

BOYO[®]
VISION
◆ VTM35x3

Multiple Display Rear View Mirror Monitor



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◆ VTM35X3

User Manual

Welcome to use our three display ultra high brightness Rearview mirror monitor.

- We reserve the final explanation right on this User Manual.
- Specifications are subject to change without notice. Sorry for any inconvenience caused!
- Please make a copy of the important data. We assume no responsibility for the data loss.
- This manual has been carefully checked. Please contact our service center when any typing mistake is found.
- Please read the operating instruction carefully and use the accessories only provided by the original factory to avoid any unexpected damage. No warranty will be executed if you are not following the instruction or connecting with the incompatible accessories, we assume no responsibility for any loss and damage caused hereby.
- Any discrepancy between the pictures with real products hereinafter, the real one prevails.
- Working voltage of the rearview mirror ranges from 10V to 30V, so a truck with 24V can install the mirror directly. The mirror does not supply power for camera, concerning camera power supply range, please refer to corresponding camera manual. We advise users buy a 24V camera or buy a camera power adapter for voltage conversion if users install the mirror to a big truck.

Table of contents

Chapter one: Product Information	1
1.1 Package	1
1.2 Features	1
1.3 Specification	1
1.4 Keyboard	2
1.5 remote control	4
Chapter two: Installation and wiring	6
2.1 How to install mirror monitor	6
2.2 Special bracket	7
2.3 How to wire	8
2.4 How to display the rear view mirror screen	10
Chapter Three: Basic functions	11
3.1 High-reflectance Mirror	11
3.2 Back up Camera Display	11
3.3 The Brightness of Screen Automatically Adjust	12
3.4 Glass and bracket	12
3.5 Adjustable guide line(the function just for middle screen)	13

Chapter one: Product Information

1.1 Package

The packing contains the following accessories, please confirm:

- Three display rearview mirror monitor
- Wire set
- User manual
- Wire cover
- Remote control (option)

For the items listed above, please check with your package box. If any missing or damage, Please contact with the distributor or the agent as soon as possible.

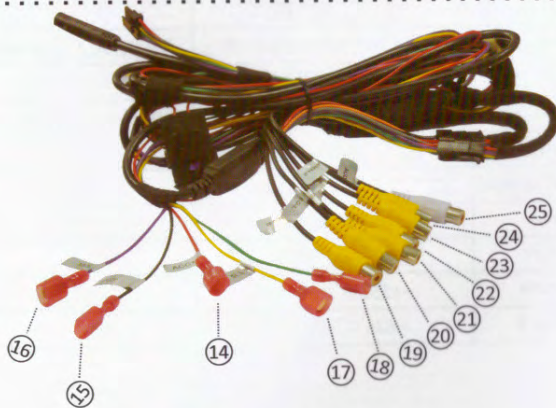
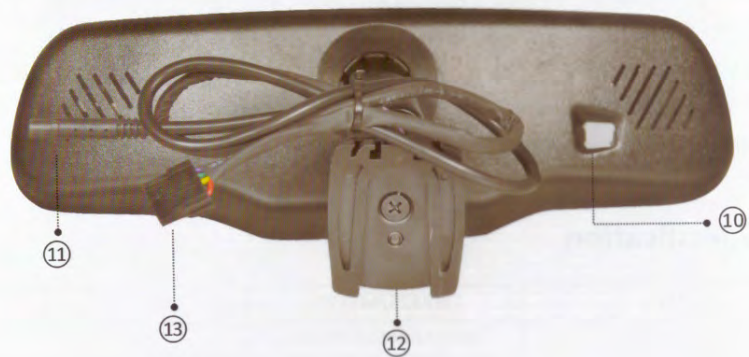
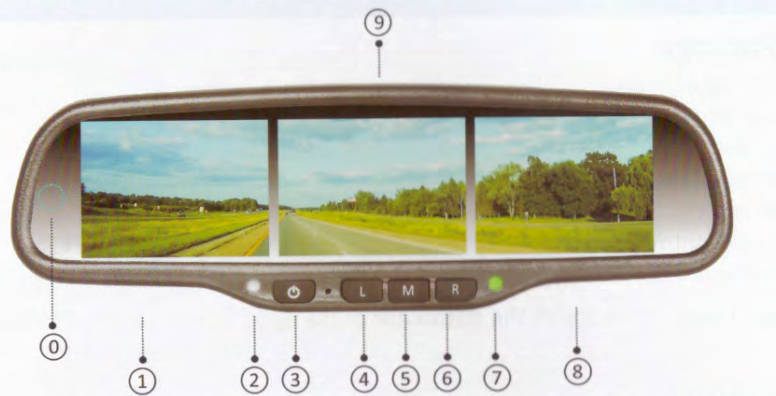
1.2 Features

- Support backup camera display
- Support auto dimming function(option)
- Auto brightness adjustment
- Three 3.5 inch screens display, 6 video +1 audio input
- Support infrared operation
- 0.16 inch glass and car factory OEM bracket

1.3 Specification

MCU	TW8825/MST706	
FLASH	MX25L6445E/2NF40A	
LED display	320*240 RESOLUTION	
button	MCU extension button	
remote control	infrared receiver signal processed by MCU	
backup camera display	CVBS video input circuit	PAL/NTSC auto identification
original car signal detection	system detects trigger signal, and make corresponding control.	
working voltage	DC 10V-30V	
working current	supply 13V: 670±10MA supply 24V: 340±10MA	
standby current(turn off screen)	supply 13V: 135±10MA supply 24V: 70±10MA	
relative humidity	0%-90%	
barometric pressure	86Kpa-106Kpa	
storage temperature	-1352°F~+2873°F	
working temperature	-676°F~+2535°F	

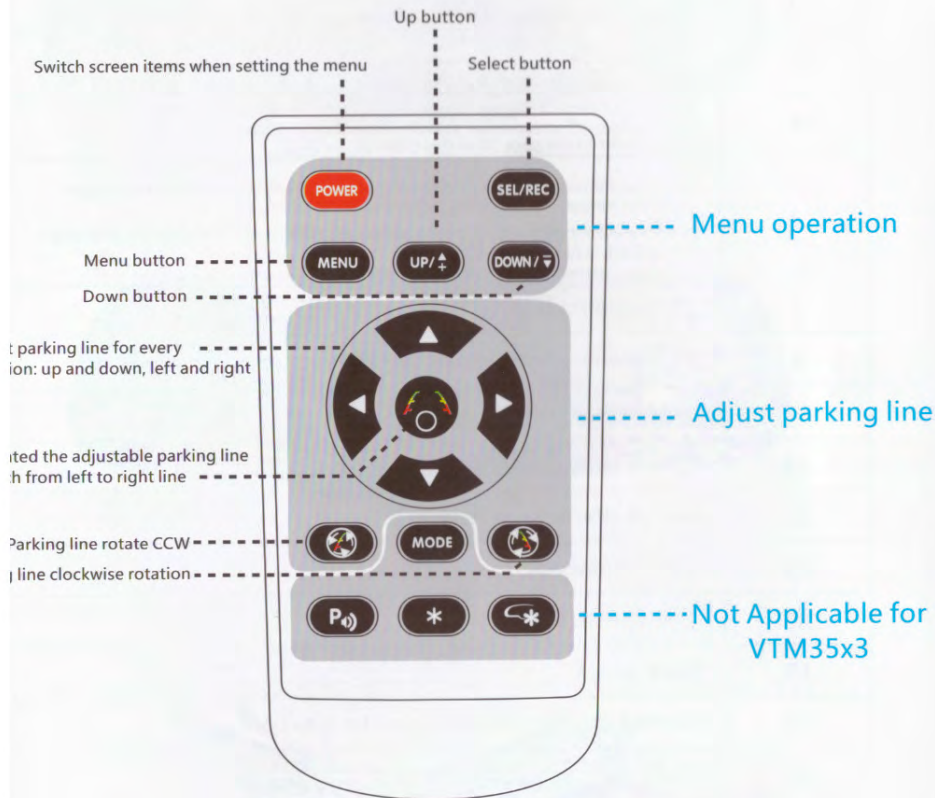
L.4 Keyboard



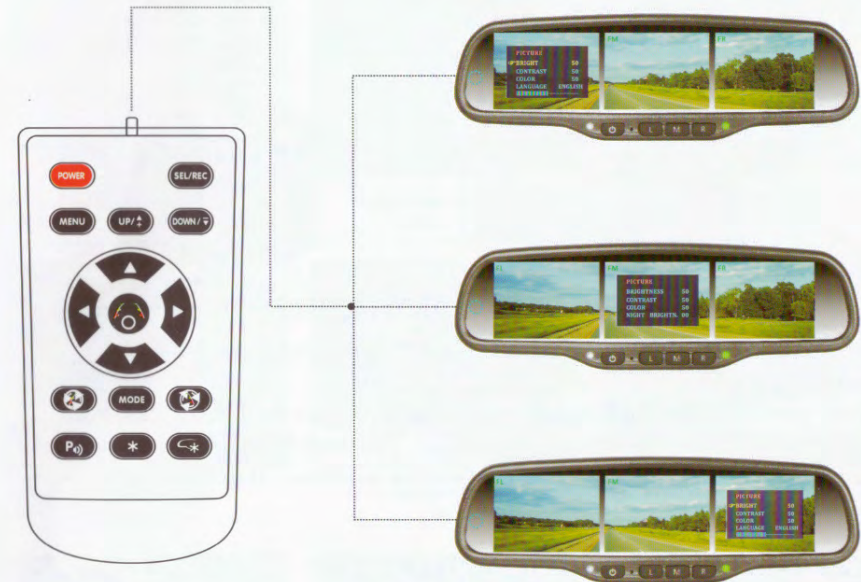
0	Infrared receiver window
1	3.5 inch ultra high brightness display screen
2	Light sensor
3	Turn on/turn off video display screen
4	Start the car-default display FL video-short press to switch RL video-short press again to turn off screen-enter standby state-short press to continue the cycle (please refer to the page 10 of this menu.)
5	Start the car-default display FM video-short press to switch RM video-short press again to turn off screen-enter standby state-short press to continue the cycle (please refer to the page 10 of this menu.)
6	Start the car-default display FR video-short press to switch RR video-short press again to turn off screen-enter standby state-short press to continue the cycle (please refer to the page 10 of this menu.)
7	Rear view mirror without auto dimming: when turn off screen or no video signal input, the indicator will light on, otherwise it will be off. Rearview mirror with auto dimming: when auto dimming is working, the indicator will light on, otherwise it will be off.
8	3.5 inch ultra high brightness display screen
9	3.5 inch ultra high brightness display screen
10	Light sensor
11	Connector(connect with main cable)
12	Special Bracket
13	5 pins connector
14	Red wire to +12V
15	Black wire to GND
16	Control line (for further extension function)
17	Brake detection signal line
18	Reverse detection signal line
19-24	Video input
25	Audio control line: trigger line enter reverse mode or manually press "M" to enter RM video, then audio function starts.

Remark: BOYO may make changes to specifications and product descriptions at any time for any reason.

..5 remote control



Note:RCD means Rear Camera Display



As shown above on operation of left screen, press "MENU" to bring up PICTURE and set menu options. On this state, press "SEL /REC" then select sub-menu to settings, available options can be set including, BRIGHTNESS, COLOR, LANGUAGE. Press again after setting "MENU" to make "SYSTEM" preference settings, options can be set only "PRESET".

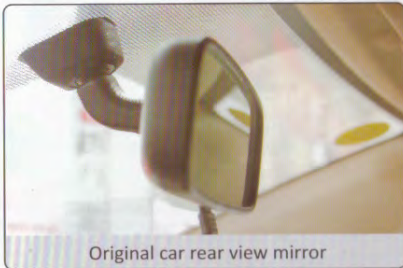
If you want to operate right screen by remote control, press "POWER" button. Right screen works with remote control. Relevant operation is same as left screen.

If you want to operate the middle screen by remote control, press "POWER" button. Middle screen works with remote control. It should be noted that in the middle screen of PICTURE there are additional NIGHT BRIGHT option. SYSTEM menu can be set including VOLUME, SCALE, LANGUAGE, PRESET.

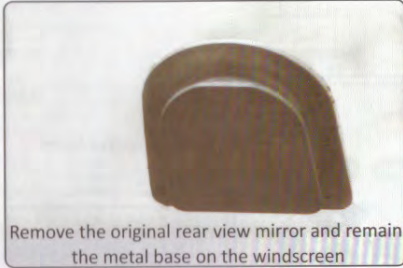
Chapter two: Installation and wiring

2.1 How to install mirror monitor

2.1.1 Remove the original mirror



Original car rear view mirror



Remove the original rear view mirror and remain the metal base on the windscreen

Different cars have different brackets, depending on your vehicle maker and manufacturer.

There are many methods for removing the original rear view mirror, however please don't force the mirror off the bracket. The manufacturer will not be responsible for damage caused to your vehicle as a result of installation of this mirror monitor.

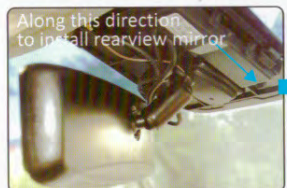
2.1.2 Install mirror monitor on the base



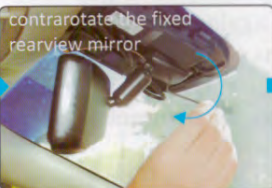
Along this direction to install rearview mirror



Along this direction to install rearview mirror



Along this direction to install rearview mirror



contrarotate the fixed rearview mirror



2.2 Special bracket



NO 1: TOYOTA CAMRY
FORD FOCUS
MAZDA-6



NO 2: HONDA ACCORD
CIVIC
MITSUBISHI GALANT



NO 32: MOST MITSUBISHI
TOYOTA
MAZDA



No42: MOST PEUGEOT
RENAULT
VOLVO



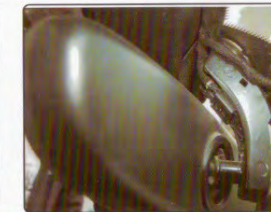
NO 7: HYUNDAI
KIA



NO 57: MOST NEW VOLKSWAGEN



NO 33: MOST FIAT



NO 35: MOST BMW
PEUGEOT



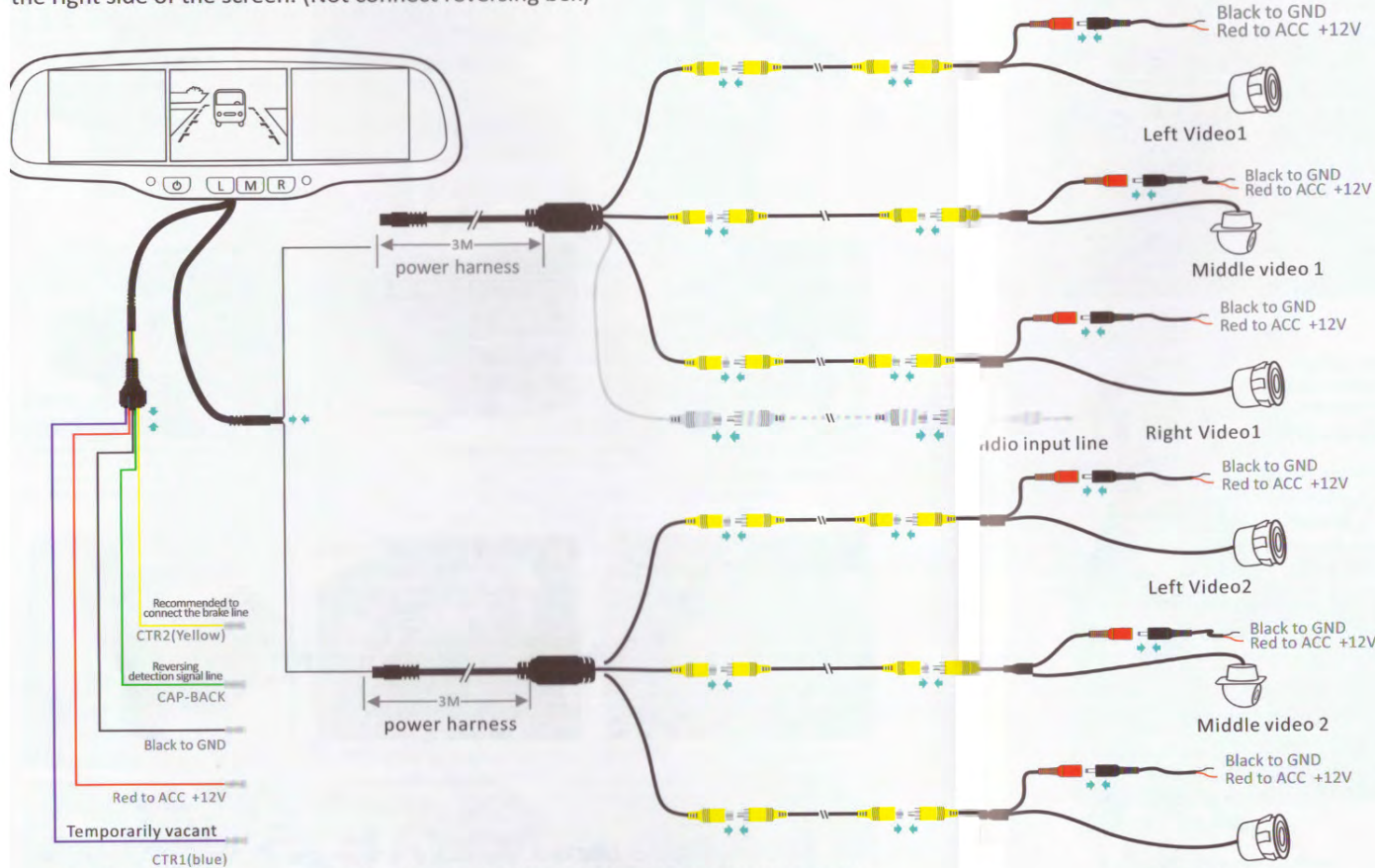
NO 3: VOLKSWAGEN PASSAT
JETTA
AUDI-A6-1.8T/A4-1.8T


We have many kinds of brackets. one of them must suitable for your car, and we are not going to go through everyone of them, because the space is limited on this page.

If you don't find the same bracket here as your car, please contact us for more brackets option.

2.3 How to wire

Connecting method: By linking the green reversing line, the reversing signal input to the rear view mirror and reversing video can automatically display on the right side of the screen. (Not connect reversing box)



After the product is power on and displays the boot Logo (if in the display logo process, cut reversing signal, then interrupt boot logo display, enter the reverse mode), in the default standby state, if there is VIDEO signal, the screen display video view and standby indicator is off. In this state, short press the button  to close or open the screen display.

If it detects the reverse signal, the mirror enter into reverse mode. if there is a reversing camera video signal, the LCD monitor is turned on, while closing the standby indicator. if there is no back-up camera video signal, then the LCD monitor is turned off, while the standby light is turned on; Only does the reverse signal disappears, it can exits CAMERA state, back to VIDEO states. Please note: It is the normal phenomenon there will be a short jump process when swift the video.

When the mirror is connected to the power firstly during driving, the car monitor is shown in front of the video image. If the user press button to switch to car rear video images manually, the program will have a memory, and the car monitor is shown in back of the video image.

In case of sudden emergency brakes, rear video mirror will automatically switch to the car front images to the behind images of the car. it will automatically return to the car front video after releasing the brake. After exiting trigger line and returning to working status, the car monitor will return to the video image before triggering.

Recommendation of the location of camera installation



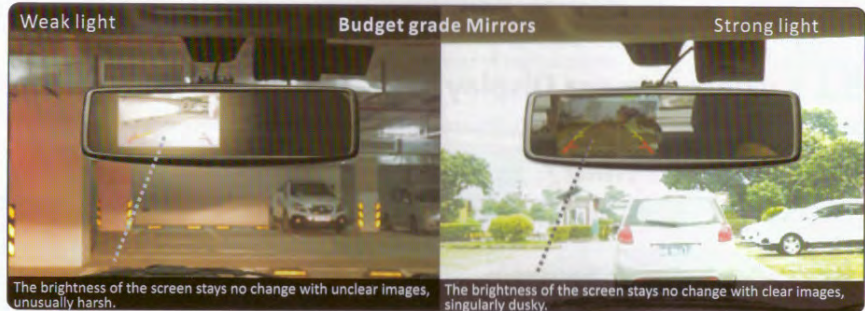
Remark: BOYO may made any changes to specifications and product descriptions at any time for any reason.

3.3 The brightness of the screen automatically adjusts

The brightness of the screen varies with ambient light, thereby, to make driver get a clear and comfortable image when reversing.



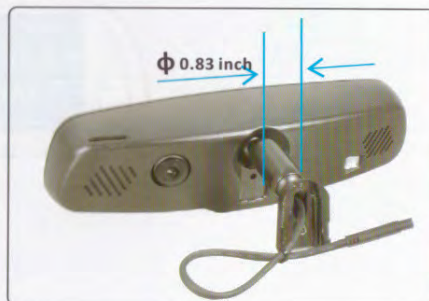
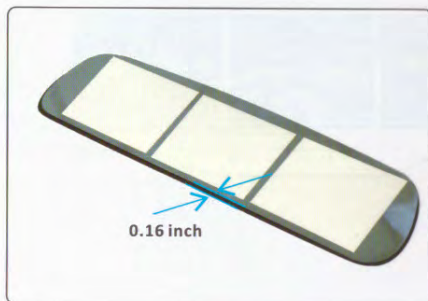
Remark: When reversing, the middle screen display reverse video only, its left and right screen still show the front video (please refer the button function for details)



3.4 Glass and bracket

The thickness of our mirror's glass is 0.16 inch. It is strong enough to bear impact and reach every country's safety standards on rear view mirror.

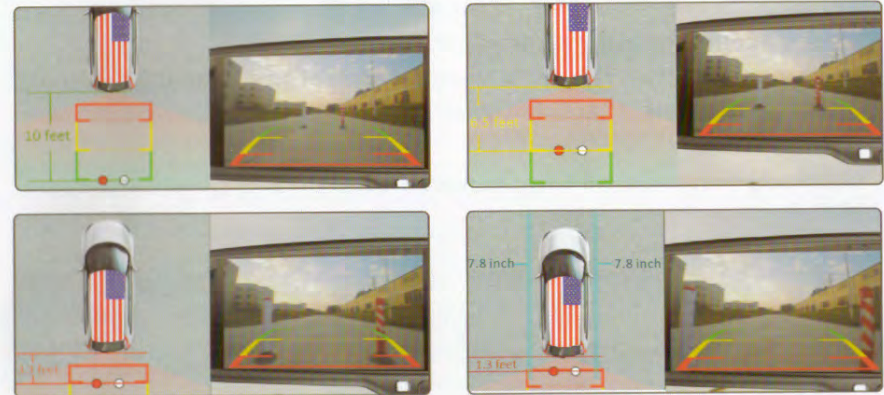
The OEM bracket for special rear view mirror monitor, it using 0.83 inch-thickness pipe.



3.5 Adjustable back-up guide line (just working for the Middle screen)

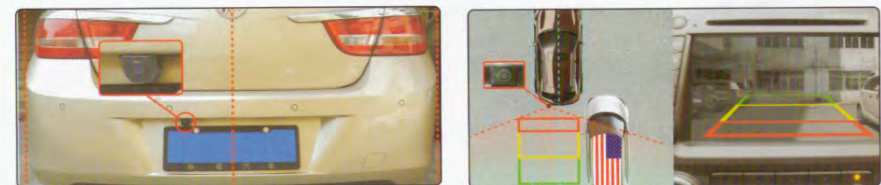
3.5.1 About guide line

Generally, to help drivers estimate the distance from obstacles, there are three lines for reference -red, yellow and green. Those three lines are displayed on the monitor when car is reversing. The green line is 10 feet from the back of car and the yellow line is 6.5 feet. The distant red line is 1m from the backside of car while the closed red line is 1.3 feet. Both reference lines on the left and right should leave 0.65 feet space from the car.










3.5.2 What the regular guide line is

VTM35X3 parking lines are fully adjustable to suit your needs . Most aftermarket cameras support the fixed guide line, however, it doesn't give accurate position and distance for the obstacles.



3.5.3 How to adjust the guide line

According to the site of standard reference line, we can put reference objects such as desks in the back area of car. Compared with the marked reference objects, we can adjust the sites and angle of two guide lines displayed on the monitor. You will get the accurate and safety guide lines once they coincide with the reference objects.

Press setting button  is to enter into "guide line adjustment" mode. The system is defaulted to adjust left guide line firstly. Press the button again will switch to adjust the right guide line. The up , down  left  and right  buttons are to adjust the correspondent location of guide lines. The clockwise rotation  and contra rotation buttons  are to adjust the angle of guide lines. It is easy to operate and calibrate. After finishing calibration, switch the reverse gear to save the information.

Caution: keep the remote control 0.5m-1.0m from rear view mirror when you use the remote to adjust the parking lines.

