

Upgrading “TriMark IEI” RF Controller to “TriMark Full-Feature” RF Controller



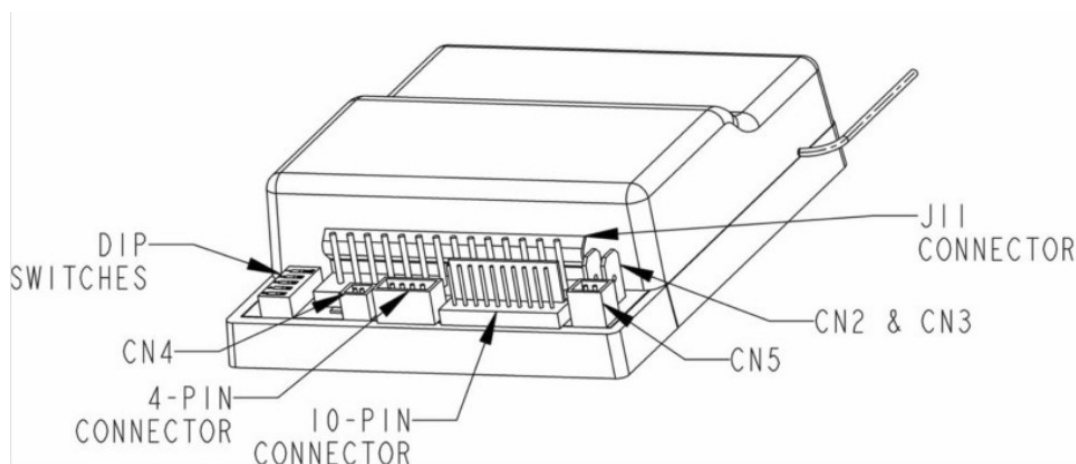
Rewiring Guide

This guide explains how to upgrade from the discontinued 19906-01 IEI RF Controller to the 22310-01 TM-FF Controller. Use the tables explaining each wire’s location and purpose for the old and new modules in conjunction with the equivalency spreadsheet and schematic for the recommended retrofit installation. Wire colors for the original installation may not match those mentioned in this guide, so reference only the parent connector and pin location when matching up wires.

IEI Wiring Definitions

This table details what each wire’s purpose, parent connector, and pin location is for the original equipment installation. The default factory color is called out, but your installation may differ if the OEM provided integrated harnesses.

IEI RF Module Connector Names and Locations



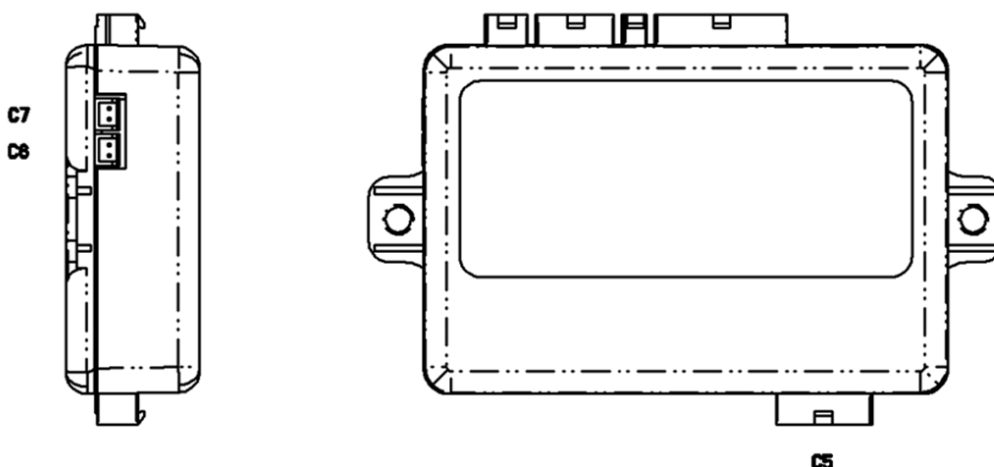
Upgrading “TriMark IEI” RF Controller to “TriMark Full-Feature” RF Controller



TM-Full Feature (FF) Wiring Definitions

This table details what each wire’s purpose, its parent connector, and its pin location for the TM-FF RF Module. The wire colors called out in this table are accurate if you’ve purchased the kit including pig-tail harnesses. Wire colors will vary if you’ve purchased an adaptor harness from a manufacturer other than TriMark.

TM-FF RF Module Connector Names and Locations



IEI RF Module Wire Definitions

J11 Connector		Default Wire Color
1	AUX 12A Relay Input/Output (Fuse is recommended)	PURPLE / WHITE
2	AUX 12A Relay Input/Output (Pin 1 and Pin 2 are interchangeable)	PURPLE / WHITE
3	LOCK Output (N / C Relay 30)	WHITE / GREEN
4	LOCK Input (N / C Relay 87A)	WHITE / BLACK
5	Connect to TRUE IGNITION	YELLOW
6	Connect to CLEAN GROUND	BLACK
7	SIREN (+) Output, Up to 2A	BROWN
8	Connect to POWER SOURCE (Fuse Recommended)	RED
9	UNLOCK Input (N / C Relay 87A)	BLUE / WHITE
10	UNLOCK Output (N / C Relay 30)	WHITE / RED
11	LOCK / UNLOCK Polarity (N / O Relay 87)	PINK / BLACK
12	PARKING LIGHTS Output (+12V, 15A)	WHITE
13	DOME LIGHT 12A Relay Input/Output (Fuse is recommended)	PINK
14	DOME LIGHT 12A Relay Input/Output (Pin 13 and Pin 14 are interchangeable)	PINK

10-Pin Connector		Default Wire Color
1	ARMED Output (-) 500mA	ORANGE
2	AUX. CHANNEL #2 (-) 500mA	WHITE / BROWN
3	HORN Output (-) 500mA	BROWN / WHITE
4	2 nd UNLOCK Output (-) 500mA	WHITE / YELLOW
5	HEADLIGHTS Output (-) 500mA	GRAY
6	UNASSIGNED	PURPLE / GREEN
7	STAGGERED LOCK (-) 500mA	WHITE / BLUE
8	(-) 2 nd UNLOCK Signal Input	BLUE
9	(-) Door Trigger Input	GREEN
10	(+) Door Trigger Input	PURPLE
4-Pin Connector		Default Wire Color
2	(-) UNLOCK SIGNAL Input	WHITE / RED
4	(-) LOCK SIGNAL Input	WHITE / GREEN
0.25" Male Connectors		
CN2 & CN3	STARTER KILL Relay Non-Polarized, 40A	none

Upgrading “TriMark IEI” RF Controller to “TriMark Full-Feature” RF Controller



TM-FF RF Module Wire Definitions

C1: 4-PIN HARNESS		Default Wire Color
1	---	None
2	IGNITION Input	YELLOW
3	GROUND Input	BLACK
4	POWER (+12V) Input	RED
C2: KEYPAD HARNESS		Default Wire Color
---	Pre-Made Harness (p/n 22305-01 or 23981-01)	---
C3: 2-PIN HARNESS		Default Wire Color
1	(-) LOCK SIGNAL Input	GREEN / WHITE
2	(-) UNLOCK SIGNAL Input	BLUE / WHITE
C4: 14-PIN HARNESS		Default Wire Color
1	(-) SECURITY TRIGGER Input 3	WHITE / PURPLE
2	ARMED Output (-500mA)	ORANGE
3	STARTER KILL Output (-500mA)	BROWN
4	HEADLIGHTS Output (-500mA)	GRAY
5	HORN Output (-500mA)	BROWN / WHITE
6	(-) SECURITY TRIGGER Input 1	WHITE / BLACK
7	SIREN Output (A/C)	WHITE / YELLOW
8	AUX 2 Output (-500mA)	RED / WHITE
9	AUX 1 Output (Relay +15A)	BLACK / WHITE
10	2 ND UNLOCK Output (-500mA)	WHITE / ORANGE
11	3 RD UNLOCK / STAGGERED LOCK (-500mA)	WHITE / BLUE
12	PARKING LIGHTS Output (Relay +15A)	WHITE
13	(+) SECURITY TRIGGER Input 2	WHITE / RED
14	SIREN Output (A/C)	GREEN
C5: 10-PIN HARNESS		Default Wire Color
1	DOOR LOCK (N/C) (Relay 30A)	GREEN / BLACK
2	---	---
3	DOME LIGHT Output (Relay 15A)	PURPLE
4	DOME LIGHT (N/O) (Relay 15A)	PINK
5	DOME LIGHT (N/C) (Relay 15A)	PINK / BLACK
6	DOOR LOCK (N/O) (Relay 30A)	GREEN / WHITE
7	DOOR LOCK Output (Relay 30A)	GREEN
8	DOOR UNLOCK (N/C) (Relay 30A)	BLUE / BLACK
9	DOOR UNLOCK (N/O) (Relay 30A)	BLUE / WHITE
10	DOOR UNLOCK Output (Relay 30A)	BLUE
C6: LED HARNESS		
1,2	Included with module	---
C7: PUSH-BUTTON HARNESS		
1,2	Included with module	---

Upgrading “TriMark IEI” RF Controller to “TriMark Full-Feature” RF Controller



WIRE EQUIVALENCY SORTED BY NEW SYSTEM CONNECTIONS						
New System			REPLACES	Old System IEI Receiver		
Connector	Pin	Potential Wire Color		Connector	Pin	Wire Purpose
C1	1	---		---	---	---
C1	2	Yellow		J11	5	KEY INSERTED/IGNITION
C1	3	Black		J11	6	GROUND INPUT
C1	4	Red		J11	8	+12V INPUT
C2	ALL	New Keypad Harness				---
C3	1	Green/White		4-PIN	4	ENTRY LOCK INPUT (-)
C3	2	Blue/White		4-PIN	2	ENTRY UNLOCK INPUT (-)
C4	1	White/Purple		10-PIN	8	(-) SECURITY TRIGGER INPUT
C4	2	Orange		10-PIN	1	ARMED OUTPUT (-500mA)
C4	3	Brown		NO CONNECTION STARTER KILL OUTPUT (-500mA)		
C4	4	Gray		10-PIN	5	LIGHTS OUTPUT (-500mA)
C4	5	Brown/White		10-PIN	3	HORN OUTPUT (-500mA)
C4	6	White/Black		10-PIN	9	(-) SECURITY TRIGGER INPUT
C4	7	White/Yellow		J11	7	SIREN OUTPUT (A/C)
C4	8	Red/White		10-PIN	2	AUX2 OUTPUT (-500mA)
C4	9	Black/White		J11	2	AUX OUTPUT (+15 A)
C4	10	White/Orange		10-PIN	4	2ND UNLOCK OUTPUT (-500mA)
C4	11	White/Blue		10-PIN	7	STAGGERED LOCK OUTPUT (-500mA)
C4	12	White		J11	12	PARKING LIGHTS (+15A)
C4	13	White/Red		10-PIN	10	(+) SECURITY TRIGGER INPUT
C4	14	Light Green		NO CONNECTION SIREN OUTPUT (A/C)		
C5	1	Green/Black		J11	4	ENTRY LOCK GROUND
C5	2	---		---	---	---
C5	3	Purple		J11	14	DOME LIGHT OUTPUT (+15A)
C5	4	Pink		J11	13	+12V INPUT
C5	5	Pink/Black		NO CONNECTION GROUND INPUT		
C5	6	Green/White		J11	11	+12V INPUT
C5	7	Green		J11	3	ENTRY LOCK OUTPUT
C5	8	Blue/Black		J11	9	ENTRY UNLOCK GROUND
C5	9	Blue/White		J11	11	+12V INPUT
C5	10	Blue		J11	10	ENTRY UNLOCK OUTPUT

Upgrading “TriMark IEI” RF Controller to “TriMark Full-Feature” RF Controller



WIRE EQUIVALENCY SORTED BY OLD SYSTEM CONNECTIONS						
OLD SYSTEM IEI Receiver			REPLACED BY	NEW SYSTEM		
Connector	Pin	Wire Purpose		Connector	Pin	NEW Wire Color
J11	1	+12V BUS		NO CONNECTION		
J11	2	AUX 1 OUTPUT		C4	9	BLACK/WHITE
J11	3	ENTRY LOCK OUTPUT		C5	7	GREEN
J11	4	ENTRY LOCK GROUND		C5	5	GREEN/BLACK
J11	5	IGNITION		C1	2	YELLOW
J11	6	GROUND INPUT		C1	3	BLACK
J11	7	SIREN OUTPUT		C4	7	WHITE/YELLOW
J11	8	+12V INPUT		C1	4	RED
J11	9	ENTRY UNLOCK GROUND		C5	8	BLUE/BLACK
J11	10	ENTRY UNLOCK OUTPUT		C5	10	BLUE
J11	11	ENTRY LOCK/UNLOCK POLARITY		C5	6	GREEN/WHITE
J11	12	PARKING LIGHTS OUTPUT		C5	9	BLUE/WHITE
J11	13	+12V BUS		C4	12	WHITE
J11	14	DOME LIGHT OUTPUT		C5	4	PINK
				C5	3	PURPLE
10-PIN	1	ARMED OUTPUT		C4	2	ORANGE
10-PIN	2	AUX 2 OUTPUT		C4	8	RED/WHITE
10-PIN	3	HORN OUTPUT		C4	5	BROWN/WHITE
10-PIN	4	2ND UNLOCK OUTPUT		C4	10	WHITE/ORANGE
10-PIN	5	LIGHTS OUTPUT		C4	4	GRAY
10-PIN	6	UNASSIGNED		NO CONNECTION		
10-PIN	7	STAGGERED LOCK		C4	11	WHITE/BLUE
10-PIN	8	SECURITY TRIGGER INPUT (-)		C4	1	WHITE/PURPLE
10-PIN	9	SECURITY TRIGGER INPUT (-)		C4	6	WHITE/BLACK
10-PIN	10	SECURITY TRIGGER INPUT (+)		C4	13	WHITE/RED
4-PIN	1	UNASSIGNED		NO CONNECTION		
4-PIN	2	DOOR UNLOCK SWITCH INPUT		C3	2	BLUE/WHITE
4-PIN	3	UNASSIGNED		NO CONNECTION		
4-PIN	4	DOOR LOCK SWITCH INPUT		C3	1	GREEN/WHITE

ANY WIRES COMING FROM THE TRIMARK KEYPAD HARNESS (IF USED) SHOULD BE REMOVED. A NEW HARNESS WILL PROVIDE THE CONNECTION TO REPLACE THOSE WIRES.

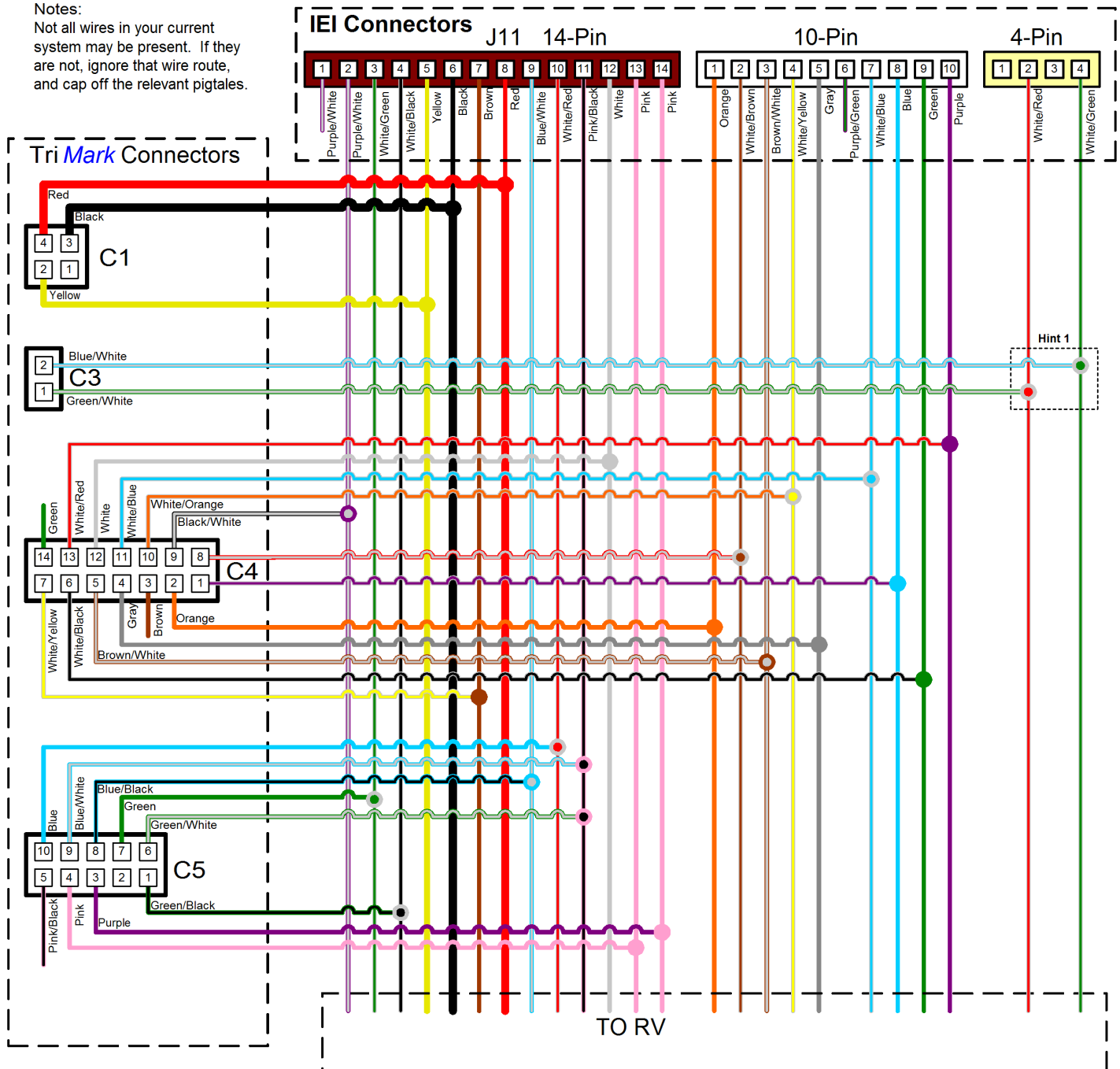
No other connections are used from this system

Upgrading “TriMark IEI” RF Controller to “TriMark Full-Feature” RF Controller

Wiring Diagram - Upgrading Stand-Alone IEI RF Receiver to TM-FF RF Receiver

Notes:

Not all wires in your current system may be present. If they are not, ignore that wire route, and cap off the relevant pigtales.



Hints:

1) If your system has a TriMark keypad installed with this module, replace the keypad's harness with the part number 22305-01 and do not connect the C3 wires to the 4-Pin connector wires.

2) Solid wires are shown in one color, striped wires are shown in 2 side-by-side colors (—).

Upgrading “TriMark IEI” RF Controller to “TriMark Full-Feature” RF Controller



TriMark Corporation
500 Bailey Avenue
P.O. Box 350
New Hampton, IA 50659
United States
Tel: +1 641 394 3188
Fax: +1 641 394 2392
E-mail: tips@trimarkcorp.com
www.trimarkcorp.com

TriMark Europe Limited
Cedar Court
Walker Road
Bardon Hill
Coalville, LE67 1TU
United Kingdom
Tel: +44 (0) 1530 512460
Fax: +44 (0) 1530 512461
E-mail: sales@trimarkeu.com
www.trimarkeu.com

TriMark (Xuzhou)
Automotive Components Co. Ltd
Building A5 Jingwu Road
Xuzhou Economic Development Zone
Xuzhou, Jiangsu
221004 PR China
Tel: +86 516 8773 0018
Fax: +86 516 8773 0058
E-mail: sales@trimarkcn.com
www.trimarkcn.com



This manual is provided courtesy of **RV Tech Cheat Sheet**



Professional resources for the whole RV industry — free.

We put manuals, wiring diagrams and hard-won tech knowledge in every technician's hands, so repairs get done right the first time, techs work faster, and RV owners everywhere get better service.



rvtechcheatsheet.com/manuals

Find thousands more RV manuals, wiring diagrams and parts lists

RV techs: share fixes, ask questions and learn from each other.

Join our free Facebook group →



Follow proper safety practices. If in doubt, consult a professional RV technician.