

CAR AND DRIVER



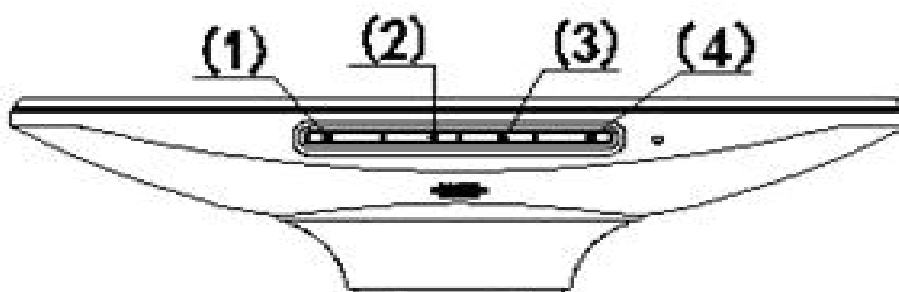
USER MANUAL

Model: CDC646

Using high performance **MSTAR8328P** chip and **2718 HD** cam recorder, the product produces video with high definition and continuous motion pictures. Approved by CE and FCC certification, the product also supports FHD 1080P full HD recording. Read this manual carefully and keep it properly before the initial use, sincerely hope that our product can satisfy your demand as well as the long usage.

1. Product Overview and Button Function

Buttons are as follow:



① **MENU/MODE** Icon ② **UP** Icon ③ **DOWN** Icon ④ **POWER/OK** Icon

Definition of the Above 4 Buttons During Operation				
Press Mode	MENU/MODE Icon	UP Icon	DOWN Icon	POWER/OK Icon
Press	Video Snapshot	Sound Recording Off/On	Switch to Playback Screen	Stop Video Recording
Press and Hold	Emergency Locking	Lens Ring Light Off/On		Screen Dormancy

(1) Menu Button/ Esc Button/ Emergency Locking Button/ Video Snapshot Button/ Esc Button

Function 1: Under *Automatic Recording* and *File Browsing* mode, press and hold **MENU** button, enter main menu settings, press **UP** button or **DOWN** button to select a menu option that you want to set, press **OK** button to confirm. After setting finished, press **MENU** button to exit the menu item.

Function 2: Mode Switching

While playing video or image under *Playback* mode, press **ESC** button to switch to *File Browsing* mode.

While in other mode, press **ESC** button will switch to home screen.

Function 3: Emergency Locking

To ensure the current video can't be overwritten during *Automatic Recording* mode, press and hold **MODE** button to start *Emergency Locking*, a file locking icon will be appeared on the screen, and accident occurred before 10s and after 1/2/3/5 /10mins will be stored as a special video, the file will never be overwritten.

While recording video under main menu mode, press **MODE** button.

Function 4: Video Snapshot Icon

While in *Automatic Recording* mode, press **MODE** button can capture picture from front and rear camera.

Function 5: ESC Icon

While playing video or image under *Playback* mode, press **ESC** mode to exit to *File Browsing* mode.

(2) Up Button/ Silent Button/ Fast Forward/ Lens Ring Light Button

Function1: Page up function

While in *Settings* or *Playback* mode, press **UP** button can go back to the previous page.

Function 2: Sound recording turn on/off

While recording video under *Automatic Recording* mode, press **UP** button can stop *Sound Recording* function, the **SPEAKER** icon on the screen changes as **STOP** icon, indicates *Sound Recording* function is off. Press again can restart sound recording functions, **STOP** icon removed indicates sound recording starts.

Function 3: Fast forward

While playing video under *Playback* mode, press and hold **UP** button can play fast forward.

Function 4: Lens ring light On/Off button

While in *Automatic Recording* mode, press and hold **UP** button can turn on and off lens ring lights around the camera.

(3) Down Button/ Fast Backward/ Picture Switching/ Motion Detection/ File Browsing

Function 1: Page down function

While in *Settings* or *Playback* mode, press **DOWN** button can go down to the next page

Function 2: While playing video under *Playback* mode, press and hold **DOWN** button can play fast backward.

Function 3: While in *Automatic Recording* mode, press **DOWN** button can switch images recording from the front and rear camera on the screen. Initial setting on the screen are big front image and small rear image, re-press to switch front image to be smaller view and rear image as bigger view. The third press switches only front image on the screen, and fourth press switches only rear image on the screen, the last press switches to the initial display mode. Press again to react in sequential cycle.

Function 4: Motion detection

First, enter *Settings* to set sensitivity of *Motion Detection* (high, normal, low), press and hold **DOWN** button to start *Motion Detection* under *Automatic Recording* mode without recording video, an eye-liked icon will appear on the screen. Press and hold **DOWN** button again to turn off while video recording mode is not operating.

Function 5: While in *File Browsing* mode, press and hold **DOWN** button can switch files recorded by front and rear camera.

(4) Power Button/ OK Button/ Video Recording Button/ Picture Button/ Stop Button/ Screen Dormancy Button/ Playback Button

Function 1: Power on and off

While the device is off, press **POWER** button for at least 3 seconds to turn on, device with TF card inserted will start recording automatically. While the device is operating, press and hold **POWER** button for at least 3 seconds, the device will be turned off after videos and user settings be saved automatically.

Function 2: OK button

While in *Stand-by/ Picture/Playback* mode, enter *Menu* mode, press **UP/DOWN** button to browse files, selected the chosen file and press **OK** button.

Function 3: Turn on/off video recording

Enter *Video Recording* mode, press **OK** button to start recording video, re-press to stop recording.

Function 4: Picture button

Enter *Picture* mode, press **OK** button to capture a picture from front camera.

Function 5: Stop button

While in *Automatic Recording* mode, press **OK** button to stop recording.

Function 6: Screen Dormancy button

While in *Automatic Recording* mode, press and hold **OK** button to turn off the screen. After the screen was off, the device keeps operating and no function will be affected. Press any button for screen wake-up.

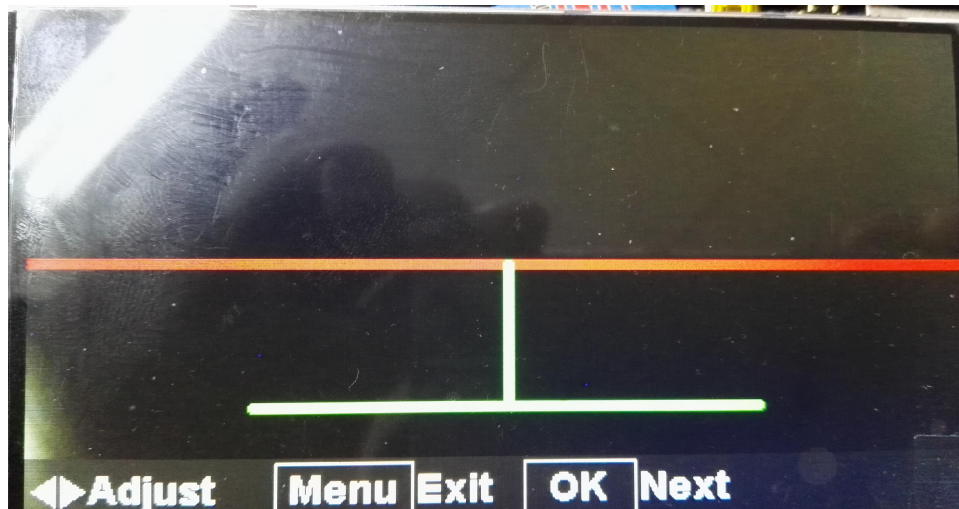
Function 7: File playing button

While browsing files, press **OK** button to play video and re-press to stop.

Ldws Adjustment

Setting Menu — **Ldws Adjustment** under system settings (available only under *Automatic Recording* mode), press to enter adjustment screen

Picture 1



OK is for confirmation. Press Up/Down to adjust calibration line location. Fixed the car camcorder onto the windshield and enter **ADJUST** setting, the upper red line indicates the fading horizontal road line ahead of the car, the horizontal green line indicates position of the car head.

Instance Graph



After entering **ADJUST** menu, the first default adjustment is the red line, press Up/Down button to adjust position, press **OK** to enter green line adjustment, re-press OK and enter the height setting (height of car camcorder installation place above the ground)

1) Height of Car: 80—100cm

2) Height of SUV: 100—150cm

Adjust according to vehicle type and installation place.

2. Installation Guide

(1) Turn off the vehicle engine.

(2) Insert the TF card into the memory card slot. Please do not format the card on the computer, format after inserted.

NOTE: Use high-speed TF card (Class 10 or above) with capacity of at least 4G and up to 128GB.

It's recommended to format all TF cards after inserted before initial use to ensure recording quality of videos.

(3) Mount the camcorder to the windshield.

(4) Plug the other end of the car adapter to the cigarette lighter socket.

(5) Use charging extension cord to connect the camcorder USB connector with the car adapter.

NOTE: Charging extension cord can be used to lay along the edge of windshield during wiring.

(6) Install the camera at the rear of the vehicle, adjust picture angle while installing. Wiring along the vehicle roof, and plug in interface of the rear camera after installation.

(7) Adjust the camera to ensure horizontal level above the ground

(8) Start the engine and make sure the device is installed properly.

NOTE: Operating indicator lights up after the device was installed properly, then the device starts automatic recording status while the video recording indicator flashes. Pay attention to the image on LCD panel, if the image is inverted, contact us immediately.

3. Function Introduction

(1) Automatic Recording

When the vehicle engine is started, the camcorder will be powered on automatically and start recording, charging indicator lights up while video recording indicator flashes. When the vehicle engine is turned off, the camcorder will be shutdown after saving recording files automatically. Recording files will be stored in partitions of the TF card, and previous recording files will be overwritten when the memory is nearly full.

NOTE:

a. Recording time can be set in the menu, ranges are 1/2/3/5 mins.

b. **Normal Cycling Video** record by front and rear camera will be stored separately under the "F" and "R" sub-folders of "Normal" folder in TF card.

c. **Motion Detection Video** record by front and rear camera will be stored separately under the "F" and "R" sub-folders of "Parking" folder in TF card.

d. **Locking Video** record by front and rear camera will be stored separately under the "F" and "R" sub-folders of "Event" folder in TF card.

(2) Manual Recording

Press **OK** button to start the camcorder for automatic recording, video recording indicator lights up and flashes.

(3) One-Key Snapshot

While in *Automatic Recording* mode and home screen, using the one-key snapshot function can capture pictures from the front and rear camera.

(4) Motion Detection

While in *Stand-by* status (no video recording), enter *Settings*, selected *Motion Detection* item, press and hold **DOWN** button to enter *Motion Detection* mode. When the camera detects mobile objects, the device starts recording, and stop recording after no moving objects 1 mins later. To exit *Motion Detection* mode, press and hold **DOWN** button .

(5) Collision Detection

The device has built-in G-sensor, when severe vehicle collision was happened, the camcorder will lock up the video 10s before and 1/2/3/5 /10s after the accident occurred, a Lock icon will be appeared on the lower left side of the screen. The emergency locking file will be created as a new file, which will be protected to avoid being over written by normal cycling recording.

ATTENTION:

- Locking recording files are named begin with EMER, normal recording files are named begin with FILE.
- G-sensor is available for sensitivity adjustment, users can adjust configuration in setting menu according to actual usage.

(6) Emergency Locking

This device has emergency locking function, enables video lock up and protects to-be-saved video from overwritten by normal recording files. Press **MODE** button, the camcorder will lock up the video before 10s and after 1/2/3/5 /10s.

(7) Date/Time Setting

While in *Stand-by* status, press **MENU** button and enter *Setting* menu, press **MODE** button to switch among several settings. When switch to *Time Setting* screen, press **UP/DOWN** button to slide the cursor for selecting **Date/Time**, then press **OK** button to continue setting.

NOTE: To ensure valid date and time for car accident recording, set the correct date and time before initial use.

(8) Video Playback

Press **MODE** button twice under operating status, then switch to *Playback* mode. Press **UP/DOWN** button to select playback file, press **OK** button and it plays. To exit *Playback* mode, re-press **MODE** button.

(9) Video and Reverse Sensor

Firstly, connect the car adapter with camcorder, then connect the red line of CCD camera with backup light. The camcorder will be powered up automatically by connecting the car adapter, and reverse image will be shown on screen when putting into reverse gear in any case. After reversing the vehicle, visible reverse image will be switch to recording mode automatically. During reverse image status, press **UP/DOWN** button can adjust position of calibration line, the adjusted video will be saved by the way.

(10) Parking Monitoring

Turn on *Parking Monitoring* even when the device is power off, the camcorder will start auto-recording once senses slight car vibrating, and will turn off after recording for 10s while the vehicle engine is shut off.

4. Specifications

Built-in Image Sensor	2 mega-pixel camera
Resolution of Postposition Camera	VGA640×480
Camera Angle	145 Degree
Video Resolution	FHD1920x1080,HD1280x720, VGA640×480
Image Resolution	1280x960,1600x1200,1920x1080
Storage and Compression Mode	H.264
Video Format	MOV
Image Format	JPEG
Storage Temperature	-30℃~70℃
Operating Temperature	0℃~50℃
Operating Humidity	15-65%RH
Memory Card Capacity	Supports up to128GB
Standard Voltage	DC5V

5. Technical Parameter

Product Overview		
Type	Item	Description
Structure	Product Size	Type: W1P
Installation	Card Device	Car Camcorder with Suction-Cup
Mould	Aluminium Oxide-Containing Alloy/Rubber	High-end quality design concept/Perfect installation design/Grit-finished alloy surface/UV-finished rubber with oil painting/Electroplated lens ring
Bracket	Free Swivel	Ergonomic design concept/180° video position adjustment, available for swivel and fasten to fix location

LCD	Screen Size	High-end Japanese style screen with 3.5 or 3.7 inch IPS/ Resolution: 480*800
System Hard-ware Configuration		
Type	Item	Description
CPU	Type	MSC8328P
Storage	SDRAM	64M*32bit
Overall Power Consumption	Electricity Current	750m/A
SPI Flash	FLASH	PN25F64B/64MB/SOP-8
Camera	Front Camera	OV2718 1920*1080 30 frame/second
	Rear Camera (optional)	1280*720 30 frame/second (supports PAL/NTSC)
MIC	Built-in	Mic/EM-4018P
Speaker	EXT	Direct Drive/Power: 1W/Internal resistance: 8Ω
G_Sensor	Built-in	DA380
Connector Setting		
Type	Item	Description
TF Memory Card Slot	Single TF Card Slot	Support up to 128GB
MINI USB Connector	Charging and Data Transfer	Available for charging
Button	Supports	POWER、MENU、MODE、NEXT、PREV、OK