

# **Operation Manual Defender Car vision 2015 HD Car DVR**

**Thank you for buying Defender Car Vision 2015 HD 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 +5 °C and +40 °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.

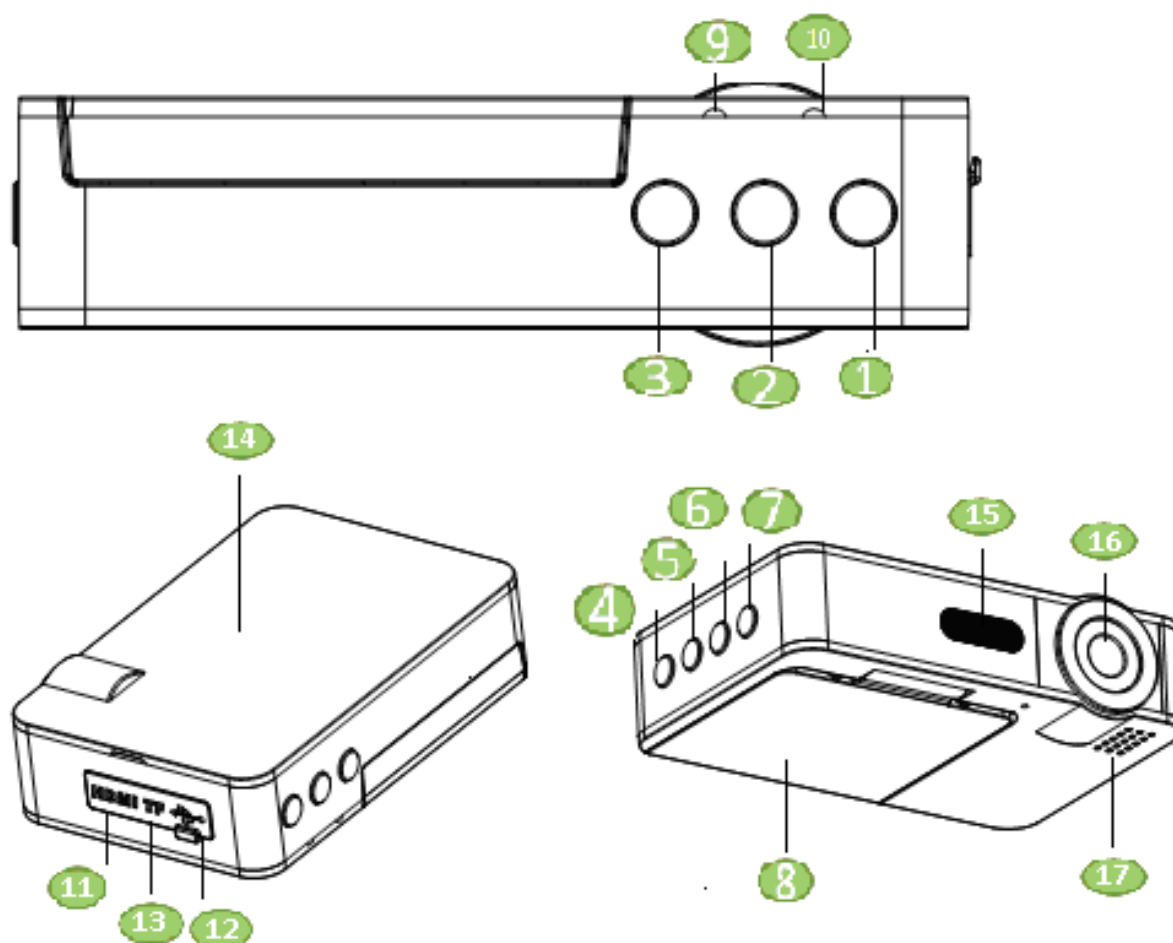
Car charger - 1 pc





MiniUSB cable — 1 pc.

Operation manual - 1 pc.

Warranty coupon - 1 pc.




## EXTERIOR



1. Button 	10. Status Indicator
2. Button 	11. MiniHDMI slot
3. SOS button	12. Mini USB slot
4. MENU button	13. Micro-SD memory card slot
5. Button 	14. Battery cover
6. Button 	15. LED scene highlight
7. POWER button	16. Camera Lens
8. LCD screen	17. Built-in speaker
9. Indicator	

## BUTTON APPLICATION

Button	Application
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1. 	<ul style="list-style-type: none"> <li>• Holding - to shift to View mode, to exit of View mode.</li> <li>• Menu short press - to confirm the choice.</li> </ul> <p>In DVR mode:</p> <ul style="list-style-type: none"> <li>• Short press - start/ stop video recording.</li> </ul> <p>In camera mode:</p> <ul style="list-style-type: none"> <li>• Short press - to shift to DVR mode.</li> </ul> <p>In View mode:</p> <ul style="list-style-type: none"> <li>• Short press - to play/ to pause.</li> </ul>
2. 	<p>In DVR/ View mode:</p> <ul style="list-style-type: none"> <li>• Short press - to shift to Camera mode.</li> </ul> <p>In camera mode:</p> <ul style="list-style-type: none"> <li>• Short press - to release the shutter.</li> </ul> <p>In the current date and time setting window:</p> <ul style="list-style-type: none"> <li>• Short press - to shift to the following inout field.</li> </ul>
3. SOS	<p>In DVR mode:</p> <ul style="list-style-type: none"> <li>• Short press - to start/ to stop microphone.</li> <li>• Holding (during the video recording): <ul style="list-style-type: none"> <li>○ In the repeated mode setting of the "only reading" attribute: <ul style="list-style-type: none"> <li>-to the current recording file,</li> <li>-to the previous file if it was recorded after the last button pressing ,</li> <li>-to the following file if the recording is not stopped at the current file.</li> </ul> </li> <li>○ In the non-repeated mode setting of the "only reading" attribute to the current recording file.</li> </ul> </li> </ul>
4. MENU	<ul style="list-style-type: none"> <li>• Short pressing - to call menu/ to shift to the menu tab/ to exit the menu and submenu/ to stop recording.</li> <li>• Holding - to rotate the image by 180°.</li> </ul>
5. ▲	<p>In DVR/ Camera mode:</p> <ul style="list-style-type: none"> <li>• Short pressing - to shift between black and white and colour image.</li> </ul> <p>In menu and view modes:</p> <ul style="list-style-type: none"> <li>• Short press - list up.</li> </ul> <p>During playing:</p> <ul style="list-style-type: none"> <li>• Short press - to rewind.</li> </ul>
6. ▼	<p>In menu and view modes:</p> <ul style="list-style-type: none"> <li>• Short press - list down.</li> </ul> <p>During playing:</p> <ul style="list-style-type: none"> <li>• Short press - to forward.</li> </ul>
7. POWER	<ul style="list-style-type: none"> <li>• Holding - DVR on/off.</li> </ul> <p>In DVR/ Camera mode:</p> <ul style="list-style-type: none"> <li>• Short press - night mode on/off (LED scene highlight).</li> </ul>

## OPERATION MODES

There are five modes of the device operation:

- DVR mode,
- camera mode,
- view 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).

## BATTERY INSTALLATION

- Uncover the battery pulling it as shown on the device housing.
- Insert the battery along the guides.
- Put the cover.

## 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.
- 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 red 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. After switching on the DVR recording will start automatically.
- **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.

**Note:** if there is no free space on the memory card then trying to start recording in the non-repeated mode the DVR will make sound and the corresponding warning will appear on the LCD screen.

## 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, the DVR will be switched off automatically in 15 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 will be red. When the charging is over, the indicator will be off. The battery icon on the LCD screen 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

Power on the DVR. Connect the DVR to the computer via HDMI cable. The LCD screen of the DVR will automatically be switched off. Power on the TV and in its configuration set the input where the DVR is connected as the video signal source. The video signal from the DVR will be transferred in 720 x 480 resolution without sound.

## 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 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.

## 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.

## BLACK AND WHITE MODE

It is switched on by ▲ button in the DVR/ camera mode, can decrease the noise level on the image under low light conditions.

## MENU DESCRIPTION

### Video

Resolution	Video Recording Resolution. Values: <u>1280 x 720 30 fr/s</u> , 848 x 480 30 fr/s, 640 x 360 60 fr/s
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Time Mark	Application of date and time on the image. Values: Off, <u>On</u> .
Motion detection sensor	If the motion detection sensor is on, then while detecting the motion in the frame regardless if the repeated recording is on or not, the DVR will start recording of the next file the duration of which is limited by one minute. Upon completion the file recording the video recording will be stopped until the motion is detected. The switching on the repeated recording and the motion sensor affects only the DVR when the memory card is full. Values: <u>Off</u> , On.
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 until the memory card is full. Values: Off, 1 min, <u>2 min</u> , 3 min, 4 min, 5 min.
Night Mode	The mode of LED scene highlight for recording under low light condition. Values: <u>Auto</u> , Off, On.
Microphone	Switch the microphone on/off. Values: Off, <u>On</u> .

## Photo

Resolution	Photo resolution. Values: VGA, <u>1.3M</u> , 2M, 3M.
Time Mark	Application of date and time on the image. Values: Off, <u>On</u> .
Shutter sound	Sound imitation of the shutter release. Values: Off, <u>On</u> .

## View

To delete	Deletion of the current file or files. Values: <u>Delete</u> , Delete all.
Locking	Setting or removing of the "only reading" attribute from the current file or all files. Values: <u>Lock</u> , Lock all, Unlock, Unlock all.
Miniatures	Go to viewing of the files list in the way of the miniatures. Values: <u>Cancel</u> , OK.
Volume	Volume level of the built-in speaker. Values: 0, 1, 2, <u>3</u> , 4, 5, 6.

## Settings (the second menu tab)

Format	To format the memory card (all files on the memory card will be lost). Values: <u>Cancel</u> , OK.
Image Rotation	Image rotation by 180°. Values: Off, <u>On</u> .
Language	Device interface language. Values: Russian, English, German, Czech, Polish.
Auto Power Off	If connected to the built-in battery the device is switched off automatically if the device is idle for 1 min. The video recording is not idleness. Values: Off, <u>On</u> .
Screen off.	Automatic display off for battery saving if no user activity within 3 min. Values: Off, <u>On</u> .



Reset	To Reset all the configuration to factory configuration. Values: <u>Cancel</u> , OK.
Twinkling	To eliminate the light source twinkling on the video recording by setting its frequency. Values: <u>50Hz</u> , 60Hz.
Date/ time	Current date and time.
Date format	The format when the date is shown on the image and is shown on the LCD screen of the device in the DVR and Camera modes. Values: <u>YYYY/MM/DD</u> , MM/DD/YYYY, DD/MM/YYYY.
Button sound	The signal of the button press. Values: Off, <u>On</u> .
Software version	Device software version (for example, 2.0, 06/22).

### Menu if connected to the PC USB port

DVR	DVR mode
Web camera	Web-camera mode
Card-reader	Card-reader 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.
	Remove and reinsert the battery (the date and the time will be reset).
Impossible to enter the DVR menu, the device does not respond MENU button.	Remove the battery, connect the DVR to the external power supply, wait for loading, disconnect the power supply and insert the battery.
	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. We recommend the following 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.
The image orientation in the recorded files does not correspond the interface orientation on the device screen i.e. while setting any "Image Rotation" option or the image in the file or the interface on the screen is inverted.	Set the "Image Rotation" to "On" and switch the DVR off. After switching the DVR on the image rotation and the interface turn to normal condition.

## TECHNICAL SPECIFICATIONS

Features and Units	Value
Video format	AVI (MJPG)
Still image format	JPEG



Video resolution	1280 x 720 30 fr/s, 848 x 480 30 fr/s, 640 x 360 60 fr/s
Still image resolution	640 x 480, 1280 x 1024, 1600 x 1200, 2048 x 1536
Video output	miniHDMI
Display	2"
Viewing angle	100°
Memory card	microSDHC up to 32 Gb (speed class at least 10)
Appr. video duration	up to 6.5 hours for memory card of 32 Gb
Battery	Changeable Li-Ion 650 mAh 3.7 V

**Notes:**

- The technical specifications specified in the table are referential and may not be used as the reason for claim.
- 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](http://www.defender-global.com)