



TE-360 User Manual

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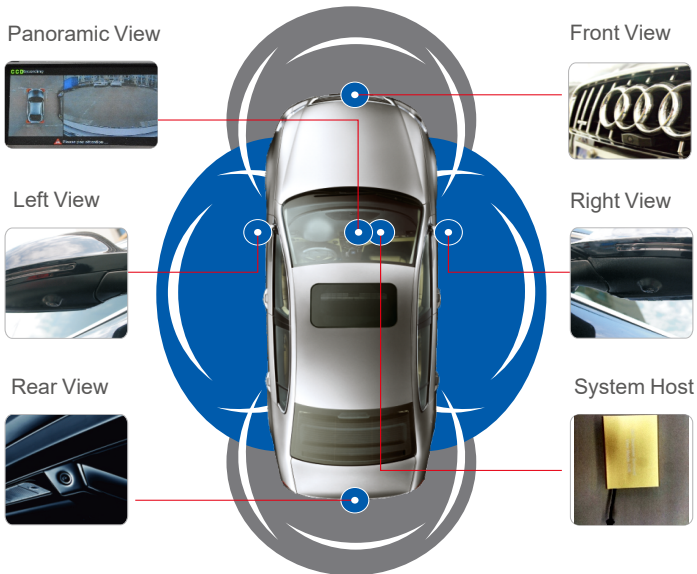
TECH SUPPORT
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Introduction of 360° Surround-view System

1.Product features





***Do you find parking frustrating?
Do you find blind spots dangerous?
Do you have enough evidences when road accidents occurs?***

Without a system that can monitor and record 360 degrees surrounding view of your vehicle, driving will not be safe and enjoyable.

360 Seamless Surround View Digital Video Recorder is your solution.

360 Seamless Surround View Digital Video Recorder uses the latest high resolution wide angle Front, Right, Left and Rear cameras, to first capture surrounding view of your vehicle.

Coupled with the latest software technology, all the camera views are merged to form a single real-time image seamlessly.

Through an in-car entertainment system or in-car display, you can now monitor and record all driving activities in real time.

It is a breakthrough technology that protect your interest.

180 degree high resolution wide angle cameras, capture high resolution video both in the day and at night. While driving, the display will show left or right camera in real time view on display, when either signal is engaged. While parking, the display will show rear camera in real time view, when in reverse gear.

The display will show front camera in real time view when in drive mode. In all circumstances, rear view will be the priority.

With each camera, 180 degree Wide Angle Camera, is your extra pairs of eyes, aiding you in parking, driving at night and eliminating blind spot.

360 Seamless Surround View Digital Video Recorder are your answer to safe driving.

Supporting up to 32GB SD Card, 360 Seamless Surround View Digital Video Recorder can record up to 28 hours of continuous recording.

In normal driving, it automatically records your surrounding view.

When in need, recorded videos can be easily retrieve, play on display or save as evidences.

Round-the-clock monitoring and automatically records when your car is being tampered.

360 Seamless Surround View Digital Video Recorder is the answer for round-the-clock monitoring, recording and in the event of theft, break-in or accident, 360 Seamless Surround View Digital Video Recorder Protects you and your car.



Real Photo



After Distortion Correction



After Seamless Splicing



Common Uses

Parallel parking



Reversing



Blind area of turn



Low obstacle



The narrow road



Front view of abrupt slope



2. Product accessories description as below

Name	QTY	Remarks
Main Box	1pc	
Remote Control	1pc	
Cameras	4pc	
Cameras Extend Cable	4pc	Left,right,front view each 4m, rear view 6.5m
Remote Control Receiver Extend Cable	1pc	
USB Extend Cable(1m)	1pc	Connect to USB
19.2mm Drill	1pc	Standard Situation
1.2m Three-core DC Cable	1pc	Yellow to Battery, Red to ACC, Black to ground
2m AV OUT Cable	1pc	
Package/User Manual	1set	

3. Product Parameters as below:

Items	Equipmet Parameters	Performance Indicators
System	Operation Language	Chinese / English
	Interface	Graphical Menu Interface (OSD Menu)
Main Box Video	Video input	4-ch dual video input
	Video output	Single channel dual video output
	Video Display	Surround view overlooking
	Video standard	PAL, NTSC
Automobile condition	image compression	H.264 Main profile compression resource is 4×D1 25frame/sec
	Turn Left	Display pictures on the left and surround view/single left picture/ Non
	Turn Right	show pictures on the right and surround view/single right picture/Non
Image resolution and storage	Reversing	Simulation surround view display
	Data storage	Support SD card of 32GB, and USB interface to Hard Disk
Software upgrade	Support SD upgrade	
Working voltage	9-36V	
Working current	440mA	
Working temperature	-30~-80°C	

4. Precautions before installation

1). Make sure the reversing video access of car display and the video control cable can work before installation. The video control wire might be called as reversing cable. Signal control cable. surround view control cable etc. The purpose is displaying camera video on the monitor while reversing/turn left/turn right. Some displayer without reversing control cable, but it can be installed by priority AV-IN.

If the monitor or car DVD were controlled by the main control cable, only can be automatic pop-up by reversing, other functions can achieved via AV input or AUX.

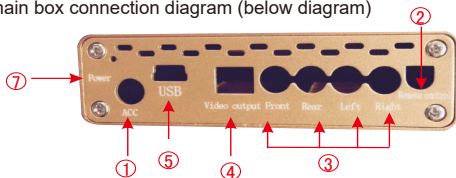
2). Finding a spacious place to install.

3). Adjustment tools □ checkerboard inner the gift box, 1.6m x 1.2m checkerboard cloth and Four 7-meter measuring tape. The checkerboard inner box is used to adjust the cameras, and the checkerboard cloth is used to adjust the surround view.

4). Do not do adjustment operation under the sun or strong light.

5. Guide of cables installation

1). The main box connection diagram (below diagram)



2 Referring to above install wiring diagram and the following table to do the cables installation.

Cable Numbers	Cable Pictures	Way of connection
① DC extend cable		Yellow to Battery, Red to ACC, Black to ground.
② Remote control receiver cable		Remote control receiver, using the 4-core earphone plug, must be connected tightly, the receiver should be put in a place easy for receiving remote control.
③ Camera extend cable		4m extension cable should be used in the front/right/left. The small white wire on the right and left of extension cable should be respectively connected with the positive wire of right turn indicator and the positive wire of left turn indicator. The rear camera use 6.5m extension cable, the small white wire of the extension cable should be connected with the positive wire of reversing light. The small white cable on the front camera no need connect to anything.
④ Video Cable		The plug of video output cable use a standard yellow RCA. The small red wire connect to reserving signal control wire of car DVD. Note: The small red wire cannot connect with reserving light or any iron ,please cut off the positive wire of the original reserving light if the automobile (once installed) has the reserving camera .
⑤ USB		For recording and software upgrade

3) The main box connection diagram (below diagram)



4). Refer to above diagram, learn the connector function

Connector Name	Functions
⑥ Serial port	For function extension
⑦ The power indicator light	The indicator light will flash for 3-seconds while power on ,then light up

Note: Please pay attention to the definition of the wires when cutting wire connection. white control wire, red camera power wire (5V), transparent wire for video, Shielding bare copper wire is for GND.

6.Position and orientation of the cameras installation adjustment

1). Following the below steps to adjust cameras location

PIC 1

A,install the front and rear view cameras according to the position.
 B,when install the left and right cameras,please check and see the distance if same from the front /back wheels to the lower end of screen according to AV1/AV2,if not same,please rotate the left and right cameras to reach same distance.(as image 1:A=B)

Note: the location installation and mounting opening way of the left and right cameras:



PIC 2

Camera mounting drill diameter is 19.2mm, try to put the hole location on the edge of the mirror as much as possible (outside), the farther located, the better quality of seamless joint pictures will be, the two oblique rings are used to fix the cameras always turns downward vertically, the plastic ring is used to beautification the opening, opening holes should pay attention to the both sides be similar, cannot block the lens to mobilize, refer to the right picture:



7. Placement of the measuring tape and checkerboard cloth

1). Requirement of the tools

4pcs of 7m measuring tape

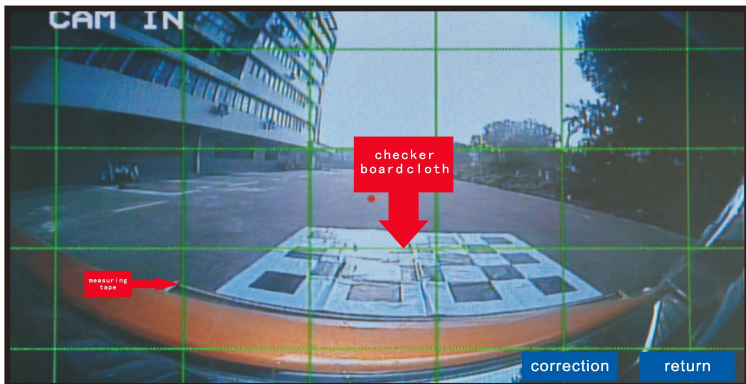
4pcs of 1.6x 1.2m checkerboard cloth.

2). Placement of the measuring tape and checkerboard cloth

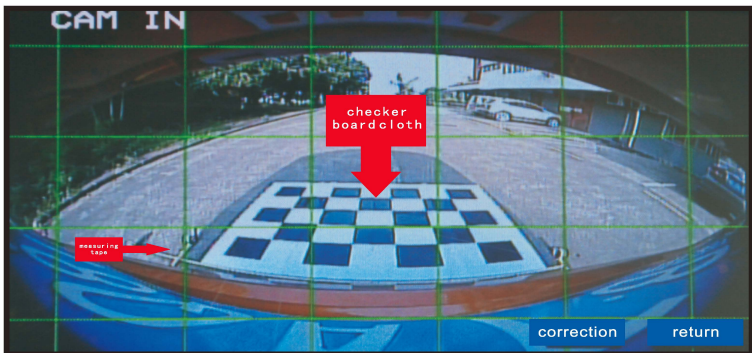
Placement Sequence: firstly, put front and rear first, and than put left and right

Press the power button on the remote controller--choose OK button--choose set up button--choose surround view and smartjoint--AV3 show the front camera on display--pull out the measuring tape and you can see the measuring tape location from the display. Put the 1.6m(the wider sized) check board cloth close to measuring tape and put in the center of the car.

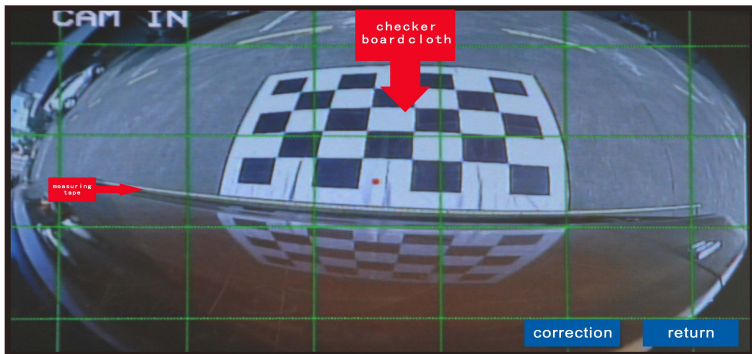
Placement of the front checkerboard cloth and measuring tape: put the tape just outside of the bumper. put the cloth close to the tape and in the center of the car head.



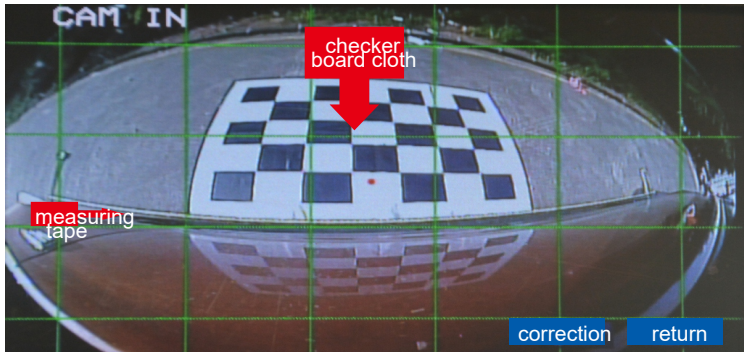
Placement of the rear checkerboard cloth and measuring tape: put the tape just outside of the bumper, put the cloth close to the tape and in the center of the car.



Placement of the left checkerboard cloth and measuring tape: put the measuring tape close to the front-back wheel, put the cloth under the left rear-view mirror.



Placement of the right checkerboard cloth and measuring tape: put the measuring tape close to the front-back wheel, put the cloth under the right rear-view mirror.



Note: the left and right checkerboard cloth should be at the same lever of the measuring tape.

8. Adjustment of surround view

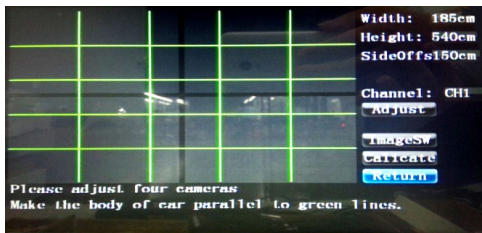
1). need to change the corresponding data when entering the panorama adjustment (refer to Pic. 1):

Vehicle Width: 4 measuring tape pull into the "□" type, use "□" width as the actual width of the vehicle.

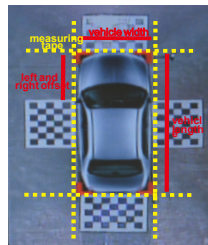
Vehicle Length: 4 measuring tape pull into the "□" type, use "□" length as the actual length of the vehicle.

The left or right offset: measure the distance from the front cloth to the left and right sides cloth, calculate in centimeters (refer to Pic.2):

Pic.1

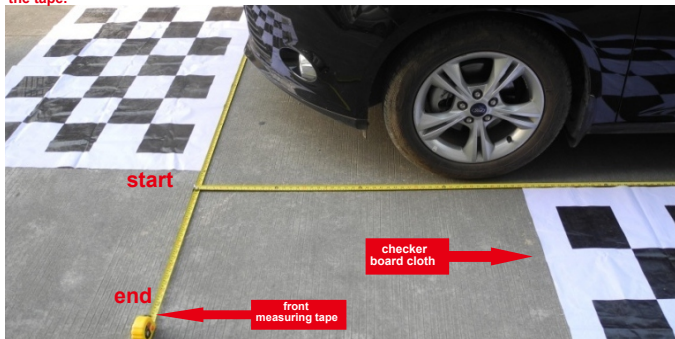


Pic.2

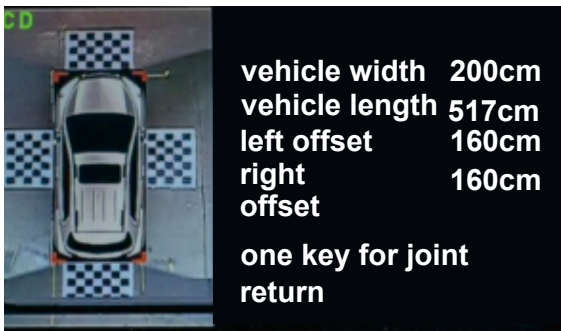


Note:

- 1 Note that the exact binding site of the measuring tapes
- 2 left and right tapes should be put close to the wheels
- 3 the checkerboard cloth should put on the binding sites of the integer on the tape.



2). After completed the adjustment of the panorama the cursor will move back to correction of panorama, ensure that nobody is surrounding the vehicle and then press the OK button, the calibration is complete (shown as below), and then save →



Note: If a camera fails to detect the appearance of a template, please check the reason in the following ways:

- ① check whether the protective film on the camera lens has been moved or not. check the lens if there is dust and dirt.
- ② check whether checkerboard cloth is reflective, whether there is an object .
3. according to the system reminder, return to recalibrate again.

9. Introduction of the the main menu and sub-menu options

1) Press the OK button on the remote control to select playback



2) Press OK to select search range



3) video file list



4) Return to the main menu,select the video settings,press the OK button to enter the video settings



5) video settings for each function selection



6) return to the main menu,select control settings,press the OK button to enter control settings



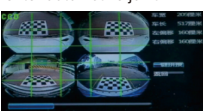
7) Various control settings options



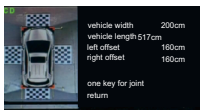
8) Select surround view smart joint,and press OK button to enter the surface of surround view joint parameter input.



9) after parameter input,select one key joint and press OK button to enter automotive joint.



10) After joint finished,then select back button



11) Return to main menu,select maintain button and press OK button to enter.



12) To see the various function of maintain surface



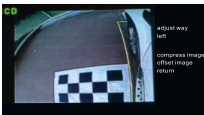
13) Select setting up and press OK button to enter



14) Select the left and right picture adjustment setting and press OK button to enter



15) Enter the single picture view of the direction indicator lamp and use remote control to compress/remove to adjust



10. Precautions

After full well installation of the 360-degree panoramic, the usage as below:

- 1) When reversing, the display will automatic pop-up the rear-view video and panorama video.
- 2).When driving, if you want to use the panoramic screen, press the emergency lights button twice or the power button on remote control, by the same method to power off the panorama.
- 3) If you need driving video recording, connect the USB to the USB extend cable, enter the playback menu, select Playback.

IMPORTANT

If you are having difficulties with the installation of this product, please call our Tech Support line at 1-800-253-TECH. Before doing so, look over the instructions a second time, and make sure the installation was performed exactly as the instructions are stated. Please have the vehicle apart and ready to perform troubleshooting steps before calling.



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**Metra recommends MECP
certified technicians**

Attention

When connecting with power cable, please make sure not to mistake the positive and negative pole, otherwise the fuse will blow immediately for security protection. If it happens, please replace the blown fuse with a new one with same specification, after connecting properly to the right pole. Don't randomly increase the current rating of the fuse, and NEVER use metal wire as a substitute.