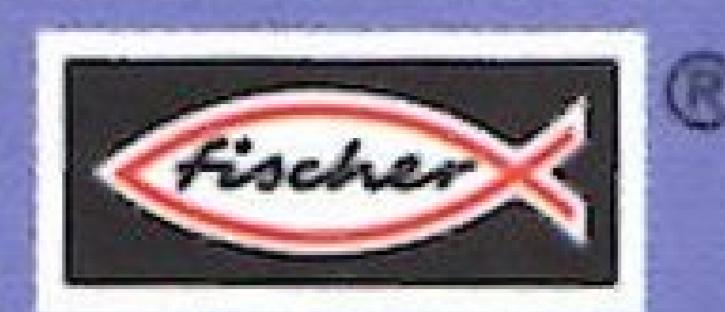
fischertechnik :



Bedienungsanleitung Instruction Manual Mode d'emploi Gebruiksaanwijzing Manual de instrucciones Instruções de operação Manuale di istruzioni Инструкция по эксплуатации 操作说明书







Abb. 1 Einzelteilübersicht

Fig. 1 Spare parts list

ATL

Afb. 1 Onderdelenoverzicht

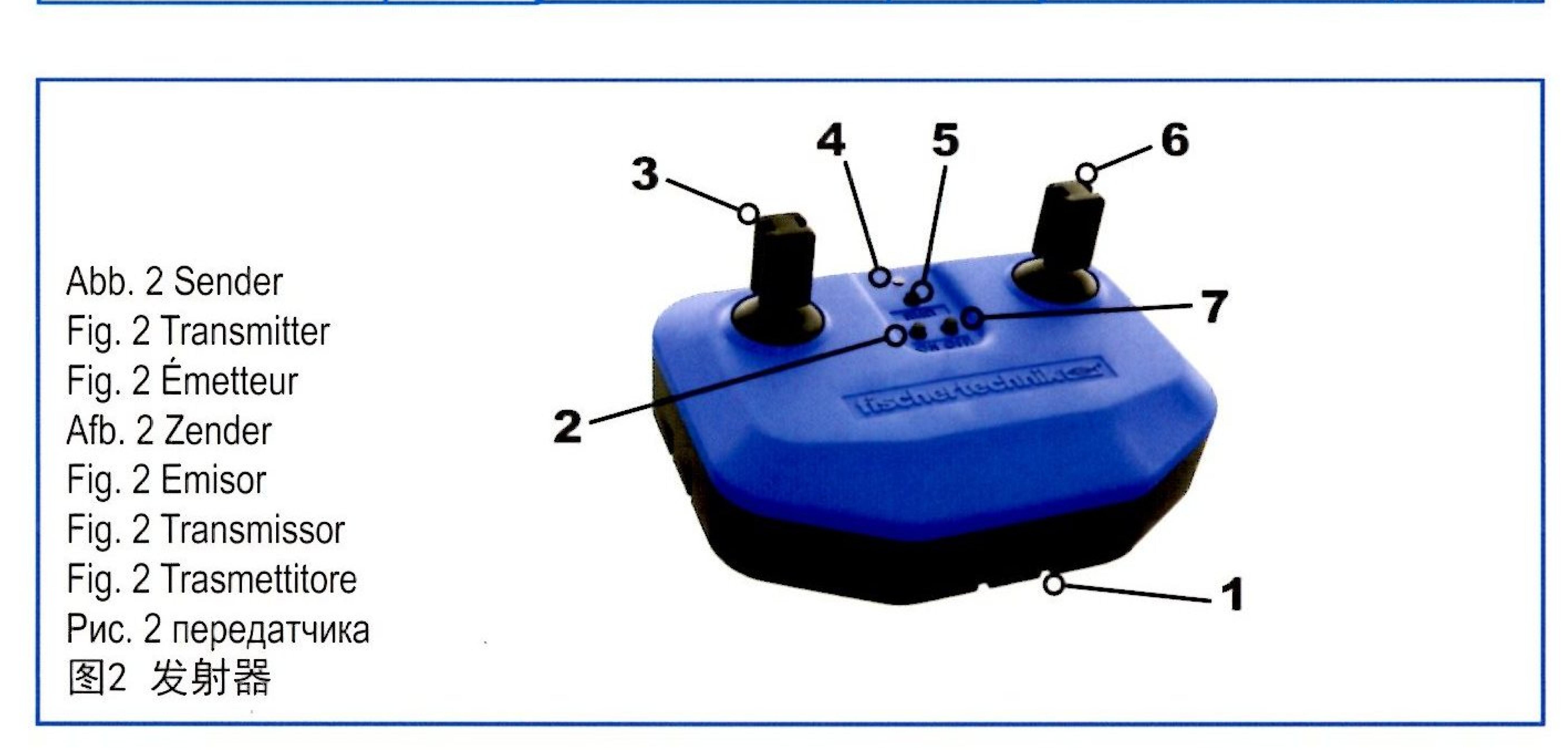
Fig. 1 Lista da piezas

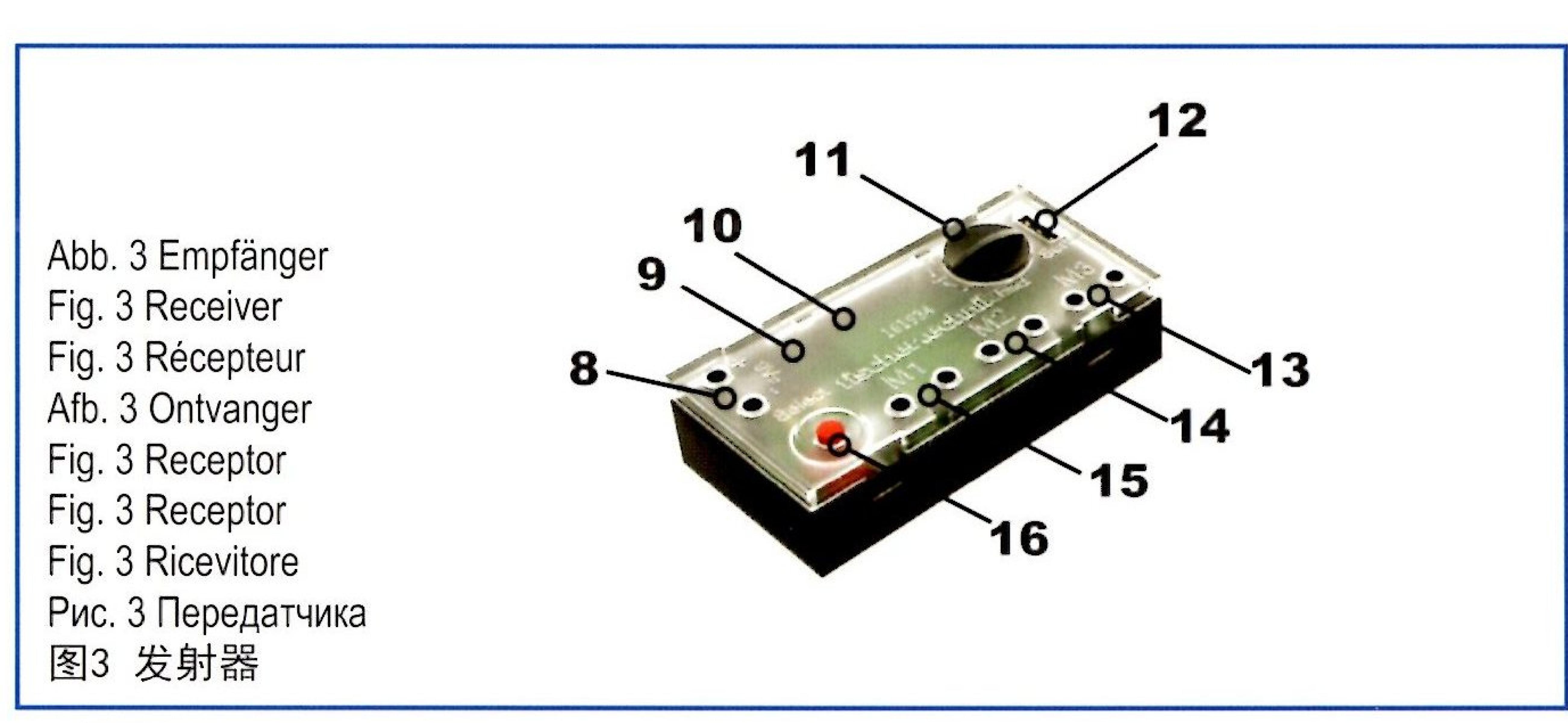
Fig. 1 Singoli componenti Рис. 1 Отдельные детали

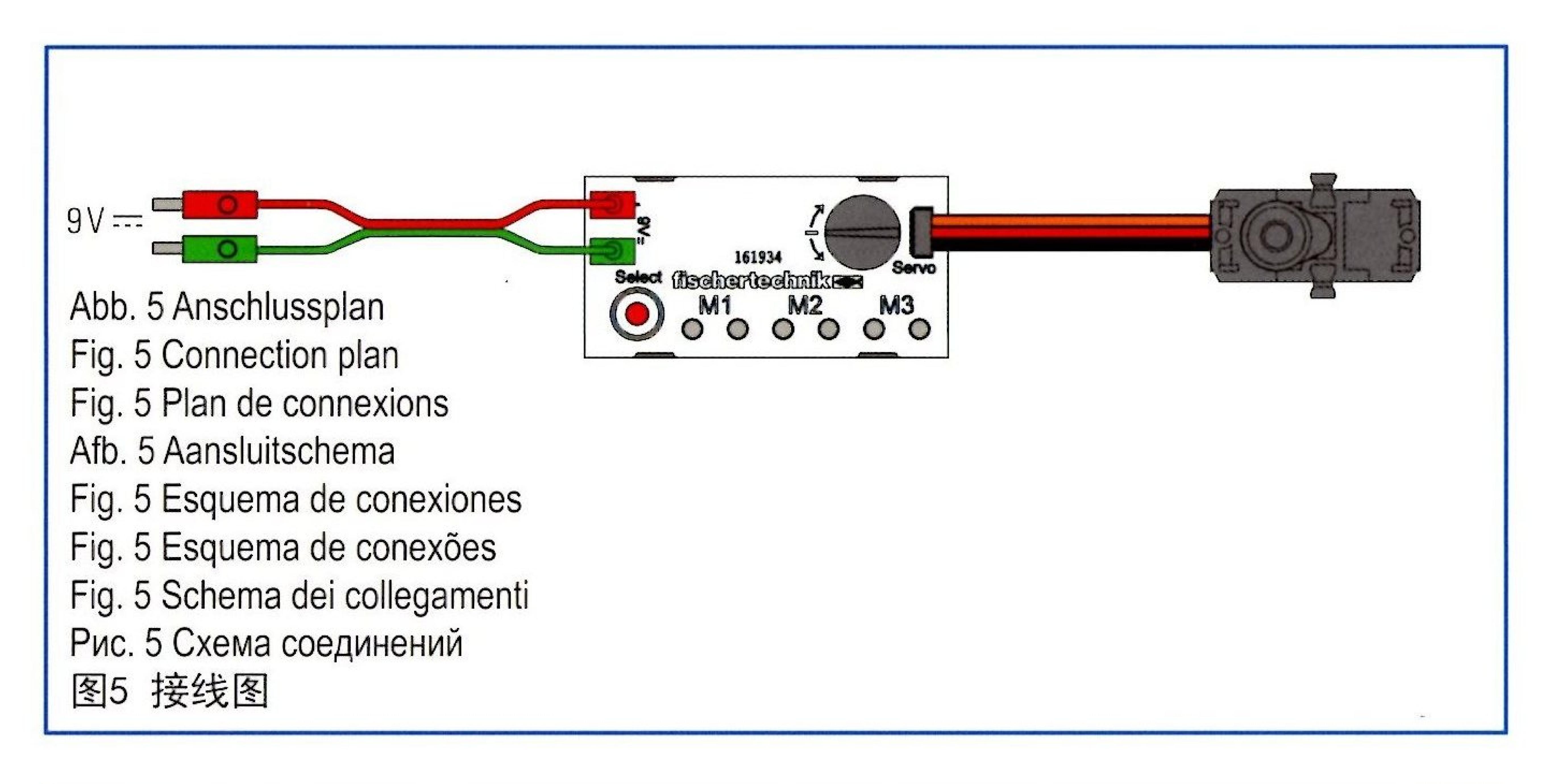
Fig. 1 Liste des pièces détachées Fig. 1 Resumo de peça individual

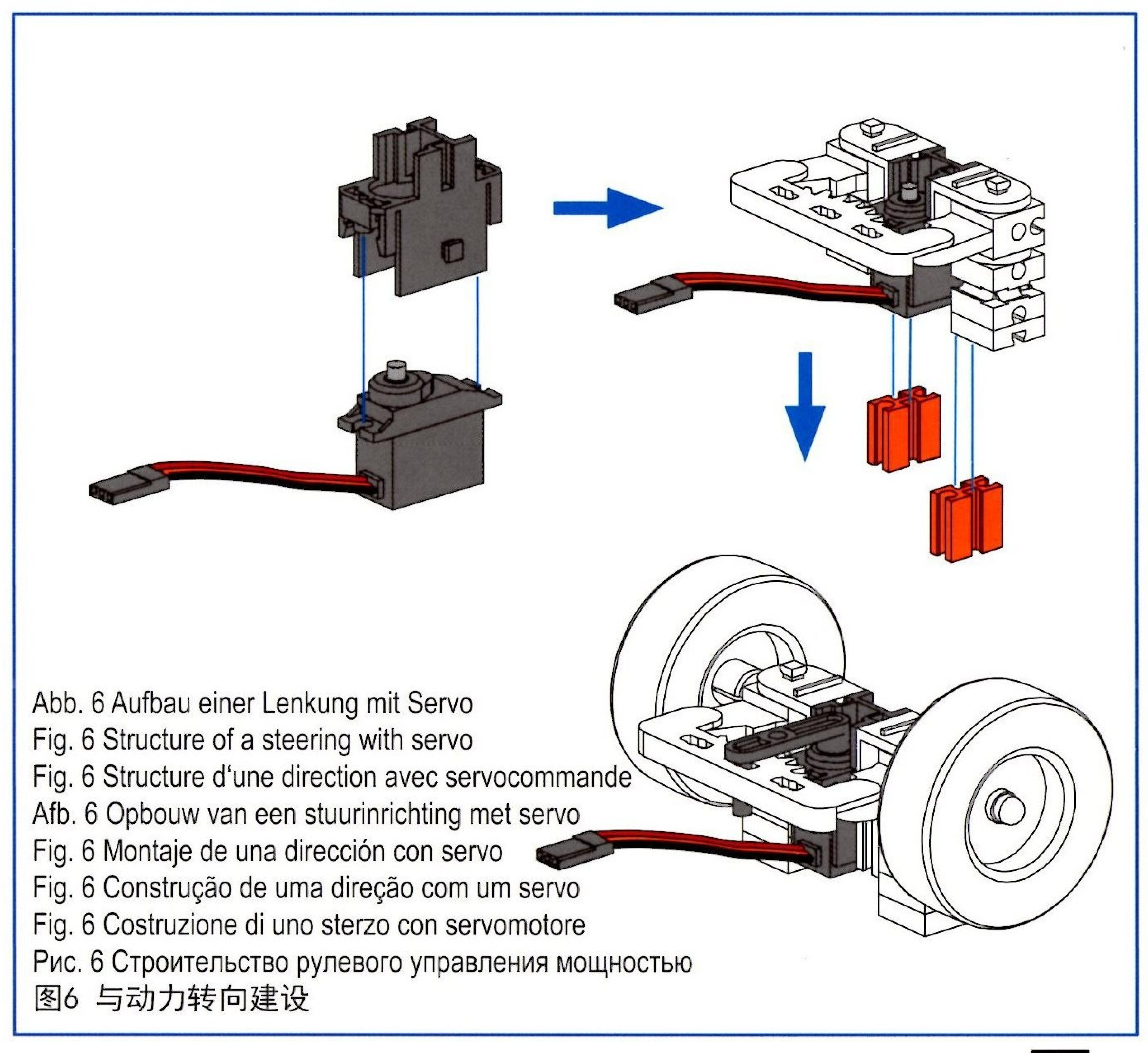
图1零件概览

	161 942		132 004		36 977
	1 x		1 x		1 X
	161 943		31 336		37 468
	1 X		2 x		2 x
	132 292		31 337		38 240
	1 X		2 x		2 x
	132 290		31 982		
	1 x		2 x		











1 The Bluetooth Control Set

Now the wide variety of functions from fischertechnik models can be controlled even more easily using the fischertechnik Bluetooth remote control.

The set consists of a high-performance transmitter, a microprocessor controlled receiver and a servo. The receiver is installed directly in the model and connect up to three motors or lamps and a servo to it. The speed of the motors and the servo deflection can be regulated infinitely. The range of the transmitter is over 10 metres.



Please absolutely observe the safety instructions in Chapter 13!

2 Coupling the transmitter with the receiver (pairing)

At the first commissioning the transmitter and receiver must be coupled with each other. This process is called "pairing" in Bluetooth terminology.

Procedure:

- 1. Place the 9 V block battery (not included in scope of delivery) in the battery compartment of the transmitter (1).
- 2. Connect the receiver with a fischertechnik 9 V power supply via the two fischertechnik sockets (8) (9 V battery holder, rechargeable battery pack or power pack, not included in scope of delivery). Afterwards the blue LED on the receiver flashes (about 1x per second).
- 3. Switch on the transmitter via the ON button (2). The blue LED also flashes 1x per second.
- 4. Press the Select button on the transmitter approx. 3 sec., until the blue LED flashes rapidly (about 4x per second). Afterwards release the button and press the Select button on the receiver until the blue LED on the both the transmitter and the receiver are lit continuously. Now both are paired with each other and can exchange data.

This process only has to be performed once. Afterwards the devices detect each other automatically and connect as soon as both are switched on. One detects that the transmitter and receiver are connected to each other by the continuously lit blue LEDs.





3 The Transmitter

Power supply

A 9V block battery is required for operating the transmitter (6F22, not included in the scope of delivery). No other power supply may be used.

Transmitter view (see Fig. 2, page 1)

• Left joystick (3)

for control of output M1 and M2 of the receiver When the joystick is moved upward, the motor M1 turns in one direction, when the joystick is moved downward it turns in the other direction. The speed of the motor changes the more the joystick is deflected. The same applies to the movement to the left or right for motor M2.

Right joystick (6)

for control of output M3 and the servo output of the receiver. To control output M3, move the joystick up and down. If the joystick is moved to the left or right, then the servo moves from the centre position in the respective direction. With this an excellent steering can be built for a vehicle. Assembly example Fig. 6.

• LED (4)

Operating display is lit continuously when the transmitter is switched on and is connected with a receiver.

Flash codes

Flashes slowly, approx. 1x per second	Receiver is not connected		
Flashes rapidly, approx. 4x per second	Pairing mode, receiver searches for a transmitter		
Flashes approx. 2x per second	Power supply too low, battery must be replaced soon.		





Select button (5)

Press briefly: LED changes colour from blue to yellow. The frequency is switched to a second receiver, which can be connected to and controlled by the same transmitter, without the first receiver being negatively influenced (see also Chapter 8). Continuing to press the button changes back to the first receiver (blue).

Pressing long (approx 3 sec.): Pairing mode is activated. The LED flashes rapidly (approx. 4x per second). Pairing mode remains active for approx. 30 sec. If during this time there is no receiver found it is switched off again. During the 30 sec. the pairing mode can be immediately switched off by briefly pressing the button.

• 0N button (2)

Pressing this button switches on the transmitter. The LED (1) lights up blue or yellow depending on which receiver was set last.

If no joystick is moved on the transmitter for an extended time, the transmitter switches off to save battery power. You can then switch the transmitter back on simply by pressing this button.

• OFF button (7)

The transmitter is switched off by pressing this button for approx. 3 sec.

Battery compartment (1)

The 9V block battery 6F22 is located in this compartment on the bottom of the transmitter (not included in the scope of delivery) for power supply of the transmitter. To insert or to change the battery, loosen the locking screw of the battery compartment and then remove the cover by pressing on the locking tab. The battery is connected with a type of pushbutton. Important! The plug only fits in one specific position on the battery. Then place the cover back on and tighten the screw.





4 The Receiver

Receiver view (Fig. 3, page 1)

Sockets for power supply (8)

Absolutely observe the safety instructions in Chapter 13!

For connection of power supply see Fig. 5. The rechargeable battery set can be used as power supply (not included in scope of delivery). Only one of the specified power supplies may be used.

LED display blue/yellow (9)

This operating display lights continuously when the power supply is connected and the receiver is connected with a transmitter.

Blue means: the receiver is operated as "Receiver 1" of a transmitter.

Yellow means: the receiver is operated as "Receiver 2" of a transmitter.

Also see Chapter 8: Pairing two receivers with one transmitter.

Flash codes

Flashes slowly, approx. 1x per sec. Receiver is not connected

Flashes rapidly, approx. 4x per sec.

Pairing mode, receiver searches for a transmitter

• LED display green (10)

Lights continuously Receiver is in normal mode

Flashes slowly, approx. 1x per sec.

Caterpillar function is activated (see Chapter 6: Control of caterpillar vehicles)

Flashes approx. 2x per sec.

Power supply too low, battery must be replaced soon or rechargeable battery pack charged

Short circuit in the wires or a motor is overloaded. The motor outputs are automatically switched off



Servo connection (12)

Connection for the fischertechnik servo (item no. 132292) see also Fig. 5. Pay attention to the correct poles when connecting the servo. It can be recognized in the shape of the plug.

Trimmer for servo (11)

Setting of the centre position of the servo. By turning on the trimmer the steering of the model, for example, can be set so that it moves exactly straight forward if the joystick for the steering is in the centre position.

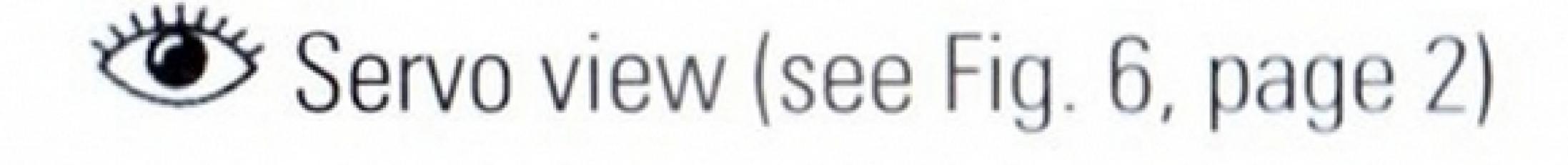
Motor connections M1 - M3 (15, 14, 13)

Here the motors M1 to M3 are connected via plugs. When the direction of rotation of a motor should be changed, simply switch the plugs of a motor.

Select button (16)

Pressing long (approx 3 sec.): Pairing mode is activated. The LED flashes rapidly (approx. 4x per sec.). Pairing mode remains active for approx. 30 sec. If during this time there is no receiver found it is switched off again. During the 30 sec. the pairing mode can be immediately switched off by briefly pressing the button.

5 Servo



The fischertechnik servo (item no. 132292) is connected to the servo connection of the receiver Fig. 3, (12).

Note: The servo plug must be plugged in as shown in Fig. 5.

If plugged in incorrectly, the servo does not function.

It is activated by the right joystick of the transmitter and changes its deflection depending on the position of the joystick. The servo is mainly used for steering vehicles.





For installation and operation of the servo make sure that the servo is not blocked.



Attention! Please absolutely observe the following sequence when installing the servo

- 1. Connect the receiver to the power supply.
- 2. Turn the trimmer (Fig. 3, (11) in the centre position.
- 3. Connect the servo to the receiver.
- 4. Install servo lever. During installation the steering must be in the centre position.

6 Control of caterpillar vehicles

Caterpillar vehicles are driven as a rule by two motors. During this one motor drives the left side and the second motor drives the right side. If both motors turn at the same speed in the same direction, the model moves straight ahead. If the motors turn with different speeds, the model moves in a curve. If the motors turn in opposite directions, the model turns in place.

These types of models can be controlled in two ways:

Individual control of the motors

Separate controls of both motors each via one joystick: Left motor on M1 (left joystick), right motor on M3 (right joystick). Each motor is controlled individually via one joystick. Disadvantage: To move precisely straight ahead, both joysticks must be deflected identically wide. That is somewhat difficult.

Intelligent caterpillar control

If the caterpillar function is activated on the receiver by briefly pushing the "Select" button, a caterpillar, whose motors are connected on M1 and M2, can be controlled very simply and comfortably via the left joystick of the transmitter. Both motors are simultaneously controlled corresponding to the position of the joysticks, so that the model moves in the desired direction. See also Chapter 4 "Receiver" — Select button.





Example:

Lever position	Driving direction	
1	Straight ahead	
7	Right curve	
->	Turning in place	

7 Cruise control function

If it is desired for a motor to remain switched on continuously and run regardless of the joystick position with the same speed, there is a "cruise control" function. This function can be set for the motors on the left and right joystick independent of each other. With this function the motor of a Ferris wheel or the lighting of a vehicle, for example, can be switched on continuously.

Cruise control for left joystick

Switching on the cruise control function.

Move the joystick of the respective motor until the motor runs with the desired speed. Press the ON button (Fig. 2, 2). The motor now continues to run with the same speed, even if the joystick is released.

Cruise control for right joystick

Switching on the cruise control function.

Move the joystick of the respective motor until the motor runs with the desired speed. Briefly press the OFF button (Fig. 2, 7). The motor now continues to run with the same speed, even if the joystick is released. the setting of the servo can be set permanently in the same manner via the cruise control function.

Switching off the cruise control function.

Press the joystick of the respective motor to full deflection and the function is switched off again.





8 Pairing two receivers with one transmitter.

If more than 3 motors and one servo is required for a model, then 2 receivers can be addressed with one transmitter without interference between them.

Proceed as follows to do this:

- 1. There is already one receiver paired with a transmitter as described in Chapter 2.
- 2. Another receiver is connected with a fischertechnik 9 V power supply (rechargeable battery pack, power pack). The blue LED flashes 1x per sec.
- 3. Press the "Select" button on the transmitter once briefly. The LED now flashes yellow. Then press the "Select" button longer (approx. 3 sec.) until the yellow LED flashes rapidly. By pressing the "Select" button longer (approx. 3 sec.) on the second receiver, this is also set into pairing mode.
- 4. The blue LED on this receiver changes to yellow and lights up continuously. The receiver is connected with the transmitter as "Receiver 2".
- 5. Now by briefly pressing the "Select" button you can switch between Receiver 1 and Receiver 2. The blue/yellow LED lights continuously on the relevant paired receiver. The LED on the non-paired receiver flashes slowly (approx. 1x per sec.)

This pairing process also has to be performed only once. Afterwards the devices detect each other automatically and connect as soon as they are switched on.

9 Several Control Sets in One Room

The Bluetooth remote technology enables operation of as many control sets as desired. These sets consist of one transmitter and one or two receivers in the same room, without interfering with each other. Only be careful if during the pairing process several transmitters and/or receivers are in one room, switched on and pairing mode is activated. It can happen that the wrong receiver is paired. Therefore only one receiver should be put into pairing mode at the same time.





10 Smartphone App Bluetooth Control

With the Smartphone App Bluetooth Control (for Version 5.0 Android and higher and iOS), one or two receivers can be controlled using the Smartphone. This App can completely replace the transmitter and offers the same scope of functions. The App is available for free in the respective Playstore/App Store.

11 Technical Data

Control Set for control of 3 motors and 1 servo	
Frequency band Bluetooth Max. emitted transmission power	2,402 - 2,480 GHz 1,37 mW
Range	10 m
Transmitter power supply	9 V block battery
Number of possible receivers per transmitter	2
Number of possible pairs (each transmitter + receiver) in one room without interfering with each other	as many as desired
Receiver power supply	9V === Accu Set
Receiver output power load	per output, max. 0,8 A

12 If it does not function...

The LEDs of the transmitter and receiver emit various flash codes, which signal the respective operating state.

LED on transmitter	Description	
LED lit continuously	Battery voltage OK The transmitter is paired with the receiver	
LED flashes 1x per sec.	Transmitter is not paired with any receiver	
LED flashes approx. 2x per sec.	The battery is almost empty and must be replaced. The full range is no longer guaranteed	
LED does not light after switching on	The battery is empty, battery not correctly plugged in. Transmitter is faulty (contact fischertechnik Service)	





Blue/yellow LED on receiver	Description
LED lit continuously.	Power supply OK The receiver is not paired with a transmitter
LED flashes 1x per sec.	The receiver is not paired with a transmitter
Colour blue	Receiver is operated as "Receiver 1"
Colour yellow	Receiver is operated as "Receiver 2"
LED green on receiver	
LED lit continuously.	Receiver is in standard mode
LED flashes 1x per sec.	Caterpillar control is activated (see Chapter 6)
LED flashes 2x per sec.	The rechargeable battery pack is almost empty or the power supply is too low.
LED flashes 4x, quickly per sec.	Short circuit in the wires or a motor is overloaded or blocked. The motor outputs are automatically switched off.
LEDs do not light after switching on.	Power supply not OK, poles reversed in power supply. The receiver is faulty (contact fischertechnik Service).
The servo does not run.	Servo plug is plugged incorrectly in the connection on the receiver. See Fig. 5 on page 2.
The servo swings out to the left and right uncontrolled.	Battery voltage too low. Use a new battery or charge the recharge- able battery pack.
Transmitter and receiver cannot be paired.	Possibly there is still an existing connection in the transmitter or receiver. First delete all pairing both on the transmitter and on the receiver: One after another activate the pairing mode using the "Select" button and leave again by pressing the button again. Afterwards try to pair again (Chapter 2)
Several motors connected to the receiver turn simultaneous- ly even though the joystick is only deflected in one direction.	Green LED on receiver flashes slowly (approx. 1x per sec.). Caterpillar control is activated. Briefly push the "Select" button on the receiver. Green LED lights continuously, normal mode is active.





13 Important Information

Safety instructions

- Check battery charger regularly for damage.
- If damaged the charger must no longer be used until it is fully repaired.
- Do not stick wires in the socket!
- Non-rechargeable batteries must not be charged!
- Take rechargeable batteries out of the battery pack before charging!
- Only charge the rechargeable batteries under the supervision of an adult!
- Insert batteries with the correct polarity!
- Take dead batteries out of the transmitter!
- Connection terminals must not be short-circuited!
- The receiver must only be operated with the fischertechnik rechargeable batter pack item no. 35537!
- When connecting the rechargeable battery pack, always connect the red plug with the plus terminal (+) of the rechargeable battery pack and the green plug with the minus terminal (-) of the rechargeable battery pack!

Instructions for environmental protection



This device does not belong in household rubbish. At the end of its service life it must be deposited at a collection point for recycling of electrical and electronic devices. The symbol on the product, the packaging or the instructions indicates this.

Electromagnetic interferences

If the Control Set is disrupted by external electromagnetic influences, it can be further used as intended after the end of the interference. Possibly the power supply must be briefly interrupted and the Control Set restarted.

Guarantee

The fischertechnik GmbH provides warranty for the accuracy of the Control Set corresponding to the current relevant state of technology. The right to make constructional or design modifications, which neither affect the functional efficiency nor the value of the device and shall not be a cause for complaint.





Obvious faults must be made in writing within 14 days after delivery, otherwise warranty claims for obvious faults shall be excluded.

No warranty claims shall exist due to a negligible defect of the Control Set. Otherwise, the customer can only request subsequent fulfilment, i.e. repair or replacement. The customer has the right to choose to withdraw from the contract or to request a reduction of the sales price if the subsequent fulfilment fails, is especially impossible for us, is not done by us within a reasonable time, if we refuse to perform the remedy or if delays in the remedy are culpably caused by us. The warranty term is 24 months after delivery. We shall not be responsible for material defects of the Control Set, which result through improper handling, normal wear, incorrect or negligent treatment, nor for the consequences of any improper modifications or maintenance work performed by customer or third parties. The warranty is defined according to German law.

Intended use

The Control Set must only be used for operating and controlling fischertechnik models.

Liability

Liability of fischertechnik GmbH for damage that result from the Control Set not being used for intended use is excluded.

EU Declaration of Conformity

fischertechnik GmbH hereby declares that the "BT Control Set, item no. 540585" complies with Directive 2014/53/EU. The complete text for the EU Declaration of Conformity can be found at the following Internet address: www.fischertechnik.de/BT-Control-Set

fischertechnik GmbH Klaus-Fischer-Str. 1 72178 Waldachtal Germany Phone +49 74 43/12-43 69
Fax +49 74 43/12-45 91
info@fischertechnik.de
www.fischertechnik.de

fischertechnik







13432 · 02/17 · Co · Printed in Germany · Technische Änderungen vorbehalten · Subject to technical modifica