The First Part: Introduction
Thanks for buying our FHD automobile data recorder. This product is a kind of automobile data recorder of professional-grade, and can record 1920 x1080 FHD and high-quality video. Compared with traditional data recorder, this product can record more delicate and perfect images, which can also be output to the HD TV directly.

This user’s manual can help you have a thorough understanding of this product, and solve any problem that customers may encounter in using our products. Please read this manual carefully, and let this product company you all the way by recording!

The Second Part: Precautions for Use

1. Charging
   As parking monitoring function of our products is on for 24 hours, it will consume the battery power, and the battery may be low at initial use, so please charge the battery before initial use or reuse after storing for a long time.

   Please give a fully charge to the data recorder using phone chargers or portable power sources with output of 5V/1A, and then connect it to your car to use. (Hint: as the diameter of common USB cable is too small, it is recommended to charge in shutdown mode in order to improve the charging efficiency, and it will take about 2 to 3 hours to be fully charge.)

2. Use of TF card:
   1) Any TF card that has not been used in the data recorder should be formatted locally, and then put to use.
   2) The minimum memory requirement is 4G, and the maximum memory requirement is 64G. (All kinds of faults will be caused if beyond the scope of support)
   3) It should be under the condition of power off to plug in or pull out the TF card, or else it will cause damage to the data record or the TF card itself.
   4) Plug in the TF card in the right direction: the word side and the screen are in the same direction.

3. Vehicle power supply mode
   1) Connect car lighter through car charger.
   2) Connect car battery fuse box through step-down cable. (To avoid burning out the machine due to misconnection, unprofessional people should not operate.)
      (Notes to step-down cable installation: please do not do the connection privately, but consult a professional. Any burnout to the machine caused by misconnection is not within the range of warranty.)

4. Connection to a computer
   Connect a computer with a data cable, and the screen of the recorder will turn to blue, and shows three options:
   1) Storage: equivalent to a mobile disk (Remember to delete the mobile disk icon at the bottom right corner first when exit.)
   2) Camera: can be used as a PC camera.
   3) Video: use the data recorder while charging. (It can continue to charge after power off.)

5. Playing the recorded video
The correct way to play:
1) Directly replay in the data recorder.
2) Play on an HD TV through the HDMI cable. (Connect the HDMI cable when the data recorder is power off.)
3) Copy the video in the data recorder to your computer by using data cable or card reader, and then play the video.
   (Tips: use the HD player to play, “Perfect Decoding”, “Ultimate Decoding” recommended)

The download link of Ultimate Decoding: http://www.duote.com/soft/7883.html

6. Fault handling: the fastest way to handle faults
Abnormal conditions to the machine due to false operation or settings can be dealt with by following steps:
1) Restore the default settings (or press the reset button to restart).
2) Format the memory card.
3) Do not set other functions except for the time.
4) Record the video again.

The Third Part: Instructions to Common Operations
I. “Date and Time” setting
1. In the standby state of video mode (If it is at the recording status, please stop it by pressing on-off button).
2. Double press “M” button to enter video setup menu.
3. Choose “date and time” option by pressing “up” and “down” button.
4. Press “0” button once to enter into “date and time” settings.
5. Press “up” and “down” button to set numbers.
6. Press the “0” button once to set the next number.
7. After setting up, press “M” button to exit.

II. Format the memory card:
1. In the standby state of video mode (if it is at recording status, please stop it by pressing on-off button).
2. Double press “M” button to enter the setup menu.
3. Choose “format” by pressing “up” and “down” button.
4. Press “0” button to confirm.

III. Restart and reset
Press “reset” button next to the “on-off” button using a toothpick or similar tool.

IV. Restore defaults:
1. In the standby state of video mode (if it is at recording status, please stop it by pressing on-off button).
2. Double press “M” button to enter the setup menu.
3. Choose “default setting” by pressing “up” and “down” button
4. Press “O” button to confirm.

V. Parking monitoring function (off by default):
Introduction to parking monitoring function: when the function is on, the data recorder does not need external power supply. It will automatically start to record for 30 seconds, and then automatically shut down upon external vibration under the condition of power off.
1. In the standby state of video mode (if it is at recording status, please stop it by pressing on-off button).
2. Press “M” button once to enter the setup menu.
3. Choose “parking monitoring” option by pressing “up” and “down” button.
4. Press “O” button to enter the submenu.
5. Choose the sensitive option of “High” “Medium” “Low” by pressing “up” and “down” button. Press “O” to save, and press “M” to exit.
(If there is need to use this function under the condition of complete darkness, another external infrared device shall be equipped, and it is better to switch it to the third gear.)

VI. G-sensor display mode (display on by default)
1. In the standby state of video mode (if it is at recording status, please stop it by pressing on-off button).
2. Enter the video setup menu by pressing “M” once.
3. Choose “G-sensor” option by pressing “up” and “down” button.
4. Press “O” button once to enter the submenu
5. Choose “display off-on” option by pressing “up” and “down” button, press “O” to save, press “M” to exit.
6. Press anyone button, the data recorder come back the normal recording mode (display on and voice on).

VII. Unlock the protected video:
1. In the standby state of video mode (if it is at recording status, please stop it by pressing on-off button).
2. Enter the playback mode by pressing “O” button twice.
3. Enter the setup menu by pressing “M” button once.
4. Choose “protection” option by pressing “up” and “down” button.
5. Press “O” button once to enter the setup menu.
6. Choose “unlock all” option by pressing “up” and “down” button.
7. Just wait for a few seconds.

VIII. Switch of infrared function:
1. the operation instruction for IR optional device
   A. If it has no IR optional device, turn the “IR Switch” to intermediate gear.
   B. If it has IR option device, turn the “IR Switch” the any one of gears but the intermediate gear.

2. the selection for Auto mode or Manual mode
   A. Manual mode: go to into the Manu of “IR setting mode” to select the Manual mode (default is Manual mode), and press the “down” key, then Manual mode be got effect.
   B. Auto mode: go to into the Manu of “IR setting mode” to select the Auto mode and set the time to open and close automatically. 19:00 open and 7:00 close is default.
   C. Re-start after completing setting to take effect.

The Fourth Part: Operating Guidelines to Basic Functions

I. Mode switching (press “O” button to switch): video mode (standby)→photo mode→replay mode

II. Instructions to key functions at different status and different modes

1. (This sign shown at the upper left corner of the screen indicates video mode and recording status).

   Key function of recording state:
   “M” is to lock the current video (with a key mark).
   “Up” is shortcut key of Mute on/off.
   “Down” is shortcut key of infrared on/off (It is valid on manual mode only).
   “O” is to take photos.
   “On/off” key is to stop recording and switch to the standby state by short pressing and power-off by keeping pressing it.

2. (This sign shown at the upper left corner of the screen indicates video mode and standby status).

   Key function of standby state:
   “M” is the menu button. Press it once to enter into video setting menu, and press it again to enter into system setting menu.
   “Up” is shortcut key of Mute on/off.
   “Down” is shortcut key of infrared on/off (It is valid on manual mode only)
   “O” is “switch” button.
“On/off” key is to switch to the recording state by short pressing and power-off by keeping pressing it.

3. (This sign shown at the upper left corner of the screen indicates video setting menu).

**Key function under video setting menu:**

"M" is the menu. Press it once to enter into system setting menu.

“Up” is to select upward.

“Down” is to select downward.

“O” is “confirmation”.

“On/off” key is invalid by short pressing and power-off by keeping pressing it.

4. (This sign shown at the upper left corner of the screen indicates system setting menu).

**Key function under system setting menu:**

"M" is the menu. Press it once to enter into the initial interface of standby states.

“Up” is to select upward;

“Down” is to select downward;

“O” is “confirmation”.

“On/off” key is invalid by short pressing and power-off by keeping pressing it.

5. (This sign shown at the upper left corner of the screen indicates photo mode)

**Key function of photo state:**

"M" is the menu. Press it once to enter into photo setting menu; while press it again to enter into system setting menu.

“Up” is to zoom in;

“Down” is to zoom out;

“O” is “switch” button.

“On/Off” key is “photo” key by short pressing and “power-off” by keeping pressing it.
6. (This sign shown at the upper left corner of the screen indicates photo setting menu)

**Key function under setting menu of photo mode:**
"M" is the menu. Press it once to enter into system setting menu; while press it again to exit the menu.
“Up” is to select upward;
“Down” is to select downward;
“O” is “confirmation”.
“On/off ” key is invalid by short pressing and “power-off” by keeping pressing it.

7. (This sign is shown when previewing image under replay mode, which indicates the file is video. If there is no such image, it indicates picture.)

**Key function of preview interface under replay mode:**
"M" is invalid.
“Up” is to select previous file.
“Down” is to select next file.
“O” is “switch” button.
“On/off ” key is “selection” by short pressing and power-off by keeping pressing it.

**Key function of replay interface under replay mode:**
"M" is the menu. Press it once to enter into file setting menu; while press it again to enter into system setting menu.
“Up” is to select previous file.
“Down” is to select next file.
“O” is “exit” key.
“On/off ” key is “play” by short pressing and power-off by keeping pressing it.

8. (This sign shown at the upper left corner of the screen indicates replay setting menu)

**Key function of replay setting menu under replay mode:**
"M" is the menu. Press it once to enter into system setting menu; while press it again to exit the menu.
“Up” is to select upward.
“Down” is to select downward.
“O” is “selection” key.
“On/off” key is invalid by short pressing and power-off by keeping pressing it.

III. Details on menu setting

1) Video setting menu:

1. Image resolution
   - 1080FHD 1920×1080 (default)
   - 720P 1280×720
   - WVGA 800×480
   - VGA 640×480

2. Loop video
   - Off: No loop video. Video shall be stopped when the memory card is full (not recommended)
   - 2 min: 2 min for each video, covering the initial video automatically after it is full.
   - 3 min: 3 min for each video, covering the initial video automatically after it is full. (default) (recommended)
   - 5 min: 3 min for each video, covering the initial video automatically after it is full.

3. WDR
   Wide dynamic processing technology is recommended to start.

4. Motion detection
   When there is certain movement range in detection range, the system will start shooting video automatically.
   When the movement is lower than certain range, the system will stop shooting video in 10 s.
   (As it can not be set under video state, therefore it is not recommended to start the function)

5. Automatic video of power supply
   The system shall enter into video mode automatically after power supply. (starting recommended)

6. Delay shutdown (valid under video state)
   - Off: shutdown immediately after power-off
   - 10 s: shutdown automatically in 10 s after power-off
   - 20 s: shutdown automatically in 20 s after power-off
5 min  shutdown automatically in 5 min after power-off

7. Delay starting
   Off  starting immediately after power-on
   10 s  delay starting in 10 s after power-on
   20 s  delay starting immediately in 20 s after power-on
   30 s  delay starting immediately in 30 s after power-on

8. Audio video
   Off  no audio at video-shooting
   On   recording audio at the same time of video-shooting

9. Time label
   Off  there is no time label shown on the recorded video upon playing.
   On   there is time label shown on the recorded video upon playing.

10. Accelerometer setting
    Off
    Low
    Medium  (default)
    High
    (In the case of emergency, the current video will be locked automatically, not covered or deleted)

11. Parking monitoring
    Off  (default)
    Low
    Medium
    High
    (When it is on, it will automatically start and shoot video for 30 s after receiving vibration under shutdown state)

12. Parking monitoring display mode
    1. Display off
    2. Display on  (default)

13. Postmark of license plate
    3. Setting number through “up” and “down”
4. O key to move to the next
5. Press O for save and exit at Ok position

**14. GPS track**
1. Insert the 2.5AV contact of GPS module into GPS interface of the machine under shutdown state (note: please be sure that GPS module is connected under shutdown state to avoid machine damage due to hot-line work)
2. Start the connected vehicle charger, and there will be a radar icon with yellow bottom on the screen. The signal icon will flash constantly, which indicates normal connection of GPS module and satellite searching is on.
3. When the yellow bottom of radar icon turns blue, it indicates connection of satellite signal is completed and the recorder can make track record.
4. Track record can be replayed through randomly distributed specialized player and Windows decoder.
   4.1 Install randomly distributed software of Windows decoder according to the hint.
   4.2 Open randomly distributed software of TPS PLAYER. Click menu-file-open, and choose recorded video file of track needed playing for confirmation in the pop-up window. At the time, replay of driving route shall be shown on the right of the window.

**II ) System setting menu:**

1. **Date/time**
   1) Set number through “up” and “down”
   2) Enter to set the next number by pressing “O” once
   3) Press “M” to exit after setting it well

2. **Automatic power-off**
   - Off: no automatic power-off under the state of no video, no operation and no action
   - 3 min: automatic power-off in 3 min under the state of no video, no operation and no action
   - 5 min: automatic power-off in 5 min under the state of no video, no operation and no action
   - 10 min: automatic power-off in 10 min under the state of no video, no operation and no action

3. **Key click**
   - Off: close key click
   - On: open key click (default)

4. **Language settings**
   - English / français / español / português / Deutsch / Italiana / Simplified Chinese /Chinese traditional /русский/ Japanese

5. **TV mode**
   - NTSC
6. **Frequency of light source**
   - 50 Hz (default)
   - 60 Hz

7. **Screen protection**
   - Off: the screen is on constantly without any operation (large power consumption, affecting driving)
   - 3 min: the screen will be off automatically in 3 min without any operation
   - 5 min: the screen will be off automatically in 5 min without any operation
   - 10 min: the screen will be off automatically in 10 min without any operation

   (It is recommended to open screen protection function. Under screen protection state, the screen can be shown by pressing any key)

8. **White-light sources**
   - Off (default)
   - On

9. **Setting of IR mode**
   - Manual (default)
   - Aut

10. **Setting of IR Auto mode**
    - Open time
    - Close time

11. **Exposure compensation**
    - +2/3
    - +1/3
    - +0.0 (default)
    - -1/3
    - -2/3
    - -1.0
    - -4/3
    - -5/3
    - -2.0
(Keep default in general and proper adjustment can be made according to individual demands specifically)

12. **White balance**
   - Automatic (default)
   - Sunlight
   - Overcast
   - Osram lamp
   - Fluorescent lamp

13. **Formatting**
    - Memory card (enter by pressing “O”, make choice and confirmation)

14. **Default setting**
    - (In the case of setting error, default setting at delivery can be recovered through the item.)

15. **Version**
    - (Showing version information)

### III) Photo setting menu

1. **Image resolution**
   - 5M definition: 2592×1944
   - 3M definition: 2048×1536
   - 2MHD definition: 1920×1080

2. **Shooting method**
   - Single shot taking photo immediately by pressing it
   - 2-second timing taking photo in 2 s after pressing it
   - 5-second timing taking photo in 5 s after pressing it
   - 10-second timing taking photo in 10 s after pressing it

3. **Continuous capture**
   - Off only taking one picture
   - On taking three pictures continuously

4. **Image quality**
   - High-quality just choosing high-quality
Standard
Common

5. **Acutance**
   Reinforcement
   Standard: just keeping defaults
   Soft

6. **Color**
   Normal: just keeping defaults
   Black-and-white
   Sepia

7. **Instant preview**
   Off: no preview after taking photo
   2 s: preview for 2 s after taking photo, and then return to photo state
   5 s: preview for 5 s after taking photo, and then return to photo state

8. **Date label**
   Off: no date/time label on the picture
   Date: date but not time label shown on the picture
   Date/time: date and time label shown on the picture

**The Fifth Part: Common Problems and Troubleshooting**

Hint: most of failure due to improper setting can be solved by “restarting”.

1. **Q: How do I set it after receive the machine?**
   A: 1) Insert memory card well
       2) Start up and format the memory card
       3) Set “date and time”
   Operate as the above steps after receiving the machine. The defaults is the most humanized settings.

2. **Q: Why can the recording not be stopped?**
   A: It is generally caused by starting “movement detection”, which can be solved by restarting.

3. **Q: Why is the whole picture purple?**
   A: It is generally caused by starting “infrared lamp”. Turn the gear to daytime mode.
4. Q: Why infrared function is not switched automatically?
   A: The light changes complicatedly during driving. Automatic switchover of infrared function is likely to damage infrared switch device.

5. Q: Why is the recording vague?
   A: 1). Please check if definition is switched to 1080P
       2). Please check if the protective film in the front of the lens is torn off
       3). Please clean the lens and windshield.

6. Q: How to solve it if the color is not bright when recorded in cloudy day or indoor.
   A: It will seriously affect automatic exposure function in the scene with large contrast. You need to used “exposure compensation” to correct exposure value.

7. Q: Why can it not be recorded after I insert the memory card?
   A: 1). Please check whether the memory card is compatible with recorder
       2). Please format the memory card
       3). Please check whether there is enough space in the memory card and whether it is locked. As for unlocking, please refer to the fifth item of “common operations”.

8. Q: Why is the key not sensitive?
   A: 1). Please check whether the power of recorder is full
       2). If external power supply is used, please check whether the supplied voltage reaches the standard and whether the current is stable.

9. Q: Why is the screen flashing?
   A: 1). Please switch “light source frequency” to 50Hz for mainland users
       2). If external power supply is used, please check whether the supplied voltage reaches the standard and whether the current is stable.

10. Q: Why does video recording stop suddenly?
    A: Please check whether “loop video” function is off.

11. Q: Why does the screen is off suddenly?
    A: It is screen protection function, which can save power and not affect driving. The function can also be turned off.

12. Q: Why is it power off suddenly?
    A: 1). It will be power off automatically without operation or recording in 3 min under default settings.
        2). If there is no operation and meanwhile “loop video” function is off, it will stop recording after the memory card is full and shut down automatically.
        3). Please check whether the port is loose.

13. Q: Why does the system halt?
    A: 1). Please check whether the memory card is compatible.
        2). Please check whether the supply method is stable.
3). First restart and then handle it based on the above two points.

14. Q: Why can the battery not be charged full?
   A: 1). Please shut down and charge it
       2). Please charge it with in standard power supply way.
       3). Please check whether the data cable is normal.

15. Q: Why can it not be connected with the computer?
   A: 1). It may be caused by the cable. Please change the cable and try again.
       2). It may be caused by the USB interface. It is recommended to connect with USB behind the computer.
       3). It may be caused by the computer drive. Please change a computer and try again.

16. Q: It seems there is second leakage in recorded video.
   A: 1). Please check whether the memory card compatible with recorder is used.
       2). Please check whether “movement detection” function is on. If on, please restart the machine.
       3). Please use correct play methods. Please refer to the fourth points of “precautions for use” for details.

17. Q: Why is the recorded video not smooth?
   A: Please use correct play methods. Please refer to the fourth points of “precautions for use” for details.

18. Q: Why can it not be started up?
   A: 1). Please check whether the power of record is enough.
       2). If external power supply is used, please check whether the power supply reaches the standard and whether the data cable is normal.
       3). Correct power supply way. Please refer to the fourth points of “precautions for use” for details.

19. Q: Why would windshield reflective after the infrared function is on?
   A: It is a normal optical phenomenon. Different glass medium has a different refractive index to light rays (including infrared ray), causing different reflex.

20. Q: Why is there internal sound when shaking recorder?
   A: It is because there is special night vision device inside the recorder. It is normal with sound.

   A: As horizontal angle is 140°, diagonal angle is 170° (wide angle).
# Part VI: Product Parameter

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tr>
<td>Display Screen</td>
<td>TFT 2.7 inch 4:3</td>
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<tr>
<td>Resolution</td>
<td>Maximum FULL HD1080P (1920X1080) / 30fps</td>
</tr>
<tr>
<td>Camera Angle</td>
<td>Wide angle 150°</td>
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<tr>
<td>Video Output</td>
<td>High-Definition Multimedia Interface: HDMI, the highest signal output 1920X1080P</td>
</tr>
<tr>
<td>Zoom</td>
<td>4 times of digital zoom</td>
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<tr>
<td>Picture Format</td>
<td>JPG file format, maximum 12 million pixels 4000X3000</td>
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<td>Video Compression Format</td>
<td>H.264 seamless connection</td>
</tr>
<tr>
<td>Video Format</td>
<td>MOV</td>
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<tr>
<td>GPS Format</td>
<td>Support external track</td>
</tr>
<tr>
<td>Storage</td>
<td>Storage medium: micro-sd (TF), minimum support: 4G maximum support: 64GB</td>
</tr>
<tr>
<td>Language Selection</td>
<td>8 languages (simplified Chinese, Japanese, Russian, Korean, Spanish, Italian, Portuguese)</td>
</tr>
<tr>
<td>Battery</td>
<td>High-capacity polymer rechargeable battery 3.7V/450mA</td>
</tr>
<tr>
<td>Power Supply</td>
<td>DC-5V</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20°C - 60°C</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C - 50°C</td>
</tr>
<tr>
<td>Dimensions of Bare Machine</td>
<td>80x58x9mm</td>
</tr>
</tbody>
</table>
Attachment: instruction of the bracket

Step 1:
clean the front glass with a towel.

Step 2:
pull the suction button upward, and tear up protective film of the suction.

Step 3:
press the suction flat on the glass.

Step 4:
press the button to the bottom so that the suction can be absorbed on the glass.

press down