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A. Features

1. Suitable for all personal vehicle, taxi, bus, truck……
2. Small size, easy installation and dismount, it does not affect the driver's line of sight.
3. Insert the card and power on to start recording without additional operating.
4. Simultaneously recording interior and exterior condition.
5. Having full time, date recording and display on the screen directly.
6. Recording driving condition, sound, G-Sensor and GPS data.
7. Front view angle approx. 120 degrees. Back view angle approx. 170 degrees.
8. Recording track of driving routes which can be shown on Google Map when we play the video.
9. Micro SD memory card Class 6 or above recommend.
10. G-sensor sensitivity can be adjusted according to road situations. When detect a strong shock, system will start emergency recording and keep the files without being overwritten.
11. Professional file formats, without built-in lithium battery, no needs to afraid of heat and bursting concerns, it is the real black box.
# B. Specification

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chipset</strong></td>
<td>H.264 image compression chip</td>
</tr>
<tr>
<td><strong>View Angle</strong></td>
<td>Outside vehicle approx : 120 degree Inside vehicle approx : 170 degree</td>
</tr>
<tr>
<td><strong>Voltage</strong></td>
<td>Please use 5V±5%, 1A Cigarette lighter adapter. The machine needs 4.7v to start.</td>
</tr>
<tr>
<td><strong>Operating Temp</strong></td>
<td>-15℃ ~+65℃ (Inside Vehicle).</td>
</tr>
<tr>
<td><strong>Storage Device</strong></td>
<td>Micro SD Card (4G/8G/16G/32G) of Silicon Power and Transcend recommend. 4GB/Class 6 or above specification is available.</td>
</tr>
<tr>
<td><strong>Recording Frame</strong></td>
<td>Forward facing lens: 640x480; Highest resolution: 30fps/25fps (NTSC/PAL) Backward facing lens: 640x480; Highest resolution: 15fps/15fps (NTSC/PAL) Auto record when power up system; backward facing lens can be closed by setting of software.</td>
</tr>
<tr>
<td><strong>Recording Content</strong></td>
<td>Date, time, image, sound, G-sensor data, GPS data.</td>
</tr>
<tr>
<td><strong>Recording Format</strong></td>
<td>Specific format for software player.</td>
</tr>
<tr>
<td><strong>Microphone</strong></td>
<td>Build-in high sensitivity of single microphone for automatic voice adjustment.</td>
</tr>
<tr>
<td><strong>Time Setup</strong></td>
<td>Auto-calibrating by GPS signals. If GPS is not available, the built-in clock will be used.</td>
</tr>
<tr>
<td><strong>G-Sensor</strong></td>
<td>Internal 3D G-Sensor.</td>
</tr>
<tr>
<td><strong>Out Device</strong></td>
<td>(a) TV-Out (1 Vp-p composite video output, 75 ohms), Video Output format: NTSC / PAL alternative. (b) Force Record Button: For emergency recording. Gleams in night time. (c) Red light: Recording indicator. In emergency recording, it flashes more frequently. (d) Green light Flashing: Searching GPS signals. Light on: GPS positioning ready (e) External hole to connect GPS Mouse Remark: When IR turns on, the LED light will be dimmer.</td>
</tr>
</tbody>
</table>
| Description | (a) The GPS positioning speed will be influenced by solar film of the front windshield, weather or other environment factors.  
(b) Starting and closing time of infra red will be subject to light intensity, the installation location, front windshield and other factors ...  
(c) Day and night mode having delay mechanism for about 30 seconds. Night mode will be priority when power on.  
(d) Memory card formatted by using the playback software, windows will recognize the remaining capacity about 80MB for copying the player software to memory card. |
| Important Notice | (a) The current consumption of the machine over standard USB hole (output 500mA). When connect with PC power supply, it's better to buy another power cable with two holes for portable hard drive.  
(b) Machine must be installed in the area that wipe can be reached to ensure the clarity of recording video.  
(c) Please do not plug the power in both micro-USB socctets. The machine might be damaged.  
(d) If not use the player to format memory card, the machine will force to format the entire memory card and then start recording.  
(e) It's better not crossing the top of the machine and the left side of GPS. We suggest to put the cables via the right side of the DVR and then connect to the ceiling to get better GPS signal.  
(f) Initial screen and Live View screen may change due to software update or revision without notice.  
(g) The machine itself has a distinction between NTSC or PAL. Video output to the monitor with corresponding screen system.  
(h) Interior lens adopt ultra-wide-angle lens. There will be slight cover corner phenomenon at the corner edge.  
(i) Memory card has the number of reading and life issues, please check and use the computer to play video regularly in order to make sure the memory card can read and write properly. |
| Accessories | Standard: (a) 5V cigarette Power adapter  
(b) USB card reader  
(c) 4 pings, 3.5 inch headphone jack to RCA output cable.  
(d) Suction cup bracket  
(e) Bracket holder  
(f) Remote control  
(g) Product CD  
(h) Quick Guide  
Optional: (a) Micro SD card (4GB/8GB/16GB/32GB)  
(b) External GPS Mouse (4P Phone Jack Connect) |
C. Structure of Product

※ Please do not plug the power in both micro-USB terminals. The machine might be damaged.

D. Dimension

UNIT : mm
E. Installation Guide

1. Make the bracket facing upward.
2. Assemble the suction cups.
3. Set up the machine in proper position.
4. Adjust the viewing angle.
5. Plug the power cable to socket on photo No. 5 or No. 6, please do not plug in both sockets at the same time.
6. Plug in the cigarette adapter.
7. When the power is successfully connected, the IR LED will light on for 10 sec.
8. Force Record button: Light on when power is connected successfully.
9. Green: flashing while GPS is positioning, Light on when GPS is ready.
11. Force Record Button: When press down, the red light will flashing rapidly. In the night its LED will light on as indicator.
12. Installation Complete! God Speed!
### F. Functions of Remote Controller

<table>
<thead>
<tr>
<th>Button</th>
<th>Function Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Force Recording Button</td>
<td>Manually establish a recorded file which cannot be overwritten.</td>
</tr>
<tr>
<td>Mode Button</td>
<td>Full screen / Half screen split shift</td>
</tr>
<tr>
<td>Menu Button</td>
<td>Firmware version of the device displayed</td>
</tr>
<tr>
<td>Mute Button</td>
<td>Voice recording On/Off</td>
</tr>
<tr>
<td>Up key</td>
<td>Select the file or enter the password number</td>
</tr>
<tr>
<td>Down key</td>
<td>Select the file or enter the password number</td>
</tr>
<tr>
<td>Left key</td>
<td>Left key to previous play list or previous password entered</td>
</tr>
<tr>
<td>Right key</td>
<td>Right key to next play list or next password entered</td>
</tr>
<tr>
<td>Enter key</td>
<td>Confirm the file to play or password entered</td>
</tr>
<tr>
<td>Fast Forward</td>
<td>Speed up playback file</td>
</tr>
<tr>
<td>Fast Rewind</td>
<td>Reverse playback footage</td>
</tr>
<tr>
<td>Playback button</td>
<td>Enter the playback mode or to play the selected file.</td>
</tr>
<tr>
<td>Pause</td>
<td>Pause playback</td>
</tr>
<tr>
<td>Stop button</td>
<td>Stop playback, back to the play list</td>
</tr>
</tbody>
</table>
Introduction of OSD Interface: (Video output from connecting TV-OUT line to the device)

1. The right side of LIVE view will show ▶️ ▶️ left figure ▶️ ▶️ is presented as forward facing lens, the other one is backward facing lens. When the figure becomes ▶️ ▶️, the backward facing lens is turned off and the microphone recording is muted simultaneously.

2. Event Record: ▶️ Appears in the top right side of LIVE screen, it means that G-Sensor didn't receive abnormal signal. When you press the record button ▶️ from the remote control or click ▶️ this icon at the right top to force the machine to record manually. When the icon ▶️ appears at the top right that means G-Sensor detects abnormal vibrations and start force recording.

3. When turns to Live screen, it could click ▶️ via remote control to switch CH1(Front View) or CH2(Inner View), dual CH display with GPS information as shown below:
4. When turns to Live screen, it could click via remote control to show Firmware version.

5. In the LIVE screen you can choose whether open the recording, click the mute button on the remote control icon will appear top right of the screen, that means stop recording; When the icon appears in the top right that says on the recording.

6. GPS display: When icon appears at the top right of the Live screen, it means there is no GPS signal; when the icon appears in the top right of the Live screen, it indicates that the GPS is working.

7. Playback page password instructions: Click the playback button of remote control When the machine sets up playback password, playback page will be asked to enter a password (this feature requires to set up on player), Click the remote control enter password in the input page. Click the remote control Select the next position; when the password is completed, you can click on the remote control Enter the playback list page.

◆ On Screen Playback Instructions:

- Force Recording
- G-SENSOR
Enter the playback page to stop recording
1. Click the remote control in the playback page  
   select the time you want to play the file.
2. Click the remote control  
   select the next file page of playback list.
3. When you select a file to play the file, then click the remote control  
   to start the playback.
4. To pause playback, tap the pause button  , and please click  
   again to continue the footage playback.
5. To leave the playback mode, click the remote control  
   to return playback list page, click remote control  
   again, to back to live mode.

◆ To leave the Playback page simply click the stop button on the remote 
control  to leave the file page and then enter the LIVE screen.

G. Start / Stop Recording
When power on the device, the screen will show a welcome message for the device 
starts if connected to TV-Out. The firmware version of the device will displayed 
before LIVE view of recording starts.

1. Power on / Start Recording
The device can be started completely after power on for one minute. When the 
device is started on programming, the green indicator light is flicker before GPS 
positioning completed. After one minute, the red indicator light will be kept 
flicker until  show n on right side of LIVE view; the device starts 
recording now.

Definition of Indicator
● Force record button: good for using at night
● Red indicator of REC:
  Stable flicker of red indicator: On recording
  Fast flicker of red indicator: Force recording
● Green indicator of GPS positioning:
**Flicker of green indicator: GPS 3D positioning**
**Steady of green indicator: GPS 3D positioning accomplished.**

2. **Power Off / Stop Recording**
Power off and enter playback page to stop recording.
Power off and then remove the memory card to read the recording file in computer.

**H. Software Player Instruction**
**How to read the files from Micro SD card?**

1. **Play Video**
Start the program 🎥 (you can locate it in the CD-R),
The main screen will be like the picture below.
Press 🎥 button, and choose where you insert memory card to play the files,
or click on 📁 button to manually select the memory card or recorded file in the hard disk.
During playback, the 🎥 button would change to 🔴 button and you can click on it to pause playback.
2. Main Screen

Viewer Interface

- Viewing Window
  - Inside Vehicle
  - Outside Vehicle
- Google Map
- Speed Meter
- Latitude & Longitude Coordinates
- Volume
- Video Search
- Play Speed
- G-Sensor
- Play & Settings

a. Play & Settings Icon Instruction:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>play previous file</td>
</tr>
<tr>
<td>2</td>
<td>play previous frame</td>
</tr>
<tr>
<td>3</td>
<td>play backward</td>
</tr>
<tr>
<td>4</td>
<td>Pause</td>
</tr>
<tr>
<td>5</td>
<td>Stop</td>
</tr>
<tr>
<td>6</td>
<td>Play</td>
</tr>
<tr>
<td>7</td>
<td>Play next frame</td>
</tr>
<tr>
<td>8</td>
<td>Play next file</td>
</tr>
<tr>
<td>9</td>
<td>Open file</td>
</tr>
<tr>
<td>10</td>
<td>Disk back up</td>
</tr>
<tr>
<td>11</td>
<td>Google map</td>
</tr>
<tr>
<td>12</td>
<td>Setting</td>
</tr>
<tr>
<td>13</td>
<td>Snapshot</td>
</tr>
<tr>
<td>14</td>
<td>Format Micro SD Card</td>
</tr>
</tbody>
</table>
Disk Backup

Save the recorded files to your PC. Click on the button and it will pop up the screen as below.

Step 1: Select the origin for the Micro SD card

Step 2: Select the recorded file which you want to backup

Step 3: Choose the backup file format
   (1) Micro SD Card Backup (*.sd)
   (2) AVI File Backup (*.avi)

Backup format:
   (1) Micro SD card backup format
(2) AVI File Backup (*.avi)

Chn01 is the forward facing lens record. The file name is *.avi.

Chn02 is the backward facing lens record. The file name is *.avi.

★ Note: If backup by original format of Micro SD card, the file recorded with location of GPS (longitude and latitude), speed and G-SENSOR. If backup by the format of *.avi, the file recorded date, video and audio. We suggest to backup by using original format of Micro SD card.

Step 4: Backup Path: Select your backup destination (e.g.: C:\blackbox)

Step 5: Backup: Start backup the file to your specified destination

Setting

One side of card translator is plug into Micro SD card, the other one is plug into USB plot before recording. Record format and display of the device can be set by configuration of PC client. After setting completed, the Micro SD card can plug into the device and start recording again.

1 Video Quality

Select the video Quality: High / Normal / Low
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 Video Frame</strong></td>
<td><img src="image" alt="Video Frame Rate" /></td>
<td>Set the recording frame rate for front camera NTSC(5/10/15/30) fps PAL(5/10/15/25) fps</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Disable Rear Camera" /></td>
<td>Turn the recording off for inside camera</td>
</tr>
<tr>
<td><strong>Video Frame Rate</strong></td>
<td><img src="image" alt="Rear Video Rate" /></td>
<td>Set the recording frame rate for inside camera (5/10/15) fps</td>
</tr>
<tr>
<td><strong>3 Car Information</strong></td>
<td><img src="image" alt="Car Information" /></td>
<td>The license plate number information can be input here, the film is easy to identify which vehicles to record video record (only English letter and number acceptable).</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td><img src="image" alt="Password" /></td>
<td>This feature of the Micro SD card encryption, to prevent others from accessing any data. Set a password to 15 characters limited: 123,456,789,123,456. After setting the password, it is required to enter password to access the playback file, setting, formatting memory card.</td>
</tr>
<tr>
<td><strong>Time zone</strong></td>
<td><img src="image" alt="Time Zone" /></td>
<td>Time Zone: GMT (GPS auto time correction)</td>
</tr>
<tr>
<td><strong>Unit Of Speed</strong></td>
<td><img src="image" alt="Unit Of Speed" /></td>
<td>You can set up the speed unit here. Km/h: kilometer per hour Mile/h: mile per hour Knot: knot per hour ★ Note: 1 KM=0.6214 mile, 1 mile=1.6093KM, 1 Knot =1.853KM</td>
</tr>
<tr>
<td><strong>On Screen Playback Password</strong></td>
<td><img src="image" alt="Playback Password" /></td>
<td>On Screen playback password: When it is enable, need to enter password first before enter playback mode. Do the settings first and then set the password. The password setting from 0 to 9.</td>
</tr>
<tr>
<td><strong>G-sensor Sensitivity</strong></td>
<td><img src="image" alt="G-sensor Sensitivity" /></td>
<td>Set the sensitivity for G-sensor. Six mode can be chosen. OFF, Light, Low, Normal, High, Heavy Note: In some uneven road, you might want to decrease the sensitivity to prevent repeated emergency recording.</td>
</tr>
</tbody>
</table>
### Sensor Sensitivity at night

The night sensitivity settings for front and interior lens: very low, low, normal, high, very high. According to night conditions set sensitivity.

### Audio Recording

Audio recording. Open: recording voice / Close: stop voice recording.

#### Snapshot

While playing the recorded file, you can use this function to snapshot the picture and save it into your PC. Default saving path for snapshot picture will be in /Snapshot folder. File type: BMP

#### Speed Meter & Volume

- **Direction**
- **Speed Meter**
- **Latitude & Longitude Coordinates**
- **Volume**

#### Video Search & Play Speed

1. **Video Search**: You can use the mouse to drag the bar to search the video quickly.
2. **Play Speed**: Support 2x, 4x fast forwarding and -2x, -4x slow play mode.
d. **G SENSOR**

When detecting extraordinary G-force, the machine will record the images and separate the recorded file from normal recording.

![G-Sensor](image)

(1) **X:** The G-force from left & right of the car.
(2) **Y:** The G-force from front & back of the car.
(3) **Z:** The G-force from upside & downside of the car.

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I. **Formatting Memory Card**

**When You Should Format Micro SD CARD?**

When you use the Micro SD card for the first time or just purchase a new card, you should format it in order to use it correctly. (The bundled Micro SD card has been formatted and tested by the manufacturer already.)

**Notice:**
1. Before formatting Micro SD card, please ensure to unlock it first.
2. If the card is unlocked but still cannot be formatted, this might be caused by Window Vista / 7 security restrictions. Please run the program as Administrator to prevent from this problem.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Image of locked Micro SD card]</td>
<td>[Image of Micro SD card with Unlock option]</td>
</tr>
<tr>
<td>[Image of Micro SD card with locked option]</td>
<td>[Image of Micro SD card with Unlock option]</td>
</tr>
</tbody>
</table>

The steps are shown in below:

1. Insert the CD in your PC and open the directory Find and run [program] and click on “Format Micro SD Card”.
2. Click on [Format] to start formatting the Micro SD card. Please see the following steps as reference.
3. When formatting is completed, please insert the card into the machine for recording.

1. Open the plastic lid.
2. Insert the Micro SD card in correct direction.
3. Press the Micro SD card in until it is set.
4. Close the plastic lid.

<table>
<thead>
<tr>
<th><strong>Windows XP</strong></th>
<th><strong>Windows 7</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image 1]</td>
<td>![Image 2]</td>
</tr>
<tr>
<td>![Image 3]</td>
<td>![Image 4]</td>
</tr>
<tr>
<td>![Image 5]</td>
<td>![Image 6]</td>
</tr>
</tbody>
</table>
J. Restoring Memory Card

When you have backup the recorded files into PC and want to use the Micro SD card for other purposes, you have to restore it first so it can be used correctly.

Notice:
1. Before formatting Micro SD card, please ensure to unlock it first.
2. If the card is unlocked but still cannot be formatted, this might be caused by Window Vista / 7 security restrictions. Please run the program as Administrator to prevent from this problem.

How to restore it?

Steps:
1. Insert the Micro SD card into the card reader (Please make sure the direction is correct)
2. Connect the card reader with the PC
3. Insert the CD in your PC and open the directory Find and run program and click on “Format Micro SD Card”.
4. Click on 「Restore」 to restore the Micro SD card. Please see the following steps as reference. After finished, you can use the memory card for other purposes.
<table>
<thead>
<tr>
<th>Windows XP</th>
<th>Windows 7</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
</tbody>
</table>

1. **Windows XP**
   - Format / SD Card
   - Restore Full Disk Space
   - Language Setting
     - Language: English

2. **Windows 7**
   - Format SD Card
   - Restore Full Disk Space
   - Language Setting
     - Language: English