



ENTRY DOOR LATCH INFORMATION - SOUTHCO

SOUTHCO, Inc. door latches are used in Lippert's Keyless Entry Door systems.

All Southco units are black and the door handle is slightly curved, see Fig. 10.

Keyfobs are used as remotes for the keyless transmitters, see Fig. 6.

Keyfobs only operate the deadbolt and not the standard door lock.



Fig. 6



**KEY
CODE**

Fig. 7

In the event of a power outage or specific loss of power to the RV occurs, the current status of the deadbolt will remain in the state in which it was last in, e.g. if the deadbolt is in the locked position, it will remain in the locked position. The key provided with the unit will be needed to unlock the deadbolt if entry into the unit must be obtained prior to power being restored.

The Southco key code is a 3 -digit code stamped onto the key, see Fig. 7. The key will have black molded plastic on the key handle and is rounded at the end. The Master Key bears no keycode.

If the key or key fob is lost, the keycode can be found on the latch plate, see Fig. 9, by removing the 4 screws on the inside latch handle, see Fig. 8. **Southco can be contacted directly for key or keyfob replacement - 610-459-4000.**

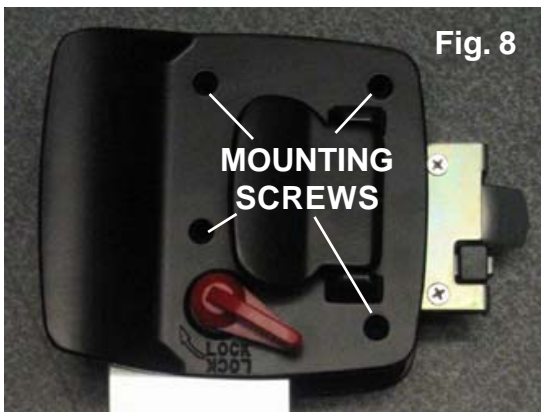


Fig. 8

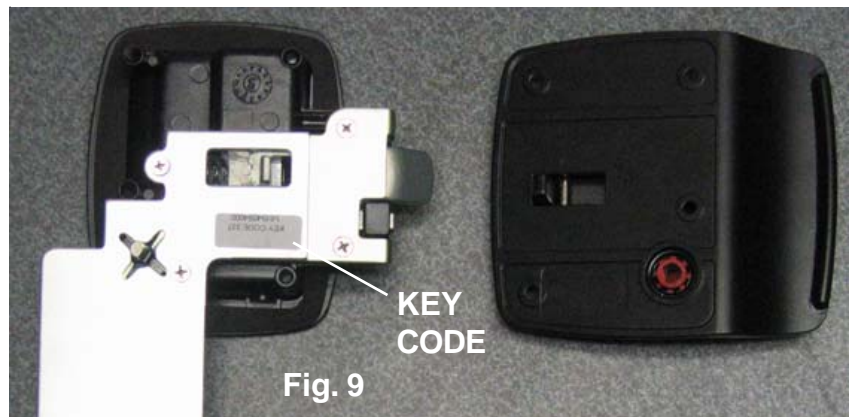


Fig. 9



ENTRY DOOR LATCH INFORMATION - SOUTHCO, CON'T.

The keyless entry mechanism is mounted in the door accessed just below the door latch, see Fig. 10.



Fig. 10

The receiver is mounted just below the entry door window.

The keyfobs are all matched directly to the receiver. A small black sticker with the code number is affixed directly to each component. On the keypad, the sticker is located under the 9 - 0 button, see Fig. 11. On the keyfob, in the middle of the backside of the fob, see Fig. 12. The matching code will be located to the receiver next to the antenna.



Fig. 11



Fig. 12



ENTRY DOOR LATCH INFORMATION - SOUTHCO, CON'T.

Problem: Entry door latch will not actuate

1. Verify Power Supply to the Latch:

- a. Power is supplied to the latch actuator through a bridge connector at the bottom of the door on the hinge side. *When the door is open, there is no power transmitted to the latch.* See figure

below:



Place **Red** lead
top most contact

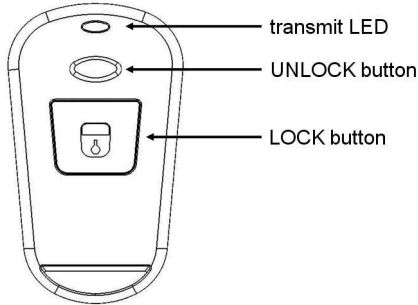
- b. The FRAME side of the connector should have resident 12VDC power. This is the input power to the RF controller and the POLARITY is critical. Using a multimeter set to read DC voltage: place the RED lead on the top most contact. Place the BLACK lead on the lower most contact. Meter should read +11-12V power. A negative value means the bridge connector was installed/wired backwards. To correct, remove screws on the connector, turn it over and reinstall.
3. If the user code is verified AND power is there with the correct polarity then contact Southco Inc. (610) 459-4000.

EA-R02 RF Controller Kit Operating Instructions

Package Contents

- Transmitter Keyfob (qty 2)
- Receiver Unit
- Wire Harness

Transmitter



Specifications

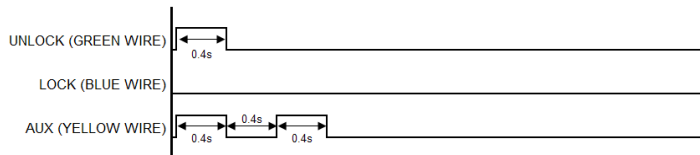
Receiver Power:	12VDC (±10%)
Receiver Idle Current:	10mA (maximum), no attached devices
Receiver Operating Current:	1A (maximum), no attached devices
Receiver Outputs:	three Form C relays, rated 15A at 14VDC
Operating Range:	up to 60 feet (open air)
Operating Frequency:	433.92MHz
Coding Type:	Fixed Code
Transmitter Power:	Type CR2016 3VDC battery (qty 2 per transmitter)

Normal Use

The keyfob transmitter can be used to lock and unlock the system.

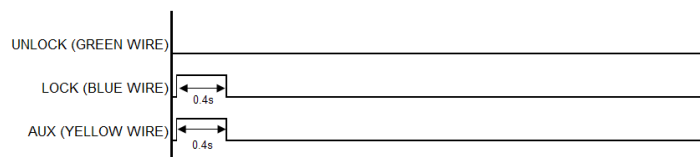
Unlocking the System

Press the transmitter's UNLOCK button. The transmitter LED will turn on and the system will unlock and the auxiliary output will pulse twice, as shown in the figure below:



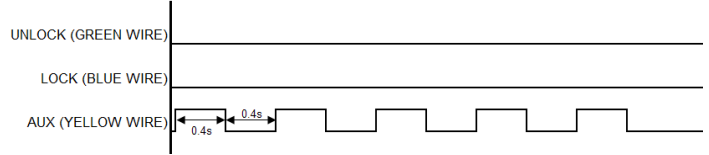
Locking the System

Press the transmitter's LOCK button. The transmitter LED will turn on and the system will lock and the auxiliary output will pulse once, as shown in the figure below:



Pulsing Auxiliary Output

Press the transmitter's LOCK and UNLOCK buttons at the same time. The transmitter LED will turn on and the auxiliary output will pulse five times, as shown in the figure below:



Transmitter Battery Replacement

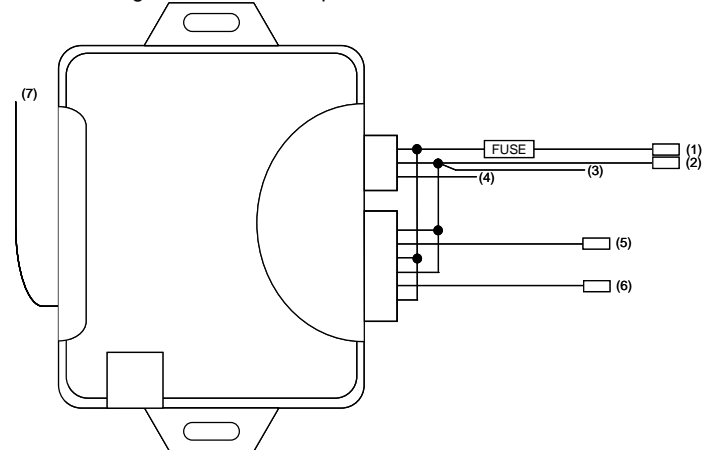
Replace the transmitter battery with two Type CR2016 3VDC batteries. The batteries can be replaced by opening the transmitter enclosure.

Wire Harness Fuse Replacement

Replace with 15A automotive blade fuse only.

Receiver Unit Mounting and Wiring

The receiver should be mounted in a location to minimize RF shielding. Two mounting screw bosses are provided to mount the receiver.



Wire	Wire Color	Description
1	Red	Power Supply Input (12VDC)
2	Black	Ground
3	Black	Ground (for use with auxiliary output)
4	Yellow	Auxiliary Output
5	Blue	Lock Actuator Output (connect to actuator blue wire)
6	Green	Unlock Actuator Output (connect to actuator green wire)
7	Black	Antenna (do not connect)

For technical support of this product contact: info@southco.com or visit: www.southco.com.

Enrolling a Transmitter with EA-R02-202 RF Receiver Application Note

Introduction

This application note explains how to enroll a new transmitter with the EA-R02-202 RF receiver. The EA-R02-202 receiver can support two transmitters. Depending on your system, the receiver is shipped with either one or two transmitters pre-enrolled:

- EA-R02 kit – Shipped with two EA-R02-102 keyfob transmitters pre-enrolled.
- EA-R03 kit – Shipped with one EA-R03-103 keypad transmitter pre-enrolled.

If two transmitters are already enrolled with the receiver unit, then the older of the two will be deleted if an additional transmitter is enrolled.

Related Documents

- J-EA-R02-M – User instructions for EA-R02 kit (keyfob transmitter)
- J-EA-R03-M – User instructions for EA-R03 kit (keypad transmitter)

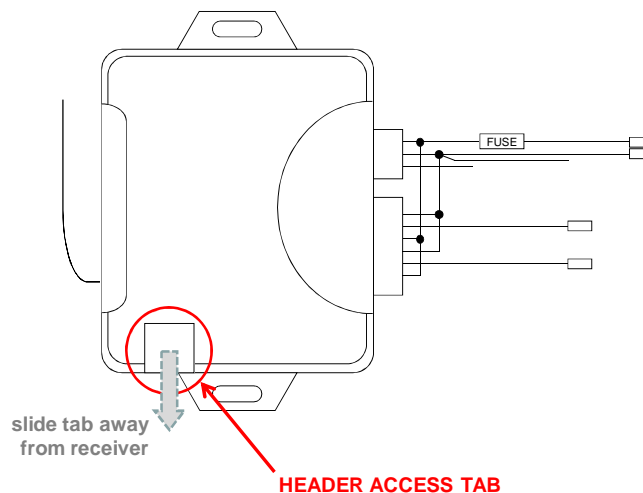
Process

CAUTION: Potentially hazardous voltages are present. Use caution when accessing the printed circuit board.

CAUTION: The receiver unit's circuit board is an ESD-sensitive device. Observe ESD best practices when accessing the circuit board to avoid damage to the circuit board.

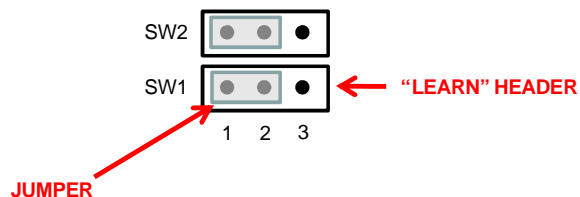
CAUTION: Do not remove the jumper across the SW2 “LOCK TIME” header.

1. Remove the header access tab by sliding the tab away from the receiver unit as shown below. Do not disconnect the wire harness from the receiver.



Enrolling a Transmitter with EA-R02-202 RF Receiver Application Note

- Through the header access tab window, locate the black jumper on the SW1 "LEARN" header on the circuit board. The "LEARN" header is closest to the edge of the receiver enclosure. The jumper should be positioned as shown below.



- Using a pair of long-nose pliers (aka needle-nose pliers), remove the SW1 jumper and re-install across the "1" and "2" pins. These are the same pins the jumper is currently installed on. When the jumper is re-installed, the auxiliary output will turn 'on', and the relay will click.

to enroll a keyfob transmitter...

Within six seconds of re-installing the jumper, press either the LOCK or UNLOCK button on the keyfob.

to enroll a keypad transmitter...

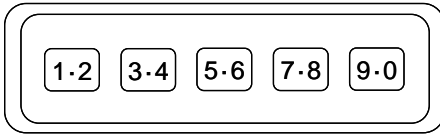
Within six seconds of re-installing the jumper, enter the current user code of the new keypad (e.g. 1 2 3 4), then press the 1-2 button.

The auxiliary output will pulse four times to verify successful enrollment. **NOTE:** Enrollment must be completed within 6 seconds of re-installing the jumper, or you will have to remove and re-install the jumper and try again.

For technical support of this product contact: info@southco.com, or visit www.southco.com.

EA-R03 Wireless Keypad Kit Operating Instructions

EA-R03 Wireless Keypad Kit



Package Contents

- Wireless Keypad Transmitter
- Receiver Unit
- Wire Harness
- Keypad Mounting Hardware

Specifications

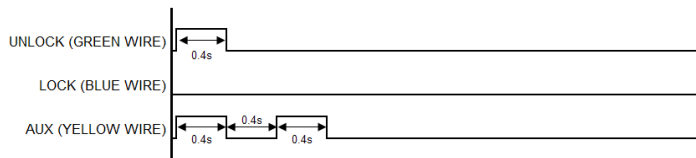
Receiver Power:	12VDC ($\pm 10\%$)
Receiver Idle Current:	10mA (maximum), no attached devices
Receiver Operating Current:	1A (maximum), no attached devices
Receiver Outputs:	three Form C relays, rated 15A at 14VDC
Operating Range:	up to 60 feet (open air)
Operating Frequency:	433.92MHz
Coding Type:	Fixed Code
Transmitter Power:	Type CR2032 3VDC battery

Normal Use

The wireless keypad transmitter can be used to lock and unlock the system.

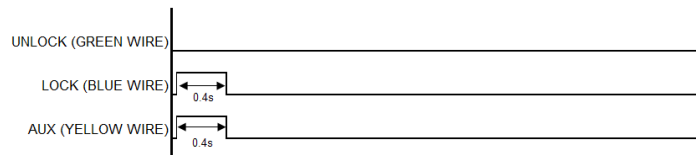
Unlocking the System

Enter the user code, then press the 1-2 button. The system will unlock and the auxiliary output will pulse twice, as shown in the figure below:



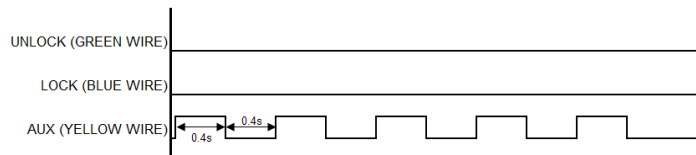
Locking the System

Enter the user code, then press the 3-4 button. The system will lock and the auxiliary output will pulse once, as shown in the figure below:



Pulsing Auxiliary Output

Enter the user code, then press the 5-6 button. The auxiliary output will pulse five times, as shown in the figure below:



Changing the User Code

The unit is shipped with a default user code of 1234, but can be changed to a 3-7 digit number. To change the user code:

1. Press the 9-0 button for approximately 3 seconds. Keypad lights should flash twice then stay on.
2. Enter the current user code. When entering the last digit of the current user code, hold the button for approximately 2 seconds. Keypad lights should flash once then stay on.
3. Enter the new user code. When entering the last digit of the new user code, hold the button for approximately 2 seconds. Keypad lights should flash once then stay on.
4. Repeat the new user code. When entering the last digit of the new user code, hold the button for approximately 2 seconds.
5. Keypad lights should flash once then turn off. The user code has been successfully changed.

If the keypad lights turn off during Steps 1-4, then programming has been timed out and the process needs to be repeated from Step 1.

NOTE: If the user code is lost or forgotten, contact Southco for assistance.

Transmitter Battery Replacement

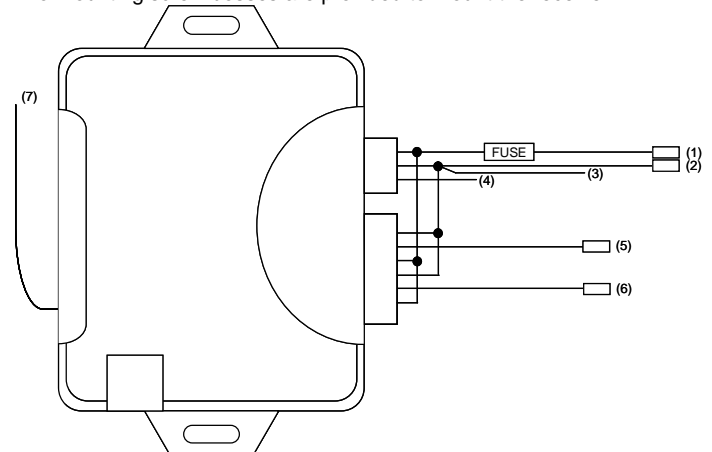
Replace the transmitter battery with a Type CR2032 3VDC battery. The battery can be replaced by opening the enclosure.

Wire Harness Fuse Replacement

Replace with 15A automotive blade fuse only.

Receiver Unit Mounting and Wiring

The receiver should be mounted in a location to minimize RF shielding. Two mounting screw bosses are provided to mount the receiver.



Wire	Wire Color	Description
1	Red	Power Supply Input (12VDC)
2	Black	Ground
3	Black	Ground (for use with auxiliary output)
4	Yellow	Auxiliary Output
5	Blue	Lock Actuator Output (connect to actuator blue wire)
6	Green	Unlock Actuator Output (connect to actuator green wire)
7	Black	Antenna (do not connect)

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Changing EA-R02-202 RF Receiver Settings Application Note

Introduction

This application note explains how to (1) enroll a transmitter with the EA-R02-202 RF receiver and (2) set the duration of the receiver's LOCK and UNLOCK output signals.

The EA-R02-202 is compatible with the:

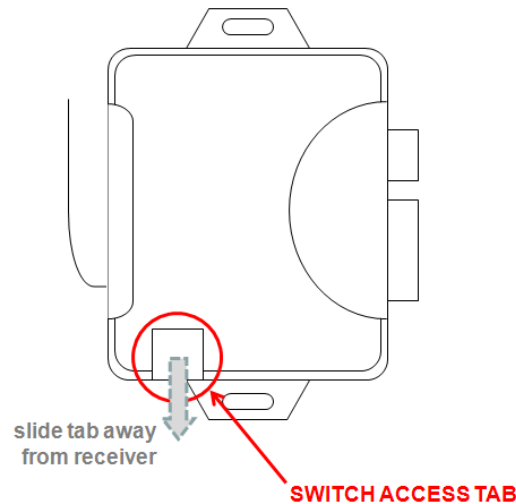
- EA-R02-102 keyfob transmitter
- EA-R03-103 keypad transmitter

Process

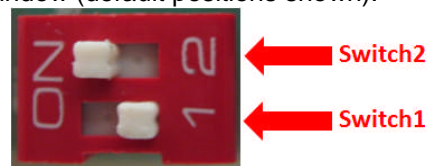
CAUTION: Potentially hazardous voltages are present. Use caution when accessing the printed circuit board.

CAUTION: The receiver unit's circuit board is an ESD-sensitive device. Observe ESD best practices when accessing the circuit board to avoid damage to the circuit board.

Changing the settings will require access to the programming switches on the receiver's circuit board. To access the switches, remove the switch access tab by sliding the tab away from the receiver unit as shown below.



Two switches will be visible thru the tab window (default positions shown):



- Switch1 – Used to enroll transmitters. Default setting = “OFF” position.
- Switch 2 – Used to set LOCK and UNLOCK duration:

Switch2 Setting	Duration
ON (default)	250ms (default)
OFF	10sec

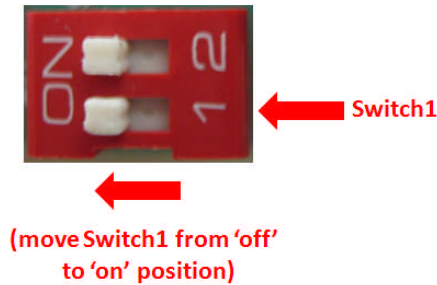
The switch access tab must always be re-installed when done changing the settings.

Changing EA-R02-202 RF Receiver Settings Application Note

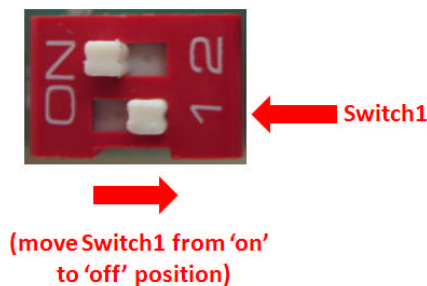
To enroll a transmitter...

The EA-R02-202 receiver can support up to four transmitters.

1. Verify receiver has 12VDC power supply.
2. Move Switch1 from OFF to ON position, as shown below. The auxiliary output will turn on.



- 3a. To enroll an EA-R02-102 keyfob transmitter: Within six seconds of moving Switch1 to the ON position, press either the LOCK or UNLOCK button on the keyfob. The auxiliary output will pulse to indicate the transmitter has been enrolled. If additional keyfobs are to be enrolled, press either the LOCK or UNLOCK button on the keyfob within three seconds of enrolling the previous transmitter. The auxiliary output will pulse twice to indicate transmitter #2 has been enrolled, three times to indicate transmitter #3 has been enrolled, and four times to indicate transmitter #4 has been enrolled.
- 3b. To enroll an EA-R03-103 keypad transmitter: Within six seconds of moving Switch1 to the ON position, enter the current user code of the new keypad (e.g. 1 2 3 4), then press the 1-2 button. The auxiliary output will pulse to indicate the transmitter has been enrolled. If additional keypads are to be enrolled, enter the current user code of the new keypad (e.g. 1 2 3 4), then press the 1-2 button within three seconds of enrolling the previous transmitter. The auxiliary output will pulse twice to indicate transmitter #2 has been enrolled, three times to indicate transmitter #3 has been enrolled, and four times to indicate transmitter #4 has been enrolled.
4. Move Switch1 from ON to OFF position, as shown below:



5. Issue a LOCK or UNLOCK command from the transmitter to verify successful enrollment.

⚠ NOTE: Enrolling any transmitters after moving Switch1 from ON to OFF will cause **all previous transmitters that were enrolled to be erased and require reprogramming to that receiver.**

To change LOCK/UNLOCK time...

The duration of the LOCK and UNLOCK outputs can be set by setting Switch2, shown below. Set the switch to the ON position for 250ms output. Set the switch to the OFF position for 10 second output.

