ASTSH AST-360XG 360 Degree Bird View Panorama System User Manual

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Product Description

360 panoramic visual parking assistance system is through the installation of four ultra-wide angle fisheye cameras in the front, rear and left side of the body to simultaneously collect images around the vehicle, after algorithm synthesis, image unit distortion correction, splicing and fusion, forming a 360-degree 2D and 3D panoramic map around the vehicle, real-time transmission to the central control display, so that the driver can intuitively view the environment around the body through the display, there is no blind spot on the ground view, to help drivers easily deal with complex road and parking vehicles, effectively reducing the occurrence of accidents such as scrapes, collisions, trapping.

Product specifications

Main engine operating voltage	DC 12V
Camera power supply voltage	5.0V
Working current	700mA@12V
Working temperature	-30℃-85℃
Storage temperature	-40℃-100℃
Video input	Four 1080P/720P AHD signal inputs
Video output	CVBS/VGA/AHD/TVI/HDMI

format	
The video store	Udisk 8GB/16GB/32GB
Video file format	MP4
CPU	4 nuclear ARM architecture (A53
Frequency	1.5GHZ
GPU	G31 MP2
FLASH	4G

Functional features

1. a variety of video output mode: HDMI\CVBS\VGA\AHD\TVI;
2. multiple views: contains more than ten views, covering all customer use scenarios;
3. Knob control: open/close 360 with one key, all views can be switched instantly;
4. true 3D: 3D perspective can be arbitrarily switched in any direction;
5. a variety of dynamic effects: door switch, wheel speed/direction, forward/backward, 3D three-dimensional radar real-time display;
6. Built-in nearly 100 3D car models;
7. license plate number customized, 7 colors of the car model arbitrary switch;
8. built-in a variety of original car style UI, a variety of track line style;
9. radar start, automatically trigger radar perspective;
10. compatible with a variety of calibration cloth: fully surrounded cloth, two big cloth manual, two big two small manual, two big two small automatic;
11. 3D perspective distance, perspective height, horizontal stretching adjustable;
12. support double CAN buckle plate, insert double CAN board second change double CAN 3D all-in-one machine;

Product Function Details

Display view
The display modes are: 2D display, 3D display, narrow lane width limit mode, wide angle front and rear view, front and rear view zoom, etc.

1.2D pre-streaming media　　2. 2D front display

3. 2D front amplification (front end)　　4. 2D post-streaming media

5. 2D rear view　　6. 2D rear zoom (rear end)

7. Lateral 2 d　　8. Both front and left are visible

9. Body left and right view together　　10. 3D left view

11.3D Rear View 12. 3D right view

13. 3D rotating view

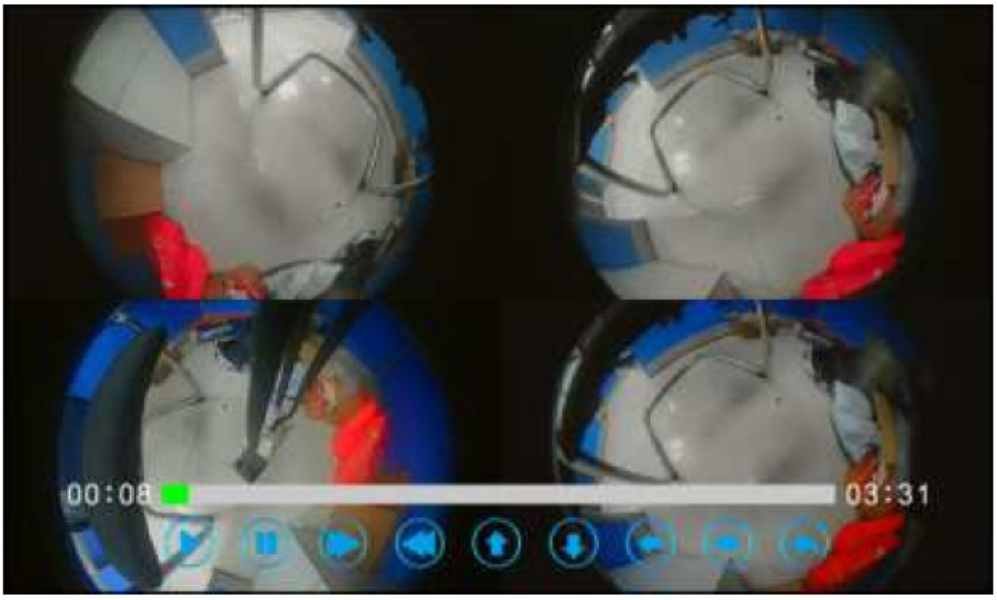
Menu interface

Main menu function: Car recording, video setting, control setting, panorama tuning, display setting, system setting, version information

Driving records

remote control arrow keys or screen touch “Previous””Next” key to find the time period to play the video file, the selected video file will be played by the OK key followed by a “√ “.

Select the video file after the remote control “OK” key or screen touch “play” key to enter the playback interface, the default is a 4-way camera field playback at the same time, you can select the function menu below the up, down, left and right arrow keys to achieve the front and rear of the single-way camera Playback, also can achieve pause, fast forward, fast rewind function.



For important video file lock protection, click “Lock” button below after the selected video file is ticked, the name of the locked video file will be changed from A….. will be changed to B…. And the video file will not be overwritten by the system automatic loop video, the locked video file can be unlocked by the “Unlock” button below.

You can manually delete the video files in the list (including the locked video files), select the file to be deleted by clicking the “Delete” button below to delete.

host power system will automatically cycle video, each video length of 5 minutes (need external USB devices to achieve video).

Video setting

Video switch: turn off/on (default on) the video function.
Format: After formatting the U disk, it will empty all the contents inside the U disk.
Time setting: Set the panoramic host system time.

Control settings

Start-up mode

Auto-start: 360 will start automatically after each fire.
Background start: 360 will not start after each fire; 360 will start only when the user reverses the gear, steering and P button.

Emergency light control

Left and right with the same display: when the emergency light is turned on, the view of the left and right cameras are displayed at the same time. streaming: displaying the view of the former streamer when the emergency light is turned on
off: when opening the emergency light, do not switch the 360 view.

Turn signal control

- ON: turn signal can open 360 panorama.
- OFF: turn signal does not enable 360 panorama.

Radar activation

- Off: radar cannot activate 360 panorama.
- Start: radar can start 360 panorama.
- Radar view: the radar automatically switches 360 panorama when it is red.

Vehicle speed control

Automatic closing of 360 panorama when the selected speed is exceeded.

Square control control

Turning on/off the functions of the original buttons.

P-key control

Turning on/off the P-key function.

Front and back view

Original view: front and back show the original view
Correction view: front and back show the correction view

Turn signal display

Corrected view: when the left and right turn signals are activated, the left and right corrected views are displayed.
3D view: when the left and right turn signals are activated, the left and right 3D view is displayed.
Original view: when the left and right turn signals are activated, the original left and right views are displayed.

Reversing display

360 panoramic view: displaying 360 panoramic view when reversing. Original rear view: displaying the original rear view view when reversing.

Trajectory following

- On: when the front and back are displayed as corrected view, the view will move with the track line change.
- Off: turn off the track following function.

Self-test delay

10 seconds: after boot-up, more than 10 seconds to exit 360 automatically. 30 seconds: after boot-up, more than 30 seconds to exit 360 automatically. 1 minute: after boot-up, more than 1 minute to exit 360 automatically.
5 minutes: after booting, more than 5 minutes to exit 360 automatically. always display: after booting, always display 360 view.

Front view delay

10 seconds: reverse gear cut to 360, reverse gear back to positive for more than 10 seconds automatically exit 360.30 seconds: reverse gear cut in 360, reverse gear back positive for more than 30 seconds automatically exit 360 1 minute: reverse gear cut into 360, reverse gear back to positive more than 1 minute automatically exit 360. 5 minutes: reverse gear cut into 360, reverse gear back to positive more than 5 minutes automatically exit 360. always display: reverse gear cut into 360, reverse gear back to positive always display 360 view.

Steering delay

3 seconds: steering cut into 360, turn off steering for more than 3 seconds to exit 360 automatically 5 seconds: steering cut-in 360, turn off steering for more than 5 seconds to exit 360 automatically 10 seconds: steering cut-in 360, turn off steering for more than 10 seconds to exit 360 automatically

Display delay

10 seconds: Enter 360 with double flash, and exit 360 automatically when double flash is over 10 seconds;
30 seconds: Open 360 with double flash, close 360 with double flash over 30 seconds, exit 360 automatically; 1 minute: Switch on 360 with double flashing, and exit 360 automatically if the double flashing exceeds 1 minute.
5 minutes: Switch on 360 with double flash, and exit 360 automatically after more than 5 minutes with double flash closed; always display: Open 360 with double flash, close the double flash and display 360 view all the time;

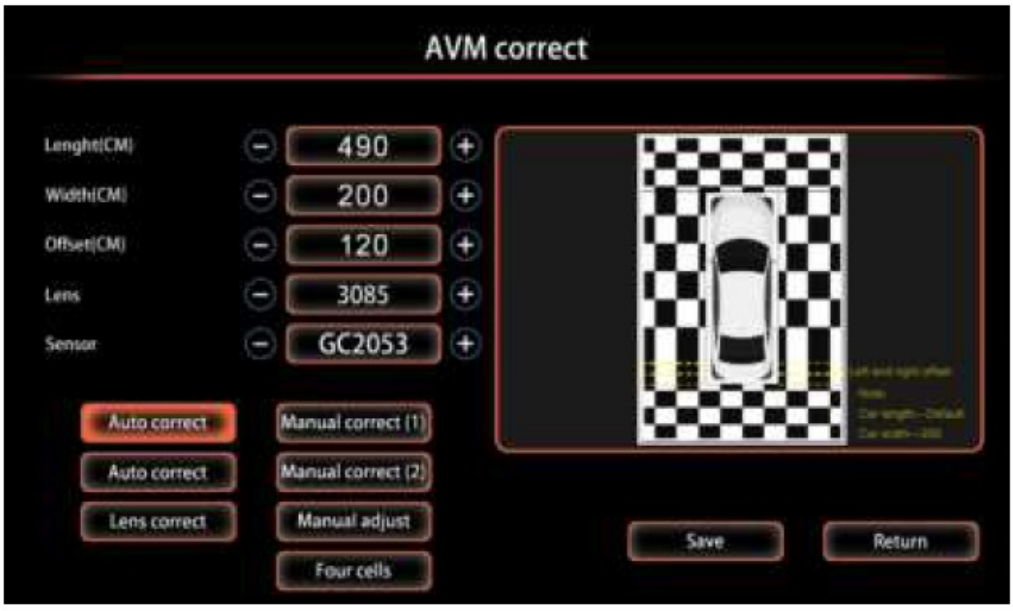
decoder

Select the matching decoder model (Universal, JCZL, YJ, etc.)

Phase selection

Select the appropriate phase of the video output signal (automatic, phase 0, phase 1, etc.)

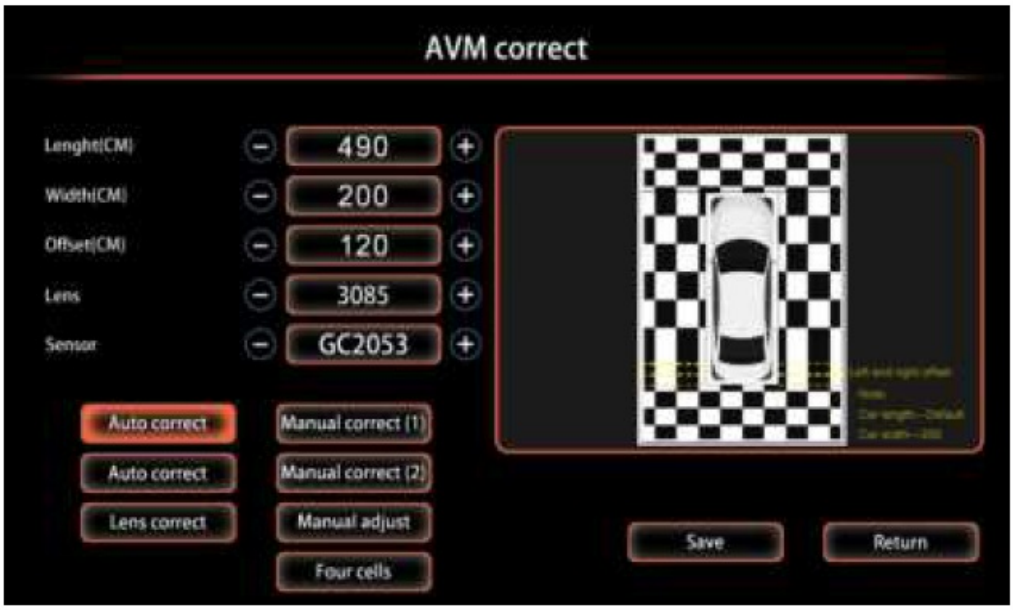
Panoramic adjustment



Vehicle length (CM) : The vehicle length is the actual distance between the front and rear debugging cloth;
Vehicle width (CM) : The vehicle width is the actual distance outside the tires on both sides of the body;
Left and right Offset (CM) : the distance from the front debugging edge to the left and right debugging edge.
Optical Lens: Select the corresponding lens according to the actual installed camera, HK8296; HK8255……

Photosensitive chip: Select the corresponding photosensitive chip according to the actual installed camera, SONY225; SC1233…

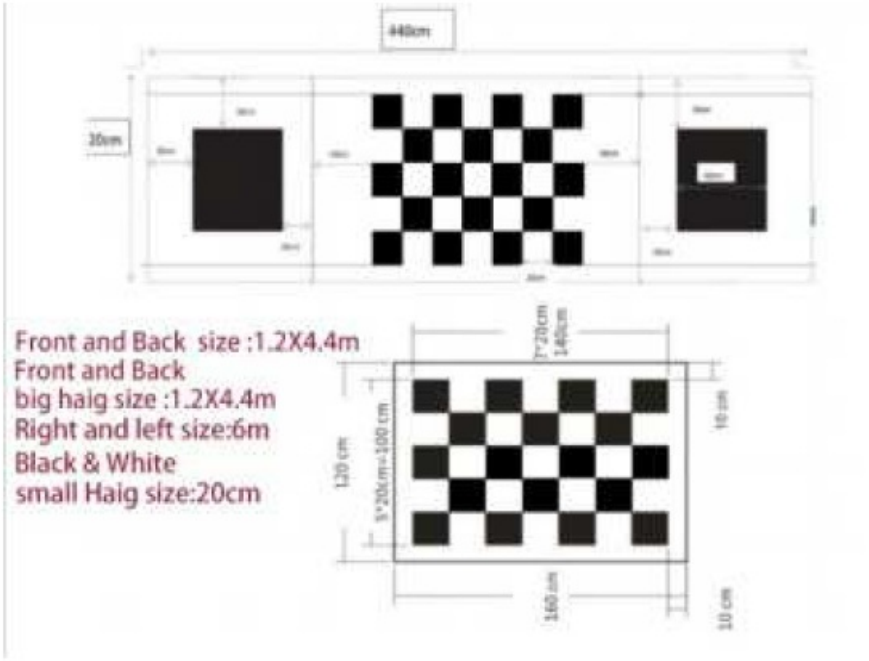
Automatic calibration



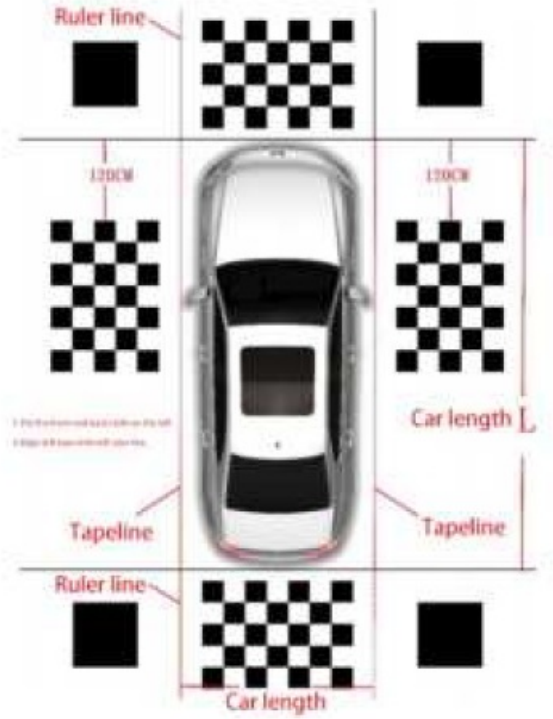
1. Lay out the cloth according to the way shown, left and right offset according to the picture to fill in the actual situation
2. Car length: default value
3. Width: 200
4. click the automatic correction a, start splicing, if there is a recognition error prompt, then you need to adjust the corresponding direction according to the prompt laying cloth, or light and other external environment, until the successful calibration.
5. Large cloth automatic calibration of the surrounding environment requirements are high, please try to avoid direct sunlight, cloth around the ground is best to avoid parking grid lines or other obvious signs of objects, so as not to affect the success rate of calibration and results.

Auto-calibration

1. Two big and two small calibration cloths: front and rear calibration cloth size 4.4×1.2m; left and right calibration cloth size 1.2×1.6m



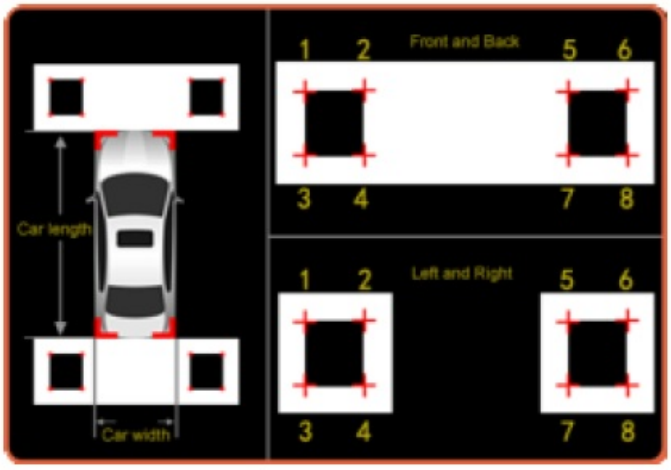
2. Tape measure 2~4: the range can measure 7.5M (inclusive) or more.
3. site requirements: more than 12 meters long / 6 meters wide open and relatively balanced ground (can not be in the slope, the ground is not flat place).
4. environmental requirements: daily light brightness is the best, can not be in the sun or shady places, otherwise it will affect the splicing.
5. before and after the calibration cloth need to be parallel to the car, using a straightedge to measure the distance between the two large cloths before and after the left and the distance between the two large cloths on the right requires less than 2cm error.

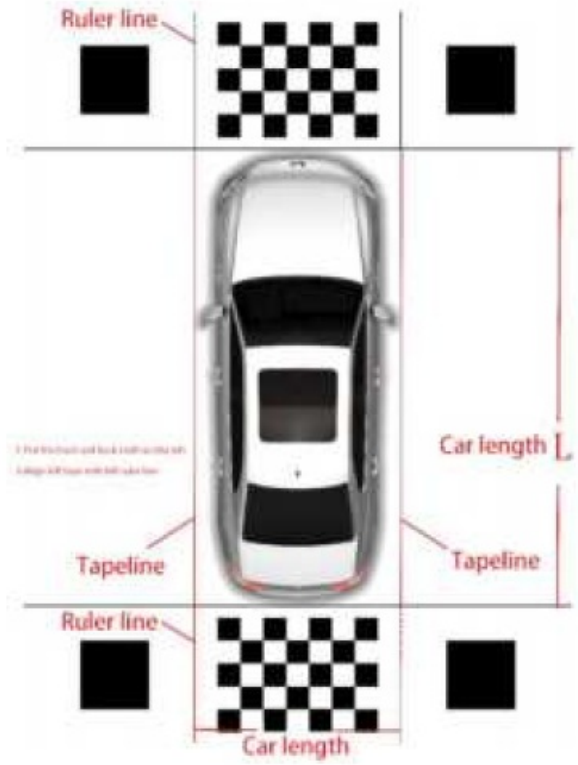


Manual calibration 1

Manual calibration before the preparation of tools and notes.

1. calibration cloth: front and rear calibration cloth size 4.4×1.2m; (and automatic splicing cloth is the same, the size of the black grid on the cloth for 60×60 cm, manual splicing, left and right calibration cloth without)
2. the placement of the calibration cloth and the order of tracing points

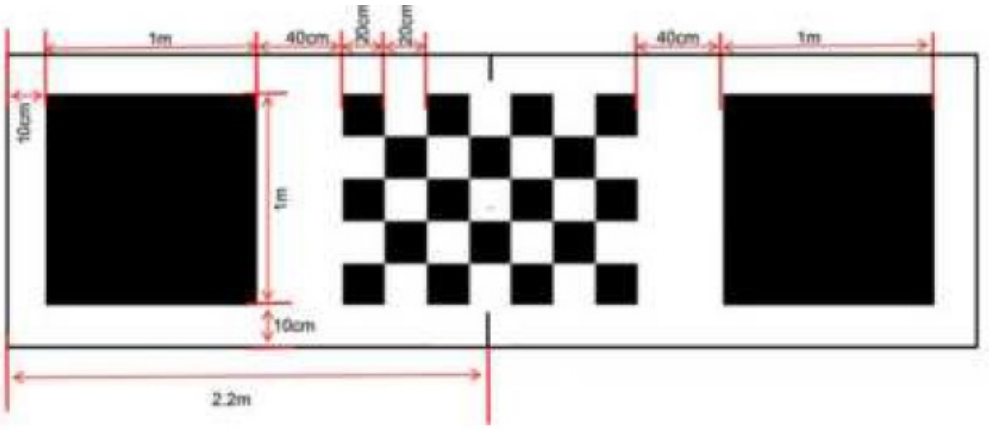




Manual calibration 2

Manual calibration before the preparation of tools and notes.

1. Calibration cloth: front and rear calibration cloth size 4.4×1.2m; (and manual calibration one and automatic splicing cloth is not the same, the size of the black grid on the cloth is 1x1m)



Display settings.

Camera

Select the correct camera standard: 1080P/720P, otherwise the camera display will be abnormal.

Output Format

Select the correct output format: NTSC/PAL/AHD_25/AHD_30/TVI_25/TVI_30/VGA720_480/VGA720_576/VGA1280_720/HDMI1280_720/HDMI USER.

Power on rotation

Rotate one week: one week is automatically selected by power on. Rotate for two weeks: two weeks are automatically selected at power-on. Rotation of three weeks: automatic selection of three weeks at power-on. Off: turn off the power-on rotation function.

Camera display

Brightness: adjust the brightness of the camera, the range of values is 0~100; (default value is 50) Saturation: adjust the saturation of the camera, the range is 0~100; (default value is 50) Contrast: adjust the contrast of the camera, the range of values is 0~100; (default value is 50) Sharpness: adjust the sharpness of the camera, the range of values is 0~100; (default value is 50)

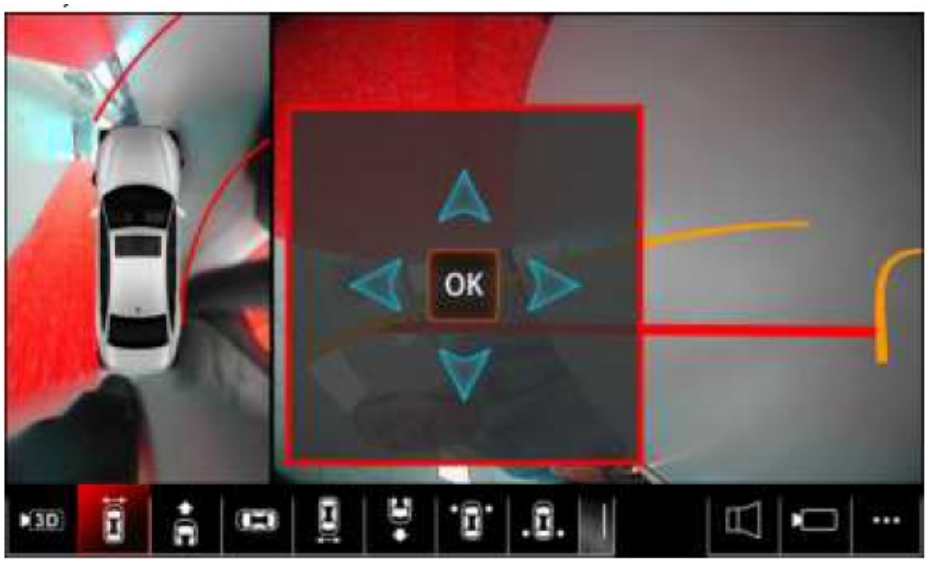
2D position
Left side: the 2D view is displayed on the left side.
Right side: the 2D view is displayed on the right side.

View Adjustment

After installing 360, when users want to adjust the view, they can do so as follows.

1. 2D view: you can adjust the display range of front, back, left, right, streaming and co-display views. After selecting the corresponding view, press the switch key for view adjustment edge selection (the yellow line is the current adjusted orientation), and then press the corresponding direction key for view range adjustment.
2. 3D view: you can adjust the distance, perspective and horizontal stretch degree of 3D view. 3D far and near: click the up and down arrows to adjust the size of the 3D view, click the left and right arrows to rotate the 3D view.
   3D perspective: click the up and down arrows to adjust the perspective of the 3D view, and click the left and right arrows to rotate the 3D view.
   3D horizontal: click the up and down arrows to adjust the horizontal stretch of the 3D view, click the left and right arrows to rotate the 3D view.

Window Adjustment



Margin adjustment can be made to the four sides of the 360 display screen.

1. Press the switch key to select the four orientations (the yellow line is the current orientation being adjusted).
2. Press the corresponding direction key for margin adjustment.

UI style

UI styles: optional UI styles Mercedes-Benz, BMW, Audi, Lexus, Cadillac, Volvo, Volkswagen, etc..

Track line

Track line: optional track style Mercedes, BMW, Audi, Cadillac, VW, etc.

Car model selection

Car model selection: the choice of car model style Mercedes-Benz, BMW, Audi, Lexus, Cadillac, Volvo, Volkswagen, etc..

Car model colors

Model colors: white, black, red, gray, blue, green, brown.

License plate settings

Settable license plate types, license plate numbers.

System setup

system upgrade insert the U disk with software, remote control “OK” key or screen touch “system upgrade” key system will be automatically upgraded, and pop-up dialog box, the upgrade process can not be power off; will automatically restart after a successful upgrade.

capture mode remote control digital “9” key or screen touch “capture mode” key to save the image displayed on the screen to the U disk, each time you press to save a picture

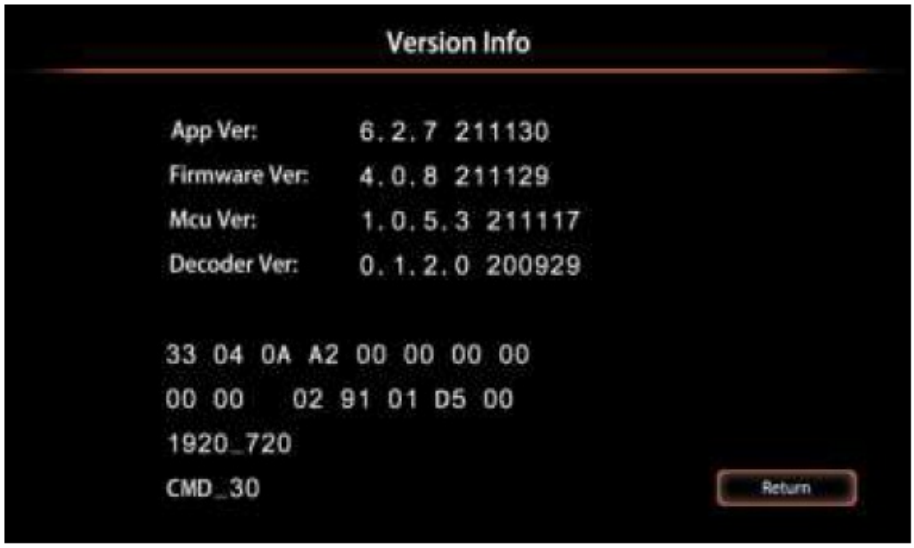
Export parameters insert the U disk, remote control “OK” key or screen touch “export parameters” key to save the settings and splicing parameters to the U disk.

Import Parameters Insert the exported parameters of the U disk, the remote control “OK” key or screen touch “import parameters” key to import the U disk settings and splicing parameters to the 360 host.

Saving default parameters backing up all currently set parameters.

Restore default parameters restores the parameters of the last backed up settings. 6.7Restore factory parameters Restore the factory preset default parameters.

Version Information



1. information on the software and hardware versions of the current machine.
2. real-time display of body data.

Password

1. Part of the menu page has password protection
2. Password is unified: 666888

Wireless knob

There are 4 ways to operate the knob.

1. Short press.
   Short press the knob when the 360 panorama is not opened, to open the 360 panorama.
   Short press the knob when the 360 panorama has been opened, which is equivalent to the ok button of the remote control.
2. Left knob.
   When the 360 panorama has been opened, the left-hand knob switches the relevant view to the left.
3. Right knob.
   When the 360 panorama has been opened, the right-hand knob switches the relevant view to the right.
4. Long press.
   When 360 panorama has been opened, long press the knob for 1s, then return to the previous level menu (equivalent to the return button of the remote control).
   When 360 panorama is in 2D view mode, long press the knob for 1s, it will turn off 360 panorama.

Note: After a period of non-operation of the knob, in order to save power will automatically enter a dormant state; when the user needs to use the knob again, you need to short press the knob to wake up the knob into normal working mode

Quick Features

The remote control numeric keys allow for quick switching of output formats:. 111111——CVBS

- 222222——HDMI-1280-720
- 333333——AHD-25
- 444444——VGA-1280-720
- 555555——VGA-720-480
- 666666——AHD-30

The knob is pressed and held for 8 seconds to cycle through the following output formats. CVBS-NTSC

- AHD-25
- VGA-720-480
- VGA-1280-720

- HDMI-1280-720

Documents / Resources

	**ASTSH AST-360XG 360 Degree Bird View Panorama System** [pdf] User Manual AST-360XG 360 Degree Bird View Panorama System, AST-360XG, 360 Degree Bird View Panorama System, View Panorama System