



FM-298 Two Way Car Security System with Remote Enginer Start

OWNER'S MANUAL

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OPERATING INSTRUCTIONS
DESCRIPTION OF FUNCTIONS AND FEATURES
WIRE CONNECTION GUIDE
INSTALLATION GUIDE

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Information to the user

This operation manual details the use of the device contained in the package.

It is recommended to look for an experienced technician for device installation.

Warning

Changes or modifications not expressly approved by the manufacturer will void the warranty and the user's authority to operate the device.

This device complies with Radio Frequency Rules in respective countries.











Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operations.

Remote Control Layout

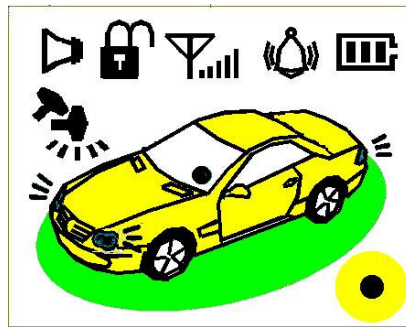


Quick Reference Guide

Button	Function
 Arming	<ul style="list-style-type: none"> Press this button to lock the doors and enter arming mode. During the arming mode, press this button to check the status of the vehicle. During the arming mode, press this button to locate the vehicle with lights flashing.
 Disarming	<ul style="list-style-type: none"> Press this button to unlock the doors and enter disarming mode. When the alarm is triggered, press this button to turn off the chirping sound from the remote control and the siren sound from the vehicle. The vehicle is then disarmed.
 Panic	<ul style="list-style-type: none"> Press this button to activate emergency panic alarm. Press this button again to turn off the panic alarm. Press this button for car finding with siren on and lights flashing
 Trunk Release	Press this button to open the trunk.
 + 	Silent Alarm mode ON/OFF
 + 	Automatic Arming mode ON/OFF
 , then  twice	Anti-Hijacking

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LCD Panel Layout



Alarm siren activated



Signal Strength Indicator



Doors locked / Arming mode



Mute alarm ON



Doors unlocked / Disarming mode



Battery Strength Indicator



Shock detected



Doors opened



AUTO ARM


Remote Control Operation


Active Pager Operations on Remote

This *DUAL-LINK* paging remote keeps you in control with instant signals and actions in response to events threatening your vehicle.

Arming




When all doors are closed, press  button to arm the vehicle and lock the doors. The siren then chirps once and the lights flash once. After about 8 seconds, the LED starts flashing.

NOTE: In the event that the vehicle is bumped within 3 seconds just after the  button is pressed, the system will delay entering into arming mode until the bumping disappears.

Disarming




Press  button to disarm the vehicle and unlock the doors. The siren then chirps twice, the lights flash twice, and the LED stops flashing.



NOTE: If the siren chirps more than 2 times, it indicates the system has been activated. Please refer to section: System Operation - Alarm Memory Mode on for details.

NOTE: If no door is opened within approximately 25 seconds after disarming, the vehicle will automatically return to arming mode again. Therefore, if you need to work for a longer time while the vehicle is in disarming mode, it is suggested to open any of the doors after disarming, thus suspend the auto re-arm function.

Turning Off Alarm Sound

When the system is triggered, press  button to turn off the warning sound from the remote control and the alarm sound from the vehicle.

Emergency Alert

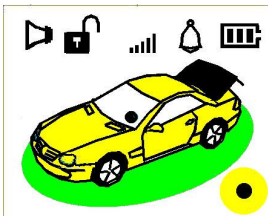
At any time, press  of the remote control, the siren then sounds and the lights flash for about 25 seconds. To turn it off, press  again.

NOTE: This function can be used for car finding in a large parking lot.


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Remote Control Operation


Trunk Release



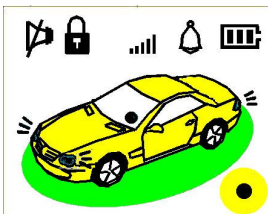
TRUNK RELEASE

Press  button to release trunk door. The lights flash once.

NOTE: This trunk release function is only applicable under the condition that the trunk door is not connected with other doors





NOTE: Pressing  button will also disarm the vehicle. If no door is opened within approximately 25 seconds after disarming, the vehicle will automatically return to arming mode again. Therefore, if you need to work for a longer time while the vehicle is in disarming mode, it is suggested to open any of the doors after opening the trunk, thus suspend the auto re-arm function.

Silent Alarm Mode



MUTE

Turning ON the Silent Alarm Mode:





Press  +  for 1 second, the speaker icon  is changed to . All chirp sounds from normal operations as well as alarm sounds triggered by shock sensing will be turned off. However, the alarm will still be active if any of the doors is opened or engine is started illegally.

Turning OFF the Silent Alarm Mode:

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Press  +  for 1 second again, the speaker icon  returns.

Anti-Hijacking




If the vehicle is being hijacked, press  once, the siren keeps on and lights keep flashing. Then press  within 8 seconds, the siren then off but the lights keep flashing. Finally, press  again within 3 seconds, the lights stop flashing. The Anti-Hijacking function is then activated. After 15 seconds, the engine power will be cut off, the siren will back on and lights will flash. To cancel the function, press  button.

NOTE: The wirings must be connected correctly to achieve the Anti-Hijacking function.

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Remote Control Operation

Temporary Mute Mode






When the system is triggered or calling for emergency help, the siren will blare. By pressing  or  or  button, the siren can be turned off temporarily.

Automatic Arming Mode (Optional)




The system will remind the user to arm the vehicle by chirping the siren 5 times within 20 seconds. After that period, the system will enter arming mode automatically without any remote operations.

INSTALLATION NOTE: The jumper (JP) in the main unit must be in short circuit to facilitate this function. If the JP is in open circuit, the automatic arming mode will be suspended. The system will then give reminders to the user only.

Automatic Arming Mode ON/OFF Setting

Press  +  for 1 second, the  icon appears indicating that Automatic Arming Mode is ON. To cancel, press  +  for 1 second again. The default setting is OFF.

Remote Engine Start

Press  button for 1 second, the remote chirps once and has the engine icon at “STOP”. Press  button for 1 second again within 5 seconds, the engine begins to start after being proper heated. After that, the system will check the vehicle status, the remote will then report the vehicle status with music sounds and engine icon at “RUNNING”. From then, the light will flash once every 5 seconds. This state will keep on for 15 minutes after the engine is being started. During this period, the engine will be cut off automatically if the  button is pressed for 1 second.

NOTE: After the engine is started, open any of the doors and from then the user has 30 seconds to insert the key or apply the foot-brake. If the user fail to do so, the engine will be cut off automatically.

NOTE: Insert the key in the **KEY ON** position, not in the **START-MOTOR** position.

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System Operation

Arming Protection

During the arming mode, the alarm will be triggered if any intrusive activity is detected. Any triggered alarm status will be reported to the remote control for your instant action.

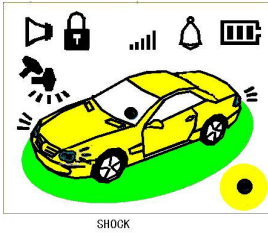
Automatic Re-Arming

If any of the doors is not opened within approximately 25 seconds after disarming, the doors will be locked automatically and the vehicle returns to arming mode again.

Vehicle Intrusion Alert

There are 2 kinds of alarm alert for vehicle intrusion during arming mode:

Alarm by Shock Sensing

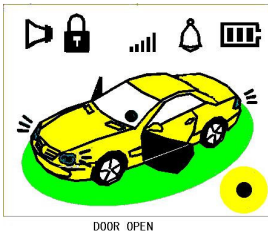


If any external impact is applied to the body of the vehicle, the system will warn with chirping sounds and flashing lights for about 15 seconds. The system will also immediately report the triggered event to the remote control. The shock icon then flashes and a warning beep sounds from the remote control.

NOTE: If silent alarm mode is on, the alarm siren will not be activated, only the lights keep flashing.

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System Operation




Alarm by Door Open or Engine Start Sensing

If any of the doors is opened without permission, or the vehicle engine is started illegally, the siren will sound and the lights flash for about 25 seconds. The system will immediately report the triggered event to the remote control. All icons on the LCD panel flash and warning beep sounds from the remote control.

Alarm Memory Mode

If more than two chirps are heard or lights flash more than 2 times when disarming the system, it indicates that the system was triggered in user's absence. The system will report the status as below:

- 3 chirp sounds and lights flash 3 times → indicate the shock sensor was triggered
- 4 chirp sounds and lights flash 4 times → indicate the doors were opened

Press  once, the system will report the triggered memory status again. The triggered memory status will be removed after any of the doors is opened.

NOTE: If silent alarm mode is on, only the lights will flash.

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System Operation



Memory Log Mode

If the vehicle power is being shut off, the system current status will be logged. The system will return to the current status once power supply is back to the vehicle.

Open Door Alert


If any of the doors is not closed completely while driving, when applying the foot brake, the siren will chirp twice and the lights will flash twice for reminding the user.

Auto Central Lock

1. When in disarming mode and the ignition key is turned ON, press  or  button to lock or unlock the doors. At this time, the system will not be activated.
2. **When all the doors are closed and the key is turned ON, apply the foot brake after 15 seconds, the doors will be locked automatically. When the key is turned OFF, the doors will be unlocked automatically**

System Operation

Electronic / Air Compressor Lock Interchange

Press  for 5 seconds, the siren sounds and lights flash. After that, the siren will stop chirping, indicating that the interchange process has been completed successfully.

- The default setting is electronic lock. The lock time is 0.8 seconds.
- Air compressor lock time is 3.5 seconds.

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Remote Control Code Cancellation and Installation

The security code stored in the remote and the main unit can be changed following the procedures listed below:

Remote Control Code Cancellation

When in disarming mode, open a door and keep the door opened, then apply and keep on the brake. Turn the ignition key from OFF to ON position 5 times. After the operation, the LED light turns off and 1 long chirp sounds to indicate that the security code is cleared from the system.

Remote Control Code Installation

When in disarming mode, open a door and keep the door opened, then apply and keep on the brake. Turn the ignition key from OFF to ON position 3 times. Then, 1 chirp sounds and the LED lights up once. Press the  button twice within 5 seconds. Two chirp sounds and the LED light turns off to indicate a new security code is stored.

NOTE: This system is designed to store only 2 different security codes at any given time.

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Wire Connection Diagram

See wiring diagram

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System Installation Guide

Main Unit Installation

The main unit is placed under the vehicle control panel. After fixing the main unit in a suitable place, start connecting all the wiring according to the Wire Connection Diagram. Before putting back all the OEM parts, simply test the system functions first.

Shock Sensor Installation

Install the shock sensor after fixing the main unit. It is recommended to place the shock sensor near the doors for easy detection of any intrusions. To adjust the sensitivity of the shock sensor, simply use a screw to turn the knob on the shock sensor, turning right to set a higher sensitivity or vice versa. Then test the sensitivity by triggering the shock sensor.

NOTE: Please do not hit the shock sensor directly.

Antenna Position

The ideal position for the antenna is in the top corner of the front windscreen right up of the wheel side. Please keep the antenna free from any obstructions to prevent reception interference.

NOTE: If the vehicle is parked in urban area with many buildings around, or under a strong electric field environment, the reception will be affected.

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Central Lock Installation Diagram

See wiring diagram

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Central Lock Installation Guide

This system can control several common central lock systems without any additional parts.

Type A:

For vehicles equipped with central lock, first recommendation (FIG. 1)

Type B:

For vehicles equipped with central lock but no motor on driver's side, add a master motor and rod into the driver side door. (FIG. 2)

This type of installation is applicable to vehicles equipped with factory central lock unit such as some Ford, Mitsubishi, Mazda, and Nissan models.

* **INSTALLATION NOTE:** First, install the actuator near the door's manual latch, and then fix the rod of the actuator on the manual latch.

Type C:

For vehicles equipped with central lock and with motor on driver's side. (FIG. 3)

Type D:

For vehicles equipped with electrical-activated vacuum-pump controlled door locks. (FIG. 4) The timing of actuator mechanism can be set as 0.8 seconds or 3.5 seconds.

This type of installation is applicable for some Mercedes-Benz and Audi models.

Type E:

For some GM vehicles equipped with factory central lock unit. (FIG. 5)

Type F:

For some vehicles not mentioned above, please consult professional installers.

NOTE: Type B installation method (FIG. 2) is suitable for most vehicles.

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Specifications

Main Unit

Output Current:	Signal Lights 5A x 2, Siren 2A, Central Lock 10A
Coding:	Learning code
Voltage:	12V +/- 2V
Static Current:	<12mA (except indicator, sensor)
Indicator Current:	20mA
Shock Sensor Current:	4mA
Frequency:	433.92MHz

Remote Control

Voltage:	1.5V
Static Current:	<0.8mA
Battery:	1 x AAA 1.5V (Alkaline)
Frequency:	433.92 MHz

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Trouble Shooting

The alarm keeps sounding and cannot be stopped by the remote control.

- Check the wiring connection.
- Check if the fuse of the main unit is damaged.
- Check if the main unit code match with the remote control code.

The alarm sounds 10 seconds after the vehicle is armed, same problem keeps happening again.

- Check if the shock sensor is too sensitive.
- Check if the door pin switches are damaged.
- Check the wiring connection.

The alarm is easily triggered when a heavy vehicle is passing by.

- Check if the shock sensor is too sensitive.

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Trouble Shooting

The siren does not work when the vehicle is intruded.

- Check the wiring connection between alarm and main unit.
- Check if the vehicle power supply is cut off.

The remote control does not work.

- Check the battery level in the remote control. (It is suggested to replace the alkaline battery each month)
- Check if the remote control has been damaged physically or by liquids.
- If possible use another remote control for comparison. If both of them do not work, then check the wiring connection. (Do not open the main unit for checking)
- Check if the main unit code match with the remote control code.

The central lock does not work.

- Check if the actuators are working.
- Check the wiring connection.
- Check if the fuse of the main unit is damaged.

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Trouble Shooting

Short remote distance

- Check the battery level in the remote control. (It is suggested to replace the alkaline battery each month)
- Anti-sunlight film can intercept radio signal that is used by the system. If anti-sunlight film is used on the front windscreen the communication signal may be affected. It is necessary to remove the film from the windscreen and install the antenna without any obstruction.

No display on the remote control.

- Check the battery level in the remote control. (It is suggested to replace the alkaline battery each month)
- Take out the battery and re-install it into the remote control 1 minute later.

Only the door locking and unlocking function work normally. Other functions are inactive.

- Check the wiring connection between ignition switch and foot brake with the main unit.

Should any problem persists, please contact your dealer, installer, and technician.