



f520

**Car Camcorder
User Manual**

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About this Guide

The content in this document is for information purpose and is subject to change without prior notice. We made every effort to ensure that this User Guide is accurate and complete.

However, no liability is assumed for any errors and omissions that may have occurred.

The manufacturer reserves the right to change the technical specifications without prior notice.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital camcorder, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This camcorder complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This camcorder may not cause harmful interference, and (2) this camcorder must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

WEEE Notice

Disposal of Waste Electrical and Electronic Equipment and/or Battery by users in private households in the European Union



This symbol on the product or on the packaging indicates that this can not be disposed of as a household waste. You must dispose of your waste equipment and/or battery by handing it over to the applicable take-back scheme for the recycling of electrical and electronic equipment and/or battery. For more information about recycling of this equipment and/or battery, please contact your city office, the shop where you purchased the equipment or your household waste disposal service. The recycling of materials will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and environment.



CE Regulatory Notice

The product herewith complies with the requirements of the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC and the RoHS Directive 2011/65/EC.

Battery warning

- ❖ The battery for this car camcorder is sealed internally. DO NOT attempt to disassemble the camcorder and remove the battery.
- ❖ Always charge using the provided system. Improper charging of the battery may result in explosion.
- ❖ The battery is designed for this camcorder and is not customer replaceable.
- ❖ Batteries may explode if exposed to open fire. Never place the car camcorder in a fire.
- ❖ **Recycle the camcorder observing local regulations.**

Notes on Installation

1. Install the device near the rear-view mirror to obtain the best open-field view. Do NOT install the camcorder in a location that will obstruct your required driving view.
2. Make sure that the lens is within the wiping range of the windshield wiper to ensure a clear view even when it rains.
3. Do not touch the lens with your fingers. Finger grease may be left on the lens and will result in unclear videos or snapshots. Clean the lens on a regular basis.
4. Do not install the device on a tinted window. Doing so may damage the tint film.
5. Make sure that the installation position is not hindered by the tinted window.

Caution

- ❖ Use the authorized charger only.
- ❖ Never disassemble or attempt repair of this product. Doing so may damage the camcorder, cause electric shock and void your product warranty.
- ❖ Never short-circuit the battery.
- ❖ Set up time and date accurately before you use this camcorder.
- ❖ Exposing the camcorder to open flames can cause explosion.
- ❖ Due to local laws and vehicles safety considerations, do not manually operate the camcorder while driving.
- ❖ Hewlett-Packard Company is NOT responsible for the loss of any data/content during operation.
- ❖ The firmware function in camcorder are reference only, please follow the actual road condition.

Before you start using the Car Camcorder it is assumed that you agree to the above statements.

1 Introduction

Thank you for purchasing this advanced camcorder. This camcorder is specifically designed for real time video and audio recording when driving.

1.1 Features

- WFHD camera (2560x1080 @ 30fps)
- SHD camera (2304x1296 @ 30fps)
- High-dynamic-range Imaging (1920x1080 @30fps HDR)
- 2.4" LCD color screen
- Wide angle lens
- Motion detection
- Automatic Emergency recording for collision detection
- Supports SDHC up to 32GB
- Supports WDR

1.2 Package Contents

The package contains the following items. In case there is any missing or damaged item, contact your dealer immediately.

Camcorder



Bracket



CD-ROM



Quick start guide



Car adapter

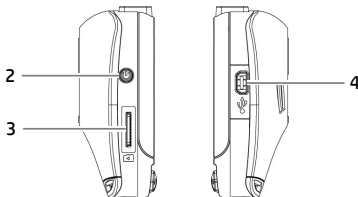


1.3 Product Overview

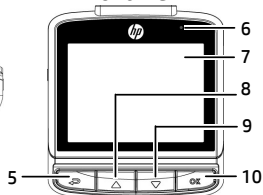
Top and Bottom Views



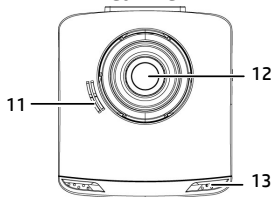
Side (Left and Right) Views



Front View



Rear View



No.	Item
1	Bracket Socket
2	Power Button
3	Memory Card Slot
4	USB Connector
5	Back Button (↶)
6	LED Indicator
7	LCD Panel

No.	Item
8	Up Button (▲)
9	Down Button (▼)
10	Enter Button (OK)
11	Speaker
12	Wide Angle Lens
13	Microphone

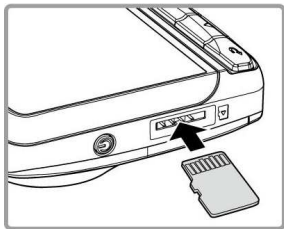
Note:

To operate the camcorder, press the corresponding buttons (5, 8, 9, 10) according to guide icons shown the screen.

2 Getting Started

2.1 Inserting the Memory Card

Insert the memory card with the gold contacts facing the back of the camcorder. Push the memory card until it clicks into place.



To remove the memory card

Push to eject the memory card out of the slot.

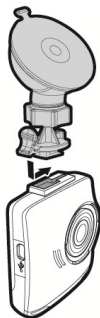
Note:

1. Do not remove or insert the memory card when the camcorder is turned on. This may damage the memory card.
2. Please use a 32GB, Class 10 or above Micro SD card.
3. Please format the micro SD cards before the initial use.
4. If the screen shows "**Low Speed Card**" while recording, it means the writing speed of the memory card is too slow. Please replace it with a higher-speed memory card.
5. If "**Card is too fragmented**" is displayed while recording, it means the card is unable to save the recording. Please make a copy of existing files in the card and then reformat it with this camcorder.

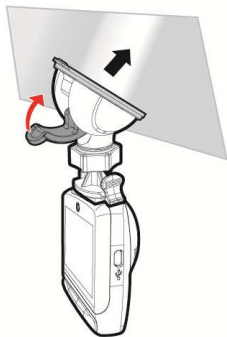
2.2 Installing in Vehicles

2.2.1 Mount to Windshield

1. Attach the bracket to the camcorder. Slide it into the bracket holder until you hear a click.



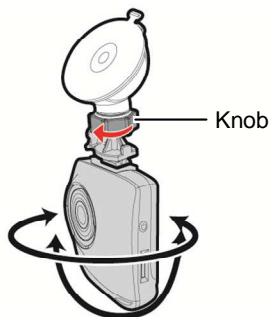
2. Before installing the bracket, please use alcohol to clean the windshield and suction cup of the bracket. Wait for dry and press suction-cup on the windshield.



3. Hold the base firmly on the windshield and press down the clamp to mount the car holder to the windshield. Make sure the base is securely locked in place.

2.2.2 Adjust the camcorder position

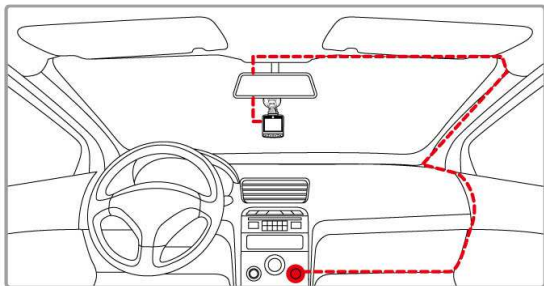
1. Loosen the knob to swivel the device vertically or horizontally.



2. Then tighten the knob to make sure the camcorder is securely locked in place.

2.3 Connecting to Power

Use only the supplied car adapter to power up the camcorder and charge the built-in battery.









1. Connect one end of the car adapter to the USB connector of the camcorder.
2. Plug the other end of the car charger to the cigarette lighter socket of your vehicle. Once the vehicle engine is started, the camcorder automatically turns on.

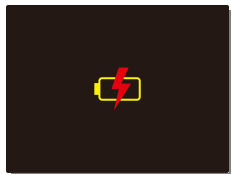
Note:

1. To use the products of the attached power charger only, please do not use other brand power charger, in order to avoid equipment burn or cause the battery explosion.
2. When first use this camcorder, please charging to battery full.
3. Please take note if the environment temperature reaches 45°C or above, the car adapter still can supply power to camcorder, but it will not charge the Lithium-ion battery. This is the characteristic of Lithium-ion and is not a malfunction.

Battery Status Indicator:

Icon	Description
	Full battery power.
	2/3 battery power.
	1/3 battery power.
	Out of battery power.
	Battery is charging.
	Connect the car adapter to charge the battery, battery is full charged.

Low Voltage:



Note:

If the camcorder is connected to the car adapter and turned on, and the screen displays a charging reminder symbol such as the image above, it means that the available voltage is too low. Please wait for a few minutes until the charging reminder symbol disappears before entering the video recording mode to prevent invalid recording or file damage.

2.4 LED Indicator

Status Explanation	LED Indicator Color
Power off, battery charging	Red
Power off, battery full charged	LED light off.
Power on, battery charging	Orange
Power on, battery full charged	Green
Standby / Standby and screen off	Green
Recording/ Recording and screen off	Flash red

2.5 Powering the Camcorder On / Off

2.5.1 Auto Power On/Off

Once the vehicle engine is started, the camcorder automatically turns on. If the *Automatic Record* function is enabled, the recording will automatically start right after the camcorder turns on.

See **Set Automatic Recording** (2.6.1).

Once the vehicle engine shuts down, the camcorder automatically saves the recording and turns off the power within 10 seconds.

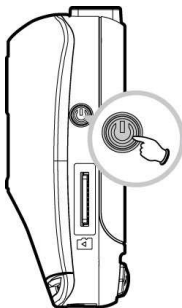
See **Delay Shutdown** (4.2).

2.5.2 Manual Power On/Off

To manually turn on the power, press the **POWER** button.

To turn off, press and hold the **POWER** button for at least 2 seconds.

To reset, press and hold the **POWER** button for at least 5 seconds.







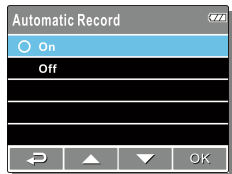
2.6 Initial Settings

Before using the camcorder, we recommend you to enable the **Automatic Record** function and set up the correct date and time.

2.6.1 Set Automatic Recording




To enable the recording to start automatically after you turn on the power, do the following:

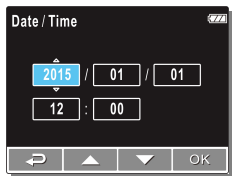
1. Press the  button to enter the OSD menu.
2. Press the  button to select **Automatic Record** and press the **OK** button.
3. Press the  button to select **On** and press the **OK** button.
4. Press the  button to exit the menu.



2.6.2 Set the Date and Time

To set the correct date and time, do the following:

1. Press the  button to enter the OSD menu.
2. Press the  button to select **Date / Time** and press the **OK** button.
3. Press the  button to adjust the value and press the **OK** button to move to another field.
4. Repeat step 3 until the date and time setting is complete.



3 Using the Car Recorder

3.1 Recording Videos

3.1.1 Record videos while driving

When the vehicle engine starts up and the **Automatic Record** function is enabled, the camcorder automatically turns on and starts recording.

Recording will automatically stop when the engine is switched off.

Or, press the ▼ button to stop recording manually.

Note:

On some cars, the recording will continue when the engine is switched off. If this happens, please manually turn off the cigarette lighter or remove the car adapter from the cigarette lighter.

3.1.2 Motion Detection

If **Motion Detection** is activated, when power off the camcorder, the system alert message, "**Press OK Key to Power off, or enter motion detection after 10sec.**", will pop on the screen. This means the system will enter Motion Detection automatically in 10 seconds; when the camcorder detects any motion in front of lens, Video Record will be activated for a duration the same as the length setting.

To set the motion detection, do the following:

1. Press the ↩ button to enter the OSD menu.
2. Press the ▲/▼ button to select **Motion Detection** and press the OK button.
3. Press the ▲/▼ button to select **On** and press the OK button.
4. Press the ↩ button to exit the menu.

Note:

1. When the battery is fully charged and is in good condition, Motion Detection can record continuously for about 30 minutes.
2. As the camcorder is used, the battery storage capacity will decrease gradually. This is a normal phenomenon for the battery
3. The LCD will be off in 30 seconds after the Motion Detection function is enabled.

3.1.3 Record all other types of videos

1. Press the **OK** button to start recording.
2. Press the **▼** button to stop recording.

Note:

1. It can be configured to save a video file for every 3 or 5 minutes of recording. See **Record Interval** (4.2).
2. The camcorder saves the recording in the memory card. If the memory card capacity is full, the oldest file in the memory card is overwritten.

3.1.4 Emergency Recording

During Video Recording, press the **OK** button to enter emergency recording mode, the “**Emergency**” message will be shown immediately on the upper left corner of the screen, and the recorded file will be protected.

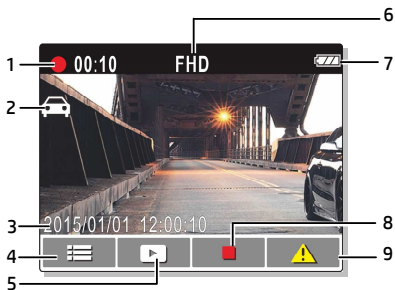
To stop the recording, press the **▼** button.








Note:

1. If the **Collision Detection** function is enabled and a collision is detected, the camcorder will automatically trigger the emergency recording. Please refer to **Collision Detection** (4.2).
2. The emergency recording file is created as a new file, which will be protected to avoid being overwritten by normal cycling recording. 4G memory card can save up to 5 emergency video files, and 8G (or above) memory card can save up to 10 emergency video files. The alert message of “**Emergency files are full**” will pop up on the screen when the emergency recording files are full, and the oldest emergency file will be automatically deleted when a new emergency recording file is created.

3.1.5 The Recording Screen



No.	Item	Description
1	Recording Duration	Indicates the recording duration.
2	Smart Scene icon	Indicates the current mode of smart scene. Driving Priority  / Scenery Priority  .
3	Date and time	Indicates the current recording date and time.
4	Guide icon (Menu)	Press the  button to enter the OSD menu.
5	Guide icon (Playback)	Press the  button to switch to Playback mode.
6	Resolution	Indicates the video resolution.
7	Battery	Indicates the remaining battery power.
8	Guide icon (Stop)	Press the  button to stop the recording.
9	Guide icon (Emergency)	Press the OK button to continuously record the video in one file until the recording is manually stopped.

3.1.6 Taking Snapshot

You can also use this camcorder to take snapshots of the current scene.

From the standby screen, press the ▼ button to take a snapshot.



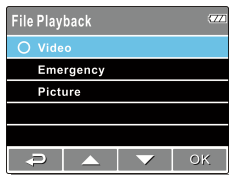
Note:

If recording is in progress, press the ▼ button to stop the recording first.

3.2 Playback Videos and Photos

To playback videos and photos, do the following:

1. If recording is in progress, press the ▼ button to stop recording. The standby screen is displayed.
2. Press the ↶ button to enter the OSD menu.
3. Press the ▲/▼ button to select the file category that you want to browse and press the **OK** button.
4. Press the ▲/▼ button to view the next or the previous file and press the **OK** button to view the file in full screen.



Note:

From the standby screen, you can directly enter Playback mode by pressing ▲ button. The last recorded video is displayed on the screen.

3.2.1 Playing Videos

To play videos, do the following:

1. If recording is in progress, press the ▼ button to stop recording.
2. Press the ↶ button to enter the OSD menu.
3. Press the ▲/▼ button to select **File Playback** and press the **OK** button.
4. Press the ▲/▼ button to select **Video** or **Emergency** and press the **OK** button.
5. Press the ▲/▼ button to browse for the desired video file and press the **OK** button to play the video.
6. Press the **OK** button to pause the playback. Press it again to resume.



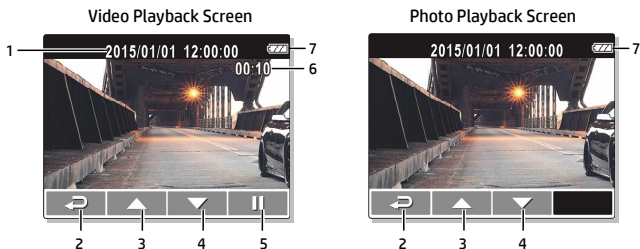
3.2.2 Viewing Photos




To view photos, do the following:

1. If recording is in progress, press the ▼ button to stop recording.
2. Press the ↶ button to enter the OSD menu.
3. Press the ▲/▼ button to select **File Playback** and press the **OK** button.
4. Press the ▲/▼ button to select **Picture** and press the **OK** button.
5. Press the ▲/▼ button to browse for the desired photo file and press the **OK** button to view the file in full screen.



3.2.3 The Playback Screen

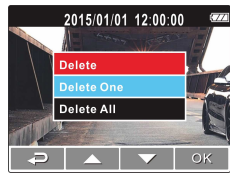
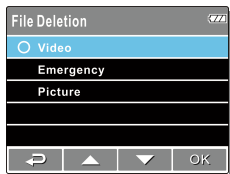


No.	Item	Description
1	Date and time	Indicates the recorded date and time.
2	Guide icon (Back)	Press the  button to return to file selection display.
3	Guide icon (Previous)	Press the  button to view the previous video/photo.
4	Guide icon (Next)	Press the  button to view the next video/photo.
5	Guide icon (Pause)	Press the OK button to pause the video playback.
6	Current Duration	Indicates the elapsed time.
7	Battery	Indicates the remaining battery power.

3.2.4 Deleting Files

To delete file(s), do the following:

1. If recording is in progress, press the ▼ button to stop recording.
2. Press the ↶ button to enter the OSD menu.
3. Press the ▲/▼ button to select **File Deletion** and press the **OK** button.
4. Press the ▲/▼ button to select the file category and press the **OK** button.
5. Press the ▲/▼ button to select the file that you want to delete and press the **OK** button to enter the Delete menu.



6. Press the ▲/▼ button to select an option.

Item	Description
Delete One	Delete the current file.
Delete All	Delete all files.

7. Press the **OK** button to confirm delete.

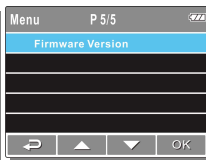
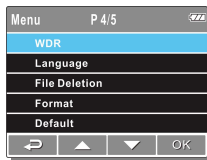
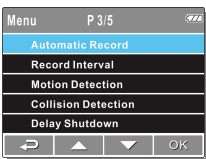
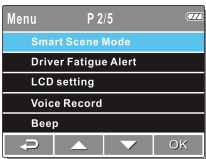
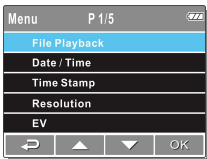
Note:

Deleted files cannot be recovered. Ensure the files have backup before deletion.

4 Adjusting the Settings

4.1 Using the Menu

You can customize the video recording and other general settings via the on-screen display (OSD) menus.



1. If recording is in progress, press the ▼ button to stop recording.
2. Press the ↶ button to open the OSD menu.
3. Press the ▲/▼ button to select a menu option and press the OK button to enter the selected menu.
4. Press the ▲/▼ button to select the desired setting and press the OK button to confirm the setting.
5. Press the ↶ button to exit the menu.

4.2 Menu Tree

Refer to the below table for details on menu items and available menu options.

Menu option	Description	Available option
File Playback	Select the file category that you want to view.	Video / Emergency / Picture
Date / Time	Set the date and time.	Press ▲/▼ button to adjust the value, press the OK button to switch the field and confirm
Time Stamp	Enable/Disable the date stamp.	On / Off
Resolution	Set the video resolution.	2560 X 1080 p30 / 2304 X 1296 p30 / 1920 X 1080 p45 / 1920 X 1080 p30 HDR
EV	Set the exposure compensation.	Press ▲/▼ button to set the exposure level. You may customize it between -1.3 ~ +1.3
Smart Scene Mode	Driving Priority: Calculate exposure based on the entire image area, but provides greater exposure to the center of a subject. Scenery Priority: Calculate exposure based on the entire image area.	Driving Priority / Scenery Priority
Driver Fatigue Alert	When Driver Fatigue Alert is enabled, a voice alert and a warning screen will be activated 1 hour after the camcorder is powered on, with a repetition every subsequent 30 minutes.	On / Off

Menu option	Description	Available option
LCD Setting	Set the duration for the display to automatically turn off right after video recording starts.	On / Turn Off After 30 sec. / Turn Off After 3 min. / Off
Voice Record	Enable/Disable the voice recording.	On / Off
Beep	Enable/Disable the beep.	Press ▲/▼ button to set the volume. You may customize it between +1 ~ +5
Automatic Record	Enable / Disable the camcorder to automatically record video after the camcorder is turned on.	On / Off
Record Interval	Set the recording duration for each recorded video file.	3 min. / 5 min.
Motion Detection	Enable/Disable the motion detection. If this function is enabled and power off the camcorder, the system alert message, " Press OK Key to Power off, or enter motion detection after 10sec. ", will pop on the screen. Under motion detection mode, the camcorder will automatically start recording when any object movement is detected.	On / Off

Menu option	Description	Available option
Collision Detection	Enable / Disable the collision detection. If this function is enabled and any collision is detected, the camcorder will automatically trigger the emergency recording.	High Sensitivity / Normal Sensitivity / Low Sensitivity / off
Delay Shutdown	Set the delay duration before turning off the power.	10 sec. / Off
*WDR	Present a crisp and clear picture quality with harmonious contrast in a high contrast, high discrepancy environment.	On / Off
Language	Set the on-screen display menu language.	According to the actual shipping regions
File Deletion	Delete the file(s).	Video / Emergency / Picture
Format	Format the memory card inserted in the equipment. All the files in the card will be erased.	Yes / No
Default	Reset all settings to factory default settings.	Yes / No
Firmware Version	Firmware Version	

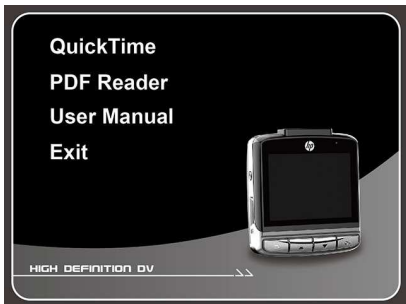
***Note:**

WDR is only applicable for use when the resolution is set at 2560 X 1080 p30, 2304 X 1296 p30, or 1920 X 1080 p45.

5 Installing the Software

1. Place the attached CD ROM into the CD player.
2. If the CD does not execute automatically, please use Windows File Manager to execute the **Install_CD.exe** file in the CD.

The following screen will be shown up.



3. Press the [Menu] item to start the installation process according to the instructions on-screen.

6 Specifications

Item	Description
Image sensor	1/3" CMOS sensor
Effective pixels	2688 (H) x 1520 (V)
Storage media	Support Micro SDHC, up to 32GB class 10 or above
LCD display	2.4" LCD color TFT (112K pixels)
Lens	Wide Angle Fixed Focus lens F1.8, f=2.95mm
Focus range	1.5m~Infinity
Movie Clip	Resolution: WFHD (2560 x 1080), 30fps Super HD (2304 x 1296), 30fps Full HD (1920 x 1080), 45fps Full HD (1920 x 1080), 30fps
	Format: MOV
Still image (Snapshot)	Resolution: 4M 2688(H) x 1520(V)
	Format: DCF (JPEG, Exif: 2.2)
Shutter	Electronic shutter Auto:1/2 ~1/2000 sec.
G-Sensor	3-Axis G-Force sensor
ISO	Auto
White Balance	Auto
Microphone	Yes
Speaker	Yes
Interface	Mini USB

Item	Description
Battery	Built-in 470mAh Li-polymer rechargeable (This battery is NOT replaceable)
Operating Temperature	0° ~ 50° C
Operating Humidity	20 ~ 70% RH
Storage Temperature	-20° ~ 80° C
Dimensions	63 x 70 x 27 mm
Weight	Approx. 92g (without memory card)