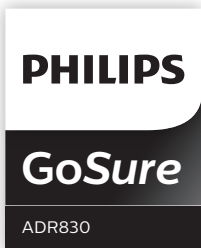


Size: 75(w)x127.5(h)mm



User manual

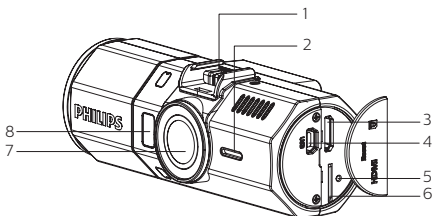
简体中文	3
English	22



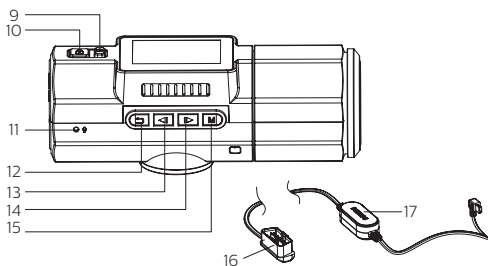
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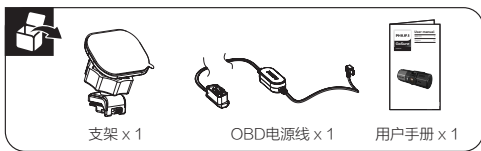
1 产品简介



- | | |
|-----------------|----------------------|
| 1. 支架槽 | 5. 重启按键 |
| 2. 扬声器 | 6. 存储卡卡槽 |
| 3. Mini HDMI 接口 | 7. 镜头 |
| 4. Mini USB 接口 | 8. WaveGuard 停车监控指示灯 |



- | | |
|-------------------|-------------|
| 9. 抓拍按钮 | 14. 右翻按钮 |
| 10. 紧急录像按钮 | 15. 菜单/确认按钮 |
| 11. 麦克风 | 16. OBD电源线 |
| 12. 返回按钮 | 17. 直流电转换盒 |
| 13. 左翻按钮/录音启动关闭按钮 | |



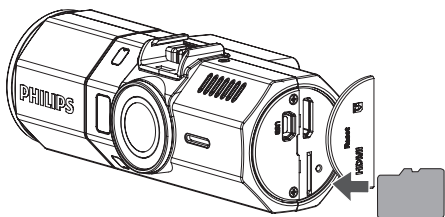
注意：

- 1.该记录仪配有OBD电源线。OBD是汽车的车载自动诊断系统接口，可以为记录仪提供稳定的电源。
- 2.请参照汽车用户手册或者询问汽车经销商，确定OBD接口的位置。
- 3.请不要在开车时操作记录仪！
- 4.为防止重要视频被覆盖，请将存储卡及时取出！

2 快速入门

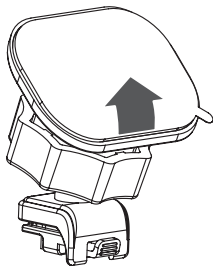
2.1 插入存储卡

1. 存储卡金属触点背向镜头，插入记录仪的卡槽。
2. 推动存储卡，直到其咔嗒一声锁定到位，然后盖上保护盖。



2.2 车内安装

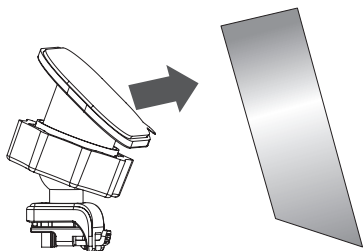
1. 撕去支架背面和镜头上塑料保护膜。



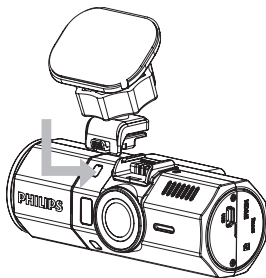
2. 请务必找到合适的粘贴位置：在通电状态下，观察并调整记录仪的视野范围；让该记录仪镜头前的挡风玻璃可以通过雨刮器自动进行清洁；同时，可以让驾驶员轻松看到该记录仪的状态指示灯；另外，请务必提前清洁粘贴区域的玻璃表面。

注意：

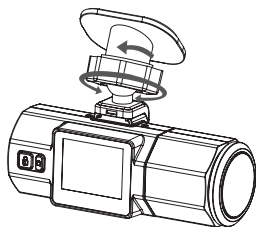
1. 请仅在环境温度处于 18~38°C 时粘贴支架，或开启汽车空调。
2. 请将记录仪安装至不影响驾驶员视线的位置。



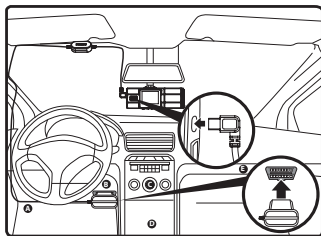
3. 24小时之后再安装该记录仪。把支架连接到记录仪上。将支架滑入支架槽，直到听到咔嗒声。



4. 松开旋钮，调整记录仪至合适位置，然后拧紧旋钮，确认记录仪已牢固锁定。



5. 将OBD电源线的Micro USB插头插接到记录仪Micro USB接口。
6. 将OBD电源线的OBD插头插接到汽车的OBD接口。
7. 请将OBD电源线的直流电转换盒粘贴在记录仪附近。



注意：

1. 大多数汽车的OBD接口位于A、B、C、D或者E区域附近。
2. 为避免OBD电源线悬挂高出车厢内壁10毫米以上造成危险，请务必使用线夹将OBD电源线紧贴车厢内壁固定。
3. 记录仪和电源线的安装不能影响车内原有设备，比如安全气囊等的运作。



2.3 自动打开/关闭电源

1. 汽车引擎一旦发动，记录仪即自动开机。
2. 如果您拔掉OBD电源线，记录仪自动关机。

2.4 手动录音关闭/启动

1. 当设置记录仪处于录音开启状态时，按 ◀ 按钮，即可关闭录音。



2. 当设置记录仪处于录音关闭状态时，按 ◀ 按钮，即可启动录音。



2.5 取出存储卡

打开保护盖，并按下存储卡，使其从卡槽内弹出。

2.6 关于存储卡

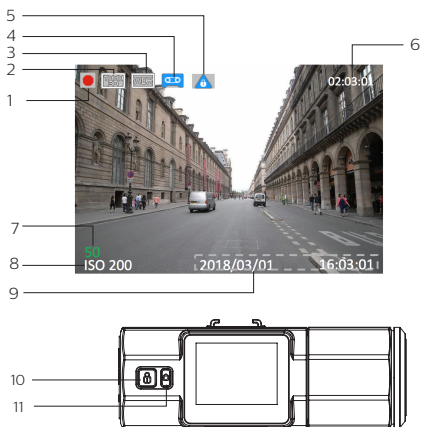
1. 请使用容量不低于16GB，不高于64GB，Class10 级别以上的存储卡。
2. 首次使用时，请务必使用记录仪对存储卡进行格式化。
3. 存储卡的容量和录像时间的关系：

存储卡容量	视频分辨率		
	(720P/30FPS)	(720P/60FPS)	(1080P/30FPS)
32GB	520 分钟	340 分钟	320 分钟
64GB	1040 分钟	680 分钟	640 分钟

注意：

1. 如果汽车超过一个月未使用，请务必断开OBD电源线，以免汽车电瓶的电量被过度消耗。
2. 请使用原装OBD电源线，以免与记录仪不相匹配。
3. 一旦通过USB与电脑相连，记录仪仅允许传递数据。
4. 为使停车监控保护的时间更长，
 - 选择720P30的图像分辨率，保护时间比1080P30延长1倍；
 - 选择停车监控的保护范围为“近”，保护时间比“中”延长10~30%；
 - 使用更高容量的卡，比如64G，保护时间比32G延长1倍。
5. 每张存储卡的都有一定的使用寿命，特别是应用于高低温变化、剧烈震动的车载环境，进行大量的数据读写。
 - 请仅使用推荐的存储卡；
 - 当频繁提醒“卡异常，请格式化或换卡！”，请换新卡。

3 用户界面



编号	描述
1	录像/停止指示
2	分辨率指示
3	WDR (宽动态范围) 开关指示
4	录音开始/停止指示
5	紧急录像状态指示
6	录音时间
7	疲劳驾驶指数
8	ISO数值
9	日期/时间戳
10	状态指示灯 <ul style="list-style-type: none"> • 蓝色: 录像状态 • 蓝色闪烁: 紧急录像状态 (紧急录像按钮被按下) • 灯灭: 非录像状态
11	抓拍

4 系统设置

按“M”按钮，即可显示菜单列表。

4.1 设置日期和时间

1. 按“M”按钮，打开主菜单。



2. 按◀|▶按钮，选择“日期/时间”图标，按“M”按钮，进入日期/时间设置菜单。



3. 要调整日期和时间字段，按“M”按钮选择该字段即可。
4. 按◀|▶按钮选择数值。
5. 重复3~4步，调整其它字段。
6. 按[返回]按钮保存所作更改。

4.2 功能设置

编号	功能	菜单图标	说明
1	媒体文件		查看“一般录像”文件，“紧急录像”文件和抓拍图片。用户可播放、暂停、删除、锁定或者解锁相关视频文件。
2	图像分辨率		将视频分辨率设置为全高清1080p (FHD)、超高清(60FPS HD+)或者高清晰度。
3	停车监控		设置停车监控的保护范围为远/中/近和分辨率

4	碰撞监测灵敏度		选择碰撞监测的灵敏度等级：高/中/低，或者关闭。
5	日期/时间		设置记录仪日期和时间
6	液晶显示屏自动关闭		设置液晶屏自动关闭前的点亮时间。
7	格式化		格式化存储卡
8	语言选择		中文或英文。
9	录音		打开/关闭录音功能。
10	曝光设置		调整曝光值。
11	时间戳		打开/关闭视频上的日期/时间标记功能。
12	宽动态 WDR		打开/关闭WDR功能。
13	Wave-Guard 指示灯		打开/关闭WaveGuard指示灯。
14	疲劳驾驶警示		打开/关闭疲劳驾驶警示功能。
15	电瓶保护电压		调整电瓶低压保护阈值
16	恢复出厂设置		将记录仪所有设置恢复为出厂默认。
17	系统版本		固件版本以及其它相关的信息。



5 操作说明


5.1 录制视频

5.1.1 一般录像

汽车引擎发动后，记录仪自动开机并开始录像。当汽车引擎关闭（停车状态）时，录像功能也自动停止。但是，只要该记录仪监测到其前方一定距离范围内有移动物体，则WaveGuard指示灯将闪烁，录像功能立即被重新启动。如果接下来的10秒时间内没有发生其它移动事件，则录像功能关闭。所录制的视频文件都将保存在“一般录像”文件夹。



5.1.2 紧急录像

1. 若碰撞监测功能启动，该记录仪将自动监测碰撞事件，生成紧急视频文件，并将其存入“紧急录像”文件夹。行车过程中，紧急视频将显示事件发生前后的情况。停车状态时，紧急视频只能显示事件发生后的情况。
2. 正常录像时，您可以随时按下紧急录像按钮 ，启动紧急录像功能，确保每一个值得关注的瞬间都可以被记录。
3. 为保证全天停车监控所必需的磁盘空间，紧急录像文件最大数量限定为12个，超过后，将在汽车点火启动后自动删除较旧文件，请及时备份。





5.2 视频回放

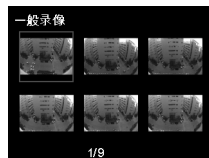
1. 按“M”按钮进入主菜单。
2. 按◀|▶按钮，选择“媒体文件”图标，并按“M”按钮。



3. 按◀|▶按钮，选择“一般录像”，或者“紧急录像”文件夹，并按“M”按钮。



4. 按◀|▶按钮，选定视频文件，并按“M”按钮，然后选择“播放”来播放该视频。



5. 播放视频时，按“M”按钮停止，按▶按钮快进，按◀按钮快退，按返回按钮返回。



5.3 删除视频

1. 按◀|▶按钮，选定视频文件。之后按“M”按钮，选择“删除”移除该视频。





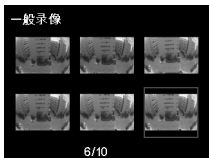
2. 选择“删除全部”删除所有未被锁定的视频文件。
3. 确认信息出现在屏幕上，按◀|▶按钮，选择“是”并按“M”按钮确认删除。



5.4 锁定视频

锁定视频，防止视频文件被覆盖。

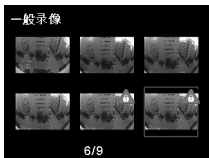
1. 按◀|▶按钮，选定视频文件并按“M”按钮。



2. 按◀|▶按钮，选择“锁定”并按“M”按钮。



3. 对该视频加锁，然后自动返回到视频列表。



4. 使用相同的方法给视频文件解锁。

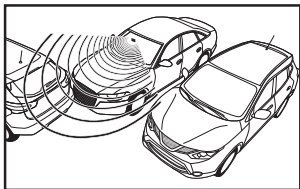




6 附加功能

6.1 WaveGuard功能（全天停车监控）

该记录仪在停车状态下也能对您的爱车进行持续保护，一旦监测到移动物体就会启动录像功能，并将录像文件保存在“一般录像”文件夹内。当记录仪监测不到移动物体，为了节省汽车电瓶电量，记录仪将自动关闭。停车状态下，如果记录仪监测到汽车碰撞，亦会开始录像，并保存在“紧急录像”文件夹。



6.2 疲劳驾驶警报

为帮助驾驶员有效预防疲劳驾驶，考虑到与生理和行程相关的各种参数（例如当前时间和驾驶时长等），疲劳指数会显示驾驶员疲劳的变化状况。当疲劳指数达到80时，记录仪即会提醒驾驶员，且每连续驾驶2小时，记录仪亦会提醒驾驶员。开启疲劳驾驶提醒功能时，屏幕上会显示疲劳指数。当疲劳指数小于60时，屏幕上会显示绿色数值。在疲劳指数达到80之前，屏幕上会显示黄色数值并同时发出一声提醒音。当疲劳指数大于80时，屏幕上会显示红色数值并同时发出三声提醒音，此外还会弹出疲劳图标提醒用户。（用户开启疲劳驾驶提醒功能时，需准确的设置系统时间。）



7 技术规格

功能	WaveGuard全天停车监控 自动录像 碰撞监测&紧急录像文件保护 循环录像 自动曝光 自动白平衡 日期和时间戳 显示屏自动关闭 疲劳驾驶提醒以及疲劳驾驶指数显示 抓拍按键 紧急录像按键 先进夜视系统
图像传感器	210万像素CMOS
录像分辨率	全高清(1920x1080P), 每秒30帧 高清(1280x720P), 每秒60帧 高清(1280x720P), 每秒30帧
显示屏	1.5英寸液晶显示屏 (480x240)
光圈	F/#1.8
定焦镜头	六玻广角镜头, 可视角135度(对角线)
文件格式	MOV PCM音频压缩技术/H.264视频压缩技术
随机存取存储器	64M x 16bit(1Gbits)DDR3 SDRAM
内部存储器	64Mb SPI闪存
储存卡	Micro SD存储卡(不低于16GB Class10及以上, 推荐32GB)
录像时长	32GB: 全高清320分钟 64GB: 全高清640分钟
系统时间保持	5天
工作温度	-10°C ~ 55°C
储存温度	-20°C ~ 65°C
随机附件	OBD电源线, 支架, 用户手册
接口	Mini USB2.0 接口, Mini HDMI 接口, 存储卡接口, 麦克风, 扬声器
语言	英文、中文
供电电源	12V转 5V/1A OBD电源线
尺寸(长×宽×高)	108.8 x 41.0 x 38毫米



8 免责声明

- * 该记录仪仅适用于12伏电源供电的汽车。
- * 若要实现7天24小时视频监控保护，请保证存储卡容量至少为32G。
- * 该记录仪仅能监测并录制一定距离范围内、与镜头拍摄方向相同的移动物体，并不能监测到相反方向的活动事件。如果您需要对爱车进行全方位保护，请购买两个记录仪，一个监测前方，一个监测后方。
- * 当车厢温度超过70°C时，为保证汽车安全，该记录仪将自动断开电源，停止视频监控保护功能。
- * 冬季气温过低、汽车电瓶年代已久或者电量未充满时，会导致该记录仪有效录制时间减少。
- * 若记录仪镜头前面的挡风玻璃因雨、雪、沙尘或者其它自然/人为因素变脏，该记录仪将无法获得有效录像证据。
- * 处于雨、雪、晃动的树枝或者繁忙的街道/停车场环境时，有时可能导致视频持续录制，因而大大降低该记录仪的有效保护时间。
- * 带自动启停功能的汽车当发动机重启时，有可能因电压被拉低到电瓶低压保护阈值，造成记录仪的重启。
- * 有些汽车贴膜不仅干扰GPS全球定位系统、雷达、ETC系统等，还会影响WaveGuard的监测范围。若通过调节系统设置仍然无法满足您对汽车录像保护范围的要求，请将其更换为质量更好的汽车贴膜，或在汽车贴膜上“开”一个小窗。判断车膜会否影响WaveGuard功能：站在车头挥手，红灯闪烁，则没问题。





产品保修卡

此产品设计精良，品质优异，在正常使用及保养下，能表现出优异性能。本产品自购买日期起(以购机发票为准)，整机保修1年。按照下列保用条例，将为持卡用户提供免费保修服务。

保用条例

- 保用服务只限于一般正常使用下有效。一切人为损坏，例如接入不当电源，使用不当配件，不依说明使用，非经本公司认可之维修和改装(防撕毁标贴明显破损)，错误使用或疏忽而造成损坏，不适当安装或因天灾造成损坏等，保用服务立即失效。
- 维修时请携带此卡原件和发票原件，并随产品一起提供给销售商。否则，将不能保证保修服务的正常提供。
- 保修卡和发票若经修改，将不能获得保修服务。
- 请联络您所购买的产品的销售商，此销售商将协助您进行产品的保修服务。
- 对不依照上述保用条例办理之用户，本公司对上述条例负有解释权。

以下信息由用户填写：

(以下信息我们将严格保密，仅用于维修联络之目的，请务必填写准确联系信息)

姓名： 详细地址：

电话： 邮编：

以下信息由零售商填写：

零售商： 负责人：

地址：

电话： 型号： 机身编号：

(若购买日期与发票日期不符，或无相关信息，将按出厂日期顺延一个月算起)

以下信息由厂商填写 (故障描述)：

1.

2.

客户服务热线：8008-201-201

手机用户拨打：4009-201-201

合格证
已检验



产品有毒有害物质申明

序号	部件名称	有害物质或元素（按要求填O或X）					
		铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
1	主机	X	O	O	O	O	O
2	附件	X	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有均质材料中的含量在GB/T 26572规定的限量要求以下。
X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572规定的限量要求。

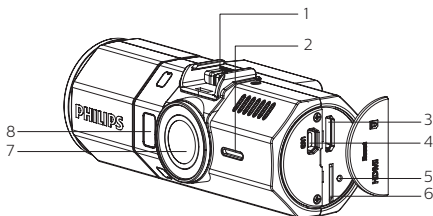


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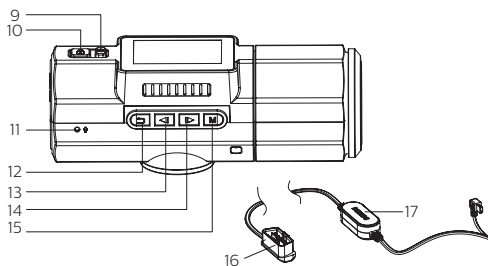
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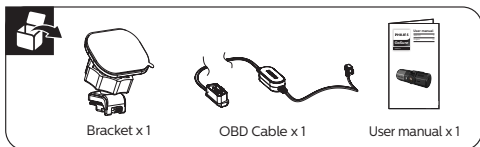
1 Product Overview



- 1. Bracket Holder
- 2. Speaker
- 3. Mini HDMI Port
- 4. Mini USB Port
- 5. Reset Button
- 6. Micro SD card Slot
- 7. Lens
- 8. WaveGuard Indicator



- 9. Snapshot Button
- 10. Emergency Recording Button
- 11. Microphone
- 12. Return Button
- 13. Left Button/Voice Recording ON/OFF
- 14. Right Button
- 15. Menu/OK Button
- 16. OBD Cable
- 17. DC Converter Box



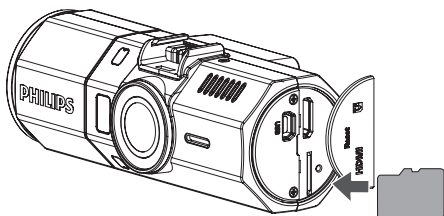
Attention:

1. This device is equipped with an OBD power adapter. The OBD is the car's On-Board Diagnostics interface and can provide a constant power supply to the device.
2. To find your car's OBD port, please refer to the car's user manual or ask the car dealer.
3. Please do NOT operate the device while driving!
4. Please take the Micro SD card out of the device after any incident to prevent important videos from being overwritten.

2 Quick Start

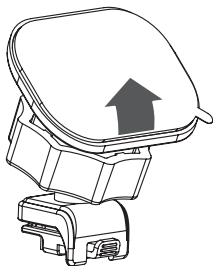
2.1 Inserting the Micro SD Card

1. Insert the Micro SD card with the gold contacts inward, toward the back of the device.
2. Push the Micro SD card until it clicks into place, and close the protective cap.



2.2 Installing in a Vehicle

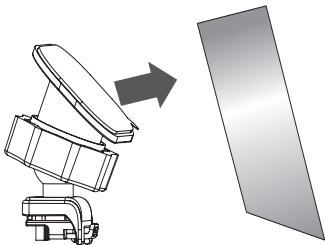
1. Peel off the protective plastic film from both the bracket and the lens.



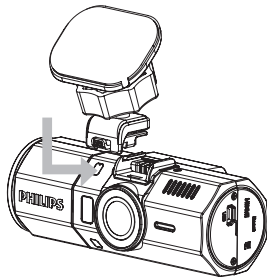
2. Please attempt to find a pasting position where the portion of windscreen in front of the device's lens will be cleaned automatically by the vehicle's windshield wiper, and the device's status indicator can be easily perceived by the driver's eyes. Please clean the pasting surface of the glass beforehand.

Attention:

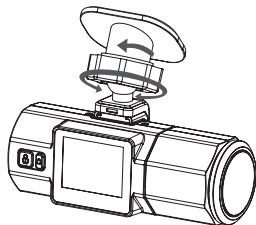
1. Please only proceed with pasting the bracket if the environmental temperature is between 18~38°C, or if the car's air conditioning is on.
2. The device should be installed in a position where it will not block driver's view.



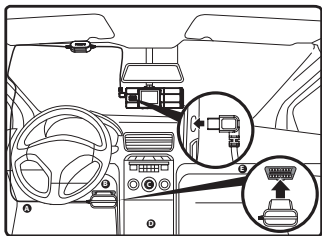
3. Mount the device after 24 hours. Attach the bracket to the device. Slide it into the bracket holder until you hear a click.



4. Loosen the knob to adjust the device into the correct position. Then tighten the knob to make sure the device securely locked.



5. Connect the micro USB connector of the OBD cable to the Micro USB port of the device.
6. Plug the OBD cable into your vehicle's OBD socket.
7. Paste the DC converter box of the OBD cable near the device.



Attention:

1. In most cars, the OBD port is located in area A, B, C, D or E.
2. To prevent the OBD cable from hanging unsafely or extruding further than 10 mm into the car cabin, **PLEASE USE CABLE CLIPS TO SECURE THE OBD CABLE!**
3. The mounting of the device and the OBD cable should **NOT** interfere with the normal operation of vehicle's original equipment, such as the airbag, etc.



2.3 Automatic Power On/Off

1. Once the power of the vehicle is on, the device automatically turns on.
2. If you disconnect the OBD cable, the device turns off.

2.4 Manual Voice Recording Off/On

1. When the voice recording setting in System Setting is OFF, press **◀|** to switch on voice recording.
2. When the voice recording setting in System Setting is ON, press **◀|** to switch off voice recording.



2.5 Removing the Micro SD Card

Open the protective cap and push the Micro SD card to eject it from the slot.

2.6 About the Micro SD Card

1. Please use a Micro SD card with capacity at least 16 GB, up to 64 GB, Class 10 or above.
2. Be sure to format the Micro SD card with the device before usage.
3. Relationship between card capacity and recording time:

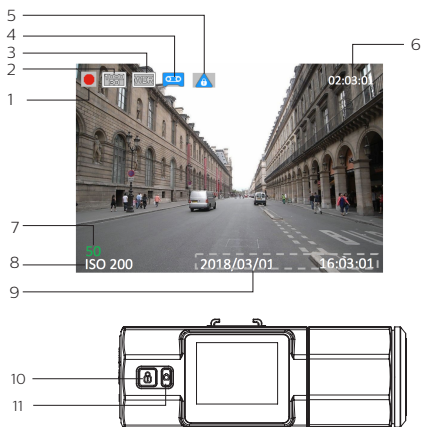


Micro SD Card Capacity	Video Resolution		
	(720p/30 FPS)	(720p/60 FPS)	(1080p/30 FPS)
32 GB	520 minutes	340 minutes	320 minutes
64 GB	1040 minutes	680 minutes	640 minutes

Notes:

1. If the vehicle is not used for over a month, please disconnect the OBD cable to avoid potential excessive consumption of vehicle battery power.
2. Please use the dedicated OBD cable to avoid noncompliance with the device.
3. Once connected to a PC via USB, the device only allows data transferring.
4. To maximize parking monitoring time, you should
 - Set the video resolution to 720p, to double the valid monitoring time possible at 1080p.
 - Use a 64 GB Micro SD card to double the valid monitoring time possible with a 32 GB Micro SD.
 - Set the parking monitoring range to "near" to extend the valid monitoring time by 10~30%.
5. Every Micro SD card has a limited lifetime, especially if used for high-volume data reading/writing in the-high vibration and high-temperature environment of a car.
 - Please use only a recommended Micro SD card.
 - If you frequently receive the prompt "SD Abnormal, please format or replace it!", please replace it.

3 User Interface



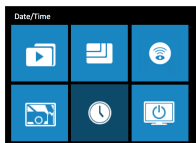
No.	Description
1	Video recording/stop status indicator
2	Video resolution indicator
3	WDR (Wide dynamic range) ON/OFF indicator
4	Voice recording ON/OFF indicator
5	Emergency recording status indicator
6	Recording time
7	Driver fatigue index
8	ISO value
9	Date and time stamp
10	Status indicator - Blue: Video recording status - Blue blink: Emergency recording status (when the Emergency recording button is pressed) - Off: Non-recording status
11	Snapshot button

4 System Settings

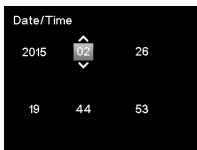
Press "M" to show the main menu, and set different functions of the device.

4.1 Set Date and Time

1. Press "M" to open the main menu.




















2. Use ◀▶ to select the Date/Time icon and press "M" to enter the Date/Time settings menu.



3. To adjust the date and time field, press "M" to select the field.
4. Use ◀▶ to select the value.
5. Repeat steps 3-4 to adjust the other fields.
6. Press the [Return] button to save your changes.

4.2 Function Settings

No.	Function	Menu icon	Description
1	Media Files		Watch and operate normal and emergency video files and snapshot pictures. Users can play, pause, delete, lock, and unlock the video files.
2	Resolution		Set the video resolution to Full HD 1080p (FHD), HD Premium (60 FPSHD+) or HD Premium (HD+).
3	Parking Surveillance		Set the protective range and resolution of parking monitoring.

4	Collision Detection		Select the sensitivity level of collision detection to high/middle/low/off.
5	Date/Time		Set date and time for the device
6	LCD Auto Off		Set the time until the LCD is turned off automatically, or set the LCD to always on.
7	Format		Format your Micro SD Card.
8	Language		Chinese and English are available for selection.
9	Voice Recording		Switch the voice recording function on/off.
10	EV Value		Manually adjust the exposure value.
11	Time Stamp		Switch the date and time watermark on the video on/off.
12	WDR (Wide Dynamic Range)		Switch the WDR function on/off.
13	WaveGuard Indicator		Switch the WaveGuard Indicator on/off
14	Driver Fatigue Alert		Switch the driver fatigue alert function on/off.
15	Battery Protect Voltage		Adjust the threshold of low-voltage protection of the car battery.
16	Default		Reset all device settings to default factory ones.
17	About		Firmware version and other related product information.

5 Operating Instructions

5.1 Recording Videos

5.1.1 Normal Video Recording

When the engine of the vehicle is on, the device automatically turns on and starts recording continuously. When the engine of the vehicle is off (parked status), video recording will stop automatically. However, if any moving object at a



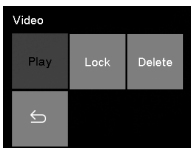
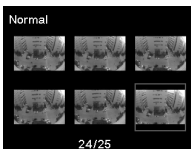
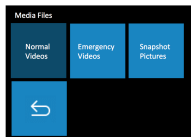
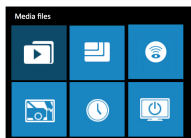
reasonable range in front of the device is detected, the WaveGuard indicator will flash and then video recording function will be activated immediately. If no further movement occurs within 10 seconds, the video recording function will be deactivated again. All these video files will be saved in the Normal video folder.

5.1.2 Emergency Video Recording

1. When the Collision Detection function is activated, the device will automatically detect any collisions, create an emergency video file, and save it in the Emergency video folder. If this occurs while driving, the emergency video clip will show video before and after the event. If this occurs while parked, the emergency video clip can only show video after the event.
2. During video recording status, you can manually create an Emergency Recording using the Emergency buttons to ensure a video file of a specific moment will be recorded [Ⓜ].
3. To ensure the necessary disk space for parking monitoring, the number of emergency files is restricted to 12. If that limit is exceeded, older ones will be deleted automatically. In this case, please backup before the vehicle engine is started.

5.2 Video Playback

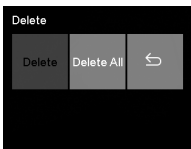
1. Press "M" to enter the main Menu.
2. Use ◀▶ to select the **Media Files** icon and press "M".
3. Use ◀▶ to select the **Normal, Emergency Video** or **Snapshot Pictures** folder, and then press "M".
4. Use ◀▶ to find the desired video file and press "M" and then select **Play** to play it.



5. During video playback, press "M" to pause, ▶ to fast forward, ◀ to rewind, or press the return button to return.

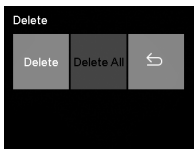
5.3 Deleting Videos

1. Use ◀▶ to find the desired video file and press "M" and then select **Delete** to remove it.





2. Select **Delete All** to delete all unlocked video files.

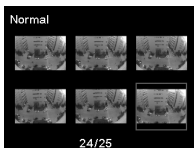


3. A confirmation message appears on the screen; use **◀▶** to select **YES** and press **"M"** to confirm deletion.

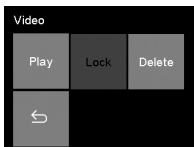
5.4 Locking Videos

To lock videos from being overwritten:

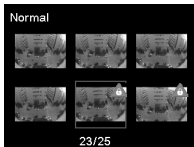
1. Use **◀▶** to find the desired video file and press **"M"**.



2. Use **◀▶** to select **Lock** and press **"M"**.



3. You will be automatically returned to the video list, and the selected video will be locked.



4. Use the same method to lock/unlock other video files.

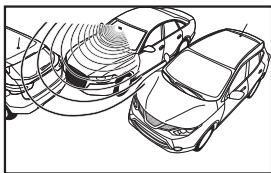




6 Add-On Functions

6.1 WaveGuard Parking Monitoring

To protect your vehicle continuously while in parked status, the device will start recording and save to the Normal video folder whenever it detects moving objects. The video recording function will be deactivated automatically to conserve vehicle battery power when there are no moving objects detected. If the device detects any collisions while in parked status, it will start video recording and save to the Emergency video folder.



6.2 Driver Fatigue Alert

To help vehicle drivers manage the development of their fatigue, a fatigue index displays the development of the driver's fatigue, taking into account physiological and journey-related parameters such as time of day and time spent driving. The device will alert the driver every two hours of driving. If the fatigue index is less than 60, the value is displayed in green. Before the fatigue index reaches 80, a yellow value is displayed with an alert sound. When the fatigue index is above 80, a red value is displayed with 3 alert sounds and a fatigue icon pop up to alert the user. (System time needs to be set correctly when the user switches on the driver fatigue alert function). When switched off, the fatigue index will not be displayed on the screen.



7 Technical Specifications

Functions	WaveGuard parking surveillance Automatic video recording Collision detection and emergency file protection Seamless loop recording Auto exposure Auto white balance Date and time stamp Auto LCD off Driver fatigue alert and fatigue index display Snapshot button Emergency recording button Advanced night view
Image Sensor	2.1 Megapixel CMOS
Video Resolution	Full HD (1920 x 1080p) @ 30 fps HD Premium (1280 x 720p) @ 60 fps HD Premium (1280 x 720p) @ 30 fps
Display	1.5" LCD (480 x 240)
Aperture Range	F/#1.8
Fixed Lens	6G wide-angle lens, FOV 135° (Diagonal)
File Format	MOV PCM audio compression/H.264 video compression
Random Access Memory	64 M x 16 bit (1 Gb) DDR3 SDRAM
Internal Memory	64 Mb SPI Flash
Recording Media (external memory)	Micro SD card (at least 16 GB, class 10 or higher, 32 GB recommended)
Recording Time	320 min @ 32 GB for full HD 640 min @ 64 GB for full HD
RTC	5 days
Operating Temperature	-10°C ~ 55°C
Storage Temperature	-20°C ~ 65°C
Accessories	OBD cable, Bracket, Quick Guide
Interface	Mini USB 2.0, Mini HDMI port, Micro SD Slot, Microphone, Speaker
Languages	English, Chinese
Power	12 V to 5 V/1 A, OBD cable
Dimensions (LxWxH)	108.8 x 41.0 x 38 mm (4.28 x 1.61 x 1.5 inches)



8 Disclaimer

- * The device is only suitable for 12 V power supply vehicles.
- * To achieve 24/7 protection with video surveillance, the memory card capacity must be at least 32 GB.
- * The device can only detect and record moving objects within a limited range, and in the direction that has lens coverage, but cannot detect any events in the reverse direction. If you need wider vehicle protection, please purchase 2 devices, one for forward-facing surveillance and the other for back-facing.
- * When the vehicle's cabin temperature exceeds 70°C, to protect the vehicle's security, the device will be powered off automatically and the protection with video surveillance will be paused.
- * In low temperatures in winter, or if the vehicle's battery has been in use for a long time or is not fully charged, the device's effective video surveillance time will be reduced.
- * If the windshield becomes dirty in front of the device's lens due to rain, snow, sandstorm or other natural or human factors, the device will not record effective video evidence.
- * Rain, snow, swaying tree branches or busy streets/parking lot environments will sometimes cause the video recording to be continuously activated, so the effective protection time will be greatly reduced. When the engine of an auto-start-stop enabled vehicle is restarted and the battery voltage is reduced to lower than the voltage protection threshold, the device may be rebooted.
- * Some windscreen films will not only interfere with GPS, radar, ETC, etc., but may also affect the WaveGuard detection range. If the protection range adjustment in the System Setting menu is still not satisfactory, please use a better film or "open" a small window in the film for the device.

To judge the existence of the film interference, stand in front of the vehicle and wave your hand, and the red WaveGuard indicator will not flash.









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