

Operation Manual

Defender Car vision 5018FullHD Car DVR

Thank you for buying Defender Car Vision 5018FullHD car DVR.

Before using the device, read attentively this manual and keep it for the whole period of usage.

UNPACKING

Carefully unpack the device, make sure no parts are left in the box. Check its integrity and absence of any free-moving subjects. If the device was damaged while transportation, refer the company that carried out the transportation; if the device does not operate, refer the seller immediately.

WARNING!

Do not switch on the device immediately after taking it to the room out of the environment with minus temperatures! The unpacked device should be kept in the indoor temperature for at least 4 hours.

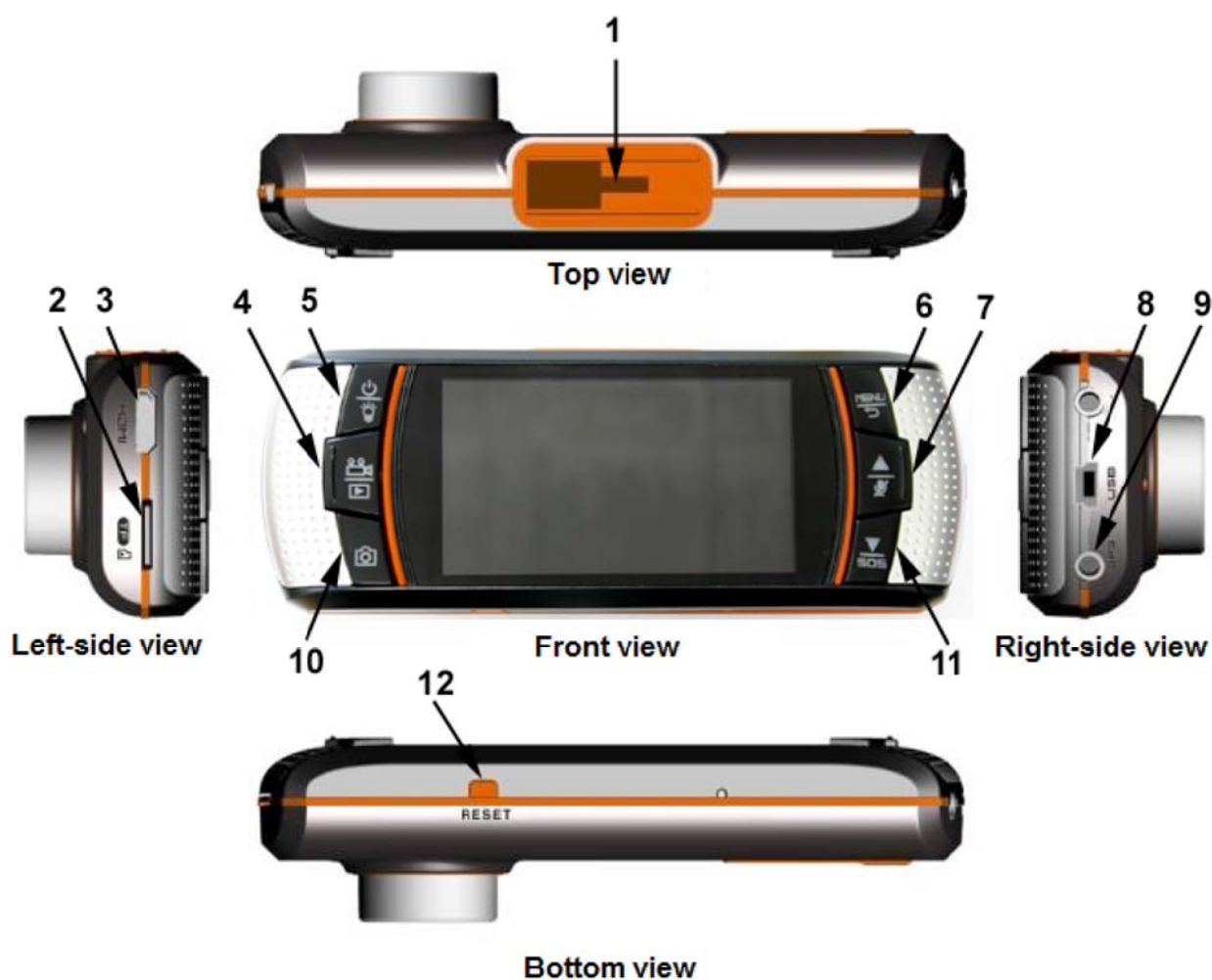
SAFETY PRECAUTIONS



- To avoid risk of electric shock do not open the device and do not repair it on your own.
- Keep the device from transferring foreign particles into the holes.
- Keep the device from excessive humidity, liquid, dust, vibration, mechanic loads, exposure of high temperatures (higher than +50°C), direct sunlight. Do not put it in the rooms with excessive humidity and dust.
- The device can only be used and stored at temperatures between +0 °C and +50 °C where moisture condensation does not occur.
- Do not use the gasoline, alcohol or other solvents for cleaning as they may damage the painted covering of the device. To clean the device use soft dry cloth.
- If the device does not operate, immediately disconnect the plug and refer to the shop where you bought the device.
- Do not use the power supply to charge the device if the current is higher than that of the source in the kit with the DVR - it may damage the battery.

PACKAGE CONTENT



- DVR - 1 pc
- Battery - 1 pc
- Mounting suction - 1 pc.
- Car charger - 1 pc
- Warranty coupon - 1 pc.
- Operation manual - 1 pc.
- Warranty coupon - 1 pc.

EXTERIOR



1. Pocket for mounting of suction	7. ▲ Button with charge indicator
2. Micro-SD memory card slot	8. Mini USB slot
3. Mini HDMI slot	9. AV output
4. Button  with record indicator	10. Button 
5. POWER button	11. ▼ / SOS button
6. MENU button	12. RESET button

BUTTON APPLICATION

Button	Application
● 	<ul style="list-style-type: none"> Holding - to shift to View mode, to exit of View mode. Menu short press - to confirm the choice. <p>In the current date and time setting window:</p> <ul style="list-style-type: none"> Short press - to shift to the following inout field. <p>In DVR mode:</p> <ul style="list-style-type: none"> Short press - start/ stop video recording. <p>In camera mode:</p> <ul style="list-style-type: none"> Short press - to shift to DVR mode. <p>In playback mode:</p> <ul style="list-style-type: none"> Short press - to play/ to pause.
● 	<p>In DVR/ playback mode:</p> <ul style="list-style-type: none"> Short press - to shift to Camera mode. <p>In camera mode:</p> <ul style="list-style-type: none"> Short press - to release the shutter.
● ▼/ SOS	<p>In DVR mode:</p> <ul style="list-style-type: none"> Short press (while video recording) - setting of the "only reading" attribute to the current recorded file. <p>In DVR/ Camera mode:</p> <ul style="list-style-type: none"> Holding - digital zoom out. <p>In menu and playback mode:</p> <ul style="list-style-type: none"> Short press - list down or up. <p>During playing:</p> <ul style="list-style-type: none"> Short press - to forward.
● ▲	<p>In DVR/ Camera mode:</p> <ul style="list-style-type: none"> Holding - digital zoom in. <p>In DVR mode:</p> <ul style="list-style-type: none"> Short press - to start/ to stop microphone. <p>In menu and playback mode:</p> <ul style="list-style-type: none"> Short press - list down or up. <p>During playing:</p> <ul style="list-style-type: none"> Short press - to rewind.
● MENU	<ul style="list-style-type: none"> Short pressing - to call menu/ to shift to the menu tab/ to exit the menu and submenu/ to stop recording. <p>In miniature mode:</p> <ul style="list-style-type: none"> Short press - to return to full screen mode.
● POWER	<ul style="list-style-type: none"> Holding - DVR on/off. <p>In DVR/ Camera mode:</p> <ul style="list-style-type: none"> Short press - night mode on/off (LED scene highlight). <p>In playback mode:</p> <ul style="list-style-type: none"> Short press - to shift to miniature mode.
● RESET	Short press - to boot the DVR.

OPERATION MODES

There are five modes of the device operation:

- DVR mode,
- camera mode,
- Playback mode,
- web-camera mode,
- card-reader mode.


Each mode has its informational icons on the screen. The first menu tab activated by MENU button is different for three modes. Depending on the mode the button application changes. The device always switches on in the DVR mode (while connecting USB port the menu allowing to select the mode appears).

MEMORY CARD INSTASLLATION AND REMOVING

- Operate the memory card (not included) only if the device is switched off.
- Insert the memory card until its clicking position directed it as shown on the device housing.
- Check that you insert the memory card by the correct side, otherwise you may damage the device and the memory card.
 - To remove the memory card press it until its clicking sound.
 - If the speed of recording to the memory card is not sufficient, the appropriate icon will turn to orange on the LCD screen (in the DVR mode). If normal speed, the icon is white.

DVR SWITCHING ON

There are two different way to switch the DVR on.

- **Manual.** Hold the POWER button. If connected to the external power supply the DVR will start manual recording. While video recording the indicator built in the  button will flash blue.
- **Automatic.** Connect the DVR to the external power supply via USB cable. The external power supply may be the power supply included in the DVR packaging or the computer USB port. The DVR will start automatically. If connected to the computer it is necessary to select the operation mode manually, otherwise video recording will start automatically (recording indicator will flash).

Note: if there is not enough space or no free space on the memory card then trying to start recording the appropriate warning will be shown on the LCD screen including the repeated mode. But if the recording in the repeated mode stats successfully, then it will not be stopped if no free space.

DVR SWITCHING OFF

There are two different way to switch the DVR off.

- **Manual.** Hold the POWER button. The DVR will be switched off. The video must not be stopped.

- **Automatic.** While disconnecting the power supply included in the DVR packaging if the power supply is not resumed or was off more than 1 time, the DVR will be switched off automatically within 20 sec.

BATTERY CHARGING

The battery may be charged from the power supply included in the packaging of the DVR and from the USB port of the computer. If the external power supply included in the DVR packaging is connected, the battery is charged in all modes. While charging the charge indicator built in the ▲ button will be red. When the charging is over, the indicator will be off. The battery icon on the LCD screen shown if no external power supply shows the current charge level.

If charging from the computer you should consider that in the on mode (the camera operated) the DVR will consume the more than 0.4A and in the record mode - up to 0.6A. 0.5 A current flows through USB port of the computer. Therefore the DVR connected to the computer and just switched on will be charged very slowly; the recording DVR will discharge the battery.

CONNECTION TO TV

Connect the DVR to the computer via HDMI cable or AV cable. Power on the DVR. The LCD screen of the DVR will be automatically switched off. Power on the TV and in its configuration set the input where the DVR is connected as the video signal source.

If HDMI connection the DVR will automatically switch to the playback mode, other modes will be unavailable, the DVR video signal will be transferred in the 1280 x 720 resolution with the sound, the video winding will not be available.

DVR MIODE

"Sharpness", "White Balance" and "Digital Effect" menu options do not affect the image in the DVR mode.

PLAYBACK MODE

There are three states in this mode: view of the file in full screen, playing the file and view of up to nine files simultaneously - by the way of miniatures. In different statuses some buttons have different functions.

WEB CAMERA MODE

In this mode the DVR is determined by the computer as UVC compatible web camera: The microphone of the DVR in this mode is not available for using and the camera resolution is up to 640 x 480 pixels.

CARD READER MODE


In this mode the memory card inserted in the DVR is determined by the computer as a removable disk. To search for video records on the memory card use the mask "*.AVI". For photo search - "*.JPG".

FILE (VIDEO RECORDS) DELETION PROTECTION FUNCTION

It is used for file deletion protection (video records) including from deletion if no free space on the memory card while repeated recording. Set the "only reading" attribute by SOS button or by menu for the necessary files.

MENU DESCRIPTION

Video

Resolution	Video Recording Resolution. Values: <u>1080P</u> 1920 x 1080 24 fr/s, 1080P 1440 x 1080 30 fr/s, 720P 1280 x 720 50 fr/s, 720P 1280 x 720 30 fr/s.
Repeated recording	If the repeated recording is on, the video will be recorded by fragments (files) of the selected duration. If the memory card is full, the DVR will delete the oldest unprotected file to continue recording. If the repeated recording is off, the DVR will record in 10 minute fragments until the memory card is full. Values: Off, 1 min, <u>2 min</u> , 3 min, 5 min, 10 min.
Exposure Compensation	Allows to compensate the errors if automatic exposure measurement. Values: +2.0, +5/3, +4/3, +1.0, +2/3, +1/3, <u>+0.0</u> , -1/3, -2/3, -1.0, -4/3, -5/3, -2.0.
Motion detection sensor	If the motion detection sensor is on, the device will automatically start recording every time when the motion in the frame is detected. If within 10 seconds there is no motion in the frame, the recording will be paused until any motion. When the motion detector is on, the icon is displayed on the screen. If recording is stopped manually by the  button, the motion detection sensor will be off automatically. Values: <u>Off</u> , On.
Microphone	Switch the microphone on/off. Values: Off, <u>On</u> .
Mark the date/ time	Application of date and time on the image. Values: Off, <u>On</u> .

Still image

Auto start	Allow to release the shutter automatically in the set time. Values: Off, 2 sec, 5 sec, 10 sec
Resolution	Still image resolution. Values: 1.3M 1280 x 960, VGA 640 x 480, 2MHD 1920 x 1080, 3M 2048 x 1536, <u>5M 2592 x 1944</u> , 8M 3264 x 2448, 10M 3648 x 2736, 12M 4000 x 3000.
Burst Mode	Shooting by 5 frames. Values: <u>Off</u> , On.

Quality:	Image quality. Values: High, <u>Middle</u> , Low.
Sharpness	Image sharpness. Values: Low, <u>Middle</u> , High.
White balance	Allows to reproduce the colour of white objects so as they are white on the frame. Values: Auto, Sun, Cloud, Tungsten, Fluorescent.
Digital Effect	The digital effect applied to the image. Values: <u>Off</u> , Black and White, Sepia.
ISO	ISO sensitivity. Values: Auto, 100, 200, 400.
Exposure Compensation	Allows to compensate the errors if automatic exposure measurement. Values: +2.0, +5/3, +4/3, +1.0, +2/3, +1/3, <u>+0.0</u> , -1/3, -2/3, -1.0, -4/3, -5/3, -2.0.
Mark the date/ time	Application of date and time on the image. Values: Off, Date, <u>Date and Time</u> .

Playback

To delete	Deletion of the current file or files. Values: <u>Current</u> , All.
File Locking	Setting or removing of the "only reading" attribute from the current file or all files. Values: <u>Lock</u> , Unlock, Lock All, Unlock All.
Slideshow	To view the slideshow of still images saved on the memory card by the DVR. Values: <u>2 sec</u> , 5 sec, 8 sec
Miniature view	Go to viewing of the files list in the way of the miniatures. Values: <u>Cancel</u> , OK.

Settings (the second menu tab)

Date and Time	Current date, time and format where the date is marked on the image.
Auto Power Off	If connected to the built-in battery the device is switched off automatically if the device is idle within the selected time interval. The video recording is not idleness. Values: Off, <u>1 min</u> , 3 min.
Button sound	The signals of the button pressing, device on and off. Values: Off, <u>On</u> .
Language	Device interface language. Values: Русский, Cesky, <u>English</u> , Polski, Deutsch.
Light Frequency	To eliminate the twinkling on the video recording caused by the light source by way of setting its frequency. Values: <u>50 Hz</u> , 60 Hz.
Volume	Volume level of the built-in speaker. If the volume was changed in the playback mode, then immediately after its change it is required to exit the playback mode otherwise the changes do not come into force and will not be saved. Values: 0, 1, 2, 3, 4, 5, 6, 7, <u>8</u> .
Screen Auto off	Automatic display off for battery saving if no user activity within 3 min. Values: Off, <u>On</u> .
Format	To format the memory card (all files on the memory card will be lost). Values: <u>Cancel</u> , OK.

Configuration Reset	To Reset all the configuration to factory configuration. Values: <u>Cancel</u> , OK.
Software version	Device software version (for example, AONI.247.20130529.005).

Menu if connected to the PC USB port

Card-reader	Card-reader mode
Web camera	Web-camera mode

TROUBLESHOOTING

Error	Elimination
The DVR shows the error of no space, not responding, not switching on, incorrect operation	Remove and reinsert the memory card (only the device is switched off).
	Format the memory card.
	Change the used memory card.
	Reset the DVR settings to default ones.
	Reboot the DVR by RESET button or by POWER button.
	Connect the DVR to the external power supply.
Impossible to enter the DVR menu, the device does not respond MENU button.	It is necessary to stop video recording before entering the menu.
The image is soft	Use clean soft fibreless wipe to clean the camera lens with special optics cleaner and accurately wipe the lenses. Recommended products: Defender ECO CLN 30591 , Defender CLN 30604 , Defender CLN 30593 , Defender CLN 30607 .
The computer does not detect the device in the card reader or web camera mode.	Check the device at the unmodified, default configured OS from Microsoft in various USB ports and on various computers. Use the USB ports supporting the devices with 500 mA consumption and do not use the USB extenders.

TECHNICAL SPECIFICATIONS

Technical Specifications	Value
Video format	AVI (MJPEG)
Still image format	JPEG
Video resolution	1920 x 1080 24 fr/s, 1440 x 1080 30fr/s, 1280 x 720 50fr/s, 1280 x 720 30 fr/s
Still image resolution	640 x 480, 1280 x 960, 1920 x 1080, 2048 x 1536, 2592 x 1944, 3264 x 2448, 3648 x 2736, 4000 x 3000.
Video output	AV, mini HDMI
Display	2.7" LCD
Viewing angle	100 degrees
Memory card	microSDHC up to 32 Gb (speed class at least 10)
Appr. video duration	up to 3 hours for the 32 Gb memory card
Battery	Built-in Li-Ion 650 mAh 3.7 V

Notes:

1. The technical specifications specified in the table are referential and may not be used as the reason for claim.

2. Defender products are constantly upgraded. By this reason the technical specifications may be changed without prior notification.

Operation manual in other languages is available at
www.defender-global.com