e-*ASK*

electronic *A*ccess *S*ecurity *K*eyless-entry

e-*FOB* Keyless-entry System
Full-Function Installation Manual

FCC ID: TV2EFOB1

(UM20 ~ 22793-02)

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Introduction

This manual provides the necessary information for the installation and use of Tri*Mark*'s **e-*FOB*** transmitter/receiver system. Basic functions of the system include:

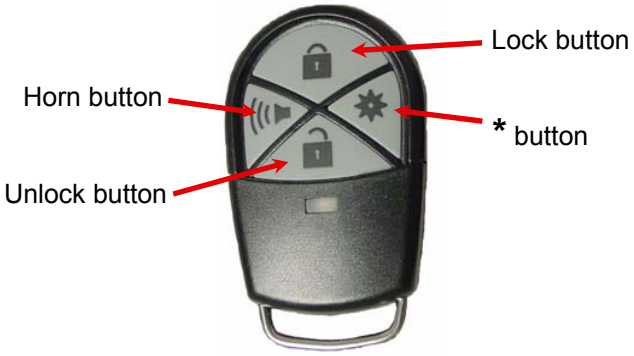
- Locking and unlocking entry and compartment doors
- Light activation
- Panic mode (standard)
- Auxiliary functions (standard)

The **e-*FOB*** system includes:

- Receiver
- 2 FOB transmitters
- 14-pin wire harness
- 10-pin wire harness
- 4-pin wire harness
- 2-pin wire harness
- Smart LED
- Push button switch

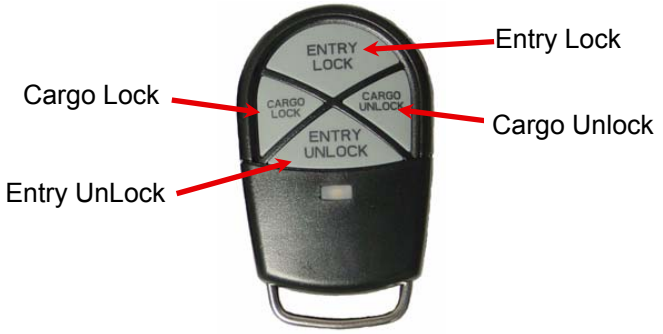
The receiver and FOB transmitters are shipped programmed. After making all necessary wiring connections (see appendix page IV), the **e-*FOB*** system will function as described.

e-*FOB* Operation and Features - Standard



Button	Function
Lock	Locks all entry doors and arms security system.
Unlock	Unlocks entry doors and disarms security system. Also activates the porch light.
Horn button	Activates panic mode when pressed and held for 2 seconds.
***** **button**	* button function is OEM/dealer defined. Possible assignment include: interior/exterior lighting, awning extension/retraction, gas cap, hood, etc.

e-*FOB* Operation and Features - Cargo

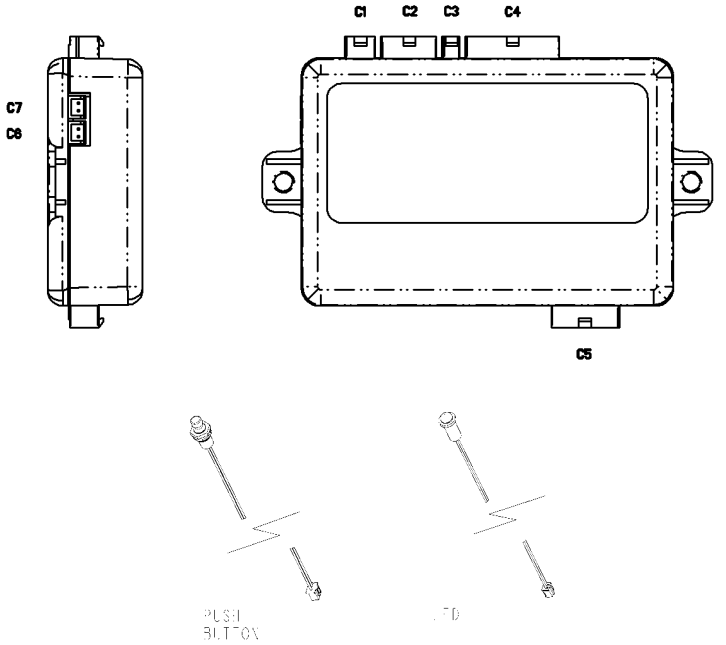


Button	Function
Entry Lock	Locks entry doors and arms security system.
Entry Unlock	Unlocks entry doors and disarms security system. Also activates the porch light.
Cargo Lock	Locks compartment doors and arms security system.
Cargo Unlock	Unlocks compartment doors and disarms security system.

Notes:

- While the engine is running only the entry unlock function of the **e-*FOB*** remains activated —other functions are deactivated.
- For information on changing the default configuration, see DIP Switch Setting Assignment on page 6.

Teaching Additional FOB Transmitters



1. Plug the LED into C6 and the push button into C7 on the receiver.
2. Turn ignition off and disarm alarm.
3. Press and release the programming button 3 times. The LED will turn on after 3 seconds.
4. Press and release the lock (Entry Lock) of each new FOB transmitter once. The LED will flash and the horn and siren will sound once. Up to 60 transmitters may be programmed at one time.

Notes:

- If you place the system in learn mode and teach nothing, the system will exit in 10 seconds.
- When new transmitters are taught, all old transmitters are erased.
- The memory for codes will not be erased if power is removed.
- As soon as the LED turns off, the system is fully functional.

Training Wireless Switches

Up to 20 wireless switches can be trained to the RF controller. A wireless switch can provide door ajar information, input from a shock sensor, motion sensor, glass break sensor, etc.

1. Plug the LED into C6 and the programming button into C7 on the receiver.
2. Turn ignition off and disarm alarm.
3. Place the wireless sensor being trained and magnet close to one another.
4. Press and release the programming button 5 times. The LED will turn on green after 2 seconds.
5. Press the programming button X number of times to store the wireless sensor in position X (1-25). The LED will briefly flash red.
6. Remove the magnet from the wireless sensor to activate the output. The horn will honk and the siren will sound.
7. Repeat steps 4 and 5 to train additional wireless sensors. If two sensors are trained to the same position, only the second sensor will be active.

Notes:

- As soon as the LED turns off, the system is fully functional.
- The system exits learn mode after 10 seconds of inactivity.
- To erase all wireless sensors, turn ignition on and press the programming button 10 times. The horn and siren will sound once to indicate that all sensors have been erased.
- The memory for codes will not be erased if power is removed.

Smart LED:

The smart LED indicates system status:

- Slow Flash = Armed
- Off = Disarmed
- Fast Flash = Alarm activated since last unlock input

Dip Switch Setting Assignment

The DIP Switch settings control additional functions. Power to the receiver should be disconnected and reconnected after a DIP switch is changed. Functional assignments are described below:

Switch	DIP Switch Settings		
#1	Standard vs Cargo Mode	ON = Cargo Mode	OFF = Standard Mode
#2	Left & Right Buttons Output	ON = Sustained	OFF = Pulse
#3	--	--	--
#4	--	--	--
#5	Headlights Supervision	ON = 0.5 sec. pulse	OFF = 30 sec.
#6	Arm Alarm	ON = 1 lock button press	OFF = 2 lock button presses
#7	Automatic Lock/Unlock	ON = Enabled	OFF = Disabled
#8	Keypad #5 Output and FOB long unlock	ON = Lights output for 5 min.	OFF = Aux 2 output for 5 min.
#9	Keypad #5 Output and FOB long unlock	ON = Output 0.25 sec. pulse	OFF = Output on for 5 min.
#10	3rd Unlock Output	ON = staggered with lock	OFF = activated with unlock
#11	--	--	--
#12	--	--	--

DIP Switch #1: Cargo/Standard Mode

- DIP switch #1 ON: Pressing the Cargo Lock button pulses the staggered lock output. A Cargo Unlock button press provides pulses at the auxiliary and 2nd unlock outputs.
- DIP switch #1 OFF: the Horn button (center left) actuates panic mode. Horn, siren lights, parking lights actuate for 30 seconds.

DIP Switch #2: Sustained Output

- DIP switch #2 ON: the middle left and right buttons provide sustained outputs. Output lasts as long as the button is pressed –up to 30 seconds. Middle left button activates horn output. Middle right button activates auxiliary output. DIP switch #1 must be OFF.
- DIP switch #2 OFF: see DIP switch #1 for output.

DIP Switch #3: Unassigned

DIP Switch #4: Unassigned

DIP Switch #5: Headlights Supervision

- DIP switch #5 ON: the headlights flash once on an unlock command.
- DIP switch #5 OFF: the headlights are actuated with the dome lights. Lights remain illuminated for 30 seconds with an unlock command. Arming the alarm or starting the vehicle deactivates the lights immediately.

DIP Switch #6: Arm Alarm

- DIP switch #6 ON: a single lock press locks doors and arms alarm.
- DIP switch #6 OFF: first lock press locks doors. Second lock press arms alarm.

DIP Switch #7: Automatic Lock/Unlock

- DIP switch #3 ON: the auto-locking feature is activated. All doors are locked 5-seconds after ignition start. Doors unlock when the ignition is turned off. THIS FEATURE IS CANCELED if a door is open when the ignition is started. This protects against accidental locking of keys in the vehicle.
- DIP switch #3 OFF: Automatic lock/unlock feature is disabled.

DIP Switch #8: Keypad #5 Output and FOB Long Unlock

- DIP switch #8 ON: the #5 keypad output provides a mirrored output to the headlights.
- DIP switch #8 OFF: the #5 keypad output provides a mirrored output to Aux 2.

DIP Switch #9: Keypad #5 Output and FOB Long Unlock

- DIP switch #8 ON: the keypad #5 output and FOB long unlock provides a pulse output dependent upon DIP switch #8.
- DIP switch #8 OFF: the keypad #5 output and fob long unlock provides a 5 minute output dependent upon DIP switch #8.

DIP Switch #10: 3rd Unlock/Staggered Lock

- DIP switch #5 ON: the 3rd unlock output is staggered to the lock actuation to decrease peak current draw.
- DIP switch #5 OFF: the 3rd unlock output actuates with an unlock command.

DIP Switch #11: Unassigned

DIP Switch #12: Unassigned

Additional System Features

Light Activation

When the alarm is armed, the parking lights flash. With an unlock instruction; the dome light stays illuminated for 30 seconds and the parking lights flash. The headlight actuation with unlock is controlled by DIP switch #5. With a lock instruction the headlights pulse once.

2nd Unlock Output

Press and release the Unlock button twice for a pulse output in standard mode. In cargo mode the 2nd unlock output occurs with the Cargo Unlock button press.

3rd Unlock Output

The 3rd Unlock output is dependent upon DIP switch #10 . It is either actuated with the unlock command or staggered to the lock actuation. In cargo mode, staggered lock occurs with the cargo lock button press.

Auxiliary Output

Press and release the * button. Possible assignments include: interior/ exterior lighting, awning control, gas cap, etc. (Available in standard mode only.)

2nd Auxiliary Output

The 2nd Auxiliary output is actuated by holding down the Unlock button for two seconds. The output is either a pulse output or a 5 minute toggle dependent on DIP switch #9.

Panic Mode

Pressing and holding the Horn button (center left) for 2 seconds activates panic mode. During panic mode, horn/siren is continuously activated and headlights and parking lights flash for 30 seconds. Pressing the Lock or Unlock button deactivates panic mode. (Available in standard mode only.)

Vehicle Alarm

In standard mode, the alarm is armed with either a single or double Lock button press.

In cargo mode, both the Entry Lock and Cargo Lock must be pressed within 5 seconds. When the alarm is armed, the parking lights flash and the horn/siren chirp. The smart LED flashes continuously.

The alarm is activated with a security trigger input or if the ignition is started. The horn, siren, parking lights and head lights flash for 30 seconds. The starter kill is activated for 30 minutes. Press the Lock or Unlock buttons to deactivate the alarm.

There is a 5 second delay before the system will recognize a security input. If a security input (door ajar switch, motion sensor, glass break sensor, etc.) is triggered when the alarm is armed, the security input must be turned off and then on before the alarm is activated. The horn and siren chirp 3 times if a security input is active when the alarm is armed.

The alarm is disarmed three ways.

- Press the Lock (Entry Lock) on the transmitter.
- Press the Unlock (Entry Unlock) button on the transmitter.
- Turn the ignition on and hold the programming button for 3 seconds.

Emergency Override

To disarm the alarm in case of FOB transmitter and access code loss:

1. Turn ignition on (apply 12V to yellow wire).
2. Press and hold the push button for 3 seconds.
3. Turn ignition off (remove 12V from yellow wire).

Lock/Unlock Confirmation

The horn and siren chirp once when the alarm is armed. If the alarm has been set off since the last unlock command, the siren and horn chirp 4 times to indicate the alarm activity when the system is disarmed. The horn and siren chirp twice on unlock. The headlight and parking light outputs pulse once on a lock and unlock.

Starter Kill Feature

The starter kill feature is active for 30 minutes after the alarm is activated. Install a relay controlled by the starter kill feature between the ignition key switch and starter solenoid.

Lock/Unlock Confirmation Control

The siren and horn confirmation is controlled by pressing lock, unlock and auxiliary buttons at the same time. A single chirp is heard when confirmation is muted. A double chirp occurs when turned on.

Cargo mode: Entry Lock, Entry Unlock, Cargo Unlock.

Troubleshooting

Problem Description	Possible Solution
e-*FOB* Hints	
Button press does not provide correct operation	Verify power to RF receiver
	Replace FOB transmitter battery
	Re-teach the FOB transmitter to the receiver
No operation or intermittent operation	Mount RF receiver away from enclosed metal areas and fully extend antenna
	Check FOB transmitter battery voltage. Batteries need to be changed every 1-2 years depending on usage.
One particular **e-*FOB*** function does not work	Check wire connection of affected function at RF module and wiring harness

This product has been manufactured with methods to ensure high quality and to meet the high expectations of our customers. Tri*Mark* warrants this product to be free from workmanship defects and will remedy issues per Tri*Mark*'s warranty policy.

Remote transmitter FOBs, batteries, and other equipment subject to normal wear and deterioration may need to be replaced periodically by dealer and/or end user and are not covered by this warranty. Tri*Mark* will not be liable for indirect, special, incidental or consequential damages.

This system 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.

Note: The manufacturer is not responsible for any Radio or TV interference caused by unauthorized modification to this equipment. Such modification could void the user's authority to operate the equipment.

Appendix: Installation and Mounting e-*FOB* System

Contact Tri*Mark* for specific mounting details, such as drawings, placement suggestions, mounting hardware, etc.

General Mounting Guidelines

The RF receiver should be placed in an interior location that does not shield RF signals. You may need to try multiple locations to optimize reception. The antennae must be left fully extended and exposed. Minimize shielding from metal enclosures.

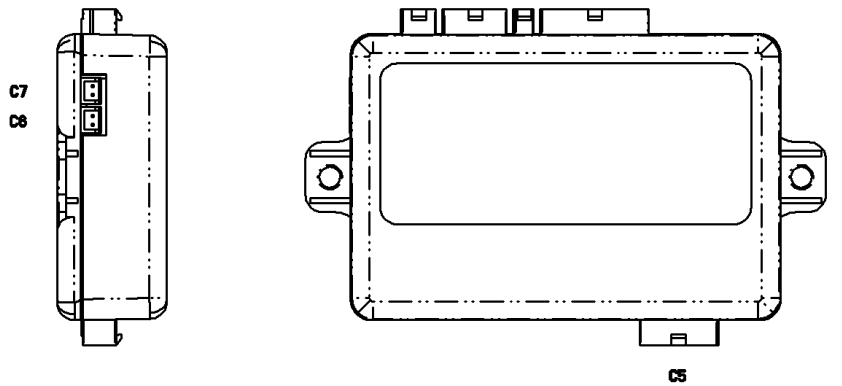
Wiring Color Code Tables and Diagrams

The following tables and diagrams are provided to show color-coded wire and pin assignments for the **e-*FOB*** system. Connect all wires before plugging module into wiring harness.

Connection Information

Lock/Unlock input:	Amp 106527-2 (2-pin)
Power input:	Amp 106527-4 (4-pin)
Relay output:	Amp 1-106527-0 (10-pin)
Non-relay output:	Amp 1-106527-4 (14-pin)
Terminals:	Amp 106529-2 for 18-22 AWG wire
	Amp 794418-1 for 16 AWG wire

RF RECEIVER



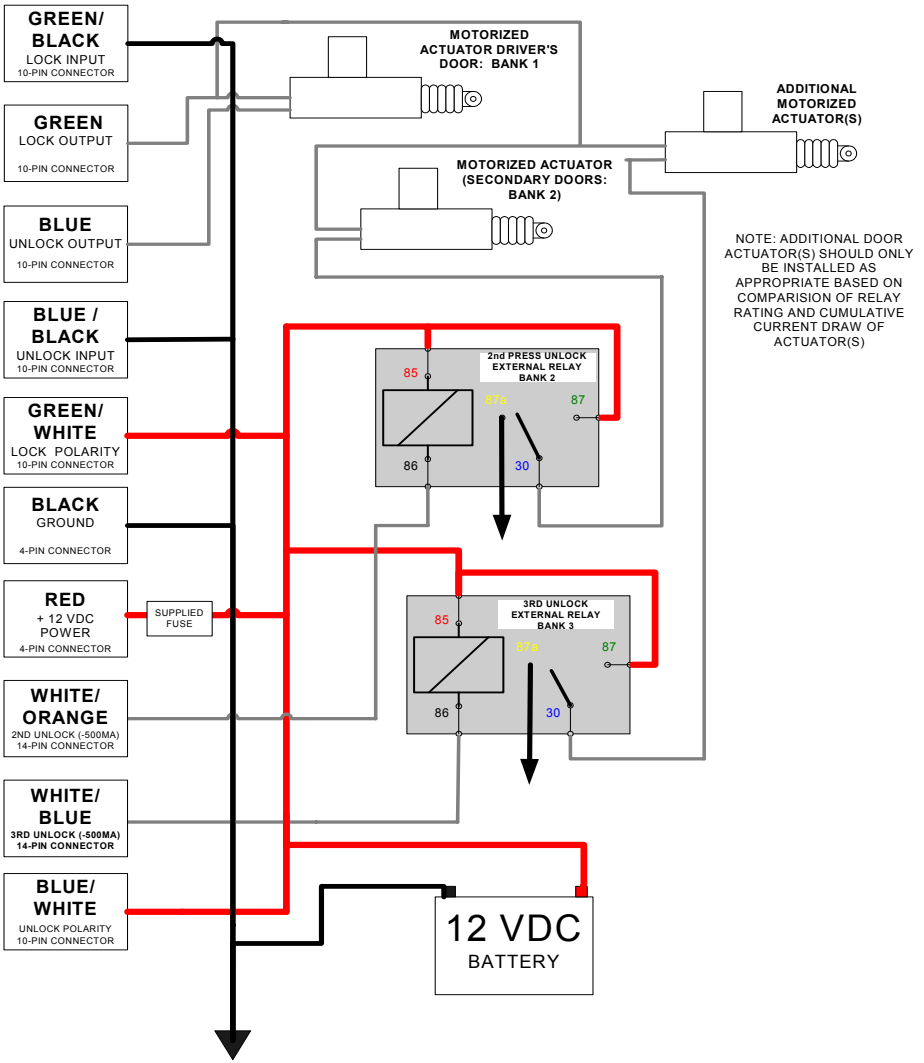
Wire Colors	CONNECTOR 1: 4-PIN HARNESS	
--	--	1
Yellow	Ignition Input	2
Black	Ground Input	3
Red	Power (+12V)	4
Wire Colors	**CONNECTOR 2: KEYPAD HARNESS**	
Integrated Harness		
Wire Colors	**CONNECTOR 3: 2-PIN HARNESS**	
Green/White	Lock Input (-)	1
Blue/White	Unlock Input (-)	2
Wire Colors	**CONNECTOR 4: 14-PIN HARNESS**	
White/Purple	(-) Security Trigger Input 3	1
Orange	Armed Output (-500 mA)	2
Brown	Starter Kill Output (-500 mA)	3
Gray	Lights Output (-500 mA)	4
Brown/White	Horn Output (-500 mA)	5
White/Black	(-) Security Trigger Input 1	6
White/Yellow	Siren Output (A/C)	7
Red/White	Aux. 2 Output (-500 mA)	8
Black /White	Aux. Output (relay 15A)	9
White/Orange	2nd Unlock Output (-500 mA)	10
White/Blue	3rd Unlock/Staggered Lock (-500mA)	11
White	Parking Lights (relay 15A)	12
White/Red	(+)Security Trigger Input 2	13
Light Green	Siren Output (A/C)	14

Wire Colors	CONNECTOR 5: 10-PIN HARNESS	
Green/Black	Door Lock (N/C) (relay 30A)	1
--	--	2
Purple	Dome Light Output (relay 15A)	3
Pink	Dome Light (N/O) (relay 15A)	4
Pink/Black	Dome Light (N/C) (relay 15A)	5
Green/White	Door Lock (N/O) (relay 30A)	6
Green	Lock Output (relay 30A)	7
Blue/Black	Door Unlock (N/C) (relay 30A)	8
Blue/White	Door Unlock (N/O) (relay 30A)	9
Blue	Unlock Output (relay 30A)	10

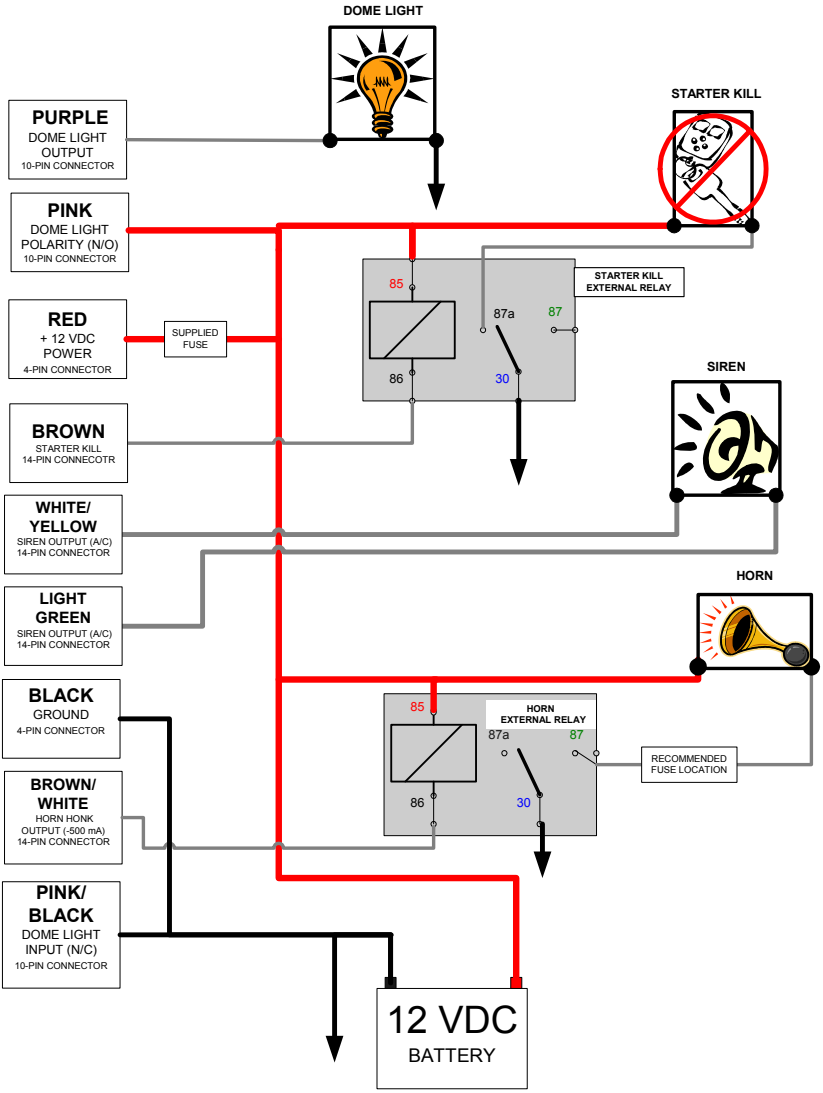
* DO NOT USE A TEST LIGHT ON THE MODULE'S 500MA OUTPUTS

Wiring Connections

WIRING CONNECTION - LOCK/UNLOCK



ACCESSORY CONNECTIONS



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