

INSTALLATION GUIDE

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OWNER'S GUIDE

KEYLESS ENTRY • MODELS KE100 / KE150 / 1702

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Technical Assistance

All tech personnel are expertly qualified to answer any technical questions.
Technicians are available Monday through Friday from 9:00 a.m. until 8:00 p.m. and Saturday 10:00 a.m. until 4:00 p.m.

Address

288 Canton Avenue • Wintersville, Ohio 43953

Telephone

Phone: 740-264-4710 • 800-878-8007 • Fax: 740-264-7306

SYSTEM FEATURES

Four-Button Remote Control	Remotely lock and unlock your car from a distance.
Starter Immobilizer	You can't steal what you can't start. Most insurance companies offer a discount for this feature. (Optional part #773 required on KE100 only.)
Trunk Release	Remotely opens your trunk. (Optional part #775 required.)
Parking Light Confirmation	Never walk up to a dark car again. Confirms that your vehicle has received a remote signal and remains on for ten seconds when disarming. (Optional part #775 required.)
Extended Range Antenna	Allows you to operate your system from an extended distance.
Limited Lifetime Warranty	Guarantees life-long protection.

SYSTEM COMPONENTS

Your system includes:

1- Installation & Operation Guide	1- 14-Pin Wire Harness
1- Main Control Module	1- Warranty
1- Four Button Remote Transmitter with Slide Protector	2- Bulldog Window Decals

TECHNICAL ASSISTANCE

Should you need help. First check our website at www.bulldogsecurity.com/wires.htm or call our toll-free Tech Support Hotline Monday through Friday 9AM-8PM and Saturday 10AM-4PM EST at 800-878-8007.

You must give the following information:

- Name
- Telephone Number with Area Code (Fax number if applicable)
- Year, Make, and Model of the vehicle
- The model number of the system you are installing
- The type of assistance you are requesting

If you give the above information you will be called back as soon as possible, usually within 10 minutes.

BEFORE YOU BEGIN

Congratulations, you have purchased one of the most advanced keyless entry systems ever made. Your new keyless entry is a technological breakthrough utilizing the most advanced, state of the art technology and components. It is computer controlled and manufactured in the U.S.A. The dependability and variety of features make Bulldog Security the leader in the industry. Enjoy your new keyless entry for years to come!

Read this manual thoroughly before starting the installation. You must also decide if any options are desired such as starter immobilizer, trunk release and parking light confirmation. An optional relay may be needed for some of these options. **Please do not skip any steps.**

Since there are many different makes and models of vehicles, look at on our website, www.bulldogsecurity.com/wires.htm.

PRECAUTIONS

This system is designed for vehicles with power door locks only.

This system will add remote keyless entry features to any vehicle with power door locks. This will also work as a replacement system for the factory installed keyless entry system.

DO NOT use mechanical wiring connections, such as **crimp or snap together taps**. Follow instructions on pages 2-3.

DO NOT disconnect the battery if the vehicle has an anti-theft-coded radio or is equipped with an airbag. Doing so may cause a warning light to be displayed and may require a trip to the dealer to be corrected.

DO NOT leave the interior or exterior lights on for an extended period of time as it may cause battery drain.

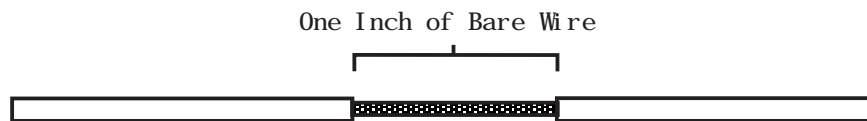
DO NOT mount the control module until all connections have been made and tested. Using wire ties or double sided tape, **MOUNT THE MODULE UNDER THE DASH.**

MAKING WIRING CONNECTIONS

1. Strip back two inches of insulation on the wire from the keyless entry.



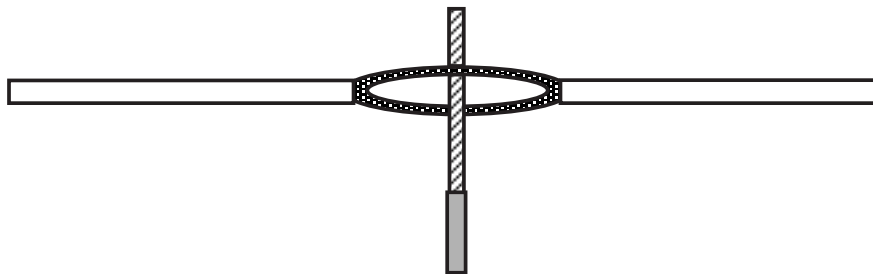
2. Strip back one inch of insulation on the wire you need to connect to.



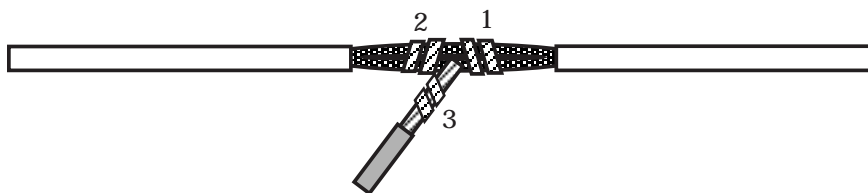
3. Separate the vehicle wire as shown. Make the separation large enough to fit the other wire through.



4. Insert the wire from the unit through the hole as shown.



5. Wrap the wire around one side then the other and finally around itself as shown.



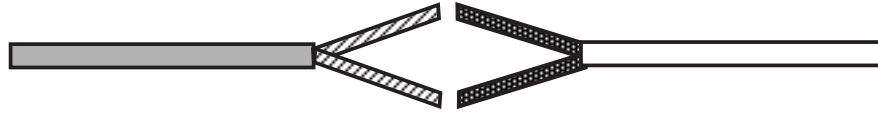
6. Use electrical tape to wrap. Be sure to cover the wire about two inches on either side of the connection. First pull the wire that you have just connected along side the wire you connected to, tape and wire tie them together. Use this method for all connections.



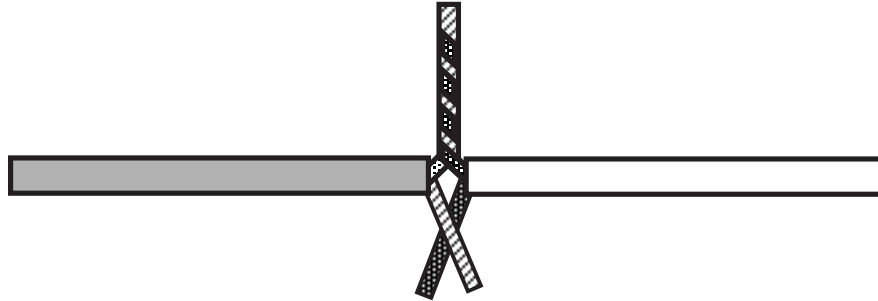
CAUTION: All wires must be wrapped and taped.

MAKING END TO END CONNECTIONS FOLLOW THESE INSTRUCTIONS

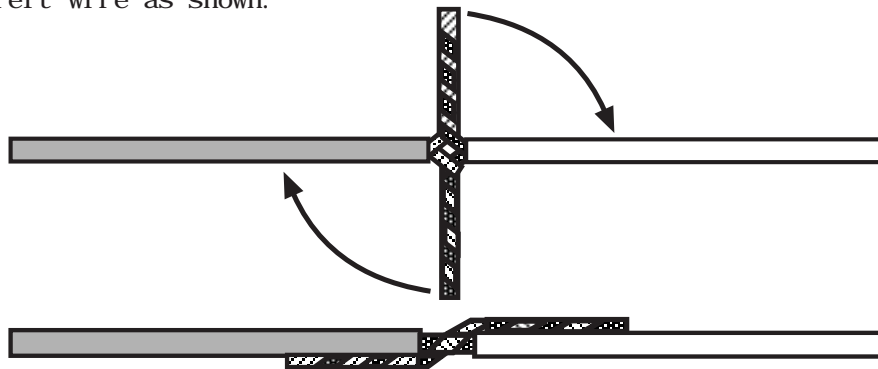
1. When tying two separate wires together at their ends, strip back 1" of insulation on both wires and separate the strands of wire as shown below.



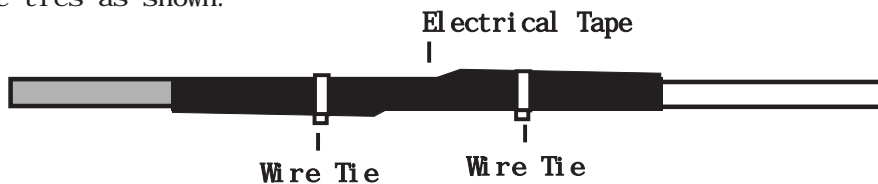
2. Twist upper wires together, twist lower wires together as shown.



3. Lay upper twisted pair of wires over right wire as shown. Bring lower twisted pair of wires up to meet the left wire as shown.



4. Use electrical tape to wrap, be sure to cover about 2 inches on either side of connection. Secure with wire ties as shown.



Use this method **ONLY** when connecting two separate wires end to end.

LOCATING & MAKING CONNECTIONS

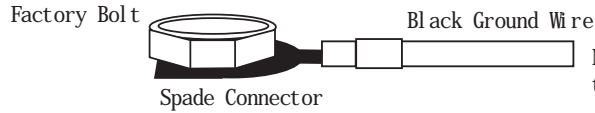
Please see the wiring chart on our website, www.bulldogsecurity.com.

CONSTANT POWER (+12V, key in any position including off)

These wire(s) are in your vehicle's main ignition harness, usually located on the steering column coming from the ignition switch. Probe each wire with your test light. The correct wire will show +12V when the ignition switch is in these 4 positions (LOCK-ON-OFF-CRANK). Attach the **RED** power wire from the 14-pin harness to this wire. **NOTE: The RED wire from the 14-pin harness is internally protected. No fuse is necessary.**

CHASSIS GROUND

Locate an easy to get to bolt or screw located under the driver's side of the dash and attach the **BLACK** ground wire from the 14-pin harness securely as pictured.



Note: Remove any paint below the spade connector.

Some vehicles have factory alarms.

FASD (-) (Factory Alarm Shut Down wire) (Optional)

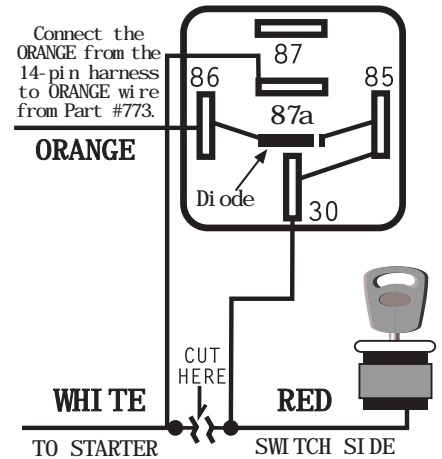
The **RED WITH BLACK STRIPE** wire provides (-) pulse at the same time the doors unlock. It is provided to turn the original factory installed alarm off. The factory disarm wire is usually found in the driver's side kick panel and will come from the door lock key cylinder. It will read +12V until the door key is inserted into the door and turned to the unlock position. At that time it will show a (-) negative output only while the key is held in the unlock position. **NOTE:** Some factory disarm wires remain neutral (shows no voltage) before you turn the key to unlock instead of +12v positive. Connect the **RED WITH BLACK STRIPE** wire to this disarm wire.

STARTER IMMOBILIZER (-)

(Optional relay Part #773 required for KE100 only)

INSTALLING STARTER IMMOBILIZER

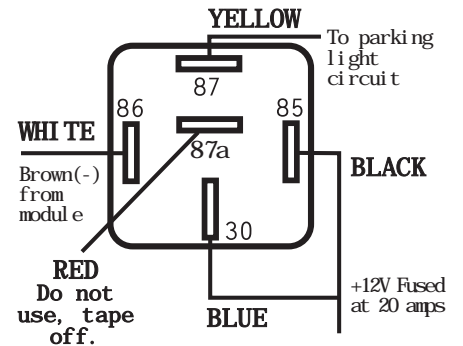
Locate the starter/crank wire. This wire is also in the main harness. Locate the wire that shows +12V on your test light only in the cranking position. This wire will not show +12V in any other position. Cut this wire in two. Now, try starting the vehicle, it should not start. If it does not, it is the correct wire. Connect the **RED** wire from the starter immobilizer to the "keyside" of the starter/crank wire. Connect the **WHITE** wire to the "starter side" of the starter/crank wire. Then connect the **ORANGE** wire from the starter immobilizer to the **ORANGE** wire on the 14-pin harness. **NOTE: You will need to cut factory wiring to make an end to end connection, see "Making Connections" on page 3.**



Parking Light (-) (Optional)

(Optional part #775 is needed) Turn the parking lights to the ON position. (NOT YOUR HEADLAMPS). Probe the wire(s) coming from your headlamp switch. Find the wire that will show +12V only when the parking lights are ON. Connect the **YELLOW** wire from part #775 to this wire. Connect the **BROWN**

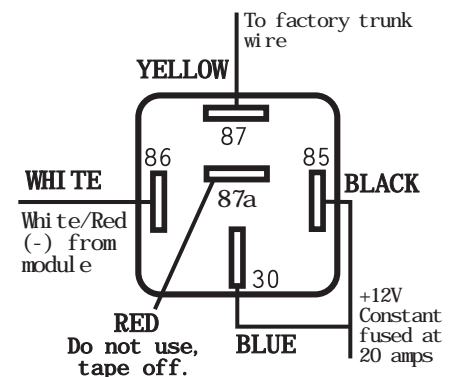
wire from the 14-pin harness to the **WHITE** wire on part #775. Connect the **BLACK** and the **BLUE** wires from part #775 to +12V constant fused at 20 amps.



Trunk Release (-) (Optional)

(Optional part #775 is needed) Locate the trunk release wire coming from the back of the trunk release switch. To determine if your trunk release is tripped by a (+) positive or a (-) negative (most trunk release switches are (+) positive). Place one end of your test light to ground, press the "Trunk" button, if the test light illuminates, you have a (+) positive trunk release. If it does not, connect the test light to +12V constant and probe the wire. If the test light illuminates when the button is pressed, then you have a (-) negative trunk release.

If your trunk output tests as a positive. Connect the **YELLOW** wire from part #775 to the trunk release wire. Connect the **WHITE WITH RED STRIPE** wire from the 14-pin harness to the **WHITE** wire on part #775. Connect the **BLACK** wire and the **BLUE** wire to +12V constant fused at 20 amps. If your trunk output tests as a (-) negative, connect the **YELLOW** wire from part #775 to the trunk release wire. Connect the **WHITE WITH RED STRIPE** wire from the 14-pin harness to the **WHITE** wire on part #775. Connect the **BLACK** wire to +12V constant fused at 5 amps. Connect the **BLUE** wire to ground.



LOCATING AND DETERMINING YOUR DOOR LOCK TYPE

In most cases, the factory door lock wires will be smaller gauge and located in the driver's kick panel or under the driver's dash.

NOTE: To help determine your door lock type, refer to the Door Lock Types by Manufacturer chart on page 13 or visit our web page at www.bulldogsecurity.com for specific detailed information on a particular vehicle.

If the year of your vehicle is listed as having two or more types of door lock systems, you must test for all of those types.

TESTING DOOR LOCK TYPE

There are 3 basic system types:

"Type A" Door Lock Test (Most GMs and most Chryslers)

Probe both of your door lock wires going to the door lock switch these wires are usually located in the driver's kick panel, attach one end of your test light to a good chassis ground. Using the vehicle's door lock controls, activate the lock then the unlock testing both wires one at a time. If the test light illuminates when you probe the lock and the unlock wires your vehicle has a "Type A" door locking system. Make sure to mark which wire is lock and unlock.

"Type B" Door Lock Test (Most Imports, some newer Fords)

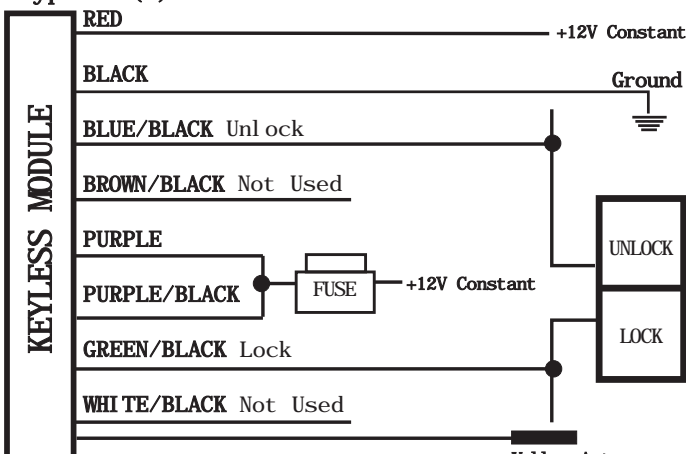
Probe both door lock wires going to the door lock switch these wires are usually located in the driver's kick panel. Attach one end of your test light to +12V using the vehicle's door lock controls activate the lock then the unlock testing both wires one at a time. If the test light illuminates when you probe the lock and the unlock wires your vehicle has a "Type B" door locking system. Make sure to mark which wire is lock and unlock.

"Type C" Door Lock Test (Most Fords, some Chryslers, GM Trucks)

Using your test light probe both the lock and the unlock wires usually located in the driver's kick panel. Attach one end of your test light to ground probing both wires one at a time while locking and unlocking the doors with the driver's side switch (usually the master switch). The test light should illuminate in both switch positions. Now attach one end of your test light to +12V constant, probe both wires one at a time again. The light should then illuminate again only in reverse order. This tells you that you have a "Type C" reversing polarity system. Make sure to mark which wire is lock and unlock.

CONNECTING DOOR LOCKS

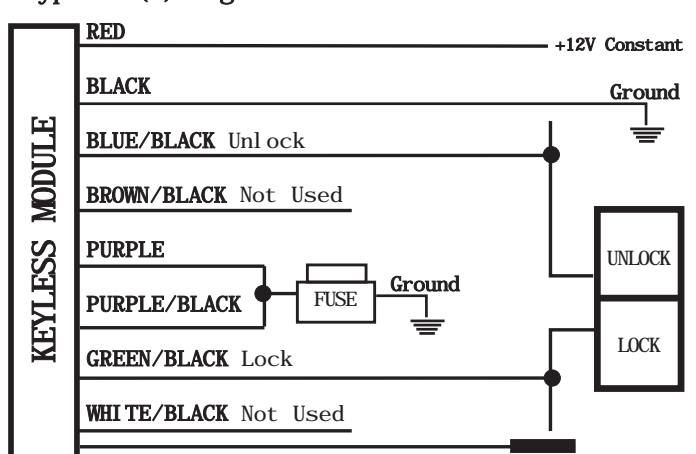
"Type A" (+) Positive



NOTE: Connect the PURPLE WITH BLACK STRIPE wire from the fuse to +12V constant power.

Yellow Antenna
Keep as straight as possible, tape the end to hold straight.

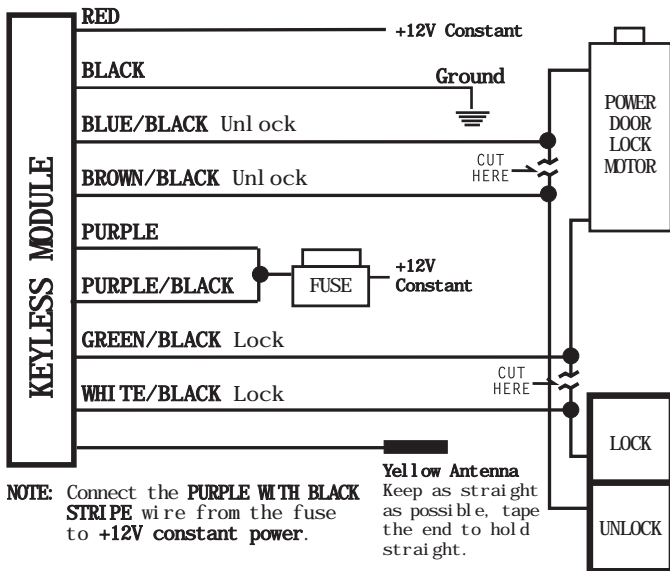
"Type B" (-) Negative



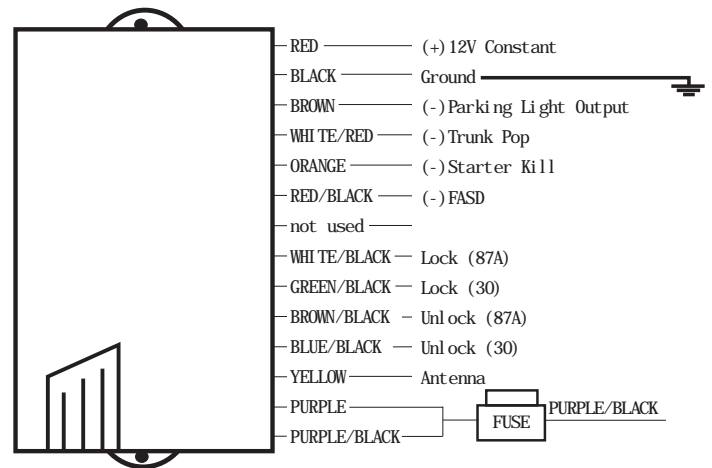
NOTE: Connect the PURPLE WITH BLACK STRIPE wire from the fuse to ground.

Yellow Antenna
Keep as straight as possible, tape the end to hold straight.

"Type C" Reverse Polarity



14- PIN HARNESS DIAGRAM



NOTE: You will need to cut factory wiring to make an end to end connection, see "Making Connections" on page 3.

DOOR LOCK TYPES BY MANUFACTURER

DOOR LOCK TYPES BY MANUFACTURER

"Type A"

Most Buicks 85-96
 Most Cadillacs 85-96
 Most Chevrolets 85-94
 4 door SUVs, vans 85-2000
 Most Oldsmobiles 85-95
 Most Pontiacs 85-95

Some Fords 96-2000
 Some Mercurys 96-2000
 Some Lincolns 96-2000

Most Chryslers 96-2000
 Most Dodges 96-2000
 Most Plymouths 96-2000
 Some Volkswagens 92-2000

"Type B"

Some Buicks 97-2000
 Some Cadillacs 96-2000
 Some Oldsmobiles 96-2000
 Some Pontiacs 96-2000

Some Fords 96-2000
 Some Mercurys 96-2000
 Some Lincolns 96-2000
 Most Hondas 85-2000
 Most Toyotas 85-2000
 Most Nissans 85-2000
 Most Mazdas 85-2000
 Some Subarus 85-2000
 Some Volkswagens 92-2000

"Type C"

Some Chevrolets 96-2000
 All Trucks 2 door 89-2000 SUVs
 2 door 89-2000

Most Fords 88-96 All Trucks 85-2000
 Most Mercurys 88-96
 Most Lincolns 88-96

Some Chryslers 85-95
 Some Dodges 85-95
 Some Plymouths 85-95

NOTE: If your vehicle requires a double pulse to lock or unlock due to factory security systems, please see programming instructions on page 7. (Double pulse door locks are used in some Japanese imports and some newer domestic vehicles.

OPERATING INSTRUCTIONS

1. Lock

Press and release button #1 (lock) the doors will lock. Starter immobilizer will engage.

2. Unl ock

Press and release button #2 (unlock) the doors will unlock. Starter immobilizer will be disengaged.

3. Trunk

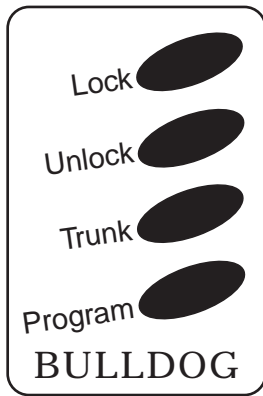
Press and release button #3 (trunk) the trunk will release. NOTE: This will send a negative 250ma output as long as button #3 is pressed.

4. Program

This is your programming button.

PROGRAMMING INSTRUCTIONS

In most cases the programming will NOT be used.



BUTTON #1
Locks your vehicle.

BUTTON #2
Unlocks your vehicle.

BUTTON #3
Pops your trunk

BUTTON #4
Programs your remote control.

To enter programming mode

Press button #4 for 10 seconds then release. You are now in programming mode. To exit programming mode press and release button #4 again.

Programming 0.7 and 3.5 second door lock/unlock pulse time

(This is used for European cars only)

(Used only with vacuum door lock system)

Press button #1 once the unit is programmed for 3.5 second door lock/unlock.

Press button #1 twice the unit is programmed for 0.7 second door lock/unlock.

Programming for dual pulse lock/unlock

(Used on some Japanese vehicles)

Press button #2 once, the unit is programmed for dual pulse unlock. Press

button #2 twice, the unit is programmed for dual pulse lock. Press button #2 three, times the unit is programmed for no dual pulse lock/unlock.

Programming a new remote

Press and hold button #1 for 10 seconds. Within 10 seconds press any button on the new remote.