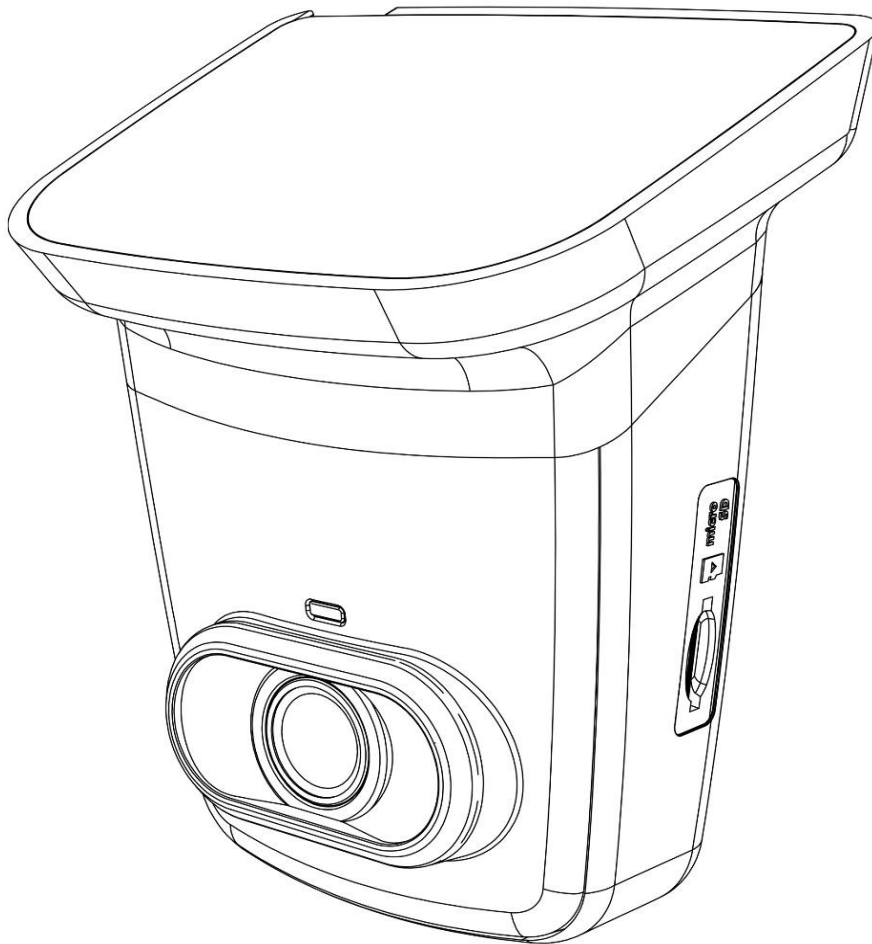




TOYOTA
ALL ABOUT THE DRIVE

DIGITAL VIDEO RECORDER (DVR)

OWNERS MANUAL



Please read this manual for proper operation and keep it for future reference.



TABLE OF CONTENTS

DIGITAL VIDEO RECORDER (DVR)

Section	Title	Page
1.0	Statements	
1.1	Important notice	1
1.2	About highway Buddy	1
2.0	Introduction to the DVR	
2.1	Front DVR	2
2.2	Rear DVR	2
2.3	DVR Overview	3
3.0	Getting Started	
3.1	Installing the memory card	4
3.2	Formatting the memory card	4
3.3	About the memory card	5
4.0	Operating the DVR	
4.1	Normal recording	6
4.2	Emergency recording	6
4.3	Parking mode	7
4.4	Capturing a photo	8
5.0	Managing files on DVR	
5.1	Playing Videos	9
5.2	Playing Rear Videos	9
6.0	Highway Buddy	
6.0	Highway Buddy	10
6.1	Lane Departure Warning System (LDWS)	11
6.1.1	Introduction to LDWS	11
6.1.2	Limitations to LDWS	11
6.1.3	Changing Setting for LDWS	12
6.1.4	Operational Condition for LDWS	12
6.1.5	Conditions in which LDWS may not operate properly	12
6.2	Forward Collision Warning System (FCWS)	14
6.2.1	Introduction to FCWS	14
6.2.2	Limitations to FCWS	14
6.2.3	Changing Setting for FCWS	14

Please read this manual for proper operation and keep it for future reference.



TABLE OF CONTENTS

DIGITAL VIDEO RECORDER (DVR)

Section	Title	Page
6.2.4	Operational Conditions for FCWS	15
6.2.5	Conditional in which FCWS may not operate even when there is no possibility for collision	15
6.2.6	Conditions in which FCWS may not function accurately	16
6.3	Driver Alert (DA)	20
7.0	Customizing the DVR	
7.1	Video Recording Settings	21
7.2	System Settings	22
8.0	Product Specification	23

Please read this manual for proper operation and keep it for future reference.



SECTION 1.0

Statements

1.1 Safety Instructions

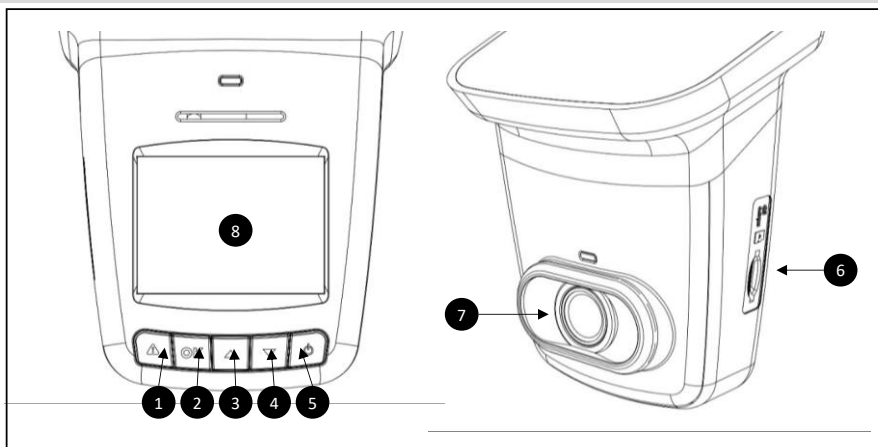
Important notice: Always use your best judgment, and operate your vehicle in a safe manner. Do not become distracted by the device while driving, and always be fully aware of all driving conditions. Minimize the amount of time spent viewing the device screen while driving.

Using this product does not change the requirement of the driver to take full responsibility for his or her behavior. This responsibility includes observing all traffic rules and regulations in order to avoid accidents, personal injury or property damage.

Please do not attempt removal of DVR unit from windscreen – please visit your local Toyota Service Center if removal is required.

Once the power of the vehicle is on the DVR automatically turns on and recording begins.

1.1 Introduction to DVR Unit



Number	Description
1	EMERGENCY RECORD BUTTON
2	REC/OK (OK button when in menu mode)
3	PLAYBACK/UP BUTTON
4	MENU/DOWN BUTTON
5	POWER ON/OFF BUTTON
6	SD CARD SLOT
7	CAMERA
8	LCD SCREEN

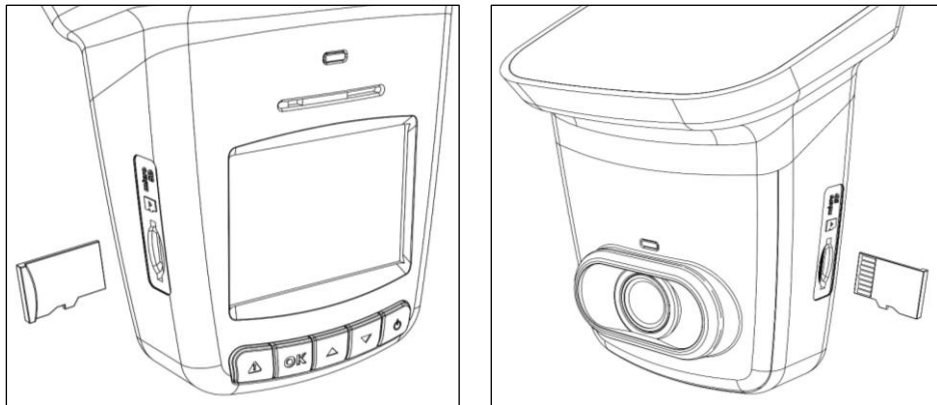


SECTION 2.0

Getting Started

2.1 Inserting the Memory Card

- Insert the memory card with the gold contacts facing to the front of the device.
- Push the memory card until it clicks into place.



2.2 To remove the Memory Card

- Push to eject the Memory Card out of the slot.
- **DO NOT** remove or insert SD Card when system is operating as this can cause errors

About Micro SD Card

- Please use Micro SD card with the size/memory at least 8gb, Class 6 (up to 32gb).
- Be sure to format Micro SD card using the DVR before the initial usage.
- The following information is the card capacity and recording time.

Micro SD Card Capacity	Video Resolution (1080P/30FPS)
8GB	80 minutes
16GB	160 minutes
32GB	320 minutes



SECTION 4.0

Recording Videos

3.1 Manual Power On/Off

- To Turn the device off press and hold the **Power ON/OFF** button for at least 2 seconds.

4.1 Video Recording

- When the power of the vehicle is on the DVR automatically starts recording.
- Recording will automatically stop when the power of the vehicle is off.

4.2 Emergency Recording

- During video recording, you can manually create an Emergency Recording to secure a video file of any event that might happen by pressing the Emergency Record Button.
- Press the Emergency Record button to start/stop the manual Emergency recording.
- The Emergency Record icon appears on the top right side of the LCD screen, indicating Emergency Recording is ongoing.
- The system automatically creates an emergency video file. The video file is saved into the Emergency Record folder on SD Card.
- When a collision is detected the device will automatically start Emergency Record mode and create an emergency record video file. The video will be saved into the Emergency Record folder on SD Card.
- During G-Sensor activated Emergency Record mode you must press "REC" (OK button) to stop recording.
- **NOTE:** Press "REC" (OK button) to start loop recording mode again.
- The DVR can save up to 24 mins of Emergency Record video files in 8 GB Card, up to 48 mins in 16 GB card and up to 96 mins in 32 GB card. The number of Emergency record files saved on the card is indicated in the top right corner of the LCD screen in playback mode.



SECTION 5.0

Managing stored files

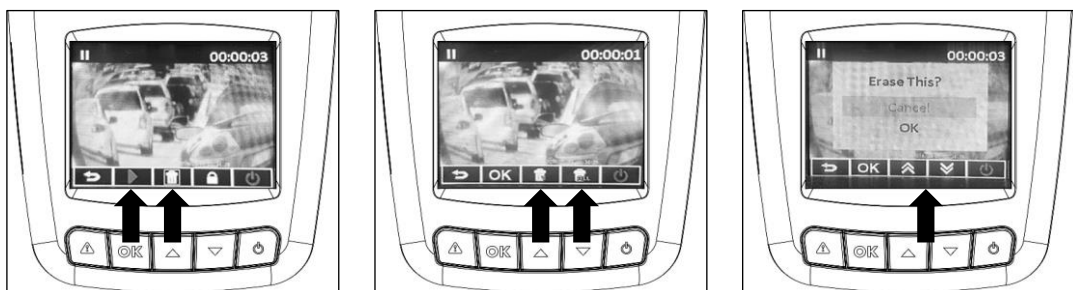
5.1 Playing Videos

1. Press **UP** arrow to enter Playback mode
2. Press **UP** /**DOWN** to select Emergency Record or Last Record and press **OK**
3. Press **UP** /**DOWN** to browse for the desired video file and press **OK** to play the video.



5.2 Deleting Videos

1. During video playback press **OK** to pause the playback.
2. Press **UP** arrow to enter the Delete screen.
3. Press **UP** to delete the selected file or press **DOWN** to delete all files.
4. A confirmation message appears on the screen. Press **UP** /**DOWN** to select Yes and press **OK** to confirm deletion.



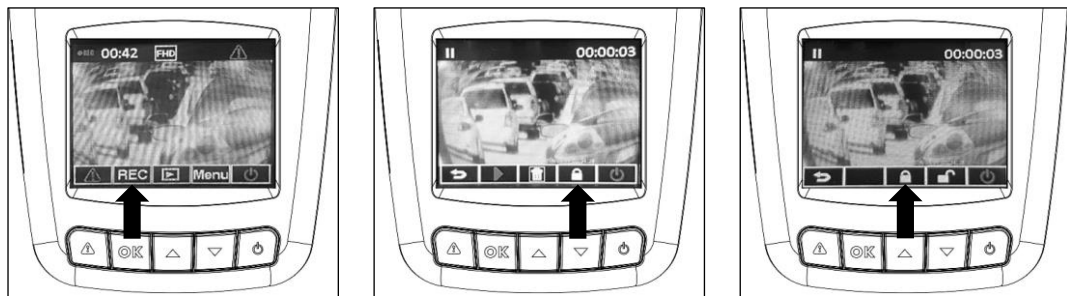


SECTION 6.0

Managing stored files cont.

6.1 Protecting Videos

1. During video playback press **OK** to pause playback.
2. Press **DOWN** to enter the Protect screen.
3. Press **UP** to lock the file. A lock icon is displayed on the screen to indicate that the file is protected. To unlock the locked file press **DOWN**.



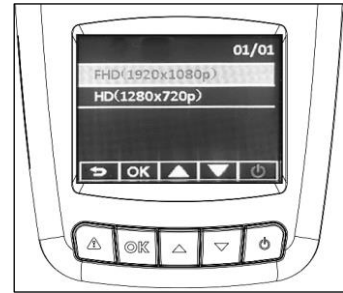
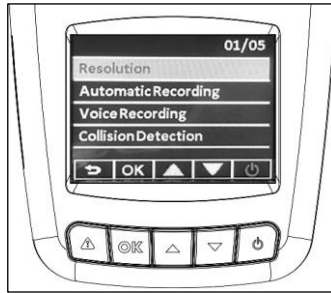
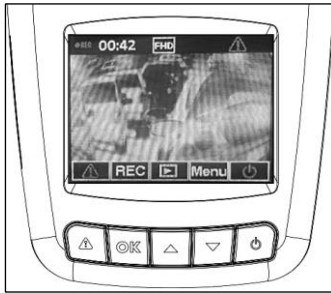


SECTION 7.0

System settings

7.1 Entering Menu

1. Press **DOWN** to enter DVR settings menu.
2. Use **UP/DOWN** to navigate to desired menu option.
3. Press **OK** to confirm selection.





SECTION 7.0

System Specifications

Feature	Specification
Processor	Novatek NT96650
Image Sensor	3M Aptina 3.1 Mega-pixels CMOS
ISO Rating	ISO 1200 max
Resolution	FHD (1920 x 1080p 30fps) HD (1280x 720p 30fps)
Random Access Memory	64Mx16bit (1Gbits) DDR3 SDRAM
Internal Memory	32Mb SPI Flash
External Memory	Micro SD card(SDXC), Min: 8G, Max: 32gb, class 6 and above
Display	2.0" LCD
Fixed Lens	FOV 130 (Diagonal)
Aperture Range	F/#2.0
EV Value	-2, -1, 0, 1, 2
White Balance	Auto White Balance with saturation control
Automatically Recording	To start recording automatically when vehicle is turned on
Recycled Recording	To delete the oldest video clip if storage is full
LCD Auto Off	30s, 3 min, 5 min, always on
Date/Time	HH:MM DD/MM/YYYY
Date/Time Stamp	On/Off
Interface	Micro SD slot (without Speaker and Microphone)
Exposure Control	Auto
Emergency Recording Mode	To protect previous and current video clip if G Shock emergency recording is activated. Previous file gets protected if G Shock recording is activated within first 15 sec of current recording.
G-sensor	3 Axis, $\pm 4G$
G-sensor settings	Low/High setting
Operating Voltage Range	4.75V~5.25V
Min/Max Current Draw	Around 400mA
Operation Temperature	-10°C ~ 65°C
Storage Temperature	-20°C ~ 70°C