

COLOR-CODED WIRE FUNCTIONS

| COLOR | FUNCTION |
|-----------------|---|
| GREY | Lock signal from the alarm |
| RED | +12VDC |
| BROWN | Unlock signal from the alarm |
| GREEN | Relay lock common |
| GREEN/PURPLE | Relay lock (N.O.) |
| GREEN/WHITE | Relay lock (N.C.) |
| BLUE | Relay unlock common |
| BLUE/PURPLE | Relay unlock (N.O.) |
| BLUE/WHITE | Relay unlock (N.C.) |
| BLACK | Chassis ground (SR-5203A only) |
| GREY WIRE LOOP | Programs lock pulse timer (SR-5203A only) |
| BROWN WIRE LOOP | Programs unlock pulse timer (SR-5203A only) |

SPECIFICATIONS FOR SR-5201R

Power: +12VDC
Contact Rating: 10 Amps
Lock/Unlock Timing: Controlled By Alarm

SPECIFICATIONS FOR SR-5203A

Power: +12VDC
Contact Rating: 30 Amps
Current Drain: 2.5mA (standby)
Lock/Unlock Pulse Length:
Lock (Grey wire loop):
 Uncut: 0.7 seconds
 Cut: 3.5 seconds

Unlock (Brown wire loop):
 Uncut: 0.7 seconds
 Cut: 3.5 seconds

NOTE: The above refers to the grey and brown wire loops found on the **SR-5203A** for systems without timed door lock/unlock outputs.

ENFORCER[®]

SR-5201R

DOOR LOCK INTERFACE

SR-5203A

TIMING DOOR LOCK INTERFACE

SLI[®]

SECO-LARM[®] U.S.A., INC.

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INTRODUCTION

The **SR-5203A** and **SR-5201R** are interfaces designed to allow **SECO-LARM's Enforcer** series of RF remote control alarms to lock and unlock a car's doors automatically when the alarm is armed and disarmed. With the convenience of automatic door locking and unlocking, the user need not fumble with keys to get into or leave the car. It makes manual door locks obsolete!

The **SR-5203A** and **SR-5201R** connect to almost any factory-installed door lock actuators, including the vacuum-operated units found in Mercedes Benz cars which require longer timers. In addition, aftermarket actuators such as the **SR-5202-ME** from **SECO-LARM** can be installed in cars without factory actuators and then connected to the **SR-5203A** or **SR-5201R**.

WARNING

While every attempt has been made to make this manual as clear as possible, installation of the **SR-5203A** and **SR-5201R** is not an easy task. **DO NOT ATTEMPT TO INSTALL THE SR-5203A OR SR-5201R WITHOUT FIRST THOROUGHLY FAMILIARIZING YOURSELF WITH THIS MANUAL. IMPROPER INSTALLATION CAN DAMAGE THE SR-5203A OR SR-5201R AND/OR THE CAR'S ELECTRICAL CIRCUITRY. ALSO, MAKE SURE YOU UNDERSTAND THE DIFFERENCE BETWEEN THE SR-5203A AND SR-5201R TO ENSURE THE CORRECT MODEL IS USED FOR EACH PARTICULAR ALARM.**

IMPORTANT

The information and specifications printed in this manual are current at the time of publication. However, the **SECO-LARM** policy is one of continual development and improvement. For this reason, **SECO-LARM** reserves the right to change specifications without notice. Also please note that this manual explains certain accessory items that do not come as standard equipment with this unit. The information regarding these accessories was included to help make the addition of such items as simple as possible.

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The **SR-5203A** and **SR-5201R** are patent pending.

WHY TWO MODELS OF DOOR LOCK INTERFACES?

This manual explains in great detail the installation and use of both the **SR-5203A** and **SR-5201R** door lock interfaces. As you read through this manual, you will notice that the installation and use of both interfaces are virtually the same. So why are there two different models?

The major difference between the **SR-5203A** and **SR-5201R** is that the **SR-5203A** includes built-in lock and unlock timers with grey and brown wire loops to control the timing duration. The **SR-5201R** uses the timer built into the **Enforcer** alarm brain, and so has no wire loops.

FOR NON-SECO-LARM ALARMS

If you wish to add a **SECO-LARM** power door lock interface to a non-**SECO-LARM** alarm, make sure that you can identify a negative (ground) output coming from the alarm when it is armed, and a separate negative (ground) output when it is disarmed. If those outputs are timed specifically for lock and unlock use, then use the **SR-5201R** interface. If those outputs are not timed, then use the **SR-5203A** interface.

HOW THIS MANUAL IS ARRANGED

This manual covers the installation of both the **SR-5203A** and **SR-5201R**. Since the installation of the two is similar, only occasional references to their differences need be noted. The **SR-5203A** connection diagrams are used, but that will make no difference in the installation of either unit.

Sections 1 through 6 of this manual give general information regarding operation and installation of the **SR-5203A** and **SR-5201R**. Sections 7 through 14 give detailed installation procedures according to the type of door locks found in the car you are working on.

VERY, VERY IMPORTANT

Even though installation and use of both the **SR-5203A** and **SR-5201R** are similar, the two units are not interchangeable. This cannot be emphasized enough. If you are installing an alarm system without door lock and unlock outputs, you must use the **SR-5203A** interface. If you are installing an alarm with timed door lock and unlock outputs, you must use the **SR-5201R** interface. Using the wrong interface with a particular alarm will have unpredictable consequences, including possible damage to the alarm brain, door lock interface, or even the car's power door lock/unlock system.

INSTALLING THE SR-5203A OR SR-5201R

(Note that installation is virtually the same for both units)

DETERMINING WHICH LOCK/UNLOCK SYSTEM IS BEING USED

Factory-installed power door lock systems vary from car to car, but some cars may require aftermarket door lock actuators. If you find a system not covered by this manual, please consult the automobile manufacturer or a certified automotive electrician.

WHERE TO START

Before you start removing door panels or dissecting the under-dash wiring harnesses, please ask yourself the following questions:

1. Does the car already have power door locks? This sounds simple, but many inexperienced installers waste time trying to find the lock and unlock wires of cars without power door locks. If the car does not have power door locks, then add aftermarket actuators as shown on the reverse of this page.
2. Does a car with power door locks have an actuator in the driver's door? Test the door lock system to see if the driver's door has an actuator. If manually locking and unlocking the driver's door also locks and unlocks the passenger's door, but there is no way to electrically lock or unlock the driver's door, then the driver's door has no actuator. This is the case with most Volvos and older Mercedes. In this situation, an actuator must be added to the driver's door only (see the reverse page). Then connect only this new actuator to the door lock interface. The interface will lock and unlock the new actuator, thus locking and unlocking the other doors.

After determining that no actuators are needed, then examine the switch which causes every door to lock and unlock. This may require removing a door panel (be careful— those panels are expensive), but this is much easier than trying to find the right wire in the kick panel. However, it may be easier for experienced installers to look under the kick panel.

If there are only 3 wires leading to the door lock control switch, then test for negative relay switching systems first, since the majority of power door lock systems are of this type (including most Japanese and European cars). If the system is not negative relay switching, then test for positive relay switching. If the system is neither negative nor positive relay switching, then test for reversal and floating reversal switching.

TEST METERS VS. TEST LIGHTS

More and more cars are being equipped with low-voltage (often only +3VDC) electronics. If you connect a test light to +12VDC, and accidentally touch a +3VDC wire, there is a very good chance you will destroy some component and/or a \$1,000 to \$2,000 computer. Therefore, **SECO-LARM** strongly recommends a test meter (VOM) for testing power door locks, as well as for all electrical testing purposes. Test meters conduct less current than test lights, and so will not damage the automobile. **WARNING!** Use only the voltage and/or resistance settings on your test meter when checking wire polarity. Using the Amperage setting is the equivalent of creating a short between the two contact points.

This manual assumes you know how to use a test meter. If you do not, then learn how to use one before proceeding with installation of the **SR-5203A** or **SR-5201R**.

IMPORTANT Before cutting any door lock switch wires, test each wire with a test meter three times— with the door locks at rest, when they are locked, and when they are unlocked. Read the information for each system and study the diagrams. **SECO-LARM DOES NOT WARRANTY ANY ALARM, THE SR-5203A OR SR-5201R, OR THE CAR AGAINST DAMAGE CAUSED BY IMPROPER INSTALLATION.**

MOUNTING THE SR-5203A AND SR-5201R

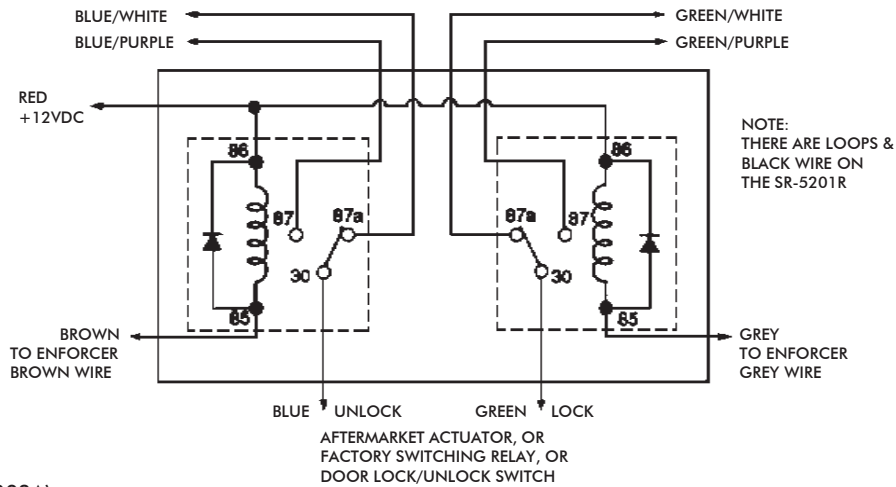
1. Choose a place where the **SR-5203A** or **SR-5201R** can be mounted (such as under the dash near the alarm brain), noting the following restrictions:
 - * The unit should be mounted completely out-of-sight. Its placement must not interfere with the normal operation of the car's other circuits or parts.
 - * The unit must not be mounted in such a place where it is exposed to extended air movements, such as in front of the heater or air conditioner vents. **DO NOT MOUNT IN THE ENGINE COMPARTMENT.**
2. Make all connections to the **SR-5203A** or **SR-5201R** using 18-gauge or thicker wire. If lighter wire is used, the doors may lock and unlock randomly. Solder all connections to ensure they will not become loose due to road vibration.
3. **DO NOT CONNECT THE RED WIRE OF THE SR-5203A OR SR-5201R TO THE SAME POWER SOURCE THAT THE ALARM'S RED (POWER) WIRE IS CONNECTED. DO NOT CONNECT THE BLACK WIRE OF THE SR-5203A TO THE SAME GROUND SOURCE THAT THE ALARM'S BLACK (GROUND) WIRE IS CONNECTED.** This will prevent a major source of interference between the door lock interface and the alarm brain.

SETTING THE LOCK/UNLOCK PULSE LENGTH

(SR-5201R)

The door lock timing is controlled by your alarm. Please consult your alarm installation manual.

CIRCUIT EQUIVALENCE FOR SR-5201R (Reference only)

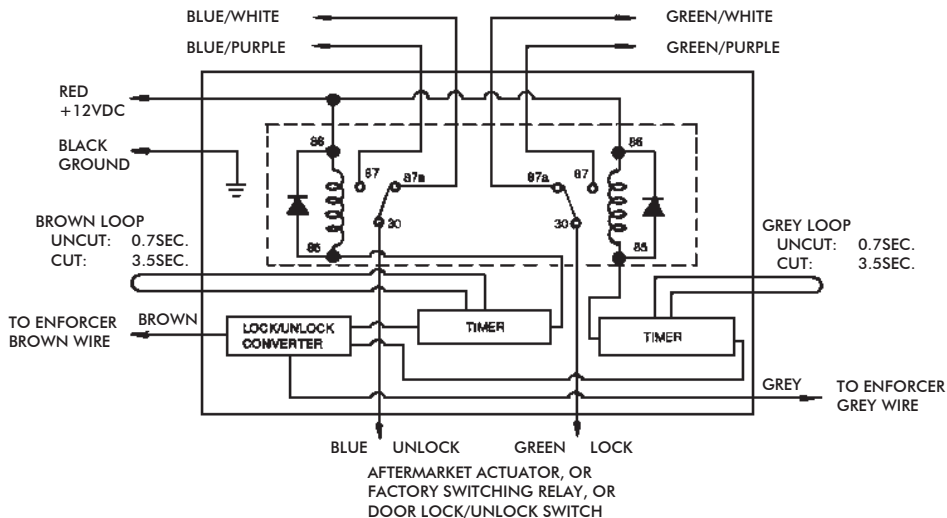


(SR-5203A)

1. If the car uses electric door lock actuators or motors (almost all cars do), then: do not cut the grey or brown wire loops.
This will give a lock/unlock pulse length of 0.7 seconds required for electric locks.
2. If the car uses vacuum-operated door lock motors (like newer Mercedes Benz or Audi), then: CUT BOTH the grey and brown wire loops.
3. The grey and brown wire loops on the SR-5203A must both be cut, or must both be left uncut. Do not cut one loop and leave the other uncut.

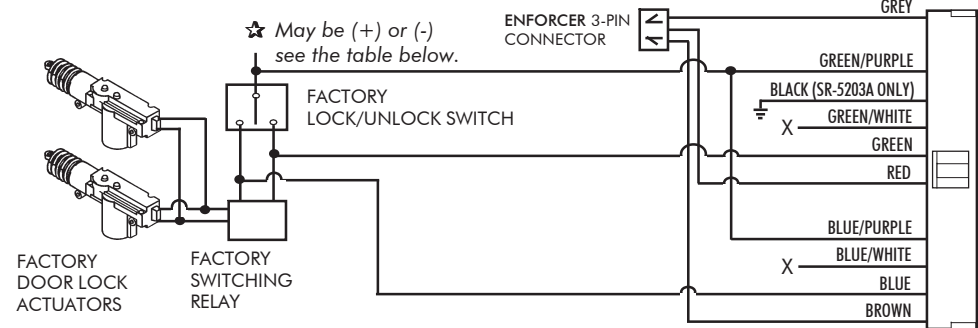
WARNING: WHEN CONNECTING TO ELECTRIC (AS OPPOSED TO VACUUM) DOOR LOCK ACTUATORS, IF THE GREY AND BROWN WIRE LOOPS ARE CUT, THE DOOR LOCK ACTUATORS WILL BURN OUT.

CIRCUIT EQUIVALENCE FOR SR-5203A (Reference only)



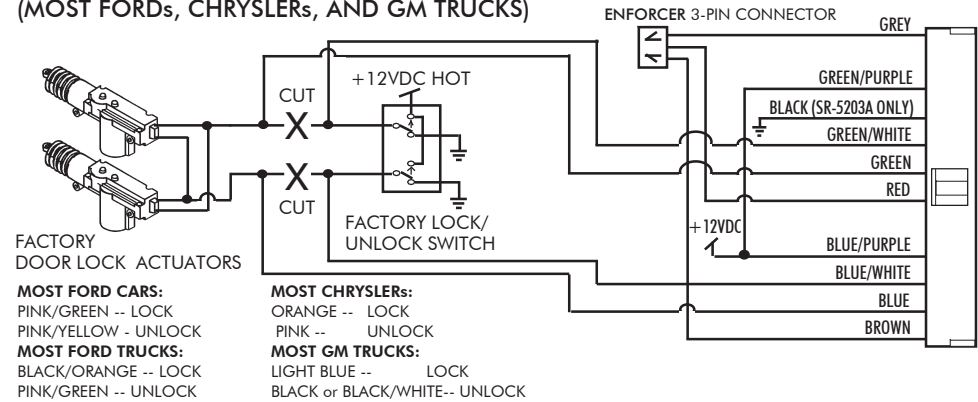
WIRE CONNECTIONS FOR DOOR LOCK/UNLOCK (SR-5203A & SR-5201R)

Door Lock System #1: RELAY SWITCHING TO FACTORY ACTUATORS



| CAR STYLE | LOCK WIRE | UNLOCK WIRE | ☆ |
|--------------------|------------|-------------|--------|
| MOST GM CARS | LIGHT BLUE | BLACK | +12VDC |
| MOST JAPANESE CARS | | | GROUND |

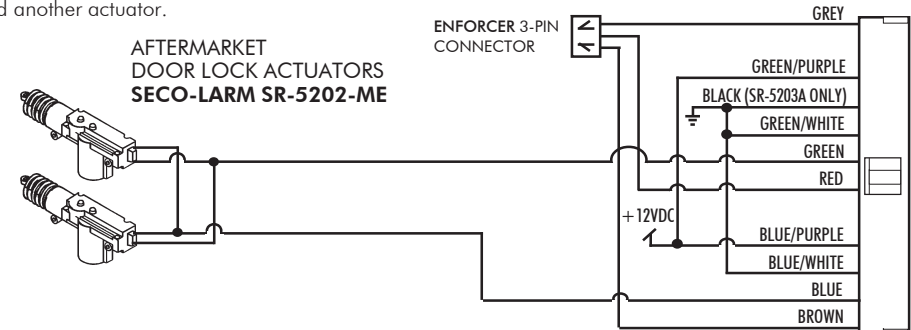
Door Lock System #2: POSITIVE REVERSAL SWITCHING TO FACTORY ACTUATORS (MOST FORDs, CHRYSLERS, AND GM TRUCKS)



Door Lock System #3: AFTERMARKET DOOR LOCK ACTUATORS

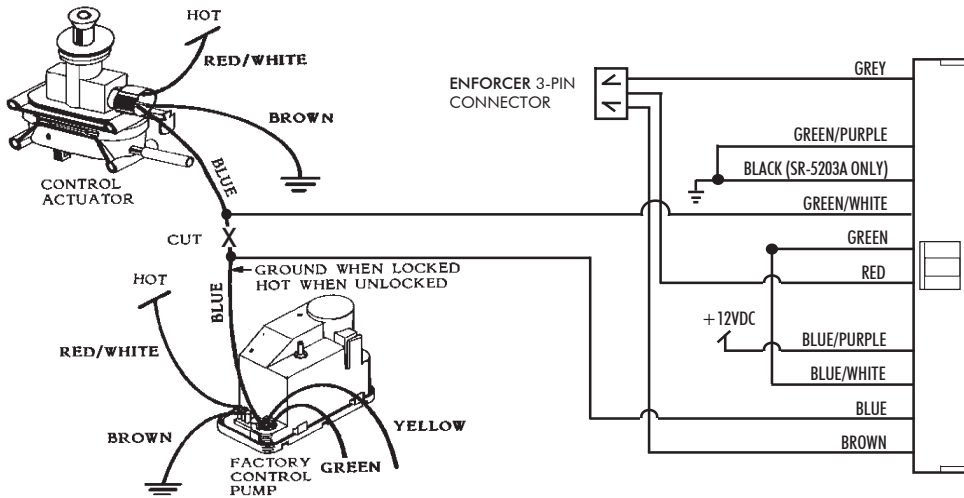
If the car does not have power door locks, install aftermarket actuators according to the manufacturer's instructions. **SECO-LARM** model SR-5202-ME door lock actuators are recommended.

If the car is equipped with central door locks and with only one switch in the driver's door, it may be necessary to add another actuator.



Door Lock System #4: SINGLE-WIRE SYSTEMS

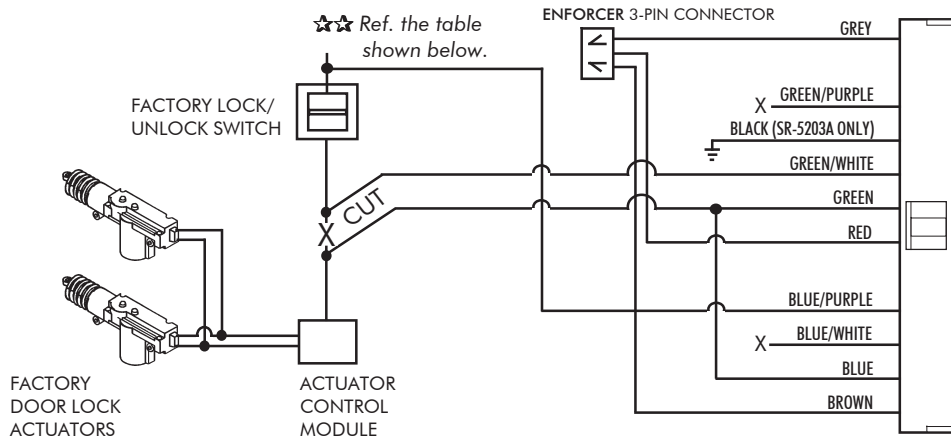
A. SINGLE WIRE, POLARITY SWITCHING (MOSTLY MERCEDES BENZs) BOTH WIRE LOOP CUT (SR-5203A)



B. SINGLE WIRE, SHUNT SWITCHING (SOME FORDS: 1992 PROBE)

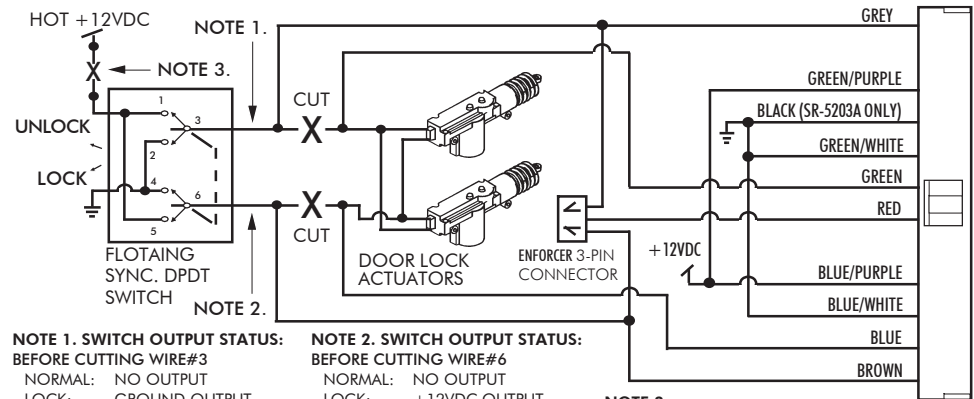
This door lock system uses a single wire to activate the door locks. Applying an activated signal on the activation wire causes the doors to unlock, and by removing the activated signal, the doors will lock.

NOTE: If the correct wire is cut, the driver and front passenger switches will not lock or unlock any of the doors. Once the correct wire is located, connect according to the diagram below.



| CAR STYLES | ACTIVATION WIRES | ☆☆ |
|---------------------------|------------------|--------|
| SOME FORD PROBES | GREEN/BLACK | +12VDC |
| SOME MAZDA MPVS | GREEN/BLACK | GROUND |
| SOME NISSAN 300ZX & 240SX | ORANGE/BLACK | GROUND |

Door Lock System #5: FLOATING SWITCHING FACTORY SYSTEMS



NOTE 1. SWITCH OUTPUT STATUS:

BEFORE CUTTING WIRE#3
 NORMAL: NO OUTPUT
 LOCK: GROUND OUTPUT
 UNLOCK: +12VDC OUTPUT

AFTER CUTTING WIRE#3

NORMAL: NO OUTPUT
 LOCK: GROUND OUTPUT
 UNLOCK: NO OUTPUT

NOTE 2. SWITCH OUTPUT STATUS:

BEFORE CUTTING WIRE#6
 NORMAL: NO OUTPUT
 LOCK: +12VDC OUTPUT
 UNLOCK: GROUND OUTPUT

AFTER CUTTING WIRE#6

NORMAL: NO OUTPUT
 LOCK: NO OUTPUT
 UNLOCK: GROUND OUTPUT

NOTE 3.
 WHEN WIRE#1 IS CUT,
 INSULATE BOTH WIRE
 LEADS BY SEPARATELY
 WRAPPING THE ENDS WITH
 ELECTRICAL TAPE.

INSTALLING AFTER-MARKET ACTUATORS

(SECO-LARM MODEL NO. SR-5202-ME)

Install the actuators according to the diagram below, noting the following:

1. Make sure that the actuator's shaft pushes and pulls the door lock rod as straight as possible to prevent damage to the actuator and to assure smooth operation.
2. The clamps to the door lock rod must be as tight as possible to prevent slipping when the actuators are activated.
3. Use either screws or nuts and bolts to fix the actuator inside the door. The tension of each screw or nut must be the same to prevent warping of the actuator.
4. The entire door lock mechanism must be free from any kinks or bends which would prevent free movement. It is recommended to thoroughly clean the entire mechanism (not including the actuator) and spray it with oil or silicon to ensure free movement.
5. Connect the after-market actuators to the SR-5203A or SR-5201R as shown in Doorlock System #3 above.

NOTE 1: Some cars have actuators built into every door except the driver's door, so that when the driver's door is manually locked or unlocked, the other doors will also automatically lock or unlock. In this case, a single SR-5202-ME may be added to the driver's door. The SR-5203A or SR-5201R should be connected to lock and unlock the SR-5202-ME only. The other doors will lock and unlock with the driver's door.

NOTE 2: The diagrams below may not be applicable to every car door.

WARNING: THE MOTOR OF THE SR-5202-ME WILL BURN OUT IF ABUSED. Therefore, do not switch this unit between lock and unlock more than 10 times in a short period of time. Allow a minimum of 10 seconds between each lock and unlock operation.

