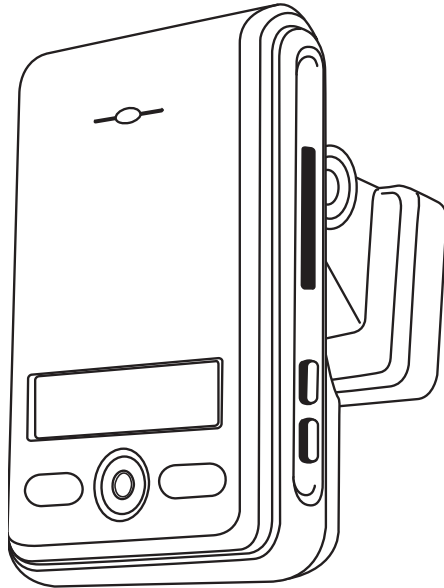# Auto-Black-Box

3311 und 3320

Gebrauchsanweisung

Main Features

Unlike other in-car recording systems, the Drive Recorder is used to record both video and audio data in a continuous loop fashion. If the vehicle is involved in an accident such as a collision, impact, and sudden acceleration-related incident, this data is marked and stored. One may thereafter analyze the data to find its root cause by playing back the scenes of interest and where acceleration, vehicle speed, direction, and location are available for review. Added to the recording are vehicle speed and direction and GPS location.

Continuous recording

The video and audio data from the front and interior views is continuously recorded while power on. When the capacity of the SD card has been reached, the oldest files are overwritten by the latest ones in a "round-robin", first in, first out fashion.

Pre and post event recording

When impact or unusual acceleration or deceleration is detected by the built-in G-Sensor and has exceeded the preset limit or one activates the manual emergency record button, the recorded video data is locked-in and is erased only by an authorized party and by using a PC or laptop, accessing the SD card. Event data records 1 minute before and 1 minute after(Note: The User may set the pre-event time to either 1 minute, 2 minutes or 3 minutes of pre-event recording). The next time the SD card is read by the unit, the unit's set up parameters will be uploaded into the recorder. As previously mentioned, stored event recording data in the SD card will not be erased by the unit, and where this must be done manually by the user.

Nachtaufnahmen der Innenkamera mit Infra-Rot- Licht nur bei AutoBlackBox 3320

The included IR (Infra-Red) Light module with adjustment used this invisible light source to assist in recording nighttime views from the interior facing camera.

Playback of video/audio data

The recorded data can be played back using the provided playback soft ware which resides on the SD card. By removing the SD card and accessing the Player folder and double clicking on the "Player.exe" line starts the playback soft ware.

Data analysis

The recorded data can be easily analyzed for speed, vehicle location and direction of travel including impact by using the Player that is found on the supplied SD card.

Contents

Before using the product

Warranty and responsibilities

◆ Damage due to production malfunction, loss of data, or other damages occurring while using this product shall not be the responsibility of the manufacturer.

◆ Although the Drive Recorder is a device used for recording/storing videos, the device is not guaranteed to record information on every accident in the case of a malfunction.

◆ Im Falle eines Unfalls wird ein geringer Aufprall oder eine geringe Verzögerung die Automatik-Sicherung durch die Fliehkraftsensoren nicht auslösen. In einem solchen Fall muss der manuelle Sicherungsknopf an der AutoBlackBox vom Fahrer oder Beifahrer gedrückt werden um dieses Ereignis unüberschreibbar zu sichern.

◆ Zur stabilen Funktion der AutoBlackBox ist es notwendig die SD-Karte und die AutoBlackBox regelmäßig auf ihre Funktionalität zu überpüfen.

Safety Instructions

User Manual

● To ensure proper operation please read the manual before installation and use. Failure to follow this safety notice may cause a malfunction and may void the warranty.

Power

● Use only the provided cables and specified power input.
  A cable not supplied by the manufacturer may cause product damage, a fire or a short circuit.

● Please use rated capacity for the fuse and confirm the message if the product correctly connected after the installation.

SD memory card

● Insert the SD card to the product.

● Ensure that the capacity of the SD card is not exceeded.

※ A full SD card will not allow one to record manual alarms or G-sensor based triggers.

● Bitte die Stromversorgung unterbrechen bevor die SD-Karte entnommen oder wieder eingesetzt

wird. (Bei Stillstand des Autos die Zündung ausschalten. Die AutoBlackBox schaltet auf Parküberwachung. Jetzt den obersten Knopf (Event Release Button) für 3 Sekunden drücken und die AutoBlackBox schaltet sofort aus).

※ Inside SD memory data loss may occur due to SD error.

Caution!

- Do not remove the SD card during product operation while power is on.
  Product or SD card could be damaged.
- In case of ejecting the SD card while power is on, press the emergency button
  over 5 seconds.
  The device will reboot and the LCD display will turn off.
  (After LCD turn off, eject the SD memory card within 10~15 seconds.)

Tip. For safe and long-term use of the SD card.

◆ Please make sure to turn off the device power when inserting or ejecting the SD card.

◆ Generally, the SD card has a set lifespan and may not be able to store new data after a certain period of time. In such a case, please purchase a new SD card for use. Please take caution as loss of data due to overuse of the SD card as it shall not be the responsibility of the manufacturer.

◆ Always store data within a storage case as data loss may occur during storage or transport due to static electricity or external voltage.

◆ Always back up all important data in a different storage media.
(Hard disk device, CD, portable disk drive, etc)

◆ Please refer to the SD card precaution for safe and long term use of product.   (Page. 8.)

Installation sequence and method

Caution prior to installation

● Stop the car at a safe parking lot before operating the device.
   Do not operate the product while driving. It might be a cause of car accident.
 • Do not obstruct the view of the product through the front windshield.
 ※ The GPS receiver may not work properly.
● Do not disassemble, repair or modify the device
 ※ This voids the warranty and where we take no responsibility for product damage or problems caused by the user.

● When replacing the fuse, please use a fuse with the rated capacity under the recommended power guidelines. Using this product in alternative power situation will void the product warranty and could result in fire.

• Any excessive window tinting may cause an unclear or distorted image on playback.

First record and then play back the video to see if the recorded video is acceptable.

● Use only the provided cables and specified power input.

 ※ A cable not supplied by the manufacturer may cause product damage, a fire or a short circuit.

● When using double-faced tape, wipe the window clean and clean the surface of the device with dry cloth before putting the tape.

 ※ From dropage of a product by any foreign substances or dust, it may cause a fatal damage to the product or a car accident while driving.

Caution prior to Storing

● Do not insert foreign substances into the product.

● Do not cover the camera lens with any materials or objects.
   This may affect recording quality.

● Do not drop or apply excessive shock. This may cause product damage.

● Avoid high temperature from heating device.

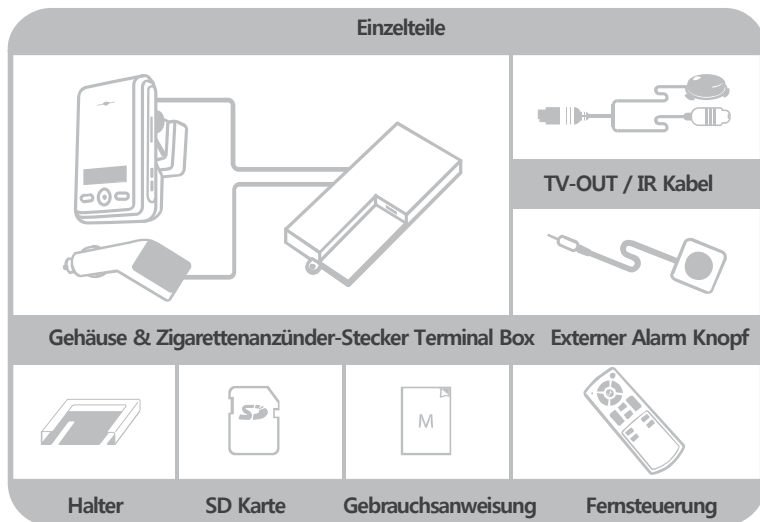● Avoid placing the product under high moisture or dust level.

Caution prior to Cleaning

● Turn the device off before cleaning the device.

● Avoid placing the device under high moisture or dust level.
   Only clean the device with dry cloth if it is necessary.

Einzelteile

TV-OUT / IR Kabel

Gehäuse & Zigarettenanzünder-Stecker Terminal Box   Externer Alarm Knopf

| Halter | SD Karte | Gebrauchsanweisung | Fernsteuerung |

*Produkteinzelteile können ohne vorhergehende Ankündigung ein unterschiedliches Aussehen haben.

Technische Details

Video	Eingebaute Kamera	2 (1.3 Mega pixel CMOS sensor)
	Kompression	H.264/AVC
	Auflösung	VGA (640X480)
	TV-OUT	○ (PIP Mode)
Audio		1 CH, Mono (in & out)
GPS		eingebautes smart GPS
G-Sensor		3D Beschleunigungssensor eingebaut
Stromversorgung durch Autobatterie		ausgerüstet für Parküberwachung
Speicher		SD Card bis zu 32GB
Stromstärke		DC 9V ~ 30V

*Diese Beschreibung kann ohne vorhergehende Bekanntgabe zum Zweck der Produktverbesserung geändert werden.

SD Memory Card Spezifikationen

- **Bezeichnet eine Durchschnitts-Aufzeichnungszeit, Bewegung beeinträchtigt die Aufzeichnungszeit. Die angegebenen Zeiten entsprechen Aufnahmen während Tageslicht im städtischen Bereich für eine 2 GB-Karte.**

Gesamt Bild	Maximale Aufzeichnunszeit (Min.)				
(Bild/Sec.)	Lowest	Lower	Normal	Higher	Highest
15 Bilder	300	240	160	120	96
10 Bilder	480	300	240	160	120
7.5 Bilder	600	400	300	200	160
5 Bilder	800	600	400	300	200
3 Bilder	1,200	800	600	400	300
2 Bilder	1,600	1,200	800	600	400
1 Bilde	2,000	1,600	1,200	800	600

* Aufnahmezeit variiert abhängig von der Bewegungsintensität und den Lichtverhältnissen   (gilt für 2GB)

Achtung!

1. Die SD Karte nur bei ausgeschalteter Stromversorgung herausnehmen.
   (Die SD-Karte kann ansonsten zerstört werden)
2. Die SD-Karte nicht für andere Zwecke verwenden oder fremde Daten darauf kopieren.
3. Überprüfen und formatieren sie die SD-Karte regelmäßig um eine einwandfreie Funktionsweise sicherzustellen. Vor dem Formatieren sichern sie bitte alle Daten der SD-Karte auf ihrem PC.
4. Im Falle, dass ihr PC die SD- und die SD SDHC2.0 Memory Karte Standards nicht unterstützt, verwenden sie bitte einen externen Kartenlesen (SD Karte zu USB Stecker)
5. Die SD-Karte muss durch eine neue SD-Karte ersetzt werden wenn sie das Ende ihres Produktlebens erreicht hat und keine neuen Daten mehr speichern kann.
   (Die Produkthaftung der SD-Karte erstreckt sich auf 3 Monate nach Kaufdatum.)
6. Verwenden sie nur SD-Karten die vom Erzeuger   bereitgestellt werden.
   Wir empfehlen die Verwendung einer SD-Karte ab "SDHC Klasse 4 ".

SD Card Formatting

Caution!

- Format the SD card at least twice a month regularly for optimal performance.
- Format function will delete all files in the player.

  Backup all the important data before formatting the removable disk.

  (Any loss of data shall not be the responsibility of the manufacturer.)
- After formatting the SD card, set the time zone in the view program configuration (Refer to 21p.)

  If you do not configure the settings, system initialization may take up to 10 minutes and where

  the time and the Time zone may not match.

Operation sequence

Preparation for video recording

1. Check to see whether the SD memory card has been inserted in to the device. and connect the power cable
2. If the device is connected to power, [**HELLO**] appears on the LCD display, indicating that the video recorder is initializing.
3. After a few seconds, a chime sound will occur and the continuous recording will be conducted while driving the vehicle.
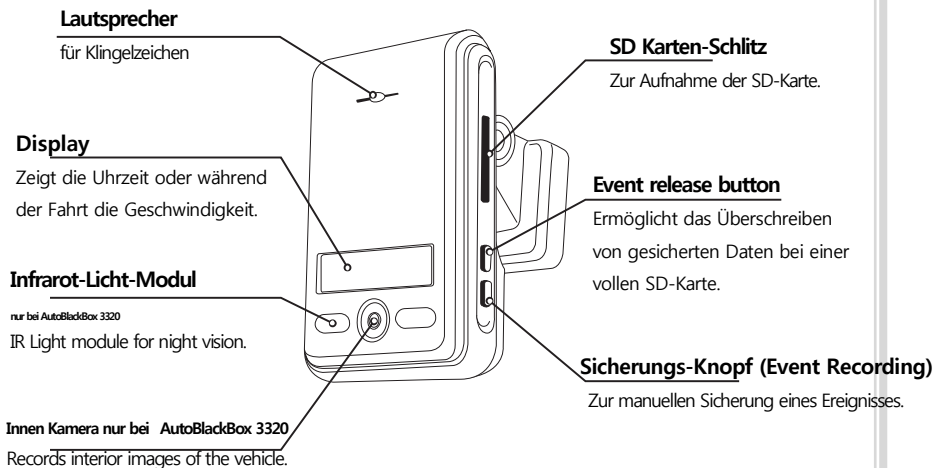
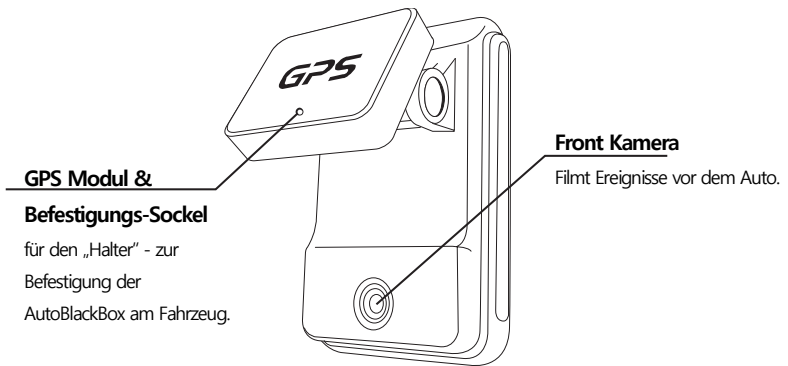## Continuous recording while driving

1. Drive Recorder informs you of your vehicle's speed, when stopped, the unit it displays the time.
2. When the capacity of the SD card has been reached, the oldest files are over written for continuous recording. The data recorded by either the unit's internal G-Sensor or external manual record button are not over written. (This alarm data must be erased by the User with the SD card inserted in the computer, erasing event data in the DATA folder.)
3. When you stop the engine or remove the power cable from the cigarette lighter plug, the device stops recording.

Running the viewer program after driving

1. The player is built in the SD card so the user is able to view the recorded data on any PC.

2. Check the recorded SD card data regularly for stable operation of the device and the SD card.

3. Always back up all important data in a different storage media.

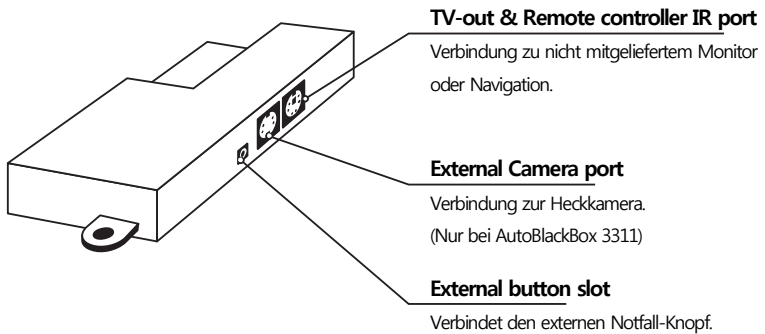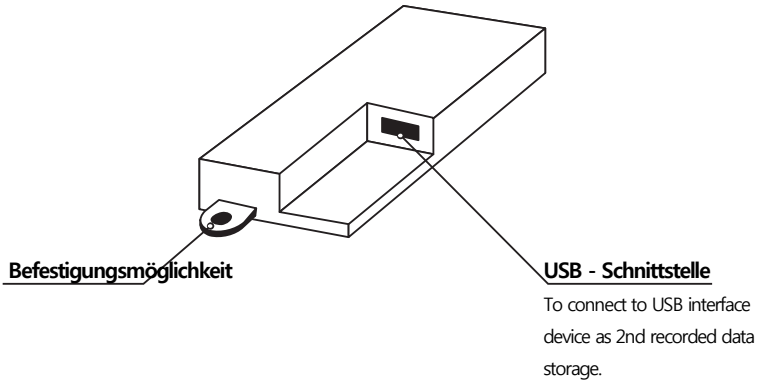   (Hard disk drive, CD, portable disk drive, etc)

Bezeichnung der Einzelteile

Lautsprecher
für Klingelzeichen

SD Karten-Schlitz
Zur Aufnahme der SD-Karte.

Display
Zeigt die Uhrzeit oder während
der Fahrt die Geschwindigkeit.

Event release button
Ermöglicht das Überschreiben
von gesicherten Daten bei einer
vollen SD-Karte.

Infrarot-Licht-Modul

nur bei AutoBlackBox 3320
IR Light module for night vision.

Sicherungs-Knopf (Event Recording)
Zur manuellen Sicherung eines Ereignisses.

Innen Kamera nur bei AutoBlackBox 3320
Records interior images of the vehicle.

GPS Modul &

Befestigungs-Sockel

für den „Halter" - zur
Befestigung der
AutoBlackBox am Fahrzeug.

Front Kamera

Filmt Ereignisse vor dem Auto.

T-BOX

Befestigungsmöglichkeit

USB - Schnittstelle
To connect to USB interface
device as 2nd recorded data
storage.

TV-out & Remote controller IR port
Verbindung zu nicht mitgeliefertem Monitor
oder Navigation.

External Camera port
Verbindung zur Heckkamera.
(Nur bei AutoBlackBox 3311)

External button slot
Verbindet den externen Notfall-Knopf.

Achtung!

After inserting the memory into USB port and powering it on, USB memory will be in
priority to save the data.

• If SD card and USB memory are inserted at the same time, USB memory will work only for the recording.
• Please use the USB memories which are recommended.

Remote controller für externen Monitor (Monitor nicht dabei)

MOVE & MENU Button

Move and select the desired menu function.
(Activate TV-Out by pressing OK key and select the menu.)

Playback control button

Playback the selected file and adjust the frames.

MODE button

Activate PIP function

MENU cancel button

Cancel the previous function

Page Up/Down

Adjust the playback file list page.

Montage der Auto-Black-Box

Achtung!

- Stellen sie sicher, dass die Zündung aus und der Autoschlüssel entfernt ist. Zuerst die Auto-Black-Box montieren und installieren und danach die Stromversorgung herstellen.
- Der Empfang des GPS-Signals wird verbessert, wenn die Montage der Auto-Black-Box an der Frontscheibe erfolgt.
- Achten Sie darauf, dass die Kamera-Linse in Aufnahmerichtung freie Sicht hat. (Spiegel, Beschattungen, Sonnenblenden usw.
- Die Auto-Black-Box sollte horizontal und vertikal ausgerichtet werden.

Befestigung der Auto-Black-Box an der Scheibe

Für diesen Abschnitt nimm dir wirklich viel Zeit.
Warum? Weil der Kleber am Befestigungssockel der AutoBlackBox sehr stark ist.
Einmal geklebt - gibt es kein Verrücken mehr.

1 Säuber die ausgewählte Klebestelle an der Frontscheibe. Schiebe den Befestigungssockel auf den Befestigungsfuss der AutoBlackBox.

Verbinde die AutoBlackBox mit der T-Box.

3

2 Lass die Schutzfolie am Befestigungssockel noch darauf. Halte die AutoBlackBox an die Frontscheibe und wähle die Befestigungsstelle aus (senkrecht und waagrecht). Achte auf die freie Sicht des Fahrers auf die Fahrbahn.

4 Sichere die AutoBlackBox vor ungewolltem Absturz. (z.B. mit einem Kabelbinder zum Rückspiegel)

Beachte dabei: Kannst du die AutoBlackBox nach dem Ankleben an dieser Stelle auch wieder aus dem Befestigungssockel herausnehmen? Ist die AutoBlackBox senkrecht und waagrecht ausgerichtet? Wenn du eine Innen-Kamera hast (3000, 3320) achte darauf, dass die Innen-Kamera freie Sicht auf den Innenraum hat und nicht hinter dem Rückspiegel versteckt ist. Markiere dir die Stelle. OK - jetzt bist du bereit die Schutzfolie abzuziehen. Drücke nur ein wenig die ober Kante des Sockels an die Scheibe und kontrolliere nochmals (auch von aussen) - jetzt kannst du den Sockel fest an die Frontscheibe andrücken.
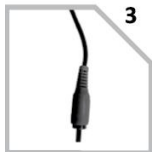
Installation der Accessories

1 Bestimme die beste Position für den externen Notfall-Knopf und befestige ihn durch entfernen der Schutzfolie.

2 Locate the best position for Remote control IR reception.

**3** Connect the video cable to the connection port of the device.

4 Keep the remote control at the safe place to be reached easily. .

Park-Überwachung

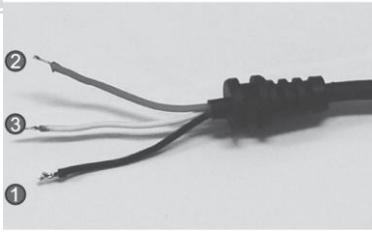Achtung - Installation nur durch die Profis in der Auto-Werkstätte

- Jedes Auto hat sein eigenes System und Eigenheiten. Bitte verwende diese Informationen nur als Hinweis und nicht als perfekte Anleitung.
- Zündung während der Installation der Parküberwachung ausschalten. Bitte kontaktiere einen Fachmann..
- Um die Parküberwachung verwenden zu können muss der Stecker für den Zigarettenanzünder abgezwickt werden um die Drähte für die Verbindung zu den Sicherungen verwenden zu können. .

Stromverbindung der T-BOX zu den Sicherungen
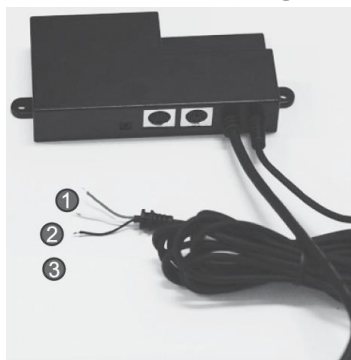
1	ROT	All-Zeit-Strom (+12V ~ 24V)
2	WEISS	Nur Strom bei eingeschalteter Zündung
3	SCHWARZ	Erdung – Null-Leiter Verbindung zur Karosserie

1. Verbinde den schwarzen Draht mit der Auto-Karosserie oder mit der Erdung. (Erdung - Null-Leiter) .

2. Verbinde den roten Draht mit einem All-Zeit-Strom - führenden Sicherung. Der rote Draht braucht Strom auch wenn die Zündung ausgeschaltet ist. (z.B. Warnblinkanlage, Innenraumsicherung…)

3. Verbinde den weißen Draht (Zündung) mit der Sicherung die NUR Strom führt wenn die Zündung eingeschaltet ist. (z.B. Zigarettenanzünder).
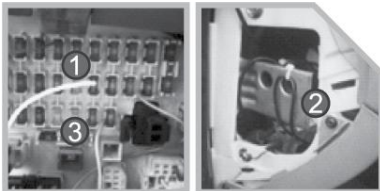
T-BOX Installation

1. Check the location of the fuse box in the vehicle.

2. Fix the place to install the T-BOX in the vehicle.

3. Adjust the length of the wire from T-BOX to the fuse box.

4. Remove the A pillar like picture (1) and insert (install) the cable

at The gap between sealing and windshield like picture (2)

5. After adjusting the cable, connect the power cable.

- 1) Red wire is connected to "emergency button" fuse (the fuse with power after the ignition is off) (2) black wire should be connected to the ground of vehicle.

- At the last, (3) white wire which is ignition wire is connected to cigarette lighter power cable after the ignition is of and

check the status of cigarette lighter power. (Some vehicles are having the power at cigarette lighter power after the ignition is off.)

6. Check all wires and power on.

Zündung einschalten damit die AutoBlackBox in Betrieb ist. Es ertönt ein Klingelzeichen und im Display erscheint das Wort „Hello" danach die Uhrzeit. Jetzt die Zündung ausschalten. Die AutoBlackBox muss in den Park-Modus wechseln, dies erkennt man daran, dass das Display farblos wird und ein „P" für Parken im Display erscheint.
Sollte nach dem Ausschalten der Zündung kein „P" erscheinen ist die Verkabelung falsch.

7. Verstaue die Kabel und sicher die T-Box und die AutoBlackbox.

T-BOX System Operation

Item(s)	Description
Input power voltage	Min. 9V ~ Max. 30V
Low voltage detection	Min. 11.6V(12V battery) or Min. 23.2V(24V battery)

LCD Display

No.	Name	Description
1	88:88	Zeigt die Uhrzeit oder die Geschwindigkeit
2	V-OUT	The sign is ON, while event recording (E button, G-Sensor detected)
3	REC	The sign is ON, while it is recording.
4	V2	The sign is ON, while front camera is recording.
5	EVENT	The sign is ON, while extra (rear) camera is recording.
6	V1	The sign is ON, while TV-out in process.
7	USB	The sign is ON, while USB connected.
8	GPS	The sign is ON, while GPS signal captured.
9	MPH km/h knot	Designated speed measurement unit.

Start des Programms von der SD-Karte (Player)

PC System Anforderungen

Component	Requirements
CPU	Above Pentium4 / 1GHz processor or higher
Menory	512MB of RAM or higher
Orperating System	Microsoft Windows XP Home Edition or higher
Graphics	DirectX 8.1b or higher
HDD space	200MB or higher

※ Beachte: Beim ersten Start des Programms (Player) ist es möglich, dass das Programm als Administator ausgeführt warden muss.

(rechte Maustaste – öffen als Administrator)

Player - Installation

1. Gib die SD Karte in den Kartenleser des PC´s.

2. Wähle "Wechseldatenträger"

3. Doppel-Klick den Ordner "PLAYER".

4. Doppel-Klick das „gelbe Auto"
den "Player" um das Programm zu
starten.

To review video

To playback video, select the "Open a File" button, explore the SD card or other location where the recorded (or saved) data is located, (file called DATA is on the SD card), then double click the selected file from the list in order to play.
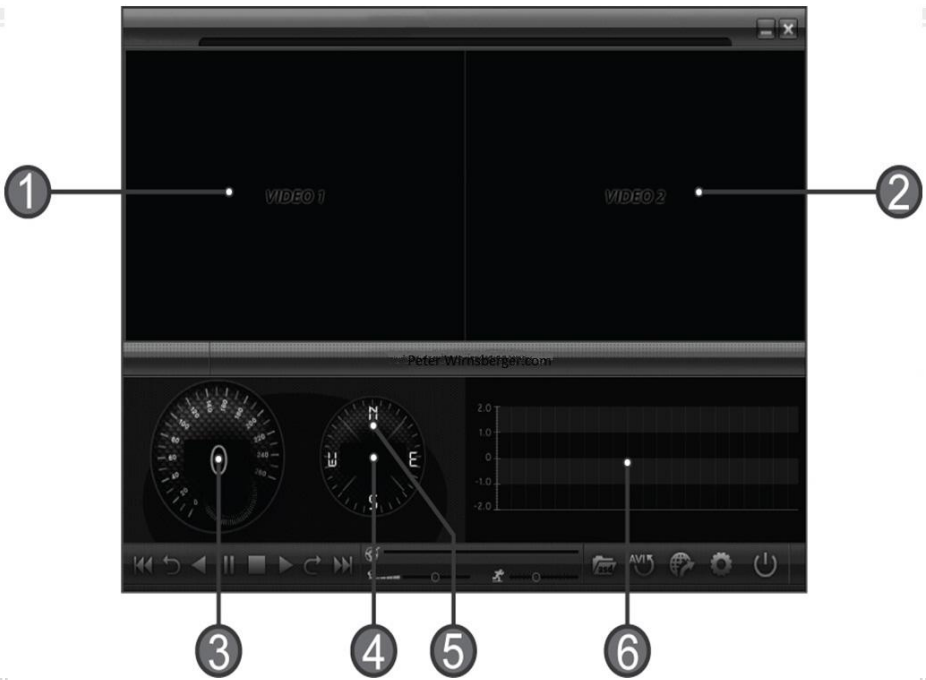
No.	Name	Description
1	**Front - Kamera**	Displays the video images recorded by the forward facing camera.
2	**Zweite Kamera**	Displays the video images recorded by the interior facing camera.
3	**Auto-Geschwindigkeit**	Displays the speed of your vehicle.
4	**Auto - Position**	Displays the coordinates (latitude and longitude) of the vehicle. (Requires GPS signal lock)
5	**Fahrtrichtung - Kompass**	Displays the vehicle's direction of travel.
6	**Fliehkraft-Sensoren Analyse**	Displays vehicle motion and any impact detected by the G-Sensor with a graphically in 3-axis.

Schaltflächen-Beschreibung des Players

Schaltfläche	Funktion	Schaltfläche	Funktion
	Springt zum vorangegangen Bild		Springt zum nächsten Datensatz
	Wiedergabe der vorangegangenen Bilder		Öffnet Dateien für die Wiedergabe
	Pause für die Wiedergabe		Ändert Dateien in AVI Format
	Stop		Verbindet mit der Satelliten-Karte
	Wiedergabe		Konfiguration der persönlichen Einstellungen
	Springt zum nächsten Bild		Schließt den Player
	Springt zum vorangegangen Datensatz		versteckt / schließt das Fenster

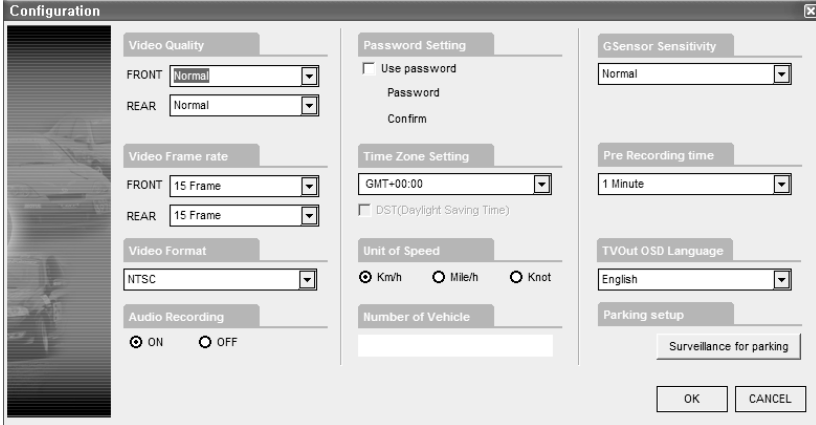## Lautstärke und Playback Geschwindigkeits-Kontrolle

Lautstärkenregler   **Wiedergabe-Geschwindigkeit**

No.	Name	Description
1	Volume Control	Adjusts the volume level while playing back the recorded data.
2	Playback speed control	Adjusts the video playback speed.

System Konfiguration

Click on the System Setup configuration icon ( ) located at the lower right corner of the player.

The following window will then appear.

Configuration

Video Quality		Password Setting		GSensor Sensitivity	
FRONT	Normal	☐ Use password		Normal	
REAR	Normal	Password			
		Confirm			
Video Frame rate		**Time Zone Setting**		**Pre Recording time**	
FRONT	15 Frame	GMT+00:00		1 Minute	
REAR	15 Frame	☐ DST(Daylight Saving Time)			
Video Format		**Unit of Speed**		**TVOut OSD Language**	
NTSC		⊙ Km/h ◯ Mile/h ◯ Knot		English	
Audio Recording		**Number of Vehicle**		**Parking setup**	
⊙ ON ◯ OFF				Surveillance for parking	

OK   CANCEL

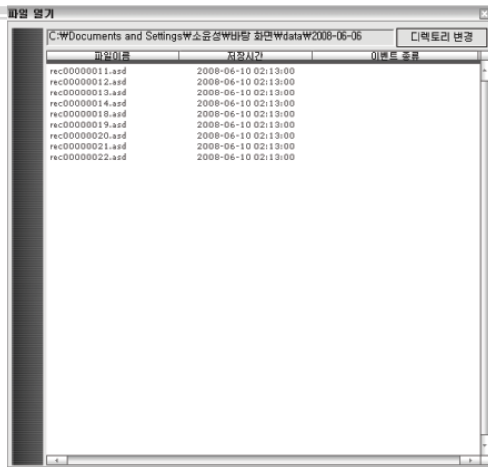| No.	Name	Description
1	Video Quality	Sets the video recording quality. (5 Levels)
2	Frame rate setting	Sets the video frame rate (1, 2, 3, 5, 7.5, 10, 15 frame/sec)
3	Video Format	Sets the video format for TV-OUT & external camera (NTSC, PAL)
4	Audio Recording	Enables or Disables the audio record function.
5	Password Setting	Sets any Password to access the recorded data.
6	Time Zone Setting	Sets the time zone for the user. (z.B. Europa Sommer GMT+02:00 Winterzeit GMT +01:00)
7	Unit for Speed	Set the unit of the car speed
8	Vehicle ID Number	Sets the license plate number or fleet vehicle ID number associated with the vehicle where the SD card is to be installed in.
9	G-Sensor Sensitivity	Sets the sensitivity of G-Sensor. (6 Levels)
10	Pre-Event Recording Time	Sets the time to record the previous scenes before the event.
11	Parking surveillance Setting	Sets video frame rate of parking surveillance. (Refer to Page.22)

Parking surveillance Setting
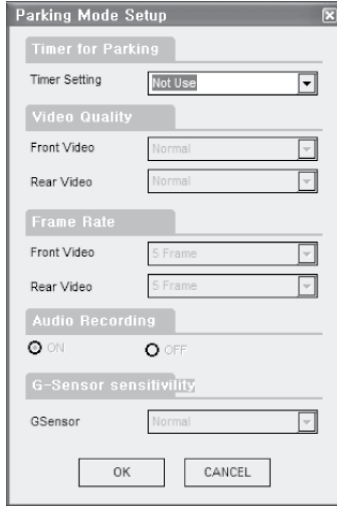
No.	Name	Description
1	**Timer for parking**	Sets the parking surveillance time (none ~ 24h)
2	**Video Quality**	Sets the video recording quality. (5 Levels)
3	**Frame Rate**	Sets the video frame rate during the parking surveillance (1, 2, 3, 5, 7.5, 10, 15 Bilder pro Sekunde)
4	**Audio Recording**	Enables or Disables the audio record function.
5	**G-Sensor Sensitivity**	Sets the sensitivity of G-Sensor. (6 Levels)

※The setting for parking surveillance will be different from the normal operation.

※The parking surveillance will be off if the status(capacity) of battery is lower than the required capacity regardless of Time setting.

Wiedergabe von aufgezeichneten Daten

1. After clicking the folder icon ( ) on the lower right corner of the viewer, click "Change Directory" to select the location for the recorded data. Typically the first time you do this all the files are located on the data folder of SD card. If saved elsewhere, use this utility to explore your computer to locate the file for playback.

2. When the file list appears, double-click the desired file to play back.

파일 열기

C:\Documents and Settings\소윤성\바탕 화면\data\2008-06-06   디렉토리 변경

파일이름	저장시간	이벤트 종류
rec00000011.asd	2008-06-10 02:13:00	
rec00000012.asd	2008-06-10 02:13:00	
rec00000013.asd	2008-06-10 02:13:00	
rec00000014.asd	2008-06-10 02:13:00	
rec00000018.asd	2008-06-10 02:13:00	
rec00000019.asd	2008-06-10 02:13:00	
rec00000020.asd	2008-06-10 02:13:00	
rec00000021.asd	2008-06-10 02:13:00	
rec00000022.asd	2008-06-10 02:13:00	

※Click the list name to sort by File Name, Record Time or Event Type.

◆   FILE NAME: File name of the recorded video images.
◆   RECORD TIME: Date and time when the images have been recorded.
◆   EVENT TYPE: Displays the recording type
     (Continuous recording /event button recording /remote event butt on recording).
◆   Click the list name to sort by File Name, Record Time or Event Type.

| Event Type	Description
Continuous recording	No nomendature applied. Clicking on this shows the recorded file when driving.
Manual Event Recording (EVENTXX-BUTTON)	Annotated with the word BUTTON. This allows you to locate files that were marked by the driver using the push button on the recorder or the remote event push button.
G-Sensor automatic recording (EVENTXX-GSENSOR)	Annotated with G-SENSOR. This data is recorded when any impact, sudden acceleration, or accident is detected.

Converting into AVI file format

Convert a portion of the recorded data into an AVI file format to playback on "Window media player" or to share the recorded data with someone else or email a file.

1.   Click the AVI conversion button ( ) at the start of video clip position to convert the images into the AVI
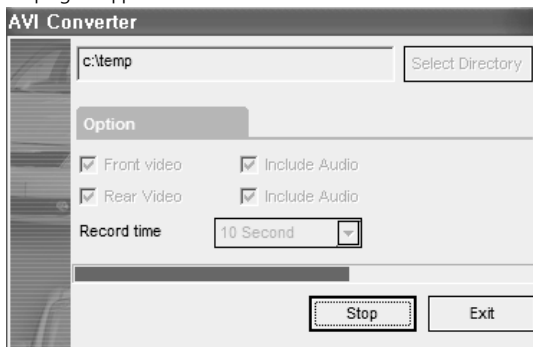
file format. The video playback stops and the AVI conversion window appear as below.
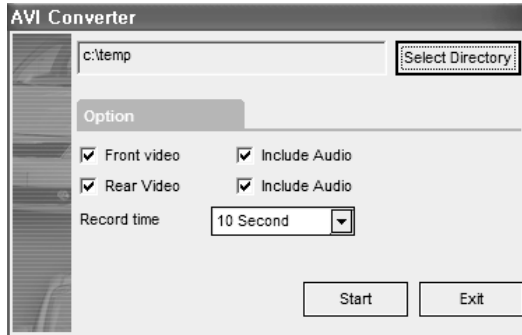
2.   Set the following options from the window and click Start.

    1) AVI storage directory

    2) Selection of previous/next video and whether or not to include audio data

    3) AVI recording time

3.   The conversion progress appears as follows.

※ The AVI files cannot be created on a portable disk such as SD Card or USB memory stick but only on a hard disk first due to speed required for the conversion.

Interfacing with a GIS/City map

Drive Recorder simultaneously records the GPS data while driving so you can check the driver's route on the map. Click the GIS/MAP icon ( ) on the lower right corner. The map window appears for the user to see the vehicle location and travel onto a city map.

※ To use this function, the system must access the Internet.

Pop-up Display window

With double-click the display window, the recorded images are played back at the original size. Double clicking the screen returns the view to normal, original size. Use the PC's mouse to move the screens and adjust them within desktop window.
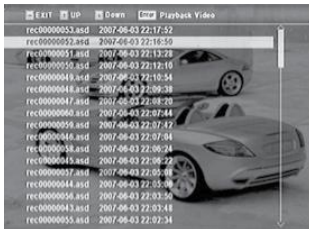
TV-OUT Viewer
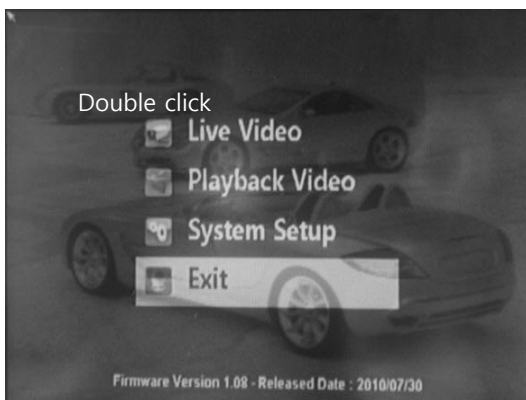
No.	Name	Description
1	Live Video	Displays live video streaming
2	Playback	Playback video and audio data recorded
3	System	Configuration settings
4	Exit	Closing TV-out

Live Video

1. Displays live video streaming.
2. With the extra camera (the 2nd CH), PIP (picture in picture) function will be activated by [**MODE**] button.
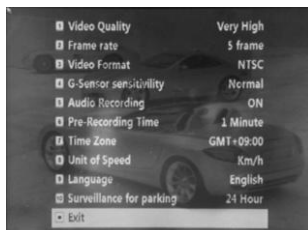
Playback recorded video data

1. Playback video and audio data recorded previously.
2. By Page **[UP/DOWN]** , it moves page of the file list.
3. By [⌃/⌄], it moves files.
4. Selects file by press [**OK**] button..

1. By [Playback control button], move to previous/next frame or rewind/pause the playing files.

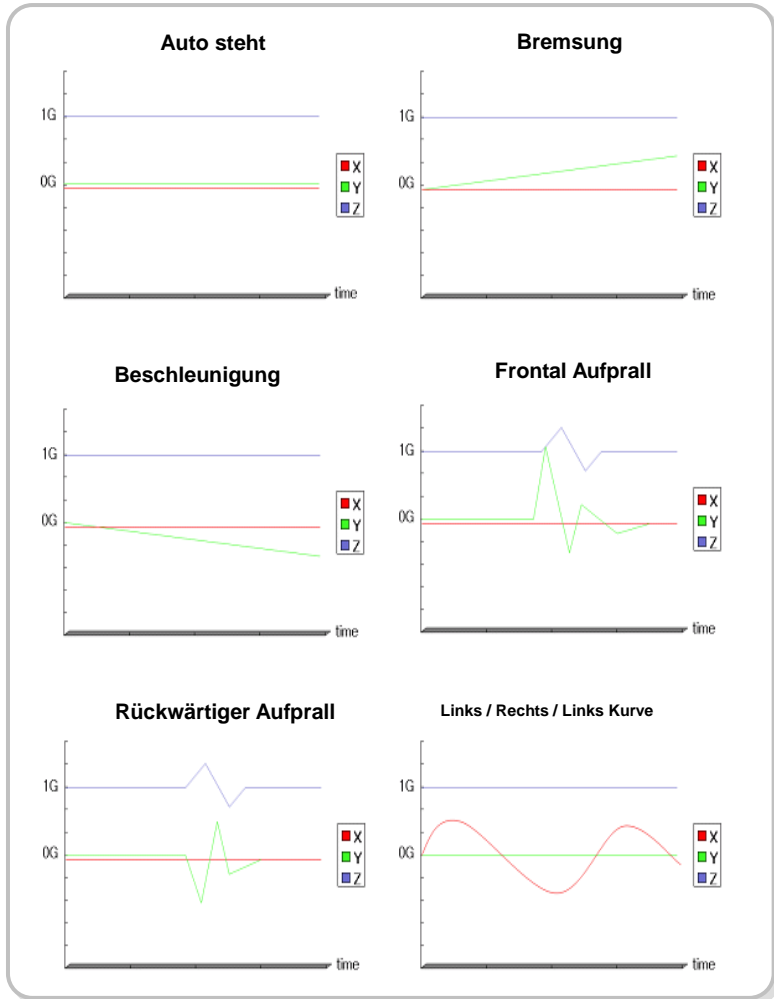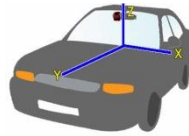2. Press [**MODE**] and activate PIP function..

System Setting

1. Setting page consist with total 11 sections.
2. Setting value will be shared with its viewer program (Player)
※For the setting detail, refert to the viewer program option. (21p)

Analyzing G-SENSOR data

The G-sensor (Gravity Sensor) furnishes data for X, Y and Z axis and stores it along with the other recorded data on the SD card. When using the playback software, this information is represented in a graphic format. The resulting graph may be used to analysis the driving condition and driver's habits.   Depending on the type of the vehicle, the amplitude of the curve of shown may vary.

* X - Achse: links und rechts des Autos
* Y - Achse: vorne und hinten vom Auto
* Z - Achse: Dach und Boden vom Auto

Auto steht

Bremsung

Beschleunigung

Frontal Aufprall

Rückwärtiger Aufprall

Links / Rechts / Links Kurve

Warranty

Warranty Cover

The warranty period covers for one full year for this device, return to base from the date of purchase. Should you believe that your device is defectives within the warranty period, please contact to the service center.

The product may be repaired or exchanged for a factory refurbished unit. Faults reported outside of the warranty period are subject to a chargeable repair.