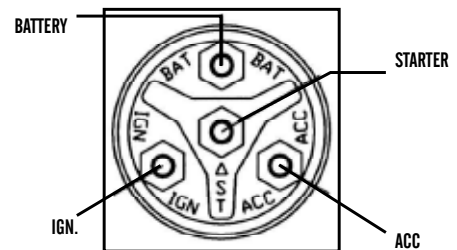
Locate and identify the circuit terminals on the back of the ignition switch assembly.

ACC – Accessory Terminal

IGN – Ignition Terminal

ST – Starter Terminal

BAT – Battery Terminal



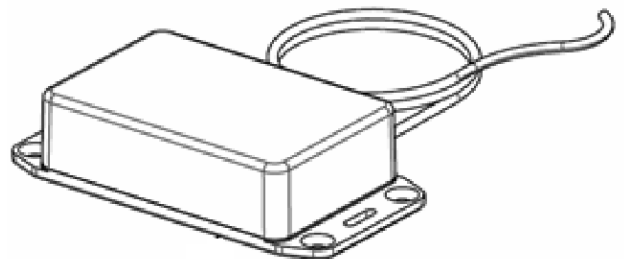
#### STEP 2

Position the FAR Reader Antenna - **Do not permanently fix the antenna until the system is tested, as the antenna may require re-positioning to optimize the read range.**

**IMPORTANT** – For optimal/proper system operation the FAR Reader Antenna should be mounted as follows.

1. In a location preferably close to the driver's seat and if possible 1-2" away from any metal mounting surfaces or structures.
2. When the security card is presented it must be within three (3) feet of the FAR Reader Antenna for system operation.

**NOTE:** Range will be less if mounted directly on a metal surface.



### STEP 3

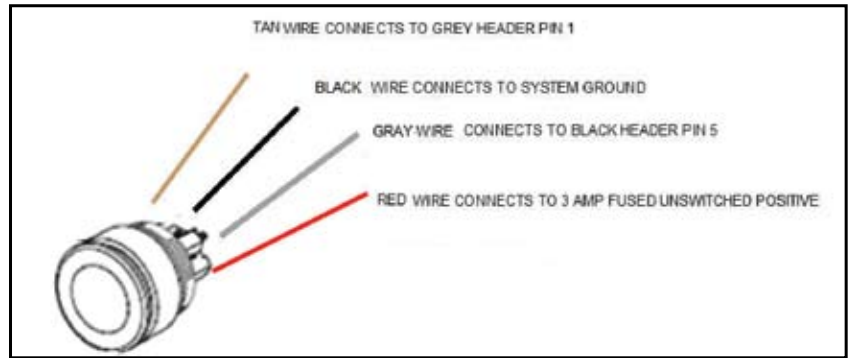
Mount the push-button switch to an interior location in the vehicle. The switch has been designed to mount into a 7/8 inch diameter hole. Once the switch has been mounted, make the following wire connections.

Tan wire connects to the gray header PIN #1.

Black wire connects to the system ground.

Gray wire connects to the black header PIN #5.

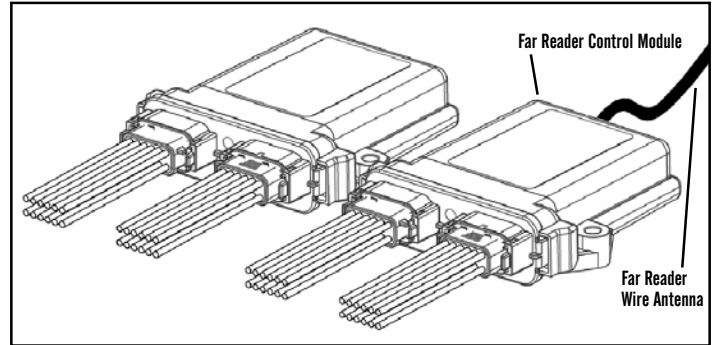
Red wire connects to the 3 AMP fused un-switched positive.



### STEP 4

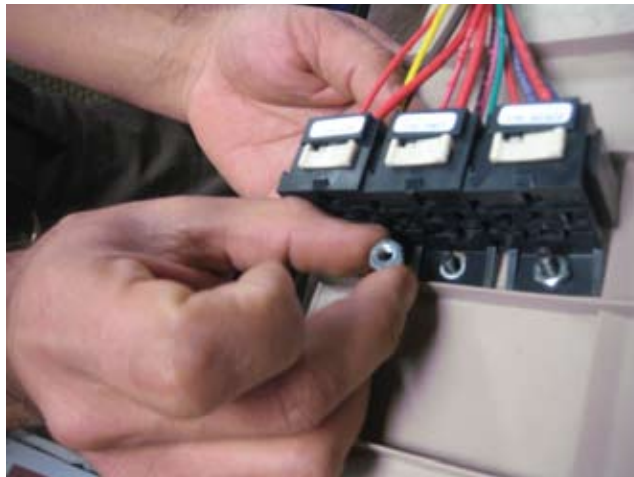
Mount the two (2) control modules to a flat surface using 1/4 - 20 self threading screws. During installation the wiring harnesses can be removed temporarily from the control modules. The wire harness connectors (Deutsch) are keyed to insure correct orientation when reattached to the control modules.

**IMPORTANT** - Make sure that the Far Reader Wire Antenna located on the FAR Reader control module is not kinked or bent after installation, and should be positioned away from metal surfaces.



### STEP 5

Mount and position in a convenient orientation the three (3) relay pack assembly to a flat surface.



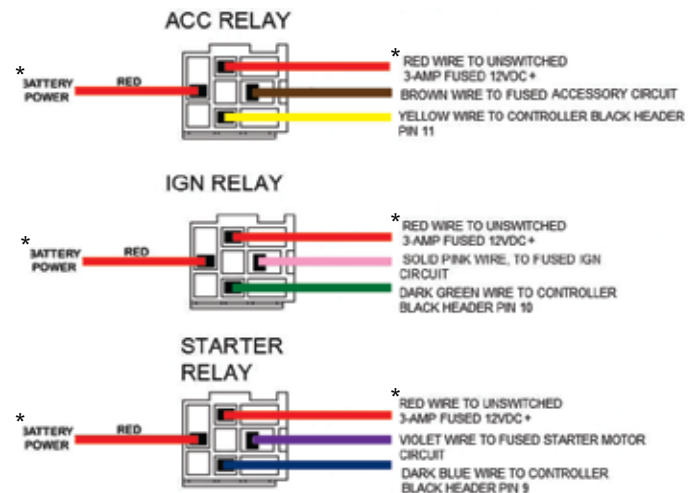
### STEP 6

Relay pack wiring (please refer to the relay pack wiring diagram).

**NOTE** - The relays may be tested by momentarily switching the yellow, green, or blue wires to the ground - this will trigger the corresponding relays.

**IMPORTANT:** A test lamp or other method should be used to verify proper operation and sequencing of the relays with the system prior to hard-wiring the relays to the ACC, IGN, and STARTER circuits. It is important to run this test to ensure that any neutral transmission safety interlocks and clutch interlocks are completely functional, and that the relays will function correctly when the yellow, green, or blue wires are switched to ground.

\*All of the red wires from the relay pack may be spliced together to a single battery wire, preferably through a fuse or circuit breaker.



## STEP 7

Wire the main harness.

- a) The 2 red power connections for the main harness should be made to a dedicated low current fused circuit. These wires may be spliced to a single red wire to the constant 12 volt circuit.
- b) The 2 black wires should be terminated to an adequate ground point.
- c) The blue, green and yellow wires are connected to the mating wires on the relay harness. These wires are switched by the control unit to ground in order to switch the corresponding relays. The wires should never be tied directly to 12 volts without a load, as this will short the output transistors and damage the unit.

## STEP 8

Mount the NEAR Reader Antenna

The NEAR Reader Antenna is used when the primary system is inoperable, such as if the battery in the security card has expired. Mount the NEAR Reader Antenna that is known and accessible to the driver. In the event the NEAR Reader must be used the driver must align the etched arrow on the security card with the center of the FAR Reader Antenna. While holding the security card in the center of the FAR Reader Antenna the driver will be able to start the vehicle using the push-button.

## STEP 9 - VERIFY KEYLESS START SYSTEM OPERATION:

- A. Ensure the security card is located within 3 feet of the antenna.
- B. Pressing the push-button for one half second or pressing and holding will advance to the next mode every 0.5 seconds. All push-button presses will trigger the security card to blink the LED and cause the system to advance to the next state. If the card LED blinks and the system does not advance, check that the FAR reader wire antenna is not positioned directly on a metal plate or surface. If the security card is out of range, the security card LED will not blink.
  - a) From OFF state: This will advance unit to ACC mode. The push-button will blink slowly.
  - b) From ACC mode: This will advance unit to IGN mode. The push-button will blink quickly indicating that the starter motor has not yet engaged.
  - c) From IGN mode: This will advance unit to CRANK mode for as long as button is pressed. Unit will go back to IGN mode when released. The push-button will stay illuminated, indicating starter motor has been engaged.
  - d) From IGN mode: After a CRANK has been initiated this will advance unit to OFF state and push-button will no longer be illuminated and the sequence may be repeated.
- C. Pressing the push-button for less than one half second prior to an engine CRANK will bring unit to OFF state.

**NOTE:** If the security card is moved out of range while the vehicle is running, the system will continue to run, and may be turned off but cannot be re-started until the security card is in range.

Security Card Battery Replacement:

The security card uses a standard CR2032 battery, the expected life of the battery is 1 year in normal operation.

To change the battery, a T6 TORX driver is needed to remove the self tapping screw. The battery must be inserted into the housing with the positive (+) side downwards.

Revised 3/24/08

### Warranty Statement

The STRATTEC Keyless Start System is guaranteed to be free from defects in material and/or workmanship and to perform as advertised when properly installed, used and maintained in accordance with the installation instructions. Failure to adhere to and/or comply with the installation instructions will void all associated warranty obligations. Should any part(s) prove defective within 6 months from date of purchase, it(they) will be replaced F.O.B. our factory without charge provided the defective part(s) is returned to our factory transportation charges prepaid.

STRATTEC Security Corporation will not be responsible for labor charges, loss or consequential damage of any kind or character caused by defected parts or charges incurred in the replacement or repair of defective parts by the Purchaser. Careless handling, including that by freight companies, and improper installation or use may void all warranties.

#### **FCC WARNING:**

**Note: Changes not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

#### **FCC - Radio Frequency Devices**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **Cahiers des charges sur les normes radioélectriques du Canada**

L'utilisation de ce dispositif est autorisée seulement aux deux conditions suivantes: (1) il ne doit pas produire de brouillage, et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.