



WIRELESS CONTROL FOR FOREST WINCHES

F6

OPERATING INSTRUCTIONS

english

Version (02)



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Translation of the German original operating instructions



1 User notes

These operating instructions enable you to use the radio control for forest winches F6 safely and efficiently.

All stated safety notices and instructions must be observed to ensure safe working. Furthermore, the local accident prevention regulations and general safety regulations for the system's area of use apply.

Illustrations are intended to help you understand the content in general, and may deviate from the actual design.

Target group

These operating instructions are written for forestry contractors, private forestry owners and firewood self-harvesters.

Contents

These operating instructions include detailed explanations on mounting, installation, parameterization, operation, maintenance, and servicing of the radio control.

Use of the operating instructions

Read the complete operating instructions before putting the remote control into operation, and store the operating instructions in a suitable protective cover at the location of use so they can be easily accessed.

Do not put the remote control into operation before you have familiarized yourself with the points of the operating instructions that are relevant to the purpose for which you intend to use it. In this way you can prevent errors when operating the system.

Correct use of the product

The radio control provides for convenient and safe remote control of forest winches. It replaces the wired control of the cable winch. All common winch types are suitable.



Limitation of liability

All technical information in this description has been written by TELENOT with the utmost care. Nevertheless, errors cannot be totally excluded. We draw your attention to the fact that we do not assume any legal responsibility or any type of liability for consequences that can be traced back to incorrect information. On account of further product development, the design and wiring of your product may differ from the information stated in these instructions. We would be much obliged if you would inform us of any errors.

We would like to draw your attention to the fact that the software and hardware names and trademarks of the companies included in the instructions are generally subject to trademark or patent law.

The manufacturer assumes no liability for damages due to:

- Non-observance of the Technical Description
- Missuse
- Use of non-trained personal
- Unauthorized conversions
- Technical modifications
- Use of non-approved spare parts

General Sales Terms

You can find the General Sales Terms at the TELENOT website at http://www.telenot.com and in the TELENOT product catalog.

Return faulty devices

To avoid damages during transport, choose stable and robust packaging (the original packaging, if possible) and, where appropriate, protective packaging and a box for shipping. Take into account the weight of the housing, boards, etc. and protect package contents from shifting. Also protect from the electrostatic discharge ESD. Enclose an error description with the device.



Product identification

For inquiries, complaints or parameterization requests, you must specify the serial number of the device. Based on the serial number, the manufacturer can identify every component. The receiver identification can be found on the housing. The transmitter identification is located on the rear of the transmitter on the belt plate.

Using the serial number the manufacturer can identify every component.

Receiver specification plate



Radio control specification plate F6

Manufacturer

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Explanation of symbols

Safety notices are indicated thus:

hazard symbol, signal word, hazard type, and a description of how to prevent the hazard. Different signal words are used depending on the hazard degree.



DANGER!

Potentially hazardous situation that can lead to death or very serious injuries.



WARNING!

Potentially hazardous situation that can lead to death or serious injuries.



CAUTION!

Potentially hazardous situation that can lead to minor or light injuries.



NOTICE!

Potentially hazardous situation that can lead to property damage.



Component at risk of ESD (ESD = electrostatic discharge (eng), elektrostatische Entladung (ger))



NOISE!

Hearing damage due to noise!



Important notice, order



Tips, recommendations, useful information



Disposal instruction



Instructions for disposal for hazardous batteries and rechargeable batteries



Delivery

Ζ

Accessories, useful add-ons for optimum product use





Sequence of action



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3 Safety notes

The operating instructions provide important information for handling the device. All stated safety notices and instructions must be observed to ensure safe working.

3.1 Responsibility of the owner of the system

- The receiver may only be connected by a specialist according to the pin assignment diagram enclosed.
- The radio control may only be operated in a technically perfect state. In the event of faults and defects that can impair safety, the system must be switched off immediately and repaired by a qualified professional.
- If a radio control is used you must make sure that it does not interfere with the other systems around it and it itself is not interfered with by them.
- Adjustment of speed from the radio control is only permissible if it can be guaranteed from a structural point of view that the cable intake speed does not exceed 0.6 m/s and that the change in cable intake speed is not more than 20 percent.
- Conduct regular visual inspections to allow damaged cables, plugs, and other equipment necessary to ensure safety to be repaired prior to starting work.
- People whose responsiveness is impaired by the influence of medication, alcohol, or drugs may not put the radio control into operation, operate, maintain, or repair it.
- People carrying medical devices should check the compatibility of their devices with the radio control that is constructed according to EN 62479.

3.2 Responsibility of the user



DANGER! Danger from vehicles tipping over

Ensure that the required stability of the vehicle is provided. Check the ground.

Danger from pulling up tree trunks

Do not touch the towing cable during operation! Nobody should be located around the intake zone of the cable winch!



DANGER!

DANGER!

Danger from tree trunks falling down

Keep a safe distance from the cable winch.





DANGER!

Danger from unintentional triggering of functions or starting up

Ensure that no unintended actuation of the transmitter can be caused by items of clothing and similar items. Switch the transmitter off during break times and at the end of work and secure it against unauthorized access (e.g. from children).

Make sure that the receiver is unplugged while driving.

DANGER!

Danger from cutting off and restoration of the power supply for the transmitter/receiver

Nobody should be located around the intake zone of the cable winch!

Keep a safe distance from the cable winch.

Requirements for safe operation

- Wear protective work clothing suitable for the activity and the deployment location (PPA).
- Before switching on the radio control, ensure that nobody could be put at risk from operation.
- Always work with a direct line of sight to the machine and proceed with particular caution if you are not yet familiar with operating the radio control.
- When changing location, make sure that you do not accidentally reverse the directions of movement of the cable.
- To ensure that a work phase ends and consequently safe conditions can be established on site in the highly unlikely event of total failure of the battery, it is recommended that you always carry two spare batteries and the manual control for the winch with you in the vehicle.
- The stop and emergency call switch on the transmitter only affects the winch and is not to be confused with the machine's emergency-off.
- Follow the instructions in the section "Maintenance".
- Only use the radio control within the climatic, environmental conditions that are specified in the section "Technical data".
- In addition to generally applicable regulations for accident prevention, the local regulations should also be observed.

Safety notes



3.3.1 Defective control elements



CAUTION!

Residual risk!

Even if the operator follows the procedures correcity, a residual risk still applies. Example: The operator deactivates the "Pull" command. Due to a mechanical blockage, however, the command continues to be executed.

Keep an eye on your working environment at all times so that you can react quickly and prudently even in unexpected hazardous situations.

3.3.2 Noise



CAUTION! Hearing damage due to noise!

- When you are working in the vicinity of audible alarm messages (> 85 dBA), wear hearing protection.
- Remain in the vicinity of audible warning devices only for as long as required.



3.3.3 Short circuit



WARNING! Fire hazard from short circuits!

In the event of a short circuit, very high currents may occur which could, for example, heat up plug connections and cables considerably. A fire could potentially result.

The supply voltage of the receiver must be protected with a 15 A fuse to prevent the risk of fire.

3.4 Transport, packaging materials and storage

3.4.1 Safety notes for transport



NOTICE!

In the case of incorrect transportation, substantial property damage can arise.

- Be careful when you unload the packing pieces or by transporting them within your company premises.
 Observe the symbols on the packaging.
- Make sure that you are ready to start mounting before you remove the packaging.

Inspection of delivery

- When you receive the delivery, immediately check it for completeness and transport damage.
- If a delivery has transport damage that can be recognized externally, do not accept the delivery – or if you accept the delivery, do so under reservation only. Tender a complaint.



3.4.2 Handling packaging materials

Packaging materials are valuable raw materials which can often be re-used or recycled.

- Dispose of the packaging materials in an environmentally friendly manner.
- Observe the locally applicable waste disposal regulations. Contract an expert company for disposal, if necessary.



DANGER!

Risk of suffocation and injury for children due to packaging materials

Keep packaging materials away from children.

3.4.3 Storage of packing pieces

Store packing pieces under the following conditions:

- Do not store in the open air.
- Store in dry and dust-free conditions.
- Do not expose to any aggressive media.
- Protect from direct sunlight.
- Avoid mechanical vibrations.
- Storage temperature: see technical data
- Relative humidity: see technical data
- In the case of storage for longer than 3 months, inspect the general state of all parts and packaging regularly. If necessary, recondition or replace the packaging.

3.5 Storing and handling the transmitter rechargeable battery eneloop®1 (optional)

Batteries gradually lose capacity with age and operating times become shorter.

If handled properly, the lifetime of the battery is around 1,500 charge and discharge cycles. After further charging cycles and at temperatures below 0°C the capacity can drop considerably.

- Only recharge the battery when it is empty. If it is charged after only a short period of operation, it shortens the service life.
- Do not charge the rechargeable battery at temperatures below 0 °C or above +40 °C. The rechargeable battery should preferably be charged within a temperature range of +10 °C to +30 °C.
- If the rechargeable battery has not been used for an extended period, charge it before using it.

The transmitter switches off automatically if it is not used for longer than the parameterized time (e. g. 20 minutes), or if the rechargeable battery is discharged. This feature reliably prevents harmful deep discharging.

¹ eneloop [®] is a trademark of Panasonic (formerly of Sanyo).

eneloop[®] battery technology enables up to 50 hrs of continuous transmission without recharging; even if – as occurs regularly in privately owned forests – instances of use are separated by weeks or months. eneloop[®] batteries only lose 15% of capacity per year (as opposed to up to 100% in conventional quality batteries)





CAUTION!

Incorrect use of rechargeable batteries can cause eye injuries or property damage!

- Only use the batteries in the devices that are intended for them (battery technology and type).
- Only charge the rechargeable batteries in charging devices that have either been supplied or recommended by the manufacturer.
- Keep the unused batteries far away from metallic objects which could cause bridging of the contacts.
- Fluid can emerge from the battery in the event of incorrect usage. Avoid contact with it. In the event of accidental contact with the battery fluid, rinse with water. If battery fluid gets in the eyes also seek medical attention.

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In accordance with the battery ordinance, batteries must not be disposed of with domestic waste! Batteries purchased from TELENOT can be returned free of charge, where they are disposed of properly.

3.6 Conduct in the event of danger and accidents

Preventive measures

- You must always be prepared for the case of accidents or fire.
- Store the first-aid equipment (medical kit, blankets, etc.) within easy reach.
- Store the fire extinguisher within easy reach.
- Make sure that personnel are familiar with accident notification, first-aid, and rescue equipment.
- Keep access routes for emergency rescue vehicles free.

In the event of problems: handle correctly!

- Put the device out of operation immediately.
- Rescue all persons from the danger zone.
- Initiate first-aid measures.
- Inform the authorized personell at the location of use.
- Notify a doctor and/ or the fire department.
- Clear access routes for rescue vehicles.

4 Delivery



| ArtNo. | Name | Delivery |
|-----------|------------------|--|
| 109536040 | Radio control F6 | Transmitter F6 S Receiver F6 E with connection cable and plug Pin assignment plan, valid for your winch Accessories kit with: 4 AA batteries, waist belt, 3 runner-bonded metal buffer for receiver, B&B ball-point pen Original operating instructions F6 Translation of the original operating instructions in German language F6 into the language of the destination country Optional: 4 AA NiMH eneloop® rechargeable batteries, 230 V rechargeable battery charger Optional: Chest belt |



System overview

5 System overview

The radio control F6 is used for wireless activation of cable winches. The radio control F6 can be used to control single-drum winches (ET) of all types.



Overview: Connecting the F6 to a machine



6 Function overview

The radio control F6 was developed specifically for the challenging requirements in the forestry sector. The high-quality radio electronics in a robust housing make the F6 an ideal controller for professional skidding and pulling work.

The radio control is suitable for use on forestry vehicles with permanently attached cable winches and for 3-point cable winches on agricultural tractors.

6.1 Transmitter



Transmitter F6 S

The transmitter is small, light and easy to handle and you can carry it conveniently on your waist, midriff or chest (optional). The ergonomic design of the operating panel allows for fatiguefree working and safe operation, also if you are wearing gloves.

The electronics are housed in a rubber-reinforced enclosure made of glass fiber-reinforced polyamide and protected against the penetration of dust and water jets (protection class IP65).

The antenna is integrated in the housing. The control elements are surrounded by a protective collar that is capable of withstanding high mechanical loads. Full batteries or charged rechargeable batteries (optional) provide sufficient power for 50 hours of continuous transmission in normal operation mode.



6.2 Receiver



Receiver F6 E

The receiver has its own diagnostics LED which indicates the status of important output functions and system messages by lighting up in a specific color (red, green, orange) and a specific blink rhythm. This permits rapid on-site assessment of the status of the radio control.

The receiver electronics are contained in a robust polyamide housing and protected against dust and water jets (protection to IP65).

- 7 Device Features
- 7.1 Radio control F6



Radio control F6

Ready-to-operate set F6 for single-drum winches

Functions:

- Pull
- Brief and permanent brake release
- Gas +/-

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7.2 General features

- Operationally safe function on the 70-cm ISM band
- Bidirectional radio technology
- 3 working channels
- Individual adjustments to the special circumstances and types of operation of a wide range of winch operating modes.
- Operating temperature -20°C to +60°C

7.3 Transmitter features

- Ergonomically designed operation panel
- Robust, glass fiber-reinforced housing with surrounding protective rubber edges
- High-quality membrane keypad for long service life
- Stop and emergency switch with active emergency call function
- Energy-saving battery concept (2 AA batteries fitted, 2 spare AA batteries) for 50 hours of operation with full batteries or charged rechargeable batteries (optional)
- eneloop[®] AA exchangeable replaceable battery system (optional)
- Protection type IP65
- Dimensions (W x H x D) 116 x 161 x 61 mm
- Weight approx. 600 g with batteries/rechargeable batteries (without belt)

7.4 Receiver features

- Shock-proof housing made from PC/ABS polyamide
- Diagnostics LED
- Protection type IP65
- Dimensions (W x H x D) 152 x 218 x 51/66 mm
- Operating voltage +10 V to +30 V DC
- Weight approx. 670 g

- 8 Functional Description
- 8.1 Structure
- 8.1.1 Transmitter F6 S



Operating possibilities for transmitter F6 S

- Button 1
 Pull drum
- 2 Button 2
 - Release brakes (brief)
 - Permanent release (long)
- Button 3
 Gas +
- (4) Button 4
 - Gas –

Details: See operation

- Button 5 – Switch on
- Button 6
 Switch off



8.1.2 F6 receiver



- 1 Diagnostics LED (red, green, orange)
- (2) Diagnostics LED flashing red: Transmitter is switched off
- Diagnostics LED flashing green: Transmitter is switched on
- Diagnostics LED blinking green: radio reception active (command is received)

Display F6 receiver

- **(5)** Diagnostics LED blink sequence red, orange:
 - Siren monitoring has triggered
 - --> Check fuse Si5 and supply line to the siren

Diagnostics LED blink sequence red, red, orange, orange:

- Monitoring of relay outputs has triggered
- --> Check main fuse Si1 and relay outputs

Diagnostics LED blink sequence red, red, orange, orange:

- Device malfunction
- --> Contact service



What to do in case of a device malfunction

In the case of an error in the safety critical function or the internal self-monitoring function, **you must cease operation of the system immediately!**

The system must be sent in to the factory for repairs. To specify faults please use the form enclosed. A corresponding response form is available for download on our website at http://www.funk-im-forst.de/service.



All outputs except for "EMERGENCY" are monitored for proper functioning or short circuits and in case of errors the diagnostics LED will give indications. The "siren" output is not monitored on delivery, but can be parameterized for being monitored.

Do not apply any voltage to the outputs!



8.2 Functions

8.2.1 Pull drum



To start the "Pull drum" function (cable intake by the winch), press and hold the button and release the button to stop the function (jog mode).

8.2.2 Release brake



To start the "Release brake" function (release brake on the winch), press and hold the button and release the button to stop the function (jog mode).

Permanent release

If you hold down the button for longer (longer than the permanent release time parametrized at the factory), the brake is permanently released until you press the button again (release brake or pull drum).

If the transmitter is not operated for longer than the parameterized stand-by time (factory setting 20 min.), the "permanent release" function is automatically exited and the brake is applied again.

The following functions are parametrized at the factory (depending on winch type):

Single functions (EF):

With the "Pull drum" command only the output "Pull drum" is activated. The brake of the winch releases automatically.

Dual function (DF):

Activating the "Pull drum" command also activates the "Release brake" command.

Depending on the winch type, the operating mode and time for permanent release are parameterized at the factory:

| Winch type | Operation mode | | |
|-----------------------|--|------------------------------------|--|
| | Single function (EF) / dual function (DF) | Duration of per- manent release | |
| AMR/BGU/ Uniforest | EF | 3.5 s | |
| Farmi | EF | 1.5 s | |
| Fransgard | EF | 3.5 s | |
| GVS | DF | 1.5 s | |
| Holzknecht | EF | 1.5 s | |
| Igland | DF | 1.5 s | |
| кмв | EF | 3.5 s | |
| Krpan/Oehler | EF | 3.5 s | |
| Maxwald | EF | 1.5 s | |
| Pfanzelt | DF | 1.5 s | |
| Ritter (old) | DF | 1.5 s | |
| Ritter KWF | DF | 1.5 s | |
| S&R | DF | 1.5 s | |
| Tajfun | EF | 3.5 s | |
| Werner/ Glogger | DF | 1.5 s | |



8.2.3 Gas adjustment

Gas continuous (GS)

- To start the "Gas +" function, press and hold the button and release the button to stop the function (jog mode).
- To start the "Gas -" function, press and hold the button and release the button to stop the function (jog mode).

Application:

The motor speed is controlled, for example, on the throttle rods upwards (Gas +) or downwards (Gas –) by a lifting spindle motor (e.g. WARNER M-Track 1 gas actuator).

For machines without mechanical gas-adjustment capability, the Propgas control module PGS01 can be used. Depending on the function Gas + / Gas –, the module outputs a variable DC voltage of between 0–4.8 V to the motor control unit.



Gas simple (GE)

Can be parameterized at the factory



The "Gas +" function switches on the supply voltage at the "Gas +" output when you tap the button.

The "Gas -" function switches off the supply voltage at the "Gas -" output when you tap the button.

Application:

With "Gas +", a fixed, higher motor speed is set. With "Gas -", a fixed, lower motor speed is set.

8.2.4 Active emergency call function ("Active emergency")

The active emergency call function is used to summon help if the person involved in an accident is still capable of triggering an active emergency call. This function is useful if people located in the vicinity can be alerted via a connected loud horn or an emergency call TD is installed to alert other assistance-providing persons.

All active commands are ended and no other commands accepted (command lock).

The active emergency call is triggered voluntarily by pressing the stop and emergency call switch on the transmitter.

The function "Active emergency" is switched on at the factory and cannot be switched off.





Active emergency sequence

- ① To trigger "Active emergency", press the stop and emergency cy call switch
- ② First the pre-alarm (2 s sound, 2 s pause) and after 30 s the main alarm (1 s sound, 1 s pause) through the siren; status LED blinks green rapidly (battery charged).
- Already activated commands (e. g. pull drum) are switched off; other dangerous commands are blocked.
 If you turn the stop and emergency call switch, new commands are accepted again; however, the alarm continues.

- ④ On expiry of the pre-alarm time, the "Emergency" output is switched (e. g. for activating an emergency-call transmission device).
- (5) By turning the stop and emergency call switch and then switching off and on the transmitter, you can reset the alarm during the pre-alarm and the main alarm.



The "Siren" output is not monitored with the factory setting; but it can be parameterized to be monitored.



Functional Description

8.2.5 Changing the radio channel

If there are faults due to radio controls being operated in parallel, the radio channel can be changed (factory setting: channel 2).

The radio control F6 operates in the 70 cm ISM band and can be operated on 3 radio channels: Channel 1: 434.175 MHz Channel 2: 434.475 MHz Channel 3: 434.675 MHz

- Switch off transmitter, receiver must be under voltage
- Press and hold a button on the transmitter for longer than 5 seconds, the operating LED lights up
- Changing to next channel up
- The status LED goes off after a successful channel change



DANGER!

Danger from accidental operation of machinery

When multiple radio controls are used in parallel, provide the transmitters and vehicles (receivers) with unique number stickers in order to prevent confusion, and thus accidental operation.



9 Accessories

| Name | ArtNo. | Description |
|---|-----------|--|
| NiMH eneloop® AA battery | 109536082 | 4 NiMH eneloop® AA-size batteries in a plastic box |
| A-LG 12 V ZA battery charger for cigarette lighter | 109536080 | For the mobile charging of 2 AA batteries at the 12-V terminal of the cigarette lighter |
| 230 V battery charger A-LG 230 V | 109536081 | For the gentle charging of up to 4 eneloop® batteries AA size at the 230-V-mains-connection |
| Waist belt for LG-S transmitter | 109535824 | Waist belt for transmitter F10, F6, F9, F5, F1011, F1008 and F1007. 40-mm wide, 1.35-m long with plastic snap buckle. |
| Chest belt for transmitter BTG-S | 109536083 | Carrying strap for chest carrying method for mounting in the waist belt for transmitters F10, F6, F5, F9, F1011, F1008 and F1007. 30-mm wide with plastic snap buckle. Carrying strap can only be used together with the waist belt. |
| Bracket for transmitter HG1 | 109536084 | Bracket for the F10 S transmitter for assembly in a tractor or as a wall bracket in a garage, for example. Material steel plate, smooth, matte |
| WARNER M-Track 1 gas actuator | 109536085 | Lifting spindle motor for continuous gas regulation for tractors and forestry machines with mechanical gas control. Sealed aluminum housing in compact design. |
| Propgas control module PGS 01 | 109535898 | Additional module for controlling the continuous gas function for tractors without mechanical gas adjustment capability. The module outputs a variable DC voltage of between 0–4.8 Volts; supply voltage 12 V. |



10 Mechanical structure

10.1 Transmitter F6 S



Mechanical structure of F6 transmitter

- 1 Belt plate
- (2) Stop and emergency switch
- ③ Operation buttons
- (4) Battery compartment screw cap

The transmitter of the radio control F6 comprises a plastic housing (polyamide 66-GF+TPE) with protection type IP65. The belt plate for passing through the waist belt is located on the rear of the device. The stop and emergency call switch is located - as viewed by the operator - on the left side of the device and the battery / rechargeable battery compartment with screw cover is on the right side.

Operation is by means of the buttons on the top side.

10.2 Receiver F6 E



- (1) Mounting clips
- 2 Cable screw thread
- ③ Diagnostics LED

Mechanical structure of F6 receiver

The receiver of the radio control F6 comprises a two-part plastic housing (PC / ABS) with protection type IP65. Three mounting tabs are provided for monting. A diagnostics LED displays different operating states and faults. The cable entry of the 2.7 m long connection cable is provided by a cable screw thread.



11 Mounting

11.1 Transmitter F6 S

11.1.1 Carrying on the body

Carrying the transmitter on your hip

You can carry the transmitter of the radio control F6 on your hip using the waist belt (included in the delivery).



Mounting of waist belt on transmitter F6 S

• Feed the waist belt under the belt plate.

Carrying the transmitter on your chest

You can carry the transmitter of the radio control F6 on your chest using the waist belt and chest belt. (The waist belt is included in the delivery and the chest belt is available as optional equipment).



Installation of chest belt onto waist belt

• Feed the waist belt through the chest belt and under the belt plate.



11.1.2 Mounting with bracket for transmitter

The transmitter of the radio control F6 can be attached to the wall or to the vehicle using the bracket for transmitter HG1.

- Dimensions (W x H x D) 110x112x48 mm
- Material: Steel plate
- Color: RAL 9005 jet black, smooth, matte
- Art. No. 109536084



Transmitter bracket installation

- 1 Mark the fixing holes using the dimensional sketch.
- 2
- Drill appropriate holes for the screws used.
- Depending on the surface, use for example sheet metal screws / screws and wall plugs. The max. diameter of the screws may not exceed 4.5 mm.

- Screw the bracket tight.
- The transmitter can now be placed in the bracket and taken out again.

11.2 Receiver F6 E

11.2.1 Mounting location requirements

- The receiver must be tightly bolted to the vehicle!
- To achieve the broadest range possible, the ideal mounting location is at the rear of the vehicle.
- Avoid mounting in completely closed metal housings to ensure the unhindered emission of the antenna.
- Avoid mounting in direct proximity to other radio systems or other electronic devices that could cause EMC faults.
- Avoid mounting in places directly exposed to atmospheric conditions.
- Select a mounting location so that a vertical installation (cable gland downwards) and cable infeed from below are possible.



11.2.2 Mounting of F6 E receiver



Mount the receiver vertically with the gable gland downwards. The antenna must be removed from metal surfaces as far as possible in order to achieve optimum radio range. Use the 3 runner-bonded metal buffers supplied with the package to install the receiver. These provide a minimum gap from metal surfaces and dampen vehicle vibration.

- 1 Mark the fixing holes using the dimensional sketch.
- 2 Drill appropriate holes for the screws used.
- **3** Fix the receiver housing to the vehicle with the help of the 3 runner-bonded metal buffers as shown in the following illustration.
- Tighten all screws.



Mounting of F6 E receiver



Rubber-bonded metal buffer mounting

- 1 Vehicle plate
- Runner-bonded metal buffer
- ③ Receiver housing



12 Connections and Interfaces

12.1 Position



Position F6 E connections

- (1) Socket 1 (BU1): 8-pole terminal block
- 2 Socket 2 (BU2): 8-pole terminal block
- ③ Socket 3 (BU3): USB socket

12.2 Connection type

The connections for socket 1-2 are designed as spring-loaded terminal blocks. Socket 3 is designed as a USB-B socket.

12.3 Connection configuration

The connections of sockets 1 and 2 are already prewired at the

factory to one or several vehicle connectors. The assignment is

based on the winch type and is attached to the remote control.

12.3.1 Socket 1



Socket 1 connection configuration

| Pin | Туре | Labeling / icon | Function | Technical Data |
|-----|--------|-----------------|--|-------------------------------------|
| 1 | Output | NOT | In the event of emergency off to trigger a loud horn / private mobile radio device | Switches +U _B / max. 5 A |
| 2 | Output | Р | Optional EMERGENCY potential-free | |
| 3 | Output | (STOP) | Not occupied | |
| 4 | Output | В | Not occupied | |
| 5 | Output | SIR | Siren (pre-alarm, main alarm) | |
| 6 | Output | R 🔘 | Not occupied | |
| 7 | Output | R ↑ | Not occupied | |
| 8 | Output | | Pull drum | |

Table: Socket 1 connection configuration



Do not apply any voltage to the outputs!



12.3.2 Socket 2



Socket 2 connection configuration

| Pin | Туре | Labeling / icon | Function | Technical Data |
|-----|--------|-----------------|-------------------------------------|-------------------------------------|
| 1 | Output | l 🔘 | Release brake | Switches +U _B / max. 5 A |
| 2 | Output | 6 | Not occupied | |
| 3 | Output | | Gas + | |
| 4 | Output | | Gas – | |
| 5 | Output | С | Not occupied | |
| 6 | Power | GND | Ground / 0 V | 0 V / max. 5 A |
| 7 | Power | +U _B | +U _β (operating voltage) | +10 V bis +30 V DC/max. 15 A |
| 8 | | | | |

Table: Socket 2 connection configuration



Do not apply any voltage to the outputs!



13 Installation

The connection line for the radio control F6 is pre-wired at the factory for one or more plugs (e. g. 7-pin vehicle plugs). The configuration and plug type dependend on the winch type.

For the following winch types there are pre-assembled connection cables:

- AMR/BGU/Uniforest
- Farmi
- Fransgård
- GVS
- Holzknecht
- Igland
- KMB
- Königswieser
- Krpan/Oehler
- Maxwald
- Pfanzelt
- Ritter (old)
- Ritter KWF
- Schlang & Reichart
- Tajfun
- Werner/Glogger



DANGER!

Danger due to malfunctions as a result of incorrect cabling

The receiver may only be connected by a specialist according to the pin assignment diagram enclosed. A radio control with the "Gas +/-" and/or "MotorStart / MotorSTOP" functions must use a separate connection box. Reason: If the radio control is inserted into the "Trailer lighting" socket, this will cause a short circuit.



14 Wiring diagrams



To protect the receiver relay contacts from sticking, inductive consumers must be provided with a flyback diode (e.g. 1N4007).



15 Parameterization

15.1 Who performs the parameterization?

Nearly all functions are already parametrized at the factory. Additional options are also parametrized at the factory.



Functions indicated with this icon can be parametrized. Please refer to your dealer concerning this matter.

16 Commissioning

16.1 Requirements

- The correct cabling of the receiver to the winch or to the vehicle has been performed by a specialist according to the relevant pin assignment diagram.
- The batteries in the transmitter are full, or the rechargeable batteries are charged.

16.2 Preparation

16.2.1 Receiver connection

Insert the connection plug(s) of the receiver into the socket(s) provided on the winch / the vehicle.



DANGER!

Danger from incorrectly connected control unit

Do not insert the connection plug of the receiver into an incorrect socket (e.g. vehicle socket for trailers). If two separate connection sockets for connecting the manual control and the radio control are located on the winch, **only one control unit** may be connected at any one time. When using the radio control, ensure that **the manual control cable is pulled out**.



16.3.1 Fitting batteries/rechargeable batteries in the transmitter



- Turn the screw cover on the battery and rechargeable battery compartment counterclockwise and pull off the lock.
- Insert the left battery / the left rechargeable battery, observing the correct polarity (negative pole points upwards).
- Insert the right battery / the right rechargeable battery, observing the correct polarity (negative pole points upwards).
- Feed the guide tabs of the screw cap (positioned to be rotated) into the grooves of the transmitter housing.
- Tighten the screw cover on the battery and rechargeable battery compartment by turning it clockwise, pressing it firmly onto the compartment at the same time.

16.3 Functional test

- Generally perform the following points prior to commencing work!
- Switch the vehicle ignition on and start the vehicle.
- Use the On button to switch on the transmitter. The diagnostics LED on the receiver blinks green. The status LED on the transmitter flashes green (if battery full / rechargeable battery charged).



Switching on the transmitter F6 S

Press the stop and emergency call switch. First, the pre-alarm (2 s tone, 2 s silence) and the main alarm after 60 seconds (1 s tone, 1 s silence) by the siren. The status LED on the transmitter blinks rapidly (green) (if battery full / rechargeable battery charged).





CAUTION! Hearing damage due to noise!

Wear hearing protection when you are working in the direct vicinity of audible warning messages (> 85 dBA). Remain in the vicinity of audible warning devices only for as long as required.



Press stop and emergency switch

- Perform any command on the transmitter (e.g. "Pull drum"). No dangerous work commands are performed and the siren continues to sound.
- Unlock the stop and emergency call switch by turning it clockwise and switch the transmitter off using the Off button and on again using the On button.

The siren is muted and the "Emergency" output switches itself off again (only with main alarm).

 Perform any command on the transmitter (e.g. "Pull drum"). The corresponding command is performed.

16.4 Fault-free operation

Requirements

- Electrically sound connections within the entire system
- Electrically sound ground and 0 V connections (frequent fault sources are corroded contacts or inadequate ground connections.)
- The ground connection must be on a line that is separated from other users (protect ground connections to appropriate bodywork points from corrosion with protective lacquer).
- Contact points may not be dirty, oxidized, or even rusty.
- Cable, terminal, or plug connections may not be loose.
- Fuse holders may not have any loose contacts.
- Switches on the machine must not have any loose contacts.
- Solenoid valves or the motor for gas adjustment must be equipped with a diode protection circuit (flyback diode).



Check whether the diagnostics LED on the receiver begins to flicker or goes off in an operating state. In this instance there is a poor contact in the supply voltage of the receiver.

In this case, have the cabling checked by a specialist workshop.



16.4.1 Commissioning check list

| No. | Activity | Carried out |
|-----|--|-------------|
| 1 | Cabling between receiver and winch has been properly installed by a specialist workshop | |
| 2 | Receiver is inserted into the correct socket(s) | |
| 3 | Batteries in the transmitter are full, and rechargeable batteries are charged (see operation/transmitter/status LED) | |
| 4 | Receiver is ready for operation (see operation/receiver F6 E) | |
| 5 | Transmitter is switched on (See operation / transmitter / status LED) | |
| 6 | Function check has been performed (See commissioning / function check) | |



17 Operation

16.5 Safety notices for operation



DANGER!

Danger from vehicles tipping over

Ensure that the required stability of the vehicle is provided. Check the ground.



DANGER!

Danger from pulling up tree trunks

Do not touch the towing cable during operation! Nobody should be located around the intake zone of the cable winch!



DANGER!

Danger from tree trunks falling down Keep a safe distance from the cable winch.



DANGER!

Danger from unintentional triggering of functions or starting up

Ensure that no unintended actuation of the transmitter can be caused by items of clothing and similar items. Switch the transmitter off during break times and at the end of work and secure it against unauthorized access (e.g. from children).

Make sure that the receiver is unplugged while driving.



DANGER!

Danger from cutting off and restoration of the power supply for the transmitter/receiver

Nobody should be located around the intake zone of the cable winch!

Keep a safe distance from the cable winch.

Operation





Requirements for safe operation

- Wear protective work clothing suitable for the activity and the deployment location (PPA).
- Before switching on the radio control, ensure that nobody could be put at risk from operation.
- Always work with a direct line of sight to the machine and proceed with particular caution if you are not yet familiar with operating the radio control.
- Ensure that you do not accidentally mix up the cable movement directions when changing locations or confuse the two sides with double-drum winches.
- To ensure that a work phase ends and consequently safe conditions can be established on site in the highly unlikely event of total failure of the battery, it is recommended that you always carry two spare batteries and the manual control for the winch with you in the vehicle.
- The stop and emergency call switch on the transmitter only affects the winch and is not to be confused with the machine's emergency-off.
- All non-observance of the safety information may result in serious accidents and injuries.
- In addition to generally applicable regulations for accident prevention, the local regulations should also be observed.
- Follow the instructions in the section "Maintenance".
- Only use the radio control within the climatic, environmental conditions that are specified in the section "Technical data".
- Check whether the waist or chest belt is damaged each time before starting work to prevent the loss of the transmitter.



17.1 Receiver F6 E



Switching on the receiver F6 E

• Switch the vehicle ignition on and start the vehicle. Diagnostics LED on the receiver flashes red.

Diagnostics LED

(1)

17.2 Transmitter F6 S

 Use the On button to switch on the transmitter. The diagnostics LED on the receiver blinks green. The status LED on the transmitter flashes green (if battery full / rechargeable battery charged).



Switching on the transmitter F6 S



To extend operating times and to avoid accidental operating errors, always switch off the transmitter during work breaks and after you finish work. Secure the transmitter against unauthorized access. The transmitter switches off automatically after the parameterized stand-by time (factory setting 20 minutes) if no command has been triggered.



17.2.1 LED indications on the transmitter F6 S



- $\textcircled{1} \quad \text{On button} \quad$
- $\textcircled{2} \quad \text{Off button} \quad$
- ③ Status LED
- ④ Operating level LED

LED indications on the transmitter F6 S

| Status LED | |
|-------------------|--|
| Flashes green | Battery is charged; transmitter is ready for operation |
| Blinks green | Command is transmitted |
| Blinks quickly | Stop switch on the transmitter actuated if no other command is triggered. The green/ red color depends on the battery charge level. |
| Flashes red | Battery is almost empty; transmitter is ready for operation |
| Blinks red | Battery is almost empty; command is transmitted |
| Illuminated green | Battery is charged (shortly after switching on the transmitter) |
| Illuminated red | Battery is almost empty |

Operation



17.2.2 Release brake



🔥 V

WARNING! Danger from falling load

Ensure that nobody is near the load to be lowered.





Press the button briefly (1.5 s). The brake is released as long as the button is pressed and is applied again immediately when the button is released (jog mode).



17.2.3 Permanent release





Release brake command

Press and hold the button for longer than 1.5 seconds or 3.5 seconds (pre-parameterized, depending on the winch type).

The brake remains permanently released until "Release brake" or "Pull drum" is pressed.



If the transmitter is not operated during the parameterized stand-by time (factory setting 20 minutes), it switches off automatically and the brake is applied.



If the function "Release brake without permanent release" is parameterized at the factory, then "Permanent release" **cannot** be realized.

Details: See function description / functions / release brake

17.2.4 Pull drum



DANGER!

Danger from vehicles tipping over

Ensure that the required stability of the vehicle is provided. Check the ground.



DANGER!

Danger from pulling up tree trunks

Do not touch the towing cable during operation! Nobody should be located around the intake zone of the cable winch!



Pull drum command

Press the button briefly. The cable intake continues as long as the button is pressed and stops again immediately when the button is released (jog mode).

Details: See function description / functions / Pull drum

17.2.5 Gas +





Gas + command

Press the button briefly. The motor speed increases while the button is pressed. The set speed is maintained when you release the button (jog mode).

Details: See function description / functions / gas adjustment



17.2.6 Gas –



Gas - command

Press the button briefly. The motor speed reduces while the button is pressed. The set speed is maintained when you release the button (jog mode).

Details: See function description / functions / gas adjustment

17.2.7 Triggering "Active emergency"



Active emergency command



CAUTION!

Hearing damage due to noise!

Wear hearing protection when you are working in the direct vicinity of audible warning messages (> 85 dBA). Remain in the vicinity of audible warning devices only for as long as required.

Press the stop and emergency call switch until it locks into place.

Operation

- Active emergency is triggered, the green status LED blinks quickly (the color green / red depends on the battery charge status)
- Activated commands are switched off immediately and other dangerous commands (e.g. "Pull drum") are blocked (command lock).
- When the "Siren" output is activated, the audible pre-alarm phase simultaneously begins (2 s sound, 2 s pause, etc.).
- After a period of time parameterizable at the factory (factory setting: 30 secs) the "Emergency" output is activated and the main alarm is tripped (siren: 1 sec sound, 1 sec pause, etc.).
- The stop and emergency call switch remains functional even when the transmitter is switched off. By actuating the stop and emergency call switch the transmitter can be switched back on. If the stop and emergency call switch is pressed, the transmitter cannot be switched off again.

WARNING!

Danger from vehicle functions that are not triggered by the remote control.

The stopping of the winch by pressing the stop and emergency call switch has nothing to do with the "Emergency off" of the machine. In the event of emergencies, ensure that the "Emergency off" of the machine is pressed separately.

Details: See function description / functions / function active emergency call ("active emergency")





17.2.8 Reset "Active emergency"



Reset "Active emergency" command

Turn the stop and emergency call switch in a clockwise direction until the switch is released and returns to its resting position.

The command lock is lifted and the system is functional again. The alarm continues.

Reset "Alarm"



- 1 On button
- Off button
- 3 Status LED
- (4) Operating level LED

Reset alarm after "Active emergency"

- 2 Switch off the transmitter by pressing the Off button.
- Switch the transmitter on again by pressing the On button. The siren and the output "Emergency" (for main alarm only) are switched off and the alarm is reset.



17.3 Eliminate fault states

| No. | Fault | Solution |
|-----|---|--|
| 1 | Diagnostics LED on the receiver is off | Check the reciever and voltage supply |
| 2 | Diagnostics LED on the receiver flashes red | Switch on transmitter / bring transmitter within the receiver's range |
| 3 | Diagnostics LED on the receiver flashes alternately, red / orange (siren monitoring has tripped) | Check fuse 5 and supply cable for the siren |
| 4 | Diagnostics LED on the receiver flashes alternately, two times red / two times orange (relay monitoring has tripped) | Check fuse 1 and relay outputs for short circuits (no voltage may be applied if the output is inactive) |
| 5 | Diagnostics LED on the receiver flashes alternately, three times red / three times orange (device malfunction) | Contact service |
| 6 | Status LED on the transmitter is off | Switch on transmitter / check the battery |
| 7 | Status LED on the transmitter flashes red (battery almost empty) | Charge the battery |
| 8 | Operating level LED flashes red (no radio response received by receiver) | Check whether the receiver is switched on (diagnostics LED) / bring the transmitter within the receiver's range. |



18 Maintenance and service

18.1 Recommended maintenance interval

Carry out maintenance work at least once annually.

18.2 Scope of maintenance

- Have all the electrical cabling on your vehicle, and the electrical, remote-controlled appliances connected to it, checked regularly by a specialist to ensure it is in perfect condition.
- Check the connection cable and, if available, the antenna cable for bare or frayed spots.
- Before each time maintenance work is performed, you must turn off the ignition on the vehicle and take out all the plugs of the radio control unit to ensure that no function is triggered involuntarily.

If you discover a fault:



DANGER! Danger due to malfunctions

Work can no longer be performed with a defective system. Send back the whole system for repair in appropriate packaging with the transmitter and receiver, including the connection cables and a precise description of the problem. A corresponding response form is available for download on our website at http://www.funk-im-forst.de/ service.



NOTICE!

Risk of damage to the device from welding on the vehicle

Before electric welding work on the log-moving vehicle, the winch connection cable plug is to be pulled out of the winch socket in order to prevent damage to the receiver electronics.

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18.2.1 Cleaning the transmitter and receiver

Before cleaning you must turn off the ignition on the vehicle and take out all the plugs of the radio control unit so that no function is triggered involuntarily. Clean the system parts with a damp or soaked in spirits cloth.



NOTICE!

Risk of damage to the device from cleaning the vehicle Prevent system parts having direct contact with oils or lubricants. The system parts may not be cleaned with a steam-jet degreaser / high-pressure washer.

18.2.2 Batteries

If the status LED on the transmitter goes out shortly after you switch on the transmitter, you must replace the batteries (see Commissioning/Preparation/Fitting Batteries/Rechargeable Batteries in the Transmitter)

18.2.3 Rechargeable batteries (optional)

To prevent a deep discharge the transmitter automatically switches itself off when there is very low battery voltage (passive emergency = off).

Charge the batteries regularly.

If the status LED of the transmitter goes out just a short time after the transmitter is switched on, the batteries must be replaced (see commissioning / preparation / installing the transmitter batteries).

| ſ | | |
|---|----------|--|
| | ٦ | |
| L | <u> </u> | |

In the event of an emergency, a work process that has begun can be ended by switching on the transmitter again.



18.2.4 Changing fuses in the receiver F6 E



NOTICE!

Risk of damage to the device from opening the receiver housing

The receiver may only be opened by qualified specialist personnel. In general do not interfere with the device as this will invalidate the warranty.



Position of fuses and relays in the receiver F6 E



NOTICE!

Risk of damage to device due to electrostatic charge Discharge yourself by touching grounded metal parts. This procedure prevents damage to semiconductors by electrostatic discharge (ESD).

Fuses

| fuse | Meaning | Figure |
|------|------------------------------|--------|
| Si 1 | Main fuse (relay outputs) | 15 A |
| Si 3 | Gas + | 7.5 A |
| Si 4 | Gas – | 7.5 A |
| Si 5 | Siren | 7.5 A |

All fuses: Vehicle mini-plug fuse (mini fuse)



Relay

| Relay | Meaning |
|-------|--|
| K1 | Emergency |
| K2 | Not occupied |
| К3 | Not occupied |
| K4 | Pull drum |
| K5 | Not occupied |
| K6 | Siren |
| K7 | Not occupied |
| K8 | Release brake, permanent release, cable output |
| К9 | Gas + |
| K10 | Gas – |
| K11 | Unlock +UB |
| K12 | Not occupied |
| K13 | Not occupied |

Table: Relay key

Procedure for the qualified specialist

- Pull the connection cable(s) from the winch/vehicle socket.
- Localize the source of the fault and eliminate it; e.g. short circuit in the cabling.
- 3 Remove the 4 housing screws and open the housing lid.
- Only replace defective fuses with fuses of the same type (same value!).
- Put on the housing cover and screw the 4 housing bolts on tightly.



In general do not interfere with the device anymore, as this will invalidate the warranty.



19 Disassembly and disposal

19.1 Decommissioning

At the end of the device's service life you must disassemble the device and dispose of it in an environmentally acceptable manner. You must put the device out of operation before you disassemble it.

- Switch off receiver and unplug from the winch/vehicle socket
- Switch off transmitter and remove batteries

19.2 Disassembling the receiver F6 E

- 1 If available: Disassemble the remote antenna.
- 2 Remove the 3 fixing screws of the receiver housing.

19.3 Disposal

- Scrap metal
- Hand in synthetic elements for recycling
- Recycle electrical and electronic parts, or return them to TELENOT.



The product is subject to the valid EU WEEE Directive (Waste Electrical and Electronic Equipment). As the owner of this product, you are obliged by law to dispose of waste equipment at a recycling plant, separately from the domestic waste. Please observe the country-specific instructions for disposal.



In accordance with the battery ordinance, batteries must not be disposed of with domestic waste! You can return batteries purchased from TELENOT free of charge, where they are disposed of properly.



20 Technical Data

| Feature | Figure |
|--|--|
| Frequency range | 70-cm ISM band, 3 radio channels (434.175 MHz / 434.475 MHz / 434.675 MHz) |
| System address | Unique address for transmitter and receiver (approx. 16 million) |
| Control commands | 4 control commands, additional 1 × emergency and 1 × siren (horn) |
| Modulation | GMSK |
| Receiver category | 2 |
| Max. emitted trans- mission power | < 10 mW |
| Hamming distance | D = 6 |
| Operation mode | Half duplex |
| Operating tempera- ture | –20°C to +60°C |
| Storage temperature | -20 °C to +30 °C (The self-discharge effect of the batteries/rechargeable batteries is temperature-dependent and increases at higher storage temperatures.) |
| Humidity | Storage at max. 40% in operation 100% |
| Protection class | IP65 |
| Performance Level (risk assessment) | ISO 13849-1:2006 class 1 PL c |

Transmitter

| Feature | Figure | |
|--------------------|--|--|
| Range | Several hundred meters in a free field | |
| Power supply | 2 AA batteries (optional 2 eneloop® AA rechargeable batteries 1.2 V DC / 1900 mAh) | |
| Operating time | 50 hours continuous transmission with a battery charger | |
| Antenna | Integrated | |
| Dimensions (WxHxD) | (116×161×61) mm | |
| Color | Black, operating panel green/yellow | |
| Material | Polyamide / 66 – GF + TPE | |
| Weight | Approx. 600 g with battery | |



| Feature | Figure |
|-----------------------------|---|
| Operating voltage | +10 V to +30 V DC |
| Power consumption | 20 to 400 mA |
| Outputs | Output relay secured, response time < 200 ms |
| Diagnostics LED | Displays operating states and faults. |
| Antenna | integrated |
| Dimensions (WxHxD) | 152×218×51 mm |
| Color | Black |
| Material | PC/ABS |
| Weight | Approx. 670 g |
| Connection cable, length | 2.7 m |

Rechargeable battery charger A-LG 230 V (optional)

| Feature | Figure |
|-------------------|---------------------|
| Operating voltage | 230 V AC/50 Hz /5 W |



CE This symbol confirms that the devices comply with the machinery directive 2006/42/EC, the radio equipment directive (RED) 2014/53/EU and the protection targets of low voltage directive 2014/35/EU and EMC directive 2014/30/EU.

The system is free of charge and does not need to be registered with the Federal Network Agency (BNetzA). The F6 radio control may be operated with the specified operating frequencies in the following countries: Albania, Andorra, Austria, Belgium, Bosnia and Herzegovina, Belarus, Bulgaria, Republic of Cyprus, Czech Republic, Germany, Denmark, Spain, Estonia, France, Finland, United Kingdom of Great Britain and Northern Ireland, Greece, Hungary, The Netherlands, Croatia, Italy, Ireland, Iceland, Principality of Liechtenstein, Lithuania, Luxembourg, Latvia, Moldova, Macedonia, Malta, Montenegro, Norway, Poland, Portugal, Romania, Sweden, Serbia, Switzerland, Slovakia, Slovenia, Turkey.

21 Declaration of conformity





F6 wireless control

Transmitter operation (basic functions)



| Symbol overview | | |
|-----------------|--------------|--|
| Transmitter off | \bigcirc | |
| Transmitter on | | |
| Pull drum | ļ∭ų ↑ | |
| Release brake | \square | |
| Gas + | | |
| Gas – | \mathbb{N} | |

Legend ∇ Short operation ∇ Long operation

Subject to technical modifications