

MACH TRUCK 3500 **Luxury** / **BLACK**

# USER'S MANUAL



MACH TRUCK 3500  
**Luxury**



MACH TRUCK 3500  
**BLACK**



1. Information of User's Manual	3	11. Event Recording	17
2. Precautions when using the product	4	12. Screen Saver Mode	18
3. Product Features	6	13. Safe Driving(ADAS)	19
4. Product Components	7	14. Safe Driving(ADAS) Correction Menu	23
5. Name of each part	8	15. Safe Driving(ADAS) Malfunction Condition	25
6. Product Specification	9	16. Live Screen	26
7. Precautions before installation & How to install the product	11	17. Menu Settings	27
8. System Booting	12	18. AV-OUT Settings	36
9. Driving Recording	15	19. Consumer Injury Compensation Rule	37
10. Parking Recording	16	20. Product Warranty	38



# 1. Information of User's Manual

MANUAL

**Thank you for purchasing Dash Cam(MACH TRUCK 3500 Luxury / BLACK) of MBIZONE Co., Ltd.**

- ◉ All contents of this manual are protected under copyright law.
- ◉ This manual contains explanations of Dash Cam operation and how to operate it.
- ◉ This manual is subject to modification for improvement without notice in advance.
- ◉ Please read this manual for proper use of this Dash Cam prior to use.

## ※ Scopes of Responsibilities and Assurance ※

- ◉ This apparatus is for recording videos and sounds of driving in order to provide a proof of a car accident, but it does not guarantee that it would record all videos and sounds pertaining to a car accident.
- ◉ The Company shall not be held responsible for any damage caused by this device, data loss, or any other damages to this device.
- ◉ We will not be responsible for any loss of product caused by user's discretion.
- ◉ In accident of light impact, shock sensor may not operate and all accidental images may not be recorded.
- ◉ ADAS function contains many errors depending on using environment, so it is recommended to use it for driving reference.
- ◉ The warranty period of SD memory card is 6 months. We recommend that you use SD memory card with a product that is guaranteed by us. We are not responsible for any problems that occur during warranty period if you use a third-party SD memory card.
- ◉ We are not responsible for any problems caused by using other accessories that we do not warrant.

## 2. Precautions when using the product

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### Power Supply



- Do not modify the power cable or cut the cable.
- Damaged or modified power cable can cause explosion, or fire. Please use manufacturer-approved power cables and accessory.
- Do not handle this device with wet hands.



### Installation



- Direct exposures to sunlight and extreme temperature may damage this device, or cause fire.
- Please do not install this device at a location blocking your vision.
- Securely attach the product so that it does not fall.
- Do not place any other objects around the product. If another object is placed on the dashboard, it may be reflected on the windshield and video image identification may not be possible.

## 2. Precautions when using the product

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### Operation



- Do not attempt to operate this device while driving. Operation of the product during driving a vehicle may cause accidents.
- Operate product after stopping vehicle at a safe place.
- If product left in high temperature or low temperature for a long time, it may cause malfunction.
- If you are not using the product, be careful of the storage temperature.
- Keep this product and cables away from foreign objects.
- Foreign objects may cause malfunction.
- Do not use dash cam for a long time in the parking mode after vehicle is parked.
- Vehicle battery will be discharged and may not be started.
- Excessive window tinting may cause degradation of recorded image quality.
- Do not use a sharp object on LCD panel.
- Disassembling or dropping the product may cause damage or breakdown.
- Please use manufacturer-approved genuine parts.

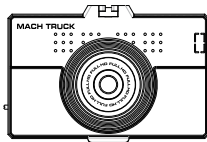
### Precautions on Using Memory Card



- Do not remove Micro SD card by force when it is recording. Press slightly to remove it from slot after turn off power.
- Memory storage devices have a usable life and may have data loss due to static electricity or external voltages. Please backup important data to other media.
- Using a third-party Micro SD Card may cause problems. Be sure to use only the authorized Micro SD Card.
- Insert or remove memory card while product is turned off. This may result in data loss or damage to memory card or the product.

### 3. Product Features

MANUAL



- ◊ Full HD 2CH
- ◊ Provides up to 126° (diagonal) angle of view
- ◊ Built-in Super Cap
  - Unexpected power failure.
  - Normal recording / shutdown
- ◊ ADAS : LDWS, FCWS, FVSA
- ◊ Save speed / location via GPS navigation device(optional)
- ◊ Provides voice guidance function
- ◊ Low voltage protection
- ◊ High temperature shutdown / LCD auto saver
- ◊ Built-in high-performance microphone
- ◊ PProvided exclusive PC viewer
- ◊ WDR
- ◊ Format-Free
- ◊ Continuous Recording Mode
- ◊ Event Recording Mode
  - Event recording in case of shock during recording
- ◊ Manual Recording Mode
  - Save as manual recording with manual recording button
- ◊ Parking Recording Mode(Motion)
  - Motion detection recording during parking mode
- ◊ Parking Recording Mode(Event Recording)
  - Parking event recording when a shock is detected during parking mode

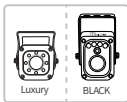
## 4. Product Components

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### Basic components



Main Body



External Camera

### Sell Separately



Rear-view Camera 10-20M Cable



External GPS Antenna



AV-OUT Cable



Cradle



5m cable for  
Rear-view Camera



Micro SD Memory Card  
Micro SD Adapter

### Consumables



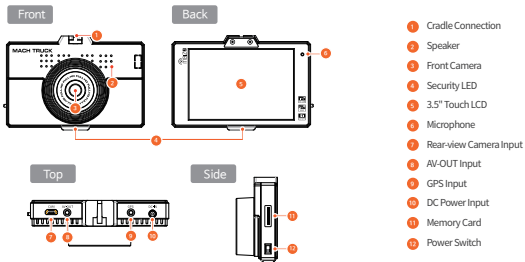
Continuous  
Power Cable



Quick Manual

\* Micro SD Memory Card will be shipped by inserted main body.

## 5. Name of each part



## 6. Product Specification (MACH TRUCK 3500 Luxury)

MANUAL



### MACH TRUCK 3500 Luxury

Classification	Specification
Resolution	1920×1080(FHD)
DISPLAY	LCD 3.5" (480×320) [IPS PANEL]
	AV-OUT
CPU	AIT
Recording Frame	30FPS (front) / 30FPS (rear)
Angle of View	about 125° (front) / about 120° (rear)
Compression Method	H.264(Video) / PCM (Audio)
Impact Sensor	3Axis Impact sensor (X,Y,Z)
SD card Safety	None format [Format free]
	Incorrect.Alert [SD card check]
Storage SD	MICRO SD 8GB ~ 128GB
Operating Voltage	12 ~ 50V
Power Consumption	about 250mA ~ 300mA
Time Setting	Auto Sync / Manual @ Gps
Battery	Internal SUPER CAP
GPS	External Support
Extra Functions	Self - formatting memory
	Security LED
PC Viewer	Exclusive viewer (offering free viewer)

Classification	Specification
PC Viewer	Exclusive viewer (offering free viewer)
File Format	AVI
Size	105mm×70mm×35mm
Recording Method	Constant / Impact / Motion / Parking Recording
Safety Guide	LDWS / FCWS / FVSA Support
System Protect	Voltage / Time / Temp cut



### MBZ-150 FHD IR

Classification	Specification
Resolution	1945(H)×1097(V) [FHD(AHD2.0)]
Image Device	2Mega - Pixel SONY Exmor R STARVIS Sensor
Size	40mm(W)×42.4mm(D)×40mm(H)
Operating Temp	-20℃ ~ +60℃, 85%RH
Lens	f=2.9mm lens (120°) [3Mega Lens]
Rated Voltage	DC 5V
Waterproof Class [IP Class]	IP65K [Completely Waterproof]

# 6. Product Specification (MACH TRUCK 3500 BLACK)

MANUAL



## MACH TRUCK 3500 BLACK

Classification	Specification
Resolution	<b>1920×1080(FHD)</b>
DISPLAY	LCD 3.5" (480×320) [IPS PANEL]
	AV-OUT
CPU	AIT
Recording Frame	30FPS (front) / 30FPS (rear)
Angle of View	about 125° (front) / about 120° (rear)
Compression Method	H.264(Video) / PCM (Audio)
Impact Sensor	3Axis Impact sensor (X,Y,Z)
SD card Safety	None format [Format free]
	Incorrect Alert [SD card check]
Storage SD	MICRO SD 8GB ~ 128GB
Operating Voltage	<b>12 ~ 50V</b>
Power Consumption	about 250mA ~ 300mA
Time Setting	Auto Sync / Manual @ Gps
Battery	Internal SUPER CAP
GPS	External Support
Extra Functions	Self - formatting memory
	Security LED
PC Viewer	Exclusive viewer (offering free viewer)

Classification	Specification
PC Viewer	Exclusive viewer (offering free viewer)
File Format	AVI
Size	105mm×70mm×35mm
Recording Method	Constant / Impact / Motion / Parking Recording
Safety Guide	LDWS / FCWS / FVSA Support
System Protect	Voltage / Time / Temp cut



## MBZ-120IR

Classification	Specification
Resolution	1945(H)×1097(V) [FHD(AHD2.0)]
Size	40mm(W)×42.4mm(D)×40mm(H)
Operating Temp	-20℃ ~ +60℃, 85%RH
Lens	f=2.9mm lens (120°) [3Mega Lens]
Rated Voltage	DC 5V
Waterproof Class [P Case]	IP69K [Completely Waterproof]



## 7. Precautions before installation & How to install the product

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### Precautions before installation

- In a flat and bright place, turn off ignition, and start installation with vehicle key unplugged.
- Clean the glass of dash cam mounting area to remove foreign matter.
- Be sure to check whether front and rear video images are stored properly before installation.
- If lens of dash cam is installed facing up, the product may malfunction.
- Please do not install this device at a location blocking your vision.
- For optimum image quality, please keep the installed front glass and dash cam lens clean.



### How to install the product

- 1 Clean glass where dash cam is to be installed. And, attach cradle and dash cam. (Place dash cam in area-proper.)
- 2 After attaching the dash cam, connect cables in the order of rear-view camera -> GPS (optional) -> DC power.
- 3 When cable installation is complete, fix it to cradle.
- 4 After power is turned on, booting will start with MBIZONE product name.
- 5 When booting is completed, main screen will appear and start recording with announcement voice message of "Start continuous recording".

## 8. System Booting

- It boots when power is applied by ACC power and cigar cable.
- The boot case is divided into 3 types, Normal booting / SD card is not mounted boot / SD card is none format-free format.

### Normal booting

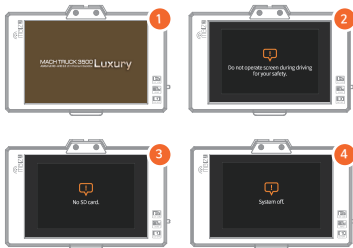
- 1 Show product logo screen.
- 2 This is warning screen for accident risk during driving.
- 3 Continuous recording progress notification screen.
- 4 Format the SD card.  
(After the dash cam is installed, formatting is performed only once at boot time, to make the SD card format-free.)
- 5 It shows live screen.



## 8. System Booting


**i** SD card is not mounted boot

- 1 Show product logo screen.
- 2 This is warning screen for accident risk during driving.
- 3 It shows screen that SD card is not installed and it waits on current screen until installation is completed.
- 4 When SD card is installed, system shutdown screen is displayed. After system shutdown, 'normal boot' process is started.



## 8. System Booting

MANUAL

 SD card is none format-free format

- 1 Show product logo screen.
- 2 This is warning screen for accident risk during driving.
- 3 If SD Card is None Format Free, this is format progress notification screen.
- 4 It is system restarting screen after format completion.
- 5 It shows system shutdown screen, and after system shutdown, it performs 'normal boot' process.



## 9. Driving Recording

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- 1 When device power is ON, continuous recording mode is activated automatically after booting. The word 'Normal' is displayed on live screen.
- 2 When Exit Menu is activated, continuous recording is started, and its image is as figure 6
- 3 Continuous recording is started after event recording.
- 4 Continuous recording is started after ACC On while parking recording mode.
- 5 The following figure shows procedure for switching to continuous recording in parking recording mode.
- 6 When ACC On, shows number of impact for 2 seconds.
- 7 Shows switching to continuous recording mode and starts continuous recording.



## 10. Parking Recording

- 1 When ACC off for 10 seconds, it is switched to parking mode.
- 2 The LCD screen is off and LCD ON for 1 minute when you touch screen.
- 3 It detects movement of camera image and carries out parking motion recording.
- 4 When G-Sensor detects impact, parking event recording is performed.
- 5 Following figure shows when parking mode is switched in continuous mode.
- 6 It shows that continuous recording mode is stopped.
- 7 It shows that parking recording mode is switched.



## 11. Event Recording

MANUAL

- 1 Event recording is performed when G-Sensor detects event during continuous recording mode.
- 2 When event recording during continuous recording mode, it is displayed by GUI in live screen.
- 3 When G-Sensor detects event during parking recording mode, event recording is performed.



## 12. Screen Saver Mode

- 1 If there is no user input for 1 minute in live screen mode, it turned to screen saver mode.
- 2 It can be used as a clock screen and LCD OFF screen depending on user's setting.
- 3 When user's input is occurred in screen saver mode, the mode is changed from screen saver to live screen mode.
- 4 Select one of two saver modes when screen saver is operated.
  - A. Clock screen mode
  - B. LCD OFF mode





# 13. Safe Driving(ADAS) - LDWS (Lane Departure Warning System)

MANUAL

- 1 This function is for driver convenience while driving.
- 2 Supports LDWS(Lane Departure Warning System), FCWS(Foward Collision Warning System), FVSA(Front Vehicle Start Alarm).
- 3

LDWS (Lane Departure Warning System)

- A. It informs you when the vehicle leaves the lane while driving.
- B. It can be set by 60km, 70km and 80km.
- C. It is displayed in blue and red colors respectively when lane departure from normal speed at above setting speed.



## 13. Safe Driving(ADAS) - FCWS (Forward Collision Warning System)

MANUAL

- ① If vehicle is detected ahead of you while driving, GUI and voice alert will notify you to a collision warning.



# 13. Safe Driving(ADAS) - FVSA (Front Vehicle Start Alarm)

MANUAL

- 1 At the intersection, the driver informs the driver of the departure of the front car during signal waiting by **GUI** and voice notification.
- 2 Waiting for signal at intersection.
- 3 Notify departure of front car during signal waiting.
- 4 If departure notification of front car is detected, **GUI** is continuously displayed along with notification voice on live screen.



Waiting for signal

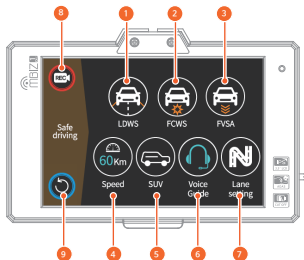


Detecting departure of front car during signal waiting.



When detecting departure of front car, **GUI** would be displayed on screen as above figures.

## 13. Safe Driving(ADAS)



- 1 LDWS (Lane Departure Warning System) ON/OFF
- 2 FCWS (Forward Collision Warning System) ON/OFF
- 3 FVSA(Front Vehicle Start Alarm) ON/OFF
- 4 Setting a speed of lane departure detection while driving  
Detects lane departure only when it is above the set speed.  
LDWS function does not work if it is below the set speed.  
Change speed value when touching (Settings: 60Km, 70Km, 80Km)
- 5 For forward collision detection, set installation height for each vehicle.  
You can set up for three types of vehicles.  
(Settings: Passenger, SUV, Truck)
- 6 Use voice guidance of safe driving detection ON / OFF
- 7 Go to safe driving correction menu.
- 8 Go to live screen.
- 9 Go to previous menu(main menu).

## 14. Safe Driving(ADAS) Correction Menu

MANUAL

- Detection of LDWS(Lane Departure Warning System), FCWS(Forward Collision Warning System), FVSA (Front Vehicle Start Alarm) will be improved when correction for safe driving is carried out.
- You will need to make customized correction for your vehicle through correction function.
- It consists of 5 steps in total.
- Correct left and right based on bonnet of vehicle.



**Move red line up and down to align with horizon.**

- 1 Move red line up when touching.
- 2 Move red line down when touching.
- 3 Touch to move to STEP 2.
- 4 Go to previous menu(safe driving menu).



**Align red line with bonnet end of vehicle.**

- 1 Move red line up when touching.
- 2 Move red line down when touching.
- 3 Touch to move to STEP 3.
- 4 Go to previous menu(safe driving menu).

# 14. Safe Driving(ADAS) Correction Menu

MANUAL



Align red line to center of left and right lanes.

- 1 Move red line to left when touching.
- 2 Move red line to right when touching.
- 3 Touch to move to STEP 4.
- 4 Go to previous menu(safe driving menu).



Move red line left and right to align with left lane.

- 1 Move red line to left when touching.
- 2 Move red line to right when touching.
- 3 Touch to move to STEP 5.
- 4 Go to previous menu(safe driving menu).



Move red line left and right to align with right lane.

- 1 Move red line to left when touching.
- 2 Move red line to right when touching.
- 3 Touch to move to STEP 1.
- 4 Go to previous menu(safe driving menu).

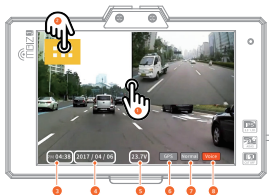
## 15. Safe Driving(ADAS) Malfunction Condition

# MANUAL

- If GPS is not connected, ADAS will not work.
- It may not be operated normally in backlight conditions.
- It may not be operated normally in bad weather conditions.
- On the roads without lanes may not be worked properly.
- Objects placed on dashboard might be reflected on front window and ADAS may not be operated normally.
- It may not be operated normally in low light conditions such as night driving or tunnel operation.
- If rear of vehicle ahead is different from that of a regular vehicle (towing vehicle, cargo truck, etc.), it may not be operated normally.
- It may not be operated normally on roads with large rotation angles.
- When angle of product is warped while using ADAS function, please set it in [Menu] - [Safe Driving] - [Lane Setting].

## 16. Live Screen

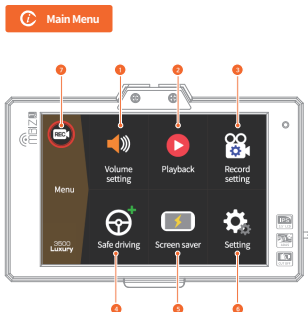
- 1 If you touch image on live screen, front and rear images are switched.
- 2 Touch upper left " " to move to MAIN MENU screen.



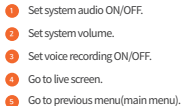
- 3 System time information (PM : 04:38)
- 4 System date information (2017/04/06)
- 5 Voltage (23.7V)
- 6 GPS information  
Connected GPS      Disconnected GPS  
      
- 7 Recording information  
Continuous recording      Event recording  
      
- 8 Show voice recording is performed or not during the video recording  
Voice recording on      Voice recording off  
      



# 17. Menu Settings



- 1 Set system and whether or not to record system voice.
- 2 Go to menu of recorded video viewer.
- 3 Go to sensor sensitivity and system shutdown setting menu.
- 4 Go to safe driving(ADAS) setup menu.
- 5 Go to screen saver setting menu.
- 6 Go to Time Setting, System Initialization, Touch Correction, SD Format, Security LED ON/OFF, System Information menu.
- 7 Go to live screen.



# 17. Menu Settings

## Video view



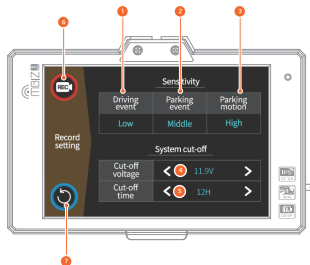
- 1 Continuous recorded video file list
- 2 Event recorded video file list
- 3 Parking motion recorded video file list
- 4 Parking event recorded video file list
- 5 Name of recorded files.
- 6 Go to main menu screen.
- 7 Shows file list page information. (1 page = 5 file)
- 8 Go to previous page.
- 9 Sort in ascending or descending order.
- 10 Go to next page.

- 1 Switching front and rear recorded video
- 2 Go to video view
- 3 Play previous video
- 4 Pause and play the current video
- 5 Play next video

# 17. Menu Settings



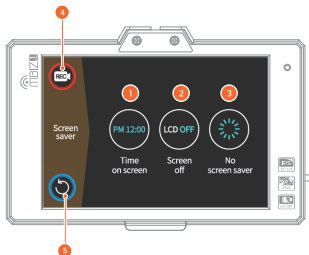
## Recording settings



- 1 Sensor sensitivity of continuous event recording  
It can be set to insensitive / normal / sensitive (3 levels)
- 2 Sensor sensitivity of parking event recording  
It can be set to insensitive / normal / sensitive (3 levels)
- 3 Sensor sensitivity of parking motion recording  
It can be set to insensitive / normal / sensitive / disable (4 levels)
- 4 Voltage adjustment for system shutdown  
Power cut-off voltage can be set to prevent battery discharge (Setting 7 steps :  
'disable', '23.0V', '23.4V', '23.8V', '24.2V', '24.6V', '25.0V')
- 5 Adjust system shutdown time  
Power cut-off time can be set to prevent battery discharge (Setting 7 steps :  
'immediately blocked', 'disable', '6H', '12H', '18H', '24H', '48H')
- 6 Go to live screen.
- 7 Go to previous menu(main menu).

# 17. Menu Settings

## Screen Saver

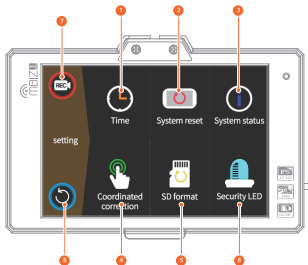


- After about 1 minute of waiting time in live screen, it enters into screen saver mode.
- If you touch screen in screen saver mode, it will be turned to live screen again.

- 1 Clock screen: Clock is displayed in screen saver mode
- 2 LCD OFF: Blank screen is displayed when screen saver mode
- 3 LCD ON: Do not use screen saver
- 4 Go to live screen.
- 5 Go to previous menu(main menu).

# 17. Menu Settings

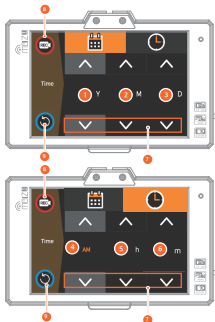
## System Settings



- 1 Go to time setting menu.
- 2 Go to system initialization menu.
- 3 Go to system information menu.
- 4 Go to LCD touch correction menu.
- 5 Go to SD card format menu.
- 6 Set security LED ON/OFF.
- 7 Go to live screen.
- 8 Go to previous menu(main menu).

# 17. Menu Settings

## Time setting



- Set system time.
  - The time setting is set to year / month / day / hour / minute.
  - GMT information for current location is showed by GPS information.  
(Only GPS module is installed)
- 
- 1 It can be changed YEAR information by touching.
  - 2 It can be changed MONTH information by touching.
  - 3 It can be changed DAY information by touching.
  - 4 It can be changed MORNING / AFTERNOON information by touching.
  - 5 It can be changed HOUR information by touching.
  - 6 It can be changed MINUTE information by touching.
  - 7 Change year / month / day / hour / minute value.
  - 8 Go to live screen.
  - 9 Go to previous menu(system setting menu).

## 17. Menu Settings



### Format

- 1 Go to previous menu(system setting).
- 2 Proceed formatting.  
(System will be restarted after formatting.)



### Touch correction

- If touch pointer is not correct, proceed touch correction.
- Touch pointer on LCD screen to complete correction.



# 17. Menu Settings

## System initialization



- Proceed system initialization.  
(User's settings are changed to factory default.)

- Go to previous menu(system setting menu).
- Proceed system initialization.  
(System will be restarted after initialization.)

## System information



- It informs system information to user.

- Model information of system (Luxury or BLACK)
- Firmware version information of system
- MICOM information of system
- G-sensor sensitivity information of system
- GPS connection information of system
- Go to previous menu(system setting menu).

## Security LED

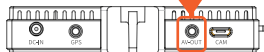
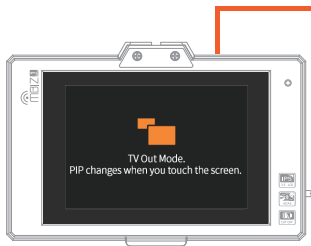


Security ON



Security OFF

## 18. AV-OUT Settings



If you connect an AV-OUT cable to dash cam and monitor, the video image will be shown on monitor and dash cam is changed to **'TV OUT mode'**.



(AV-OUT cable is sold separately.)

# 19. Consumer Injury Compensation Rule

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## A/S Information

Phone : 1577-8091

**A/S request :** The product shall be accepted at Company, or delivered to Company by parcel service.

**Service Hours of Customer Center :** Monday to Friday – 10:00 to 18:00 (Lunch Break 12:00~13:00),

**Do not operate on Saturday, Sunday and Legal Holidays.**

※ Contact the customer center immediately if the product malfunctions. It might not be possible to repair the product if it is disassembled by user.



## Quality Assurance

※ This product has undergone strict quality control and inspection procedures. The Company shall provide the quality assurance as the following.

1. When there is a malfunction of this product, please contact the place of purchase or our agency.
2. If this product malfunctions while it is in a normal operation, our service center shall provide a repair service as the following.

**Free-of-charge repair service :** - 1 year from the date of purchase – 6 months for accessories

**Paid repair services :** - after the warranty period – malfunctions caused by negligence of a customer.

- malfunctions caused by force majeure events or accidents

- This product is intended for use in a car.

The Company shall not be responsible for any costs incurred by improper use or altering of this product.

## 20. Product Warranty

MANUAL

The warranty period of this product is ONE YEAR.

Memory card that comes with dash cam is a consumable part and warranty period is SIX MONTHS.

Model Name		Firmware Ver.	
Serial No.			
Date of Manufacture (MM/DD/YY)			
Date of Purchase (MM/DD/YY)			
Place of Purchase			

## **MBIZONE Co., Ltd.**

1208 Anyang Venturetel, 167 Simin-daero, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

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