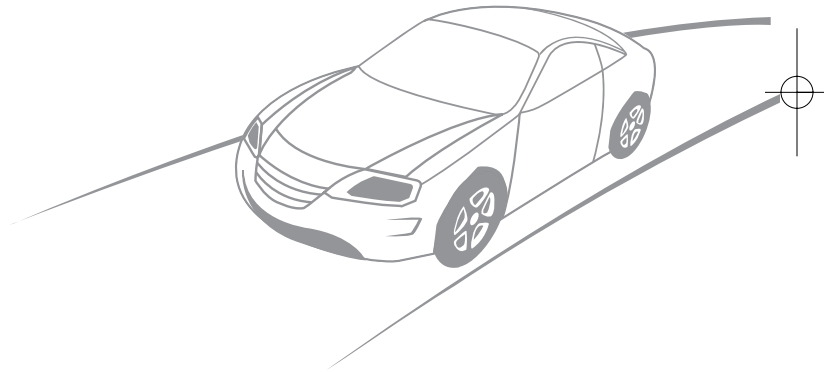


Installation Guide

(MM760)

Considering customers' safety,
YoungShinELC always pursues the best.



After installing this product, a technician must check whether the product works properly with a customer.

Warnings in installation

Warnings When maltreatment can kill a person or cause serious injuries.

- If there is a cut on an auto transition jumper inside of the main cover, it must not be installed to a manual car.
- For manual cars, an auto transition jumper must not be cut.
- As for an automatic car, if it starts when the gear is not "N" or "P", it must be recognized as a manual car. Hence, an auto transition jumper must not be cut.
- A door pin detection line must find an integrated diction line. (Very important for security and starting a car)
- All the wiring covers must not be cut to prevent a short.
- Starting wiring must be done inside the key box.
- When a car has a problem, the alarm must not be installed. (Install after fixing a car)
- After installing this product, a technician must check whether the product works properly according to the manual with a customer.

Cautions When maltreatment can kill a person or cause serious injuries.

- Installation must be done in the safe place away from the road with heavy traffic or inclined place.
- Necessary parts must be prepared before installation by checking the specifications of a car (door motors, vacuum valves, starting cut wiring, diodes, door relays, car wiring drawings)
- Check a car with a customer before installation (car functions, and its various electronic and convenient functions).
- Use safe tools and be aware of potential risks during installation.
- During wiring, a multi-tester without any effect on a car should be used.
- As for a car with air bags, air bag fuses or relevant connectors should be removed during installation and re-assembled after installation.
- Remove starting lines after pulling off a key. If a key is put in, an air bag lamp or AMS lamp can be turn on during installation.

Be careful

After installing this product, a technician must check whether the product works properly according to the manual with a customer. And they should fill out a warranty and customer card.

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Chapter 1

Features of Wiring

I. Main starting jack

1. Main line (Red: +12V)

A thick line from a key box. (+) battery power for a car.
 - Black/red: When trunk output is (+), it is connected to trunk open power (black/red) of a 5P jack. When it is not used, it is finished with tie and tape to prevent a short.

2. IG1 (Green)

When a key is on, it is used for providing (+) battery power. While a start motor is on, it keeps providing power. It provides power for over all starting lines and manages a front dashboard.

3. IG2 (White)

When a key is on, it is used for providing (+) battery power. However, when a start motor is on, it is shut down. It is a supplementary power line for a heater, an airconditioner, and a radiator. When a start motor is on, a heater, an air-conditioner, and a radiator come to a halt.

4. Start (Yellow)

When a key starts, it is used for providing (+) battery power (When (+) battery power is provided, it runs a start motor). * For an automatic car, it must be checked whether a car is remotely start-up when its gear is other than "P" or "N." (It must not be connected to a wire coming from a start cut relay.)

5. Earth (Black)

(-) battery power. It is very important for the operation of an alarm. When it is not well connected, it can cause a malfunction. It must be fixed to car's bolt and its installation must be checked with a multi-tester.

II. 5P Jack

1. Blinkers (No. 1, 2 pin)

When a key is on, if a blinker switch is on, it provides (+) power. (However, be careful if a line responds to left/right blinking both, it is an emergency line.)

2. Siren (White)

Fix a siren inside of an engine room tightly, then connect a black (-) line to a car body and a white (+) to a white line of a main body.
 (However, if a line cover is taken off while it is going through an engine room, it can break the relay in the main body which controls a siren. In this case, changing the main body of an alarm won't help fix the problem. So, check wiring before changing the main body of an alarm.)

3. Trunk (Black)

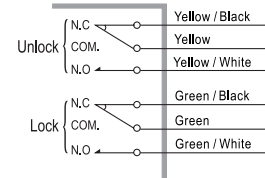
For a car which opens a trunk with an electronic motor, it is connected to trunk output lines. And (+) or (-) for a trunk opening line is decided according to the polarity of trunk output lines.

4. Trunk Open Power (Black/Red)

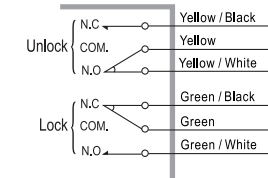
Only for a car which opens a trunk with an electronic motor, if the car's trunk output is (+), it is connected to (+), and if (-), it is connected to (-).

※ If trunk open power is (-), there is no need for an extra relay.

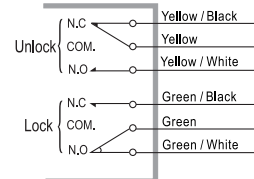
III. 6P Jack



< Circuit diagram >



< Circuit diagram during unlock output >

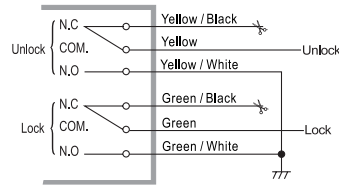


< Circuit diagram during lock output >

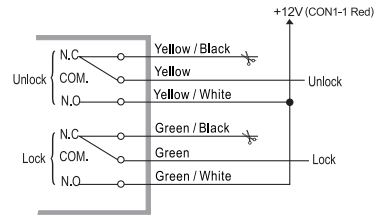
▶ Installers are able to install as per the following methods when you install. please find a suitable method as per the door system of your vehicle

※ The Wires of CN3 are not connected with any part of inside
 Connect +12V to the wire placed between the Connector and the Fuse (15A)

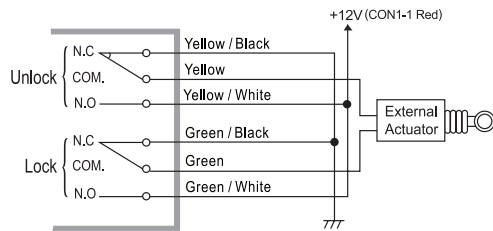
▷ **Method 1 :**
Negative Trigger Door Lock System
(W/O Actuator)



▷ **Method 2 :**
Positive Trigger Door Lock System
(W/O Actuator)



▷ **Method 3 :** External Actuator



< External Actuator >

IV. Other jacks

1. Generator (Yellow/Black)

It is for a generator alarming lamp. Find a line which is under (+) 4V when a car is off, and a key is on; and over (+) 7V after a car is starting. As there are fuel pump lines with similar responses, generally it is connected directly to the L terminal of a generator, but if this is not available, check interior wirings with wiring drawings.

2. Door detection (Red/Black, Red)

It checks whether a door is open for all the functions of an alarm. For all of Korea cars, when a door is open, it is (-), and when a door is closed, all the lights and a dashboard are off, it becomes (+). For imported cars (Not Korea cars), it is (+) when a door is open. As it is very important for starting reservation and security, it must be checked up whether it is an integrated detection line as well as whether or not a switch is out of order.

3. Warming-up detection (White/Black, White)

It is only for a diesel car, and is a dashboard warming lamp line. As cars response differently (+) or (-) for warming-up, you can use only one line for a car. It detects warming up temperature of a diesel car. When the temperature drops from its highest temperature, it makes a car start (the best condition). When a warming-up detection device is not installed, set warming-up time from three seconds to twelve seconds (3 sec./5sec./8sec./12sec.) by changing options.

4. Tail light detection (Orange/Black, Orange)

As cars response differently (+) or (-) for tail lights, you can use only one line for a car. When a car is in a caution mode (door closed), if tail lights are on, it will give an alarm to an owner.

5. Trunk detectit (Gray/Black)

It is for detecting trunk opening. In most cases, if a trunk is open, it is (-). But as there is a (+) response, in that case, you have to connect it to a door pin (+) detection line.

6. Hood detection (Brown/Black)

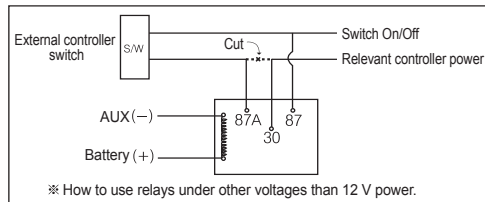
It is for detecting hood opening.
If a hood is open, it is (-).

7. Foot brake detection (Black/White)

It is for detecting foot brake.
If hit the foot brake, it is (+).

8. AUX output (AUX 1: Yellow, AUX 2: Yellow/White)

As it can produce (-) 250mA output, it can operate an external controller. (However, if there is a resistance of a car switch itself, you must not use AUX output.) When installing AUX, you have to check on/off switch with a tester before installing it. (If necessary, you can use external relays.)



Cautions.

- When you install AUX, you have to check power not to damage other devices.
- When you install power window AUX, you have to do a job for up and down (Relays are recommended).
- For devices operating under ADD or IG1, diodes are connected to ACC or IG1 under IG2. (IG2 → ACC / IG2 → IG1)
However, when it is connected to IG1, for a manual car, you have to check whether starting reservation is active or not under AUX.
- When AUX relays are installed, (+) battery power should go by way of a 30A fuse.

9. Shock sensor

If possible, it should be fixed at the center of a car. After connecting all the jacks, control sensitivity with a shock sensor lamp by applying shock to a car. (If you want to check a shock for a certain part, you can add more sensors). After 30 seconds in a caution mode, it detects shock.

10. Ultrasonic Sensor

Ultrasonic sensor should be connected to connector to make it run and it detects inner invasion

11. Car Call (Calling a car owner)

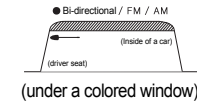
It functions as an LED. When an LED is blinking, if you knock twice within two seconds, a remote controller will ring a bell. (However, after knocking twice within two seconds, you can lock after ten seconds.)

12. Temperature sensor

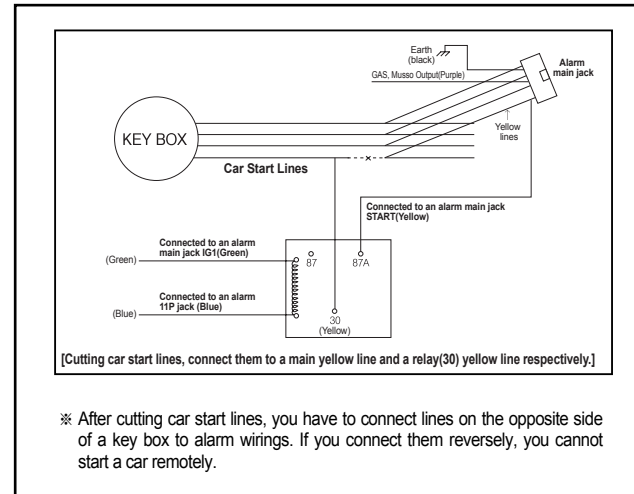
All you have to do is connect it to a temperature sensor. It checks temperature around the sensor (With an additional sensor, you can check temperature of which you want to check).

IV. Antenna

- Installed horizontally parallel up left of windshield.
- For a colored window, the distance a little decreases.



How to install start cut wirings



⚠ Cautions.

- For a car which underwent a start cut operation, as you must be able to stop a car with a key when a remote controller is lost, a technician must check whether a car can be stopped with a key.

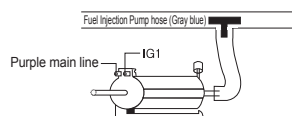
Chapter 2

Solenoid valves (When inserting a cord, it should be III)

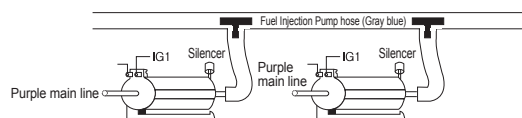
When a key is on, a vacuum hose is closed and the external air is inserted with a Fuel Injection Pump hose. When a key is off, as a vacuum hose and a Fuel Injection Pump hose are connected, all the hoses become vacuum. A vacuum circuit engine will not start for (+) power of a start motor, but start only when the air is supplied to a Fuel Injection Pump hose (For most Benz type cars).

※ Two points of contact of valves can be changed.

1. Most used



2. When RPM is not stable for remote startup, you had better connect another valve



How to install a bypass module

A device enables a car which you cannot start remotely without a key on to be started remotely. It is about applying an immobilizer.

1. How to use and connect wirings

a. Disassemble a key box cover, install a key antenna on the key box (around a cylinder), and fix it with tie or tape.

b. Connect power lines

Red	Connected to a green alarm start line(IG1)
Black	Connected to a purple alarm start line

c. Connect a harness to a bypass module.

d. Insert a relevant car key (supplementary) into a main bypass module (a black case) as shown in the picture.



⚠ Warnings

- As a coil can be damaged, do not fix a key box (around a cylinder) to a coil too tightly. This cannot be covered by A/S warranty.

Cautions

- It is effective to prevent a car theft to make a car not to be started with a key inserted in a main bypass module (a black case).
- For a car with a bypass module, other keys than a key provided by a car manufacturer will not work ("Immobilizer" functions should be maintained).
- The black power line must not be directly connected to batteries or earthed.

How to use diodes

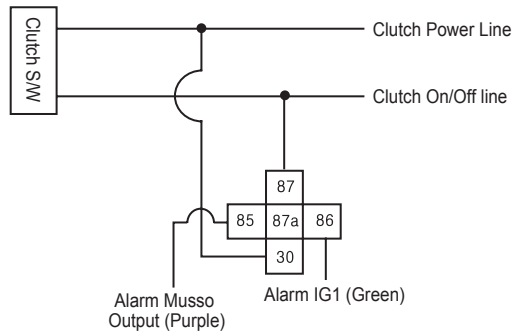
This is used to direct current in one way.



(In the above picture, current flow only from B to A, not from A to B.)

► For a car which start only with a clutch pressed

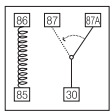
Generally, it can be solved by shorting S/W line above a clutch pedal. However, for some cars, as gas and torque output are automatically controlled while a clutch is pressed, it is desirable to supply only when a car starts.



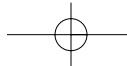
How to use relays

As this is very important to deal with various problems in installing an alarm, please fully understand this part.

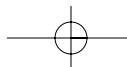
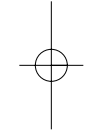
1. 5P relay



85 and 86 are for coil terminals for an electromagnet. If there is no current on this coil, 30 is connected to 87A. If there is current on this coil, a electromagnet attract terminal 30 to connect it to 87.



<p>When you change a (+) signal to a (-) signal</p>	<p>Ex) the (+) signal of a blinker is changed to a (-) signal and connected to emergency lights.</p>
<p>When you change a (-) signal to a (+) output</p>	<p>Ex) When AUX is installed, a relevant device is operating on (+).</p>
<p>When you change a (-) output to a (+) output</p> <p>Normal case: (-) output When a (-) signal is applied, there is a (+) output.</p>	<p>Ex) Door motor output can be gained with two relays applied to (-) signals of alarm door output. * When a door motor output is out of order.</p>
<p>With a (-) signal, two lines are cut off.</p>	<p>Ex) With a (-) signal, line A and B are cut off. * Use this when an alarm start cut is installed.</p>
<p>Short two lines with a (-) signal</p>	<p>Ex) Mostly used for installing alarm gas relays.</p>



How to set up options

[Option 2]

Option	Feature	Factory Default Button I	Button II	Button III	Button IV
2-1	Trunk Output Time	0.5 Sec	2 Sec	3 Sec	4 Sec
2-2	Door Output Time	0.8 Sec	4 Sec		
2-3	Start Output	St-1	St-2	St-3	
2-4	AUX1	0.5 Sec	3 Sec	5 Sec	10 Sec
2-5	AUX1	0.5 Sec	3 Sec	5 Sec	10 Sec
2-6	Dome light delay	5 Sec	15 Sec		
2-7	Start kill / IG Kill	Anti-jacking(IG kill)	Anti-jacking(IG kill)		
2-8	Pin code	Easy-emergency -disarm (OFF)	2 Digit Password (ON) (Default:11)		
2-9	Cold start	Off	0°C	-5°C	-10°C

1. Option setup

Step1 : For Programming menu 1: Key on,door opened, then
Press Buttons **(I+II)** for 2 seconds.

For Programming menu 2: Key on,door opened, then
Press Buttons **(I+IV)** for 2 seconds.

The car will chirp once indicating that you are in programming mode.

Step2 : **Within a 2 seconds** after pressing **(I+II)** or **(I+IV)**, press Button **IV** the number of times to go to the option number you want to change. You have to hear a chirp and see the parking light flash each time when you press Button **IV**.

Step3 : Wait a few seconds. You will hear a number of chirps and see a number of parking light flashes corresponding to the option number you want to change. If the number of chirps or flashes is not what you want, go back to Step 1.

Step4 : Press Button **I** for the default factory settings and your car will respond by one chirp and one flash. Press Button **II** for the optional setting and your car will respond by two chirps and two parking flashes.

■ If you hear a long chirp, you are going out of programming mode, please go back to Step1.

■ If you want to change more options, go back to Step1.

Resetting all of Menu #1 or Menu #2 of Programming Options to the factory default settings

Step1:Key on, door res buttons **(I+II)** simultaneously or Buttons **(I+III)** simultaneously for 2 seconds.

Step 1 is confirmed by a car chirp and a one-time flashing of the parking light.

Step2:Press button **III** three times. This will be confirmed by a car chirp and parking light flash each time you press Button **III**. A few second later, your car will chirp and parking light flash three times rapidly. Your car is now set to all of the original factory default settings.

2-8 PIN code

PIN code is fixed with the factory default code(11) PIN code must be inputted to enter Valet mode after turning key on/off 3 times if you already selected "2 digit password" from optional table .

- ① Procedures how to change PIN code from factory default code 11 to owner's code
 - Select " 2 Digit Password " from optional table
 - Maintain the conditions of trunk opened and door open
 - Turn the key on/off 3 times
 - 1 chirp & 1 light after activating of siren & lighting for 1sec
 - Turn the key on/off as many times as the first digit of PIN code within 5 sec
 - 1 chirp & 1 light
 - Turn the key on/off as many times as the second digit of PIN code within 5 sec
 - 2 chirps & 2 lights
 - Well completed
- ② Procedures how to enter Valet mode with PIN code
 - Arming condition
 - Turn the Key on/off 3 times
 - 1 chirp & 1 light
 - Turn the key on/off as many times as the first digit of PIN code within 5 sec
 - 1 chirp & 1 light
 - Turn the key on/off as many times as the second digit of PIN code within 5 sec
 - 2 chirps & 2 lights
 - Valet mode is ON

Default options

[Option 1]

Option 1	Description	Default
Option 1 - 1	Turbo	Not used
Option 1 - 2	Timer	Not used
Option 1 - 3	Remote start time	10 min
Option 1 - 4	Auto door release during running	Not used
Option 1 - 5	Reservation mode	Auto Manual
Option 1 - 6	Blinking when a door is open	Used
Option 1 - 7	Warming-up time change	3 sec
Option 1 - 8	Blinking when a hood is open	Used

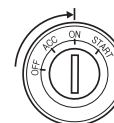
[Option 2]

Option 2	Description	Default
Option 2 - 1	Trunk output time	0.5 sec
Option 2 - 2	Door output time	0.8 sec
Option 2 - 3	Start output	Default
Option 2 - 4	AUX1	0.5 sec
Option 2 - 5	AUX2	0.5 sec
Option 2 - 6	Dome light delay	5 sec
Option 2 - 7	Start kill / IG kill	Anti-jacking (IG kill)
Option 2 - 8	Pin code	Easy-emergency-disarm
Option 2 - 9	Cold start	OFF

How to insert a cord

1. Place a key ON

(Key Box)



2. Switch a key from ON to ACC three times within three seconds.

three times



3. Every time a blinker blinks, if you push one of following buttons for 0.5 seconds three times with in three seconds, cord inserting is completed as a blinker blinks twice at the end.
(Normal car: button I)
(Car which automatically releases a door while it is running: button III)

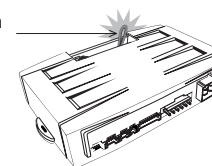
※ When you want to insert more than two remote controllers (As No. 3, while you are pushing buttons three times, you have to push buttons in order (Up to three remote controllers can be input))

Notice

- When a car is off, if a door is released, it will lock the door again (for a car which automatically release a door after it stops) → This is applied only to cars which automatically releases a door at the same time when a car stops.

Auto transition jumper

Auto/manual car transition jumper (green/white)



⚠ Caution

- When there is a cut on auto transition jumpers inside of a main cover, you must not install it into a manual car.

INSTALLATION GUIDE

Items	Color	Location
Main line		
IG1		
IG2		
START		
Blinker		
Door Lock		
UNLOCK		
Trunk		
Generator		
Door pin		
Warming-up detection		
Tail light detection		
Trunk detection		