



GRANIT
QUALITY PARTS

Operating Instructions

Multi-Monitor-System

5070010848



These operating instructions must be read thoroughly before use and followed. These Operating Instructions must be retained for future reference.

Translation of the original operating instructions

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1 About these instructions and symbol descriptions

The information in these operating instructions is labelled as follows:



DANGER

Warning of personal injury or environmental damage.



IMPORTANT

Warning of property damage.



NOTE

Additional information.

2 Safety and accident prevention rules

2.1 General safety instructions

- The manual has been created so that you can work safely with the device.
- Read the manual thoroughly before operating. Pay particular attention to the safety instructions.
- This manual is intended for people with basic technical knowledge of handling devices such as the one described here.
- If you have no experience with such a device, you should first have an experienced person help you.
- Keep all documents supplied with the device, so you can check if necessary. Keep the purchase receipts for any warranty claims.
- If you should lend or sell the device, all the required documents should be given to the person using the device.
- Observe the operating and maintenance instructions, which can be found in this manual.
- For defective devices maintenance orders should be put into place to keep the extent of the damage minimal and not to compromise the safety of the appliance.
- The system components must be installed and operated only under the conditions laid down in these operating instructions and conditions.
- Retrofits, changes or modifications to the device are strictly prohibited. They require definitely the consultation and written approval of the manufacturer.
- If during operation (residual) show hazards and risks which are not described in this manual, the operator is obliged to report this to the manufacturer.

2.2 Device-specific warning and safety



DANGER: Failure to observe the following safety instructions can lead to serious accidents causing high injury and damage!

- Always pay attention to the direction and the traffic situation and the vehicle's environment. The system cannot substitute for the driver/operator's attention.

- Use the support system only if it provides a good and clear picture. The picture may be disturbed by dirt, vibration or a defect.
- The responsibility when entering/leaving a parking space, manoeuvring or similar manoeuvres and pivoting movements of attachments rests with the driver.
- Please note that certain surfaces and materials (for example, wire mesh fences, trailer noses, surfaces of water bodies, etc.) cannot be recognized by the system or display properly.
- The cameras have blind spots where objects, animals and people are not recognized.
- Pay particular attention to small children and persons directly located next to the machine, residing in blind spots.
- Keep the environment always in view even using the conventional mirror.
- Low or particularly high-lying obstacles can be eliminated depending on the camera settings from the perspective of the camera.
- The camera lens scales and distorts the view, so that objects, people and distances appear differently to you.

NOTE: By following the operating instructions personal injury, accidents and damage can be avoided.

- In order to become familiar with the system and its display, we recommend the practice of working and driving manoeuvres on a pedestrianized area outside the public traffic area with good visibility and weather conditions.
- In order for the display to always show the best picture, the camera must be mounted clean and free of vibration.

3 Performance specifications

3.1 Intended use

The rear view camera system is an additional support system for the driver/operator to improve the view of the vehicle, the engine and its environment.

Basically it has an exclusively supportive role, the responsibility for damage and injuries are the responsibility of the driver.

It does not replace the duty of care and attention of the driver and must be used in combination with conventional devices such as mirrors and the direct view of the infrastructure and the environment.

Failure to comply with the provisions of the generally accepted rules and the provisions of this manual, including insufficient maintenance, the manufacturer cannot be held responsible for any damage.

3.2 Technical parameters

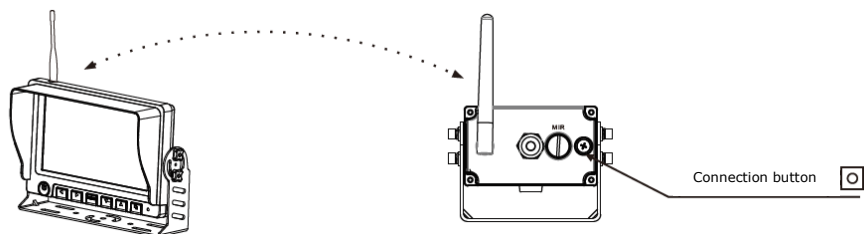
| Display device | Color TFT-LCD |
|--------------------------------|--------------------------------------|
| Size | 7" Digital Screen |
| Operation frequency | 2400~2483.5MHz |
| Receiving sensitivity | ≤-86dBm(1MHZ QPSK MD300RE) |
| Resolution | 800×(RGB)×480 |
| View angle (LR/UD) | L/R: 70/70 U/D: 50/70 |
| Contrast ratio | 500:1 |
| Luminance (cd/m ²) | 450 |
| Response time (ms) | 25 |
| Load dump | DC 12+87V/400ms |
| Operating temperature | -20°C~+70°C |
| Storage temperature | -30°C~+80°C |
| operating voltage range apply | DC8V~32V (5W Max) |
| Dimension(L x W x T) | (218X149X82mm) |
| Transmission power | 18dBm with Power control |
| Camera | Color CMOS Camera |
| Image pick-up device | 1/3" Color CMOS |
| Picture elements | NTSC:720(H)X480(V);PAL:720(H)X480(V) |
| Horizontal resolution | 500 TV Lines |
| Minimum illumination | 0 Lux At Night (IR LED ON) |
| View angle | 120° |
| Waterproof rating | IP69K |
| Shockproof rating | 10G |
| operating voltage range | DC11~32V |
| Dimension | 106(W) x 75(H) x 70.4(D) mm |

4 Operating the video system

4.1 Establishing a connection between the monitor and the camera

After opening the packaging check that all components are complete and undamaged. If components are missing or defective, contact your dealer immediately and do not use the device until its use has been approved by your dealer.

Before first use, the monitor must be connected to at least one camera.



- 1) Loosen the screw on the back of the camera using a Phillips screwdriver (size PH1). Use a needle or other pointed object to press the connection button under the screw.
- 2) Turn on the monitor and camera, go to the Monitor menu and select the device connection icon. Press the Enter button. The display shows "PAIRING START 30" and a countdown starts.
- 3) Press the connection button on the back of the camera. Wait a few seconds until the display switches to the camera display.
- 4) Repeat steps 1-3 to connect additional monitors.

Before connecting to the vehicle's electrical system, the battery must be disconnected from the vehicle. The power supply connection point must be coordinated with the vehicle manufacturer or the vehicle operating manual. Connection work may only be carried out by trained specialists.

4.2 Initial start up

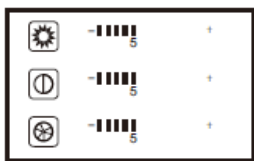
Symbols on the display:



DANGER: Note that the camera is only a support and the driver is never to be ruled out of its duty of care. Carelessness can result in serious accidents with high property losses and to fatal injury.



DANGER: The operation must be only carried out when the vehicle is stationary. Distractions can cause serious accidents.



1) Image settings:

1. Brightness setting 0-9 steps (left / right key adjustment)
2. Contrast setting: 0-9 steps (left / right key adjustment)
3. Color setting: 0-9 steps (left / right key adjustment)

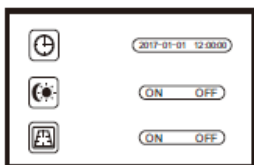
This feature can only be controlled by the RX1 display.



2) Mirror settings:

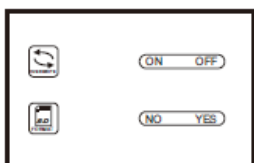
Set the four states of the camera image:

Original, horizontally mirrored, vertically mirrored, horizontally and vertically mirrored. Use the "Left/Right" arrow buttons to select the desired image for the respective camera.



3) Function setting:

1. NC
2. Turning the ambient light mode of the LED screen on and off;
3. Reversing Ruler Setting: Set the RX1/ RX2/ RX3/ RX4 channel reversing scale to open and close.



4) SD card storage settings:

1. NC
2. NC



5) Code setting:

To establish the connection between screen and camera, both devices must be switched on. Select "PAIR" via the menu selection and confirm with "OK". The instruction "PAIRING START 30" will appear; switch the camera off and on again within 30 seconds. After 5-10 seconds the camera image will appear on the display

5 Maintenance and care

- Carrying out maintenance and repair work must be conducted only by qualified personnel.
- Ensure that the spare and wear parts are original.
- Carrying out maintenance and cleaning work and the correction of malfunctions are generally permitted only when the vehicle is outside the public traffic area.
- Fasteners must be regularly checked for tightness and, if necessary, pulled and adjusted.
- Clean the optics of the camera with a damp and soft cleaning cloth without any kind of cleaning agents.



Important: The use of abrasive cleaners or high pressure cleaners and water jet can damage the optics of the camera, as well as the surface of the screen.



DANGER: Failure to comply with maintenance information can lead to serious accidents and use impairments.

6 Storage and transport

Check the condition of the device before storage and perform the maintenance work before stopping so that you may video system is ready quickly.

7 Disposal

The separate, environmentally friendly disposal of materials encourages recycling of materials. Therefore, after expiry of the normal service life, the equipment itself and all related components, including the packaging, should be disposed of at a recyclables collection point.

Packaging, equipment and accessories are made of recyclable materials and should be disposed of accordingly. If the unit is no longer serviceable, make sure it is unusable before disposal.



DANGER: If you do not have the necessary expertise, consult an expert with the dismantling and disposal. RISK OF INJURY!

!!! Always observe local disposal regulations !!!

8 EC declaration of conformity

The manufacturer,

**Wilhelm Fricke SE
Zum Kreuzkamp 7
DE-27404 Heeslingen**

hereby declares on its sole responsibility that the multi-monitor-system

Type/series identification:
5070010848

is in conformity with the provisions of

| | |
|-------------------|---|
| 2014/53/EU | Radio Equipment directive |
| 2011/65/EU | Restriction of the Use of Certain Hazardous Substances in Electronic and Electrical Equipment (RoHS) |

The product was developed in accordance with the following standards:

| | |
|--------------------------------------|---|
| Safety | EN 62368-1:2014+A11:2017 |
| Health | EN 62479:2010 |
| Electromagnetic compatibility | ETSI EN 301 489-1 V2.2.3 (2019-11) |
| | ETSI EN 301 489-3 V2.1.1 (2019-03) |
| | ETSI EN 300 328 V2.2.2 (2019-07) |
| Radio | |
| IEC 62321-3-1:2013 | |
| IEC 62321-5:2013 | |
| IEC 62321-4:2013+AMD1:2017 | |
| IEC 62321-7-1:2015 | |
| IEC 62321-7-2:2017 | |
| IEC 62321-6 :2015 | |
| IEC 62321-8 :2017 | |

Technical documentation is kept by:

Mr. Eike Viebrock
Wilhelm Fricke SE
Zum Kreuzkamp 7
DE-27404 Heeslingen

The serial number and model year are shown on the type plate of the equipment.



Heeslingen, 03.12.2020

Holger Wachholtz, Board

Translation of the original declaration of conformity

9 Warranty

The warranty terms of Wilhelm Fricke SE, as can be found in the sales documents and the current version of the Terms and Conditions, apply.

In case of questions, please contact the company's customer service line.

10 Addresses

Sales/Customer Service/
Spare parts sales:

Tel.: +49 (4281) 712 712
Fax: +49 (4281) 712 700

Postal and shipping address:

Wilhelm Fricke SE
Zum Kreuzkamp 7
DE-27404 Heeslingen

11 Legal Notice

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| Translation of the original operating instructions for the multi-monitor-system |
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