

WIRELESS CONTROL FOR FORESTRY CABLE WINCHES

F10

F10 ET

F10 DT

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Translation of the German original operating instructions

1 User notes

These operating instructions enable the safe and efficient use of the wireless control for F10 forestry cable winches.

All stated safety notices and instructions must be observed to ensure safe working.

Furthermore, local accident prevention regulations and general safety regulations for the system's area of use apply.

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

Target group

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

Use of the operating instructions

Read the complete operating instructions before putting the wireless 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 wireless 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.

Intended use of the product

The wireless 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 created with the utmost care. Nevertheless, errors cannot be totally excluded. Therefore, we would like to draw your attention to the fact that we cannot 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 device may deviate from the information stated in this Description.

We would be much obliged if you would inform us of any errors. Moreover, we would like to draw your attention to the fact that the software and hardware names and trademarks of the companies included in the Description 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 Conditions of Sale

You can find the General Conditions of Sale at our website at <http://www.funk-im-forst.de>.

Return of faulty devices

To avoid damage during transport, choose stable and robust packaging (the original packaging, if possible) and where appropriate, protective packaging and a box for shipping. Bear in mind the weight and protect package contents from shifting. Also bear in mind protection against electrostatic discharge (ESD protection). Enclose an error description with the device. A corresponding response form is available for download on our website at <http://www.funk-im-forst.de/service>.

User notes

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.

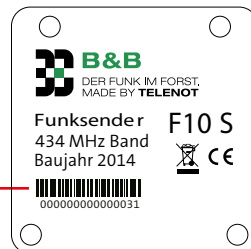
Receiver rating plate



Serial number

Transmitter rating plate

Serial number



F10 wireless control specification plate

Manufacturer

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Explanation of symbols

Symbols indicate safety guidelines and warning notices. The symbol is accompanied by a signal word that conveys the extent of the danger.

It is essential to observe these notices to avoid accidents, personal injury, and damage to property!



DANGER!

... indicates a hazardous situation which, if not avoided, will result in death or serious injuries.



WARNING!

... indicates a potentially hazardous situation which, if not avoided, leads to death or serious injuries



CAUTION!

... indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE!

... indicates a potentially hazardous situation which, if not avoided, can lead to property damage



Requirements for safe operation



NOISE!

Hearing damage due to noise!



Tips and recommendations for correct operation



Designation for modules/assemblies/components in danger of electrostatic discharge - ESD



Disposal instruction



Disposal instructions for hazardous batteries and rechargeable batteries



Delivery



Accessories, useful add-ons for optimum product use



Option



Parameterizable function



Legend



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 wireless 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 wireless 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 wireless 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 wireless control into operation, operate, maintain, or repair it.

- People carrying medical devices should check the compatibility of their devices with the wireless control that is constructed according to EN 62479.

3.2 Responsibility of the user



DANGER!

Danger from vehicles tipping over

Ensure that the vehicle has the necessary stability. Check the subsoil. Recommendation: the anti-tipping system option.



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.



Requirements for safe operation

- Wear protective work clothing suitable for the activity and the deployment location (PPA).
- Before switching on the wireless 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 wireless control.
- Ensure that you do not accidentally mix up the cable movement directions when changing locations or confuse the two sides when using 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**.
- Any 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 wireless control within the climatic, environmental conditions that are specified in the section "Technical data".

3.3 Special risks

3.3.1 Defective control elements



CAUTION! **Residual risk!**

Even if the operator follows the procedures correctly, 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 Storage and handling the transmitter battery (eneloop®)

- Batteries gradually lose capacity with age and operating times become shorter.
- 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 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.
- A deep discharge, which is damaging to the battery, is reliably prevented, because the transmitter automatically switches itself off (passive emergency = off) when it is not used for longer than a parametrized period of time (e.g. 20 minutes) or if the battery is discharged.
- If the rechargeable battery has not been used for an extended period, charge it before using it.

¹ eneloop® is a trademark of Panasonic (formerly of Sanyo). eneloop® battery technology enables up to 50 h 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!

Eye injuries or property damage can occur if the batteries are not handled properly!

- 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.
- In the devices only use the batteries that are intended for them (battery technology and type).
- Fluid can emerge from the battery in the event of incorrect use. 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.



If the device is shut down for an extended period, the rechargeable batteries or other batteries should be removed from the battery compartment. Under no circumstances should an empty rechargeable battery (or other battery) remain permanently in the device (risk of leaking battery acid).



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.
- Clear access routes for rescue vehicles.

In hazardous situation: 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



Art.-No.	Name	Delivery
109536000	F10 ET wireless control	<ul style="list-style-type: none"> - F10 S ET transmitter - F10 E receiver with connection cable and plug - Pin assignment diagram, valid for your winch - 230 V battery charger A-LG 230 V - Accessories kit with 4 NiMH eneloop® AA batteries in a plastic box, waist belt and chest carrying belt, 3 metal vibration dampers for F10 E receiver and B&B pen - F10 original operating instructions - F10 original operating instructions English translation - Warranty extension form


Table: F10 ET product contents

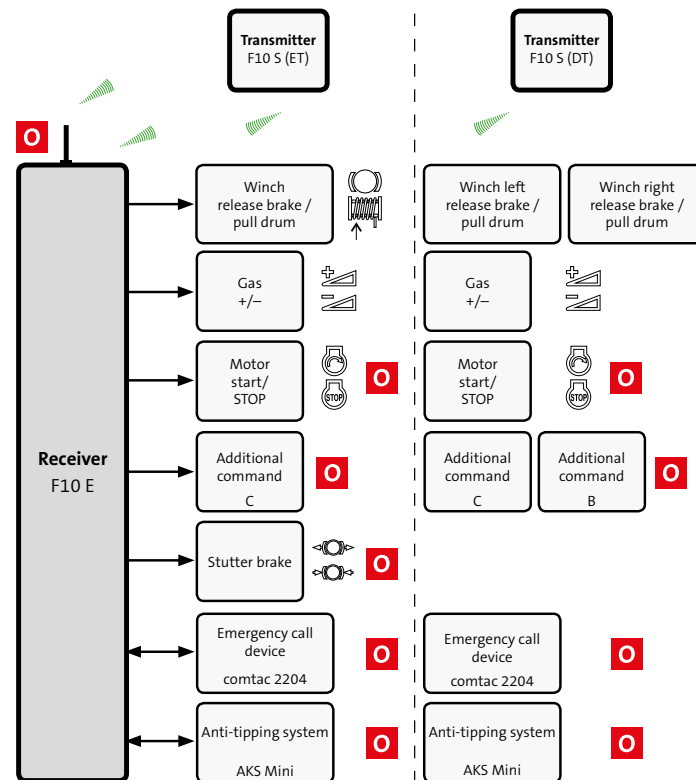
Art.-No.	Name	Delivery
109536010	F10 DT wireless control	<ul style="list-style-type: none"> - F10 S DT transmitter - F10 E receiver with connection cable and plug - Pin assignment diagram, valid for your winch - 230 V battery charger A-LG 230 V - Accessories kit with 4 NiMH eneloop® AA batteries in a plastic box, waist belt and chest carrying belt, 3 metal vibration dampers for F10 E receiver and B&B pen - F10 original operating instructions - F10 original operating instructions English translation - Warranty extension form

Table: F10 DT product contents

5 System overview

The F10 wireless control is used for the wireless control of cable winches. Depending on the model, single (ET) and double-drum winches (DT) of all makes can be controlled.

 The F10 wireless control can be extended with various options (see the section on device features/options).



Overview: F10 connection to a machine

6 Function overview

The F10 wireless control was specially designed for the harsh requirements of the forest.

Sophisticated radio electronics in a robust housing makes the F10 the optimum device for professional log-moving work.

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

Depending on the model, single (ET) and double-drum winches (DT) of all makes can be controlled.

6.1 Transmitter



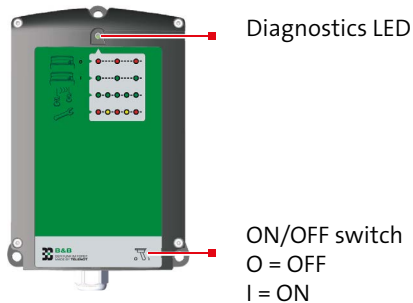
F10 S transmitter

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 fatigue-free 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 which withstands great mechanical stress. The two eneloop® (AA) batteries provide the transmitter with power for up to 50 h of continuous transmission in normal operation. Two spare batteries are delivered with the device.

6.2 Receiver



F10 E receiver

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 wireless control.

The receiver is switched on and off with a switch.

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

7 Device features

7.1 Device models

7.1.1 F10 ET wireless control



F10 ET

Set F10 ET (ready for connection) for single-drum winches with two additional commands (optional)

Functions:

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

Additional commands: (Option MAS)

- Motor start/STOP
- Additional command A: e.g. power take-off shaft ON

7.1.2 F10 DT wireless control



F10 DT

Set F10 DT (ready for connection) for double-drum winches with three additional commands (MAS option)

Functions

- Pull (left/right)
- Brief and permanent brake release (left/right)
- Gas +/-
- Immediate permanent brake release (left/right)

Additional commands: (Option MAS)

- Motor start/STOP
- Additional command A: e.g. power take-off shaft ON
- Additional command B: unassigned, free

7.2 Device features

7.2.1 General features

- Operationally safe function on the 70-cm ISM band
- Bidirectional wireless technology
- 3 working channels
- Can be individual adjusted to the special factors and types of operation of a wide range of winch operating modes.
- Operating temperature -20°C to $+60^{\circ}\text{C}$

7.2.2 Transmitter features

- Ergonomically designed operation panel
- Robust, glass fiber-reinforced housing with surrounding protective rubber edges
- High-quality toggle switch for long service life
- Stop and emergency call switch with active emergency call function
- Motion and position sensors for passive emergency call function
- eneloop® AA batteries replaceable battery system
- Energy-saving battery concept for 50 h of operation with one battery charging procedure
- 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)

7.2.3 Receiver features

- Shock-proof housing made from PC/ABS polyamide
- ON/OFF switch
- 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

7.2.4 Options



For F10 ET and F10 DT there are different options which you can order with the package and which are pre-installed at the factory:

F10 ET device model

Option	Art.-No.	Note
Stutter brake (Option SB)	109536054	Installed at the factory Periods are parameterizable
Remote antenna (Option AA F10)	109536050	BNC socket for external antenna installed at the factory The external antenna for attaching (Art. No. 109535858) or for remote installation (Art. No. 109535861) must be ordered separately.
Interface for anti-tip- ping system (Option AKS Mini)	109536051	Interface for anti-tipping system AKS 2515 MINI from the company Biastec (http://www.biastec.at) installed at the factory
Emergency call TD straight from the factory (Option comtac 2204-C)	109536052	Installed at the factory with the emergency call TD comtac 2204-C, housing: W×H×D (152×218×66) mm and the remote antenna option (AA F10): BNC socket for external antenna installed at the factory. The external antenna for attaching (Art. No. 109535858) or for remote mounting (Art. No. 109535861) must be ordered separately.
Motor start/STOP (Option MAS) Including additional command A	109536055	Parameterizable: Motor start via Motor STOP or Motor start, Motor STOP direct

Table: F10 ET options

F10 DT device model

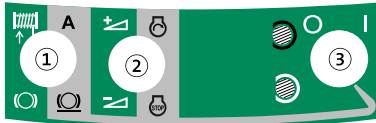
Option	Art.-No.	Note
Remote antenna (Option AA F10)	109536050	BNC socket for external antenna installed at the factory The external antenna for attaching (Art. No. 109535858) or for remote installation (Art. No. 109535861) must be ordered separately.
Emergency call TD straight from the factory (Option comtac 2204-C)	109536052	Installed at the factory with the emergency call TD comtac 2204-C, housing: W×H×D (152×218×66) mm and the remote antenna option (AA F10): BNC socket for external antenna installed at the factory. The external antenna for attaching (Art. No. 109535858) or for remote mounting (Art. No. 109535861) must be ordered separately.
Motor start/STOP (Option MAS) Including additional commands A and B	109536055	Parameterizable: Motor start via Motor STOP or Motor start, Motor STOP direct

Table: F10 DT options

8 Functional Description

8.1 Structure

8.1.1 F10 ET

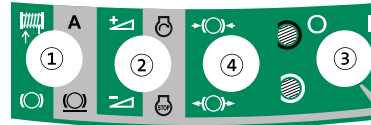


F10 ET transmitter operation options

- ① Switch 1
 - Operating level 1 (green): Pull drum / release brake
 - Operating level 2 (gray): Additional command A (e.g. power take-off shaft ON) / permanent brake release
- ② Switch 2
 - Operating level 1 (green): Gas + / Gas –
 - Operating level 2 (gray): Motor start / Motor STOP
- ③ Switch 3
 - ON / OFF: brief activation
 - Switchover to operating level 2 (gray): keep pressed

Details: See operation

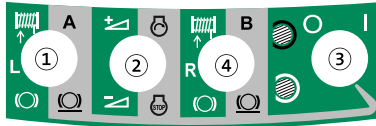
8.1.2 F10 ET with stutter brake option



F10 ET SB transmitter operation options

- ① Switch 1
 - Operating level 1 (green): Pull drum / release brake
 - Operating level 2 (gray): Additional command A (e.g. power take-off shaft ON) / permanent brake release
- ② Switch 2
 - Operating level 1 (green): Gas + / Gas –
 - Operating level 2 (gray): Motor start / Motor STOP
- ③ Switch 3
 - ON / OFF: brief activation
 - Switchover to operating level 2 (gray): keep pressed
- ④ Switch 4
 - The Stutter brake switch has the same function in both actuation directions

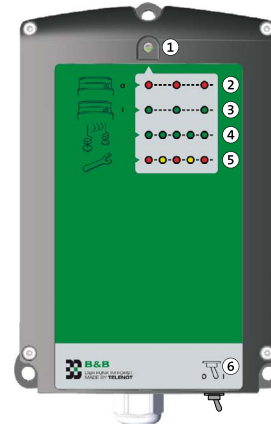
8.1.3 F10 DT



F10 DT transmitter operation options

- ① **Switch 1**
 - Operating level 1 (green): Pull drum left / release brake left
 - Operating level 2 (gray): Additional command A (e.g. power take-off shaft ON) / permanent brake release left
- ② **Switch 2**
 - Operating level 1 (green): Gas + / Gas –
 - Operating level 2 (gray): Motor start / Motor STOP
- ③ **Switch 3**
 - ON / OFF: brief activation
 - Switchover to operating level 2 (gray): keep pressed
- ④ **Switch 4**
 - Operating level 1 (green): Pull drum right / release brake right
 - Operating level 2 (gray): Additional command B (unassigned, free) / permanent brake release right

8.1.4 F10 receiver



F10 receiver display

- ① **Diagnostics LED (red, green, orange)**
- ② **Diagnostics LED flashing red: Transmitter is switched off**
- ③ **Diagnostics LED flashing green: Transmitter is switched on**
- ④ **Diagnostics LED blinking green: wireless reception active (command is received)**

- 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, red, orange, 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 stop operation of the system immediately!
Send the system to the factory for repairs. To specify faults please use the form enclosed. You can download a corresponding response form at our website at <http://www.funk-im-forst.de/service>.

- ⑥ ON/OFF switch
O = OFF
I = ON



All outputs except "Emergency" are monitored for functionality or short circuits and indicated by the diagnostics LED in the event of failure. The "Siren" output is not monitored due to the factory setting; but it can be parameterized to be monitored.

If an emergency call device is connected, it monitors the connection line between receiver and emergency call device.

Do not apply any voltage to the outputs!

8.2 Functions

8.2.1 Pull drum



The function "Pull drum" (the pulling in of the winch's cable) is started by holding the switch in the direction of this icon and is stopped by releasing the switch (jog mode).

Functional Description

8.2.2 Release brake



The function "Release brake" (release winch brake) is started by holding the switch in the direction of this icon and is stopped by releasing the switch (jog mode).

Permanent brake release

By holding the switch for a long period (longer than the period parametrized at the factory for permanent brake release), the brake is permanently released until new actuation (release brake or pull drum).

If the transmitter is not operated for longer than the parametrized stand-by period (factory setting: 20 minutes), the "Permanent brake release" function is automatically ended and the brake closes again (passive emergency = OFF).

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 brake release are parameterized at the factory:

Winch type	Operation mode	
	Single function (EF) / dual function (DF)	Duration of permanent brake release
AMR/BGU/Uniforest	EF	3.5 s
Farmi	EF	1.5 s
Fransgard	EF	3.5 s
GVS	DF	1.5 s
Holz knecht	EF	1.5 s
Igland	DF	1.5 s
KMB	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
Welte	DF	Only in operating level 2
Werner/Glogger	DF	1.5 s

Table: Winch-dependent parameterization (at the factory)



The function "release brake without permanent brake release" can be parametrized at the factory. This function is intended for winches with cable ejection in order to prevent accidental permanent brake release and thus the complete ejection of the cable. Furthermore, there is no time delay with this function (duration of permanent brake release). When pressing the "Release brake" switch in jog mode, the brake can be released and the cable ejection can be triggered for the duration of time the switch is actuated. For complete cable ejection, you can use the function "Permanent brake release" of operating level 2.

8.2.3 Gas adjustment



Gas continuous (GS)

The function "Gas +" is started by holding the switch in the direction of this icon and is stopped by releasing the switch (jog mode).



The function "Gas –" is started by holding the switch in the direction of this icon and is stopped by releasing the switch (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



When tipping the switch towards this icon, the function "Gas +" switches on the supply voltage to the "Gas +" output.



When tipping the switch towards this icon, the function "Gas –" switches off the supply voltage to the "Gas +" output.

Application:

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

With "Gas –", a fixed, lower motor speed is set.

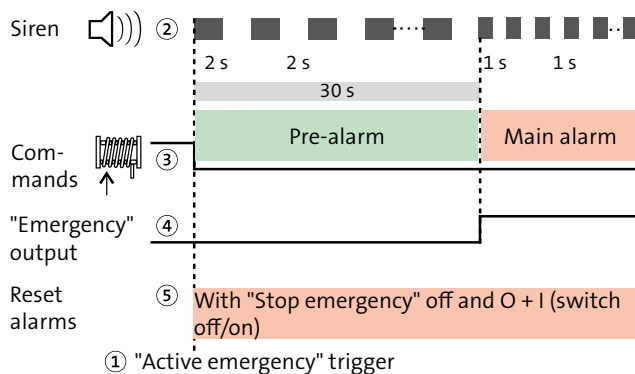
8.2.4 Active emergency call function ("Active emergency")

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 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).
- ③ 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 upon delivery (factory setting); but it can be parameterized to be monitored.

8.2.5 Passive emergency call function ("Passive emergency")

The passive emergency call function is used to summon help if the person involved in an accident is no longer capable of triggering an active emergency call. This function is only useful if people located in the vicinity can be alerted via a connected loud horn or if an emergency call TD is installed to alert other assistance-providing persons. All active commands are ended and no other commands accepted (command lock).

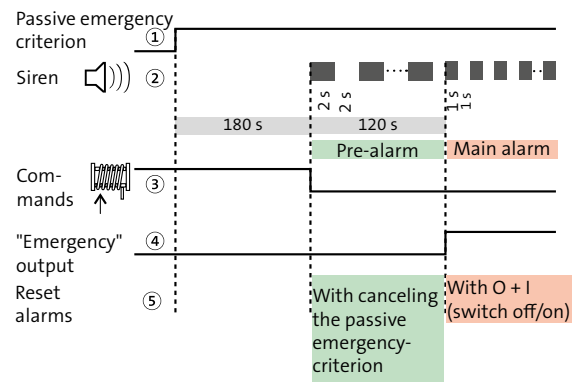
The passive "Emergency call trigger" is set off automatically and involuntarily if:

- The transmitter has not been operated over a given period of time (factory setting: 180 s) and the receiver has not received anymore commands (**range monitoring**)
- The transmitter is not moved anymore (factory setting: 180 s) (**acceleration monitoring**)
- The transmitter is tilted at a particular angle (factory setting: greater than 45°, 180 s) (**position monitoring**)

The function "Passive emergency" is switched off on delivery (factory settings). You must switch on this function if it is required (see operations / passive emergency).



The "Siren" output is not monitored upon delivery (factory setting); but it can be parameterized to be monitored.



Passive emergency sequence

- ① Passive emergency is triggered by one of the passive emergency criteria: Acceleration monitoring or range monitoring or position monitoring
- ② First the pre-alarm (2 s sound, 2 s pause) and after 120 s Main alarm (1 s sound, 1 s pause) through the siren
- ③ Already activated commands (e.g. pull drum) are switched off, other dangerous commands are blocked.
- ④ On expiry of the pre-alarm time, the "Emergency" output is switched (e. g. for activating an emergency-call transmission device).

Functional Description

- ⑤ Within the passive emergency period (180 s) and during the pre-alarm, the next sequence can be stopped by withdrawing the passive emergency criterion or by actuation. During the main alarm you must first switch the transmitter off and then back on again in order to reset the alarm.

8.2.6 "Motor start" / "Motor STOP" (optional)



Motor start through Motor STOP (MAS)



When tipping the switch towards this icon, the function "Motor start" provides supply voltage to the "Motor start" output.



When tipping the switch towards this icon, the function "Motor STOP" provides supply voltage to the "Motor STOP" output.

Application:

First you must activate the function "Motor STOP" and within the next 6 s the function "Motor start". Consequently, a machine's motor is started, whereby a motor that is already running is prevented from starting again due to the upstream function "Motor STOP".



The option "Motor start" / "Motor STOP" in the F10 ET model contains the additional command A (e.g. for power take-off shaft ON) and the additional command A and B (for free use) in the F10 DT model.





Motor start (direct): can be parametrized at the factory Application:

With "Motor start" the motor is started immediately (output "Motor start" switches on) without the necessity to activate "Motor STOP" function first.

8.2.7 Stutter brake (optional)

O The "Stutter brake" option can only be ordered for F10 ET single-drum wireless controls. An additional switch for this function is installed at the factory.

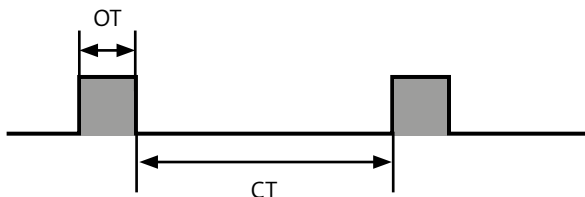
 The function "Stutter brake" is activated by holding the switch towards one of these icons (forwards or backwards).



Application:

Controlled lowering of loads

The winch brake is opened and closed automatically at short, parameterizable time intervals. In so doing the open time (OT) and closed time (CT) of the brake changes periodically. The longer the closed time is in comparison to the open time, the slower the load is lowered.



Open time (OT) and closed time (CT) for the function "Stutter brake"

Requirement:

Brief response times of the winch brake



Use the function "Stutter brake" only in exceptional circumstances, because it creates increased stress both for the winch mechanics and for the output relay of the receiver. In the event of frequent use you must expect increased wear and tear of the affected parts.



Open time (OT) and closed time (CT) are parameterizable (see parameterization / stutter brake).

8.2.8 Anti-tipping function AKS (optional)



The "Anti-tipping function" option can only be ordered for F10 ET single-drum wireless controls and must be installed at the factory.

The anti-tipping system is an active safety device for preventing typical accidents through the pitching and falling down of forestry towing vehicles with wireless cable winches. The system permanently monitors vehicle inclination during inward movement and stops the cable winch in the event of a risk of tipping. Using this interface, a simple connection of the product AKS 2515 MINI from the company Biastec is possible (for more information on functionality directly from the provider: <http://www.biastec.at>).

Functional Description

8.2.9 Remote antenna AA F10 (optional)



The "Remote antenna" option must be installed at the factory. A BNC socket is installed for connecting the remote antenna.

In addition, one of the two external antennas has to be ordered as an accessory for the option "Remote antenna".



1. External antenna for attachment (EA-AS)
The antenna is plugged directly onto the BNC socket on the receiver.
2. External antenna for remote installation (EA-AM)
The antenna is mounted remotely to the vehicle using the enclosed cable.

Device features

- Antenna length approx. 41 cm
- Cable length 400 cm
- Chassis bore: antenna foot outer: 21 mm, antenna foot inner: 14 mm
- Roof thickness 0.6 to 5.0 mm



Attach the antenna to a protected space on the vehicle's rear side to prevent damage. When doing so, no metallic parts (with the exception of installation surfaces) should be located in close proximity to the antenna in order to achieve the best possible range.

Lay the antenna connection cable in the vehicle without kinks!

8.2.10 Emergency call TD (optional)



The option "Emergency call transmission device" is installed at the factory.

The emergency call TD is used for transmitting hazard and emergency call messages and/or technical alarms via the GSM network to an emergency service. The device also uses the integrated GPS satellite navigation system to calculate the correct position coordinates. The device transmits these coordinates with the emergency call message to the emergency call center or to a cellular network subscriber.

For further technical information please see the technical description of the emergency call TD comtac 2204.

8.2.11 Changing the wireless channel

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

The F10 wireless control works on the 70-cm ISM band and can be operated on 3 wireless channels:

Channel 1: 434.175 MHz

Channel 2: 434.475 MHz

Channel 3: 434.675 MHz

- Switch off the transmitter
- Hold the ON/OFF switch on the transmitter for longer than 5 s in the "ON" position, the status 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 wireless 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	Art.-No.	Description
External antenna for attachment	109535858	The antenna is plugged directly onto the BNC socket on the receiver. Requirement: Optional remote antenna AA F10
External antenna remote installation	109535861	The antenna is remotely attached to the vehicle with the enclosed cable. Requirement: Optional remote antenna AA F10.
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 charging of 2 AA batteries at the 12-V terminal of the cigarette lighter in the vehicle
230 V battery charger A-LG 230 V	109536081	For the controlled 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 mounting 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.

Table: F10 wireless control accessories

10 Mechanical structure

10.1 F10 S transmitter

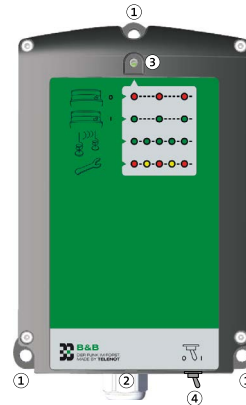


F10 transmitter mechanical design

- ① Belt plate
- ② Stop and emergency call switch
- ③ Switches for commands
- ④ Battery compartment screw cap

The transmitter of the F10 remote control consists of a plastic housing (polyamide 66-GF+TPE) with protection class IP65. Viewed from the perspective of the user, the belt plate for feeding through the waist belt is located on the device's rear, the stop and emergency call switch is on the left side, and the battery compartment with the screw cap is on the right. Operation is conducted using the switches on the top.

10.2 F10 E receiver



F10 receiver mechanical design

- ① Mounting clips
- ② Cable screw thread
- ③ Diagnostics LED
- ④ ON/OFF switch

The receiver of the F10 remote control consists of a two-part plastic housing (PC / ABS) with protection class IP65. 3 mounting clips are provided for mounting. The receiver can be switched on or off via a toggle switch. A diagnostics LED indicates various operating states and faults. The cable entry of the 2.3-m-long connection cable is realized by the means of a cable gland.

11 Mounting

11.1 F10 S transmitter

11.1.1 Carrying on the body

Carrying the transmitter on your hip

The transmitter of the F10 wireless control can be worn on the hip using the waist belt contained in the package.

To do this the waist belt must be attached to the transmitter:



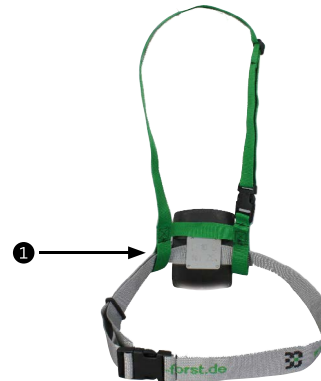
Installation of waist belt onto F10 S transmitter

- 1 Feed the waist belt under the belt plate.

Carrying the transmitter on your chest

The transmitter of the F10 wireless control can be worn on the chest using the waist belt and chest belt contained in the package.

To do this the waist belt must be attached to the transmitter and the chest belt to the waist belt:



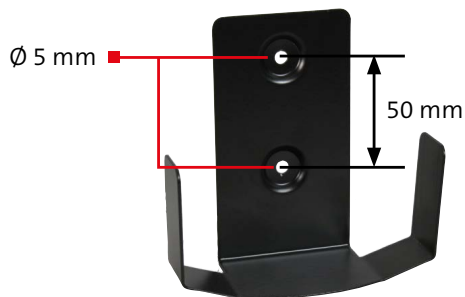
Installation of chest belt onto waist belt

- 1 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 F10 wireless control can be attached to the wall or to the vehicle using the bracket for the HG1 transmitter.

- 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.
- ③ 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.
- ④ Screw the bracket tight.
- ⑤ The transmitter can now be placed in the bracket and taken out again.

11.2 F10 E receiver

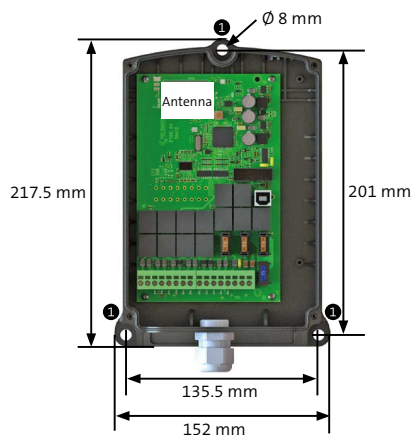
11.2.1 Mounting location requirements

- 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 wireless 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.
- When using the external antennas, damage from stripping branches is to be avoided. Attach the external antenna so that it does not protrude over the vehicle. To ensure unhindered emission, no metallic parts may be located near the antenna.

11.2.2 F10 E receiver installation

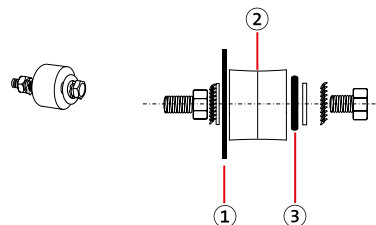


Mount the receiver vertically with the cable gland downwards. The antenna must be as far away from metal surfaces as possible in order to achieve optimum wireless range. Use the 3 runner-bonded metal buffers supplied with the package to install the receiver. These provide a minimum required gap from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



F10 E receiver installation

- 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.
- ④ Tighten all screws.

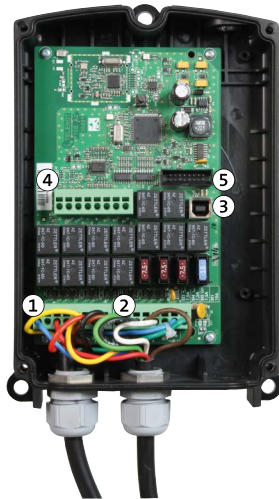


- ① Vehicle plate
- ② Runner-bonded metal buffer
- ③ Receiver housing

Rubber-bonded metal buffer mounting

12 Connections and Interfaces

12.1 Position



Position of F10 E connections

- ① Socket 1 (BU1): 8-pole terminal block
- ② Socket 2 (BU2): 8-pole terminal block
- ③ Socket 3 (BU3): USB socket
- ④ Socket 4 (BU4): 8-pole terminal block for anti-tipping system and CAN BUS
- ⑤ Plug 2 (ST2): 16-pole plug frame for connecting a ribbon cable for the emergency call TD (parallel S1 interface)

12.2 Connection type

The terminals sockets 1–2 and socket 4 are designed as spring-loaded terminal strips. Socket 3 is designed as a USB-B socket and the plug 2 as a 16-pole plug frame for connecting a ribbon cable.

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 wireless control.

12.3.1 Socket 1

1	2	3	4	5	6	7	8
○	○	○	○	○	○	○	○

Socket 1 connection configuration



Do not apply any voltage to the outputs!





Pin	Type	Labeling / icon	Function	Technical Data
1	Output	NOT	In the event of emergency off to trigger a loud horn / private mobile wireless device	Switches +U _B / max. 5 A
2	Output	P	Optional EMERGENCY potential-free	
3	Output		Motor STOP	
4	Output	B	Additional command B	
5	Output	SIR	Siren (pre-alarm, main alarm)	
6	Output	R 	Release brake right (only for F10 DT)	
7	Output	 R ↑	Pull drum right (only for F10 DT)	
8	Output	 L ↑	Pull drum (for F10 DT left)	

Table: Socket 1 connection configuration

12.3.2 Socket 2

1	2	3	4	5	6	7	8
○	○	○	○	○	○	○	○

Socket 2 connection configuration





Pin	Type	Labeling / icon	Function	Technical Data
1	Output	L 	Release brake (for F10 DT left)	Switches $+U_B$ / max. 5 A
2	Output		Motor start	
3	Output		Gas +	
4	Output		Gas –	
5	Output	C	Additional command A	
6	Power	GND	Ground / 0 V	0 V / max. 5 A
7	Power	$+U_B$	$+U_B$ (operating voltage)	+10 V to +30 V DC / max. 15 A
8				

Table: Socket 2 connection configuration



Do not apply any voltage to the outputs!

12.3.3 Socket 4

1	2	3	4	5	6	7	8
○	○	○	○	○	○	○	○

Socket 4 connection configuration

Pin	Type	Labeling / icon	Function	Technical Data
1		C		
2		CANH		
3		CANL		
4		-	Interface to anti-tipping system Bias-tec AKS 2515 MINI	Only to be used for the anti-tipping system Bias-tec AKS 2515 MINI
5		+		
6		KLE		
7		KLA		
8		KLW		

Table: Socket 4 connection configuration



Do not apply any voltage to the outputs!

12.3.4 Plug 2

Pin	Type	Function	Technical Data
1	Power	+U _B for emergency call TD	+U _B / max. 300 mA
2			
3	Power	GND for emergency call TD	
4			
5	Vacant		
6	Vacant		
7	Output	TD input 1	O.C. output GND switching
8	Output	TD input 2	
9	Vacant		
10	Vacant		
11	Vacant		
12			
13	Vacant		
14	Vacant		
15	Input	Acknowledgment signal	Do not apply any external voltage
16	Input	Fault UE	Do not apply any external voltage

Table: Plug 2 connection configuration

13 Installation

The F10 wireless control connection cable is already prewired at the factory to one or several plugs (e.g. 7-pole vehicle connector). The assignment and plug type depend on the winch type.

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

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



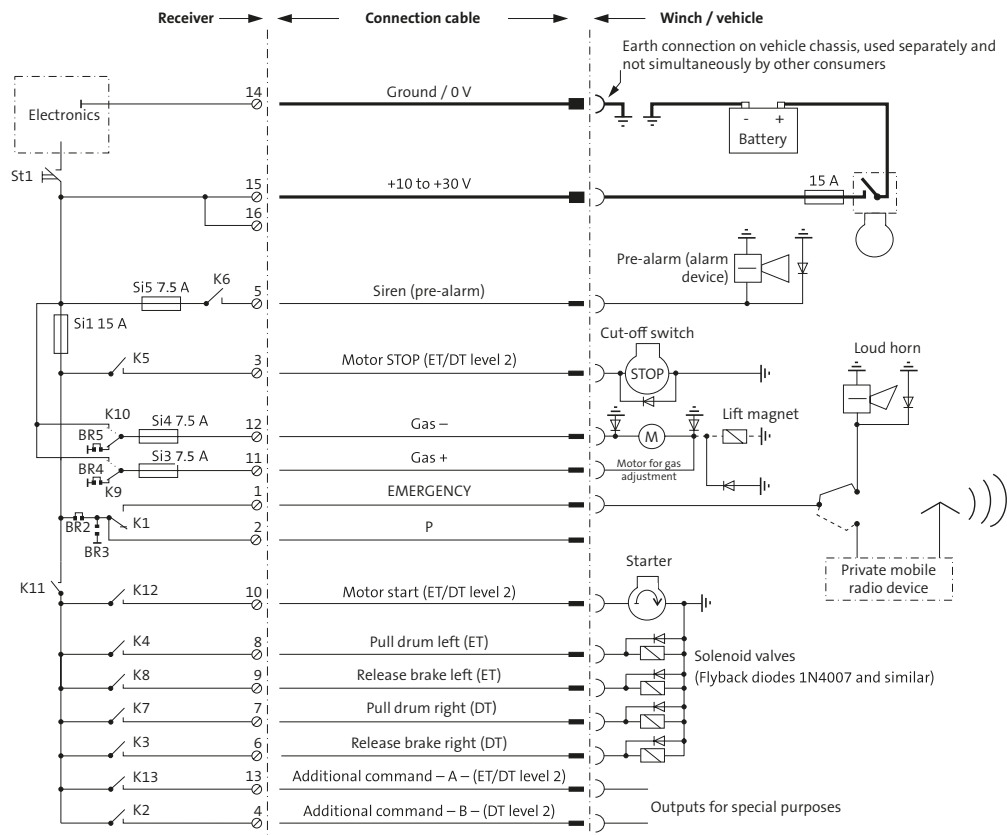
DANGER!

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 wireless control with the "Gas +/-" and/or "Motor start / Motor STOP" functions must use a **separate** connection box. Reason: If the wireless 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.

15.2 Stutter brake parameterization

If you have also ordered the option "Stutter brake", you can set the open time and closed time of the brake.



WARNING!

Danger from falling load

Ensure that nobody is near the load to be lowered.



Check whether the brake only follows your winch with a slight delay when the command "Brief release" is quickly actuated. A requirement for using the operating mode "Stutter brake" is brief response times for opening and closing the brake cylinder on the winch.

First read the full procedure for parameterizing the periods for the "Stutter brake" before you begin parameterizing!

Application:

Controlled lowering of loads

Description:

The winch brake is opened and closed automatically at short, parameterizable time intervals. In so doing the open time (OT) and closed time (CT) of the brake changes periodically. The longer the closed time is in comparison to the open time, the slower the load is lowered.

3 examples for setting the open time (OT) and closed time (CT)

Example 1: Slow lowering: OT = short, CT = long



Example 2: Medium lowering: OT = short, CT = short



Example 3: Quick lowering OT = long, CT = short

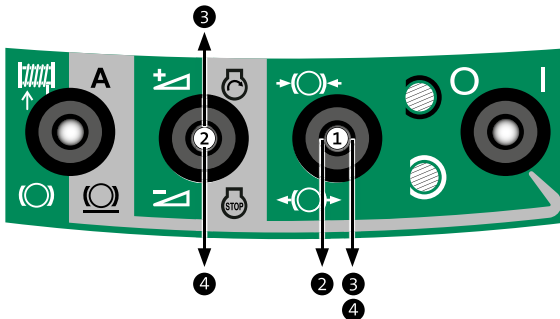


Example settings for OT and CT of the "Stutter brake" function.

15.2.1 Brake open time (OT) parameterization

First set the open time of the brake (OT). It determines the speed of load lowering when the brake is opened.

- ① Cable a load that is available in normal operation until just before the winch's guide pulley.



- ① Stutter brake switch
- ② Gas + / "Gas-" switch

Brake open time (OT) parameterization

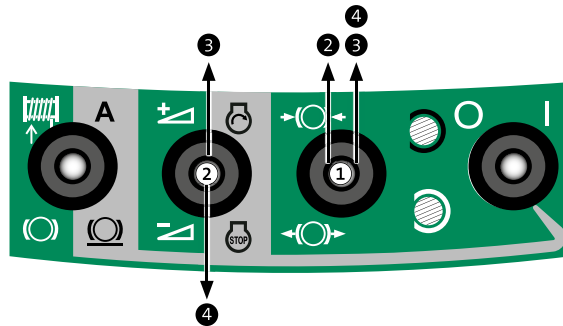
- ② Press the switch "Stutter brake" towards the body and hold the switch in this position.
The brake is alternately opened and closed again. If the load lowering is too fast during this period, the opening time must be reduced.

- ③ To reduce the open time, press the switch "Stutter brake" towards the body and hold the switch in this position. Also briefly touch the switch for "Gas +". Every time "Gas +" is touched the open time is reduced by roughly 1/10 of a second. As a result the load lowering is slower.
- ④ To extend the open time, press the switch "Stutter brake" towards the body and hold the switch in this position. Also briefly touch the switch for "Gas -". Every time "Gas -" is touched the open time is extended by roughly 1/10 of a second. As a result the load lowering is quicker.
- ⑤ After releasing the switch, the values are automatically saved; however, they can be changed again at any time.

15.2.2 Brake closed time (CT) parameterization

After the open time, set the closed time of the brake (CT). It determines the speed of load lowering when the brake is closed.

- ① Cable a load that is available in normal operation until just before the winch's guide pulley.



① Stutter brake switch

② Gas + / "Gas-" switch

Brake closed time (CT) parameterization

- ② Press the switch "Stutter brake" away from the body and hold the switch in this position. The brake is alternately opened and closed again. If the load lowering is too slow during this period, the closing time must be reduced.

- ③ To reduce the closed time, press the switch "Stutter brake" away from the body and hold the switch in this position. Also briefly touch the switch for "Gas +". Every time "Gas +" is touched the closed time is reduced by roughly 1/10 of a second. As a result the load lowering is quicker.
- ④ To extend the closed time, press the switch "Stutter brake" away from the body and hold the switch in this position. Also briefly touch the switch for "Gas -". Every time "Gas -" is touched the closed time is extended by roughly 1/10 of a second. As a result the load lowering is slower.
- ⑤ After releasing the switch, the values are automatically saved; however, they can be changed again at any time.

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 transmitter battery is charged.

16.2 Preparation

16.2.1 Receiver connection

- ① Insert the connection plug(s) of the receiver into the socket(s) provided on the winch / the vehicle.

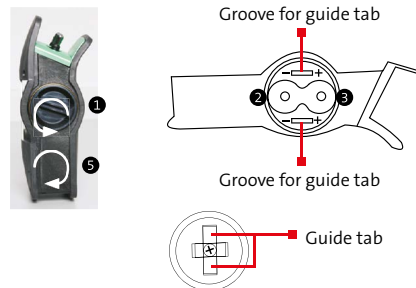


DANGER!

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 wireless control are located on the winch, **only one control unit may be** connected at any one time. When using the wireless control, ensure that **the manual control cable is pulled out**.

16.2.2 Transmitter battery installation



Transmitter battery installation

- ① Turn the screw cap of the battery compartment in a counterclockwise direction and pull the cap off. Use a coin to help you if necessary.
- ② Insert the left battery according to the correct polarity (negative pole upwards).
- ③ Insert the right battery according to the correct polarity (positive pole upwards).
- ④ Feed the guide tabs of the screw cap (positioned to be rotated) into the grooves of the transmitter housing.
- ⑤ Turn the screw cap of the battery compartment back on tightly in a clockwise direction.

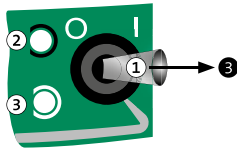
16.3 Functional test



NOTICE!

Generally perform the following points prior to commencing work!

- ① Switch the vehicle ignition on and start the vehicle.
- ② Switch the receiver on with the ON/OFF switch.
The diagnostics LED on the receiver flashes red.
- ③ Switch the transmitter on with the ON/OFF switch (tilt to the right).
The diagnostics LED on the receiver blinks green.
The status LED on the transmitter flashes green (when battery charged).



F10 S transmitter activation

- ④ Press the stop and emergency call switch.
First the pre-alarm (2 s sound, 2 s silent) and after 30 s the main alarm (1 s sound, 1 s silent) through the siren.
The status LED on the transmitter blinks quickly (green).



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 call switch

- ⑤ Perform any command on the transmitter (e.g. "Pull drum").
No dangerous work commands are performed and the siren continues to sound.
- ⑥ Unlock the stop and emergency call switch by turning it in a clockwise direction and first switch the transmitter off with the ON/OFF switch and then back on again.
The siren is muted and the "Emergency" output switches itself off again (only with main alarm).
- ⑦ Perform any command on the transmitter (e.g. "Pull drum").
The corresponding command is performed.

- 8 When using the function "Passive emergency call", check whether this function works: Place the transmitter on the ground and wait until the pre-alarm is signaled. Then reset "Passive emergency". See operation / reset "Passive emergency"

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	Transmitter battery is charged (See operation / transmitter / status LED)	
4	Receiver is switched on (See operation / receiver / activation)	
5	Transmitter is switched on (See operation / transmitter / status LED)	
6	Function check has been performed (See commissioning / function check)	

Table: Commissioning check list

17 Operation

17.1 Safety notices for operation



DANGER!

Danger from vehicles tipping over

Ensure that the vehicle has the necessary stability.
Check the subsoil.
Recommendation: the anti-tipping system option.



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).



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.

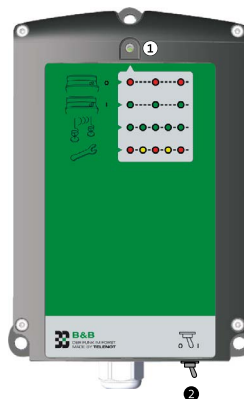


Requirements for safe operation

- Wear protective work clothing suitable for the activity and the deployment location (PPA).
- Before switching on the wireless 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 wireless control.
- Ensure that you do not accidentally mix up the cable movement directions when changing locations or confuse the two sides when using 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.
- Any 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 wireless 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.

17.2 F10 E receiver



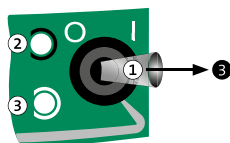
① Diagnostics LED

F10 E receiver activation

- ① Switch the vehicle ignition on and start the vehicle.
- ② Switch the receiver on with the ON/OFF switch. The diagnostics LED on the receiver flashes red.

17.3 F10 S transmitter

- ③ Switch the transmitter on with the ON/OFF switch (tilt to the right).
The diagnostics LED on the receiver blinks green.
The status LED on the transmitter flashes green (when battery charged).



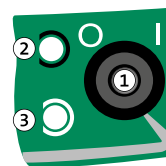
- ① ON/OFF switch
② Status LED
③ Operating level LED

F10 S transmitter activation



Always switch off the transmitter to extend the operating time and to prevent accidental operating during work breaks and after work has ended. Secure the transmitter against unauthorized access. The transmitter automatically switches itself off after the parameterized stand-by period (factory setting: 20 min; passive emergency = OFF) if no command has been triggered.

17.3.1 F10 S transmitter LED displays



- ① ON/OFF switch
② Status LED
③ Operating level LED

F10 S transmitter LED displays

Status LED ②	
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 color green/red 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

Table: F10 S transmitter indications; status LEDs

Operating level LED ③	
OFF	Operating level 1
Illuminated green	Operating level 2; short when passive emergency on
Illuminated red	Operating level 3 (optional); short when passive emergency off
Lights up orange	Operating level 4 (optional); short when passive emergency ON/OFF
Flashes red	No wireless response received by receiver (e.g. beyond range)

Table: F10 S transmitter indications; operating level LEDs

IMPORTANT OPERATING PROCEDURES ARE EXPLAINED IN THE SECTIONS THAT FOLLOW.

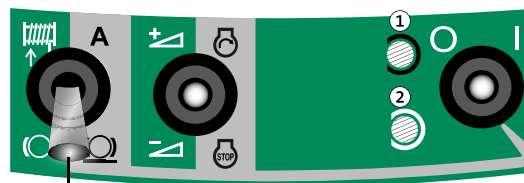
17.3.2 Release brake



WARNING!

Danger from falling load

Ensure that nobody is near the load to be lowered.



- ① Status LED
- ② Operating level LED

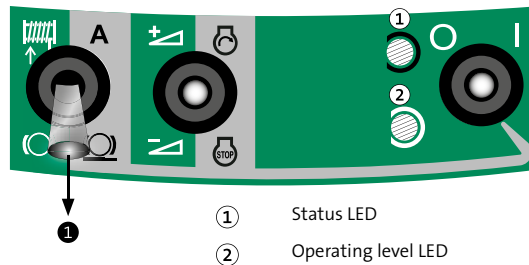
Release brake command

- ① Press the switch briefly (< 1.5 s). The brake opens for the duration the switch is pressed and immediately closes again when it is released (jog mode).

17.3.3 "Permanent brake release"

Operating level 1 (green background)

⓪ Via function "Release brake"



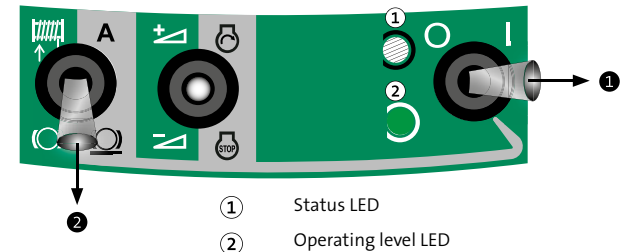
Release brake command

- ① Press the switch and hold it for longer than 1.5 or 3.5 s (depending on the pre-parametrized winch type). The brake remains permanently opened until "Release brake" or "Pull drum" is pressed again

i If the transmitter is not operated during the parametrized stand-by period (factory setting: 20 minutes; passive emergency = OFF) it switches itself off automatically and the brake closes.

■ If the function "Release brake without permanent brake release" is parametrized at the factory, "Permanent brake release" can only be performed through operating level 2.

Operating level 2 (gray background)



Permanent brake release command through operating level 2 (2-switch operation)

- ① Press the ON/OFF switch towards "ON" and keep it in this position. Operating level LED lights up green.
- ② Press the switch briefly. The brake remains permanently opened until "Release brake" or "Pull drum" is pressed again (operating level 1: release ON/OFF switch).

i If the transmitter is not operated during the parametrized stand-by period (factory setting: 20 minutes; passive emergency = OFF) it switches itself off automatically and the brake closes.

Details: See function description / functions / release brake

17.3.4 Pull drum



DANGER!

Danger from vehicles tipping over

Ensure that the vehicle has the necessary stability.
Check the subsoil.

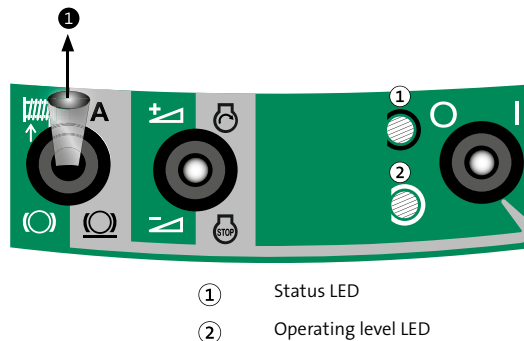
Recommendation: the anti-tipping system option.



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!



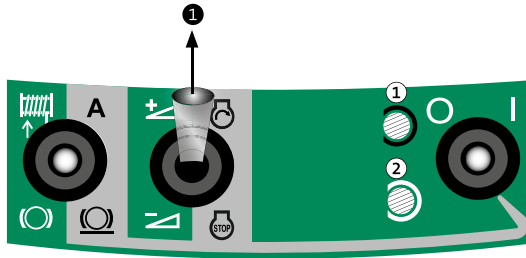
Pull drum command

- ① Press the switch briefly. The cable is pulled in for the duration the switch is pressed and immediately stops again when it is released (jog mode).

Details: See function description / functions / Pull drum

Operation

17.3.5 Gas +



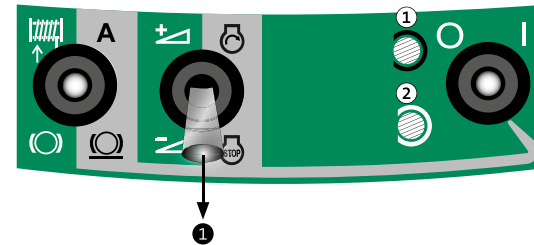
- ① Status LED
- ② Operating level LED

Gas + command

- ① Press the switch briefly. An increase in motor speed occurs for the duration of actuation. When released the set speed is preserved (jog mode).

Details: See function description / functions / gas adjustment

17.3.6 Gas -



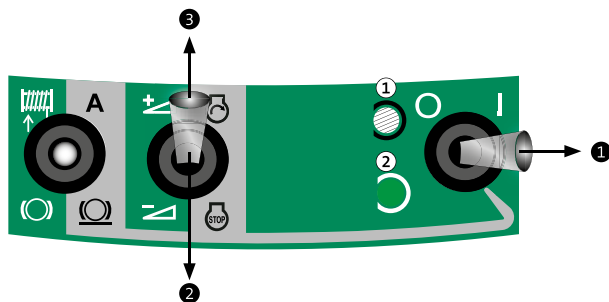
- ① Status LED
- ② Operating level LED

Gas - command

- ① Press the switch briefly. A reduction in motor speed occurs for the duration of actuation. When released the set speed is preserved (jog mode).

Details: See function description / functions / gas adjustment

17.3.7 "Motor start"



- ① Status LED
- ② Operating level LED

Motor start command

Motor start through Motor STOP (MAS)

- ① Press the ON/OFF switch towards "ON" and keep it in this position.
Operating level LED lights up green.
- ② Press the switch briefly towards the body ("Motor STOP").
The motor stops if it is running.
- ③ Within 6 s following "Motor STOP", press the switch briefly away from the body; the motor is started.



This way a motor that is already running is prevented from being started again.

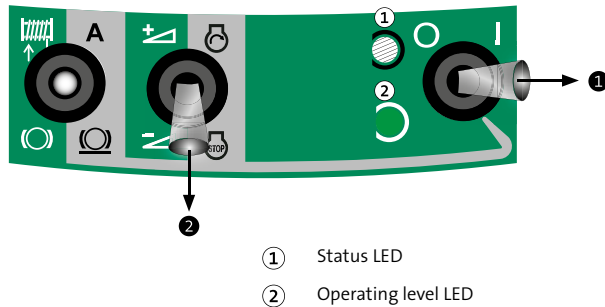


If the function "Motor start direct" is parameterized at the factory, you can start the motor directly without the necessity to actuate the "Motor STOP" command in first.

Details: See function description / functions / Motor start / Motor STOP (optional)

Operation

17.3.8 Motor STOP



Motor STOP command

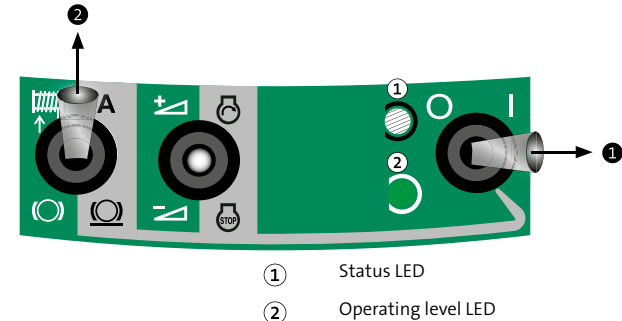
- ① Press the ON/OFF switch towards "ON" and keep it in this position.
Operating level LED lights up green.
- ② Press the switch briefly towards the body and the motor stops running.

Details: See function description / functions / Motor start / Motor STOP (optional)

17.3.9 "Additional command A"



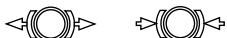
The "Additional command A" option is parametrized with the option "Motor start/STOP" at the factory.



Additional command A command

- ① Press the ON/OFF switch towards "ON" and keep it in this position.
Operating level LED lights up green.
- ② Press the switch briefly. The output of "Additional command A" is triggered for the duration of actuation. When released the output is switched off once again (jog mode).
Application example: power take-off shaft ON.

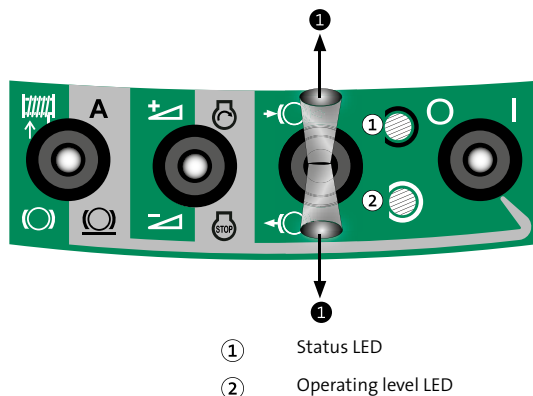
17.3.10 "Stutter brake"



WARNING!

Danger from falling load

Ensure that nobody is near the load to be lowered.



Stutter brake command



The "Stutter brake" switch has the same function in both actuation directions.

Details: See function description / functions / stutter brake STOP (optional)

Parameterization of the function stutter brake: see parameterization / parameterization stutter brake

- ① Press the switch away from or towards the body. The stutter brake function is activated for the duration of the actuation, and deactivated when released (jog mode).

17.3.11 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.

- ① Press the stop and emergency call switch until it locks into place.
- 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 s) the "Emergency" output is activated and the main alarm is tripped (siren: 1 s sound, 1 s 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")

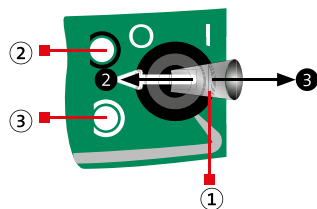
17.3.12 Reset "Active emergency"



Reset "Active emergency" command

- 1 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"



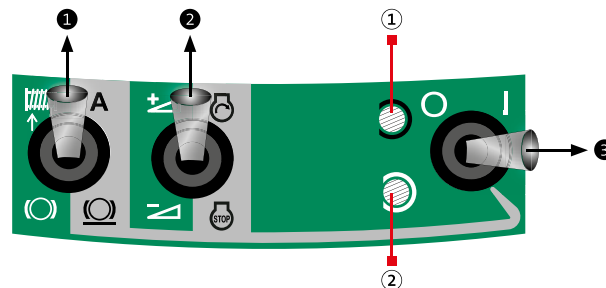
Reset alarm after "Active emergency"

- 2 Switch the transmitter off by pressing the ON/OFF switch towards "OFF" (O).
- 3 Switch the transmitter back on by pressing the ON/OFF switch towards "ON" (I).
The siren and the "Emergency" (only with main alarm) output are switched off and the alarm is reset.

17.3.13 Switch on "Passive emergency"



You only have to activate the passive emergency monitoring once, because the function is saved (even with the transmitter or receiver switched off).



- 1 Status LED
- 2 Operating level LED

Switch on "Passive emergency"

The transmitter must be switched off.

- ❶ Press the switch ("Pull drum") away from the body and hold the switch in this position.
- ❷ Press the switch ("Gas +") away from the body and hold the switch in this position.
- ❸ Press the ON/OFF switch towards "ON" (I) and keep it in this position.
Status LED lights up green.
Operating level LED lights up orange.
- ❹ Let go of all 3 switches so that they go back to their resting position.
The operating level LED lights up green.
The siren is triggered once, briefly.
Passive emergency is switched on. The transmitter switches itself off again.
- ❺ Switch the transmitter on (see operation / F10 S transmitter) if you want to resume your work.

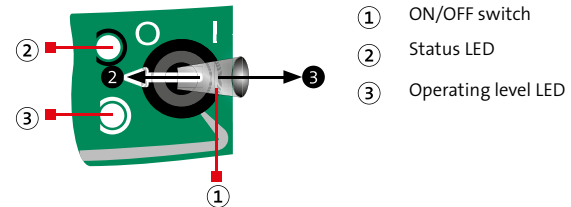
Details: See function description / functions / function passive emergency call ("passive emergency")

17.3.14 Reset "Passive emergency"

During the pre-alarm (siren: 2 s sound, 2 s pause)

- ❶ Cancel the trigger criterion of the passive emergency call:
 - In the event of an alarm by position monitoring --> Move the transmitter to an upright position
 - In the event of an alarm by acceleration monitoring --> Move the transmitter to an upright position
 - In the event of an alarm by range monitoring --> Bring the transmitter back within the range of the receiver (operating level LED stops flashing red)

During the main alarm (siren: 1 s sound, 1 s pause)



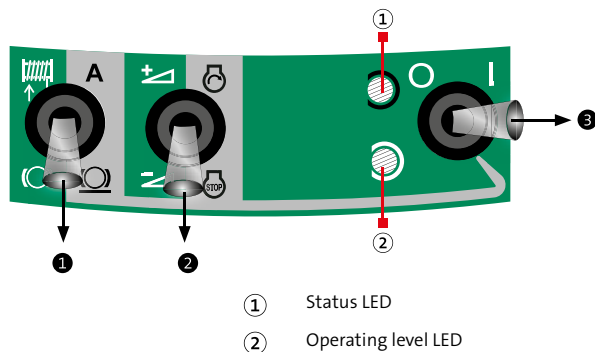
Reset alarm after "Passive emergency" during main alarm

- ② Switch the transmitter off by pressing the ON/OFF switch towards "OFF" (O).
- ③ Switch the transmitter back on by pressing the ON/OFF switch towards "ON" (I).
The siren and the "Emergency" output are switched off. The alarm is reset.

17.3.15 Switch off "Passive emergency"



If you switch off the passive emergency monitoring once the deactivation is saved (even with the transmitter or receiver switched off). Then **no more emergency calls** are transmitted with passive emergency criteria. If the function is required again then it must be reactivated.



Switch off "Passive emergency"

The transmitter must be switched off.

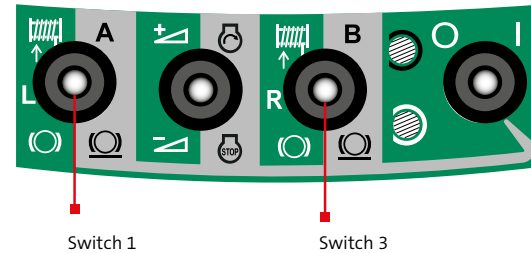
- ① Press the switch ("Release brake") towards the body and hold the switch in this position.
- ② Press the switch ("Gas —") towards the body and hold the switch in this position.
- ③ Press the ON/OFF switch towards "ON" (I) and keep it in this position.
Status LED lights up green.
Operating level LED lights up orange.
- ④ Let go of all 3 switches so that they go back to their resting position.
The operating level LED lights up red and the siren is triggered briefly twice.
Passive emergency is deactivated and the transmitter switches itself off again.
- ⑤ Switch the transmitter back on (see operation / F10 S transmitter) as soon as you want to resume your work.

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

17.3.16 Device model F10 DT wireless control

With the device model F10 DT (double drum) wireless control, the same standard commands ("Pull drum", "Release brake") as with the device model F10 ET wireless control (switch 1) can be carried out for the second winch (switch 3). Here, switch 1 is intended for the left winch and switch 3 for the right winch. Additionally with the F10 DT, the permanent brake release of the right winch is possible with switch 3 on the second operating level, and the additional command B (open for assignment) with the motor start/STOP option.

The option "Stutter brake" is not available for the device model F10 DT. All other functions are to be operated the same way as with the device model F10 ET.



Device model F10 DT wireless control

17.4 Eliminate fault states

No.	Fault	Solution
1	Diagnostics LED on the receiver is off	Check the receiver 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 wireless response received by receiver)	Check whether the receiver is switched on (diagnostics LED) / bring the transmitter within the receiver's range.

Table: Eliminate fault states

18 Maintenance and service

18.1 Recommended maintenance interval

Carry out maintenance work at least once a year.

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 wireless control unit to ensure that no function is accidentally triggered.

If you discover a fault:



DANGER!

Danger due to malfunctions

Do not work 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 any electric welding work is done on the log-moving vehicle, pull out the winch connection cable plug out of the winch socket in order to prevent damage to the receiver electronics.

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 wireless control unit so that no function is triggered accidentally. 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 Transmitter batteries

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).

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

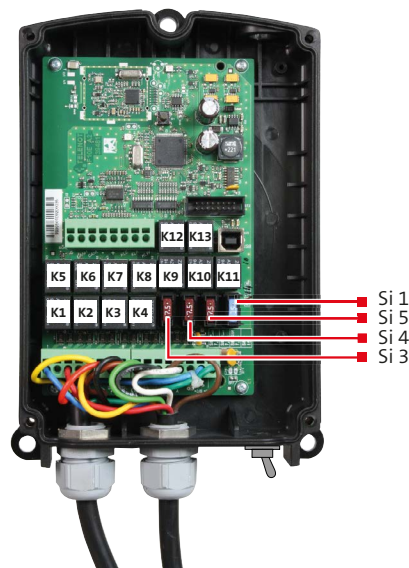
18.2.3 Fuse replacement on receiver F10 E



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 the fuses and relay in receiver F10 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

Table: Plug fuses in the F10 E receiver

All fuses: Vehicle mini plug fuse (mini fuse)

Relay

Relay	Meaning
K1	Emergency
K2	Additional command B (unassigned, free)
K3	Release brake R (F10 DT), permanent brake release R (F10 DT), cable ejection
K4	Pull drum L
K5	Motor STOP
K6	Siren
K7	Pull drum R
K8	Release brake L, permanent brake release L, cable ejection
K9	Gas +
K10	Gas –
K11	Unlock +UB
K12	Motor start
K13	Additional command A

Table: Relays

Procedure for the qualified specialist

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



In general, do not interfere with the device any further, 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 F10 E receiver disassembly

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

19.3 Disposal

- Scrap the metal parts
- 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 wireless channels (434.175 MHz / 434.475 MHz / 434.675 MHz)
System address	Unique address for transmitter and receiver (approx. 16 million)
Control commands	10 control commands, additional 1 x emergency and 1 x siren (horn)
Modulation	GMSK
Receiver category	2
Max. emitted transmission power	< 10 mW
Hamming distance	D = 6
Operation mode	Half duplex
Operating temperature	−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
Approvals / recognitions	KWF test marking (Test No. 6864)
Performance Level (risk assessment)	ISO 13849-1:2015 class 1 PL c

Transmitter

Feature	Figure
Range	Several hundred meters in a free field
Power supply	2 eneloop® AA rechargeable batteries 1.2 V DC / 1,900 mAh (optional 2 AA batteries)
Operating time	50 hours continuous transmission with a battery charger
Antenna	Integrated
Acceleration sensor	3 axes
Dimensions (WxHxD)	(116×161×61) mm
Color	black, control panel green / gray
Material	Polyamide / 66 – GF + TPE
Weight	Approx. 600 g with battery

Technical Data

Receiver

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	Indicates operating states and faults
Antenna	Integrated, optional: Portable antenna / remotely positioned using a cable
Dimensions (WxHxD)	(152×218×51) mm, with emergency call TD (152×218×66) mm
Color	Black
Material	PC/ABS
Weight	Approx. 670 g
Connection cable, length	2.7 m

A-LG 230 V battery charger

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.

Make sure to obey the country-specific laws and regulations for use of radio networks. The F10 wireless control may be operated without restriction 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



EU Konformitätserklärung / EU Declaration Of Conformity

Hersteller / Manufacturer
TELENOT ELECTRONIC GMBH
Wiesentalstraße 42
73434 Aalen
Germany

Das nachfolgend beschriebene Gerät/Produkt / The following designated device/product:

Ausgabestand Issue Date	F10_01_2016
Bezeichnung Designation	Funksteuerung für Forstseilwinden Radio control for forestry winches
Kurzbezeichnung Short-term	F10
Funktion Function	Die Funksteuerung dient der bequemen und sicheren Fernbediennung von Forstseilwinden und elektrischen Zusatzeinrichtungen. The radio control is used for comfortable and secure remote control of forestry winches and auxiliary electrical devices.

stimmt mit folgenden EG-Richtlinien überein: is found to comply with these EC directives:	
<input checked="" type="checkbox"/> 2006 / 42 / EG (Maschinenrichtlinie) (Machinery Directive)	ISO 13849-1:2008 bis / till 29.06.16 ISO 13849-1:2015 ab / from 30.06.16 EN 60204-1:2006 / A1:2009 ISO 12100:2010
<input checked="" type="checkbox"/> 1998 / 5 / EG bis / till 12.06.16 (RÖTTE - Richtlinie / RÖTTE - Guideline)	EN 300 220-2 V2.4.1 (2012-05) EN 301 489-1 V1.9.2 (2011-09)
<input checked="" type="checkbox"/> 2014 / 53 / EU ab / from 13.06.16 (RED - Richtlinie / RED - Guideline)	EN 301 489-3 V1.6.1 (2013-08) EN 62479:2010
<input checked="" type="checkbox"/> 2011 / 65 / EU (RoHS - Richtlinie) (RoHS - Guideline)	EN 50581:2012
und hält die Schutzziele der folgenden EG-Richtlinien ein / and complies with the objectives of the following EC directives:	
<input checked="" type="checkbox"/> 2014 / 35 / EU (Elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen, Niederspannungsrichtlinie) (Electrical equipment designed for use within certain voltage limits, low voltage Directive)	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+AC:2011+A2:2013
<input checked="" type="checkbox"/> 2014 / 30 / EU (Elektromagnetische Verträglichkeit) (Electromagnetic compatibility)	ISO 14982:1998

Die Sicherheitsmerkmale und Einbauanweisungen der dem Gerät beiliegenden Produktdokumentation sind zu beachten.
The security documentation and installation documentation have to be considered.

Dokumentationsverantwortlicher /
Person responsible for documentation

Hartmut Wimmer

TELENOT ELECTRONIC GMBH, den
Name / Name
20.04.2016
Peter Wunderle
Funktion / Position
Geschäftsführer / CEO

rechtsgültige Unterschrift / legally binding Signature

Testurkunde



Das
Kuratorium für Waldarbeit und Forsttechnik e.V.

zeichnet die
Funkfernsteuerung für Doppeltrommel-Winden
Typ „B&B F 10 DT“

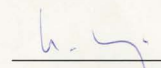
der Firma
Telenot Electronic GmbH
73434 Aalen, Deutschland

für den im Jahr 2014 bestandenen Test mit dem
KWF-Testzeichen „Funkfernsteuerung für Rückeseilwinde“ aus.

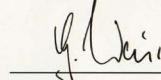
Prüfnummer: 6864

Kuratorium für Waldarbeit und Forsttechnik e.V.

Groß-Umstadt, den 16. Juli 2014

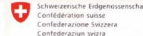


Geschäftsführende Direktorin



Prüflingenieur

In Anerkennung der vom KWF erbrachten
Prüfleistung ist das ausgezeichnete Produkt
berechtigt, auch folgende Prüfzeichen zu tragen:

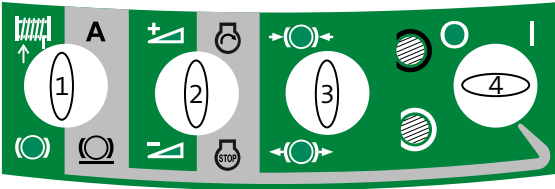


Wireless control F10

Transmitter operation (basic functions)

You can find the extended functions in the technical description.

▽▽	Additional command A	Motor start	Additional command B	+	Hold in „ON“ position
▽	Pull left	Increase motor speed	Pull right		„ON“



▽	Release left	Reduce motor speed	Release right		„ON“
▽	Permanent release left		Permanent release right		„ON“
▽▽	Permanent release left	Motor STOP	Permanent release right	+	Hold in „ON“ position

- Legend
- ▽ Short operation
 - ▽ Long operation
 - ▽▽ 2-switch operation

Symbol overview	
Transmitter OFF	
Transmitter ON	
Pull drum	
Release brake	
Permanent brake release	
Gas +	
Gas -	
Motor start	
Motor STOP	

Subject to technical modifications