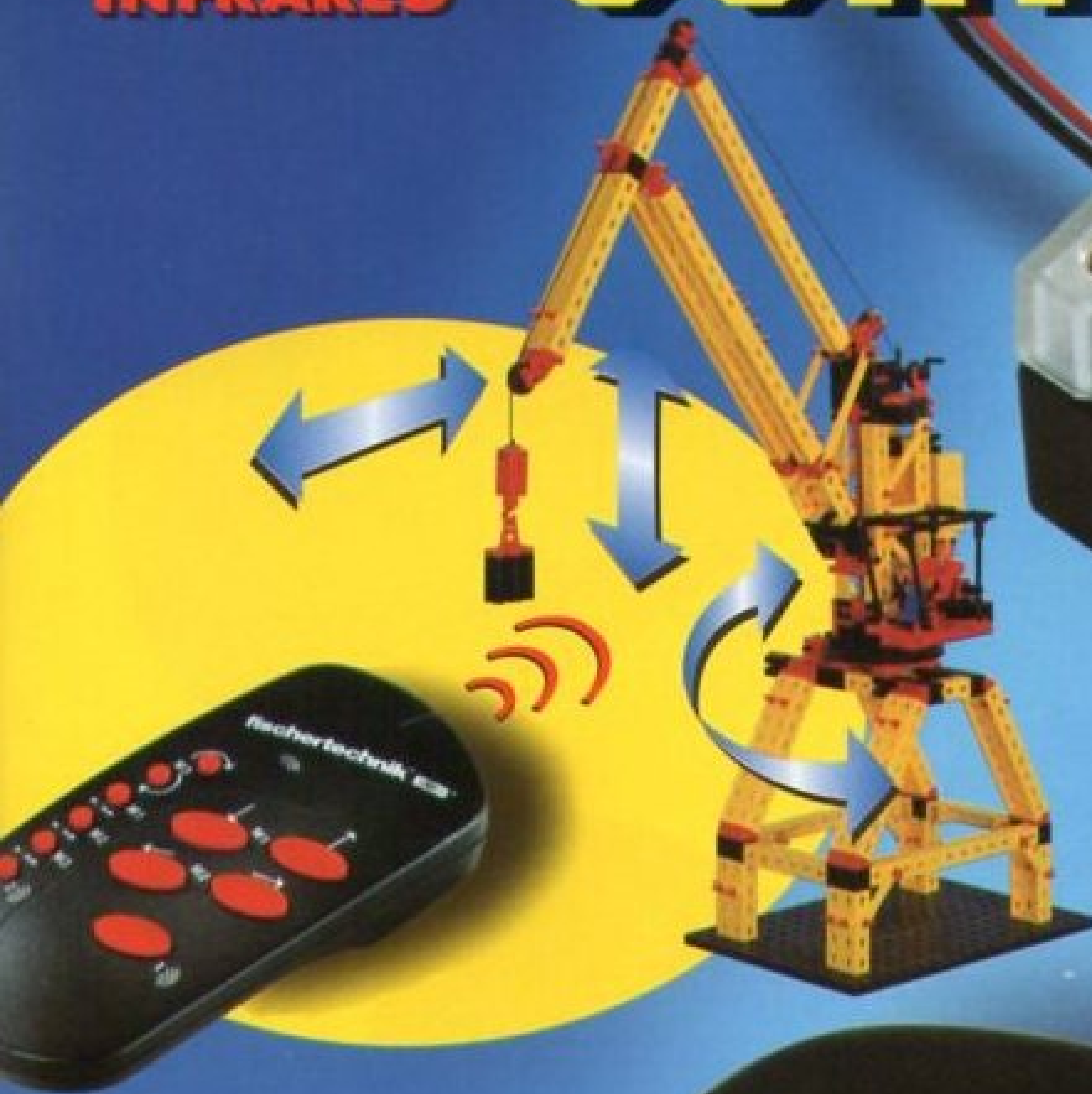


IR
INFRARED

CONTROL SET



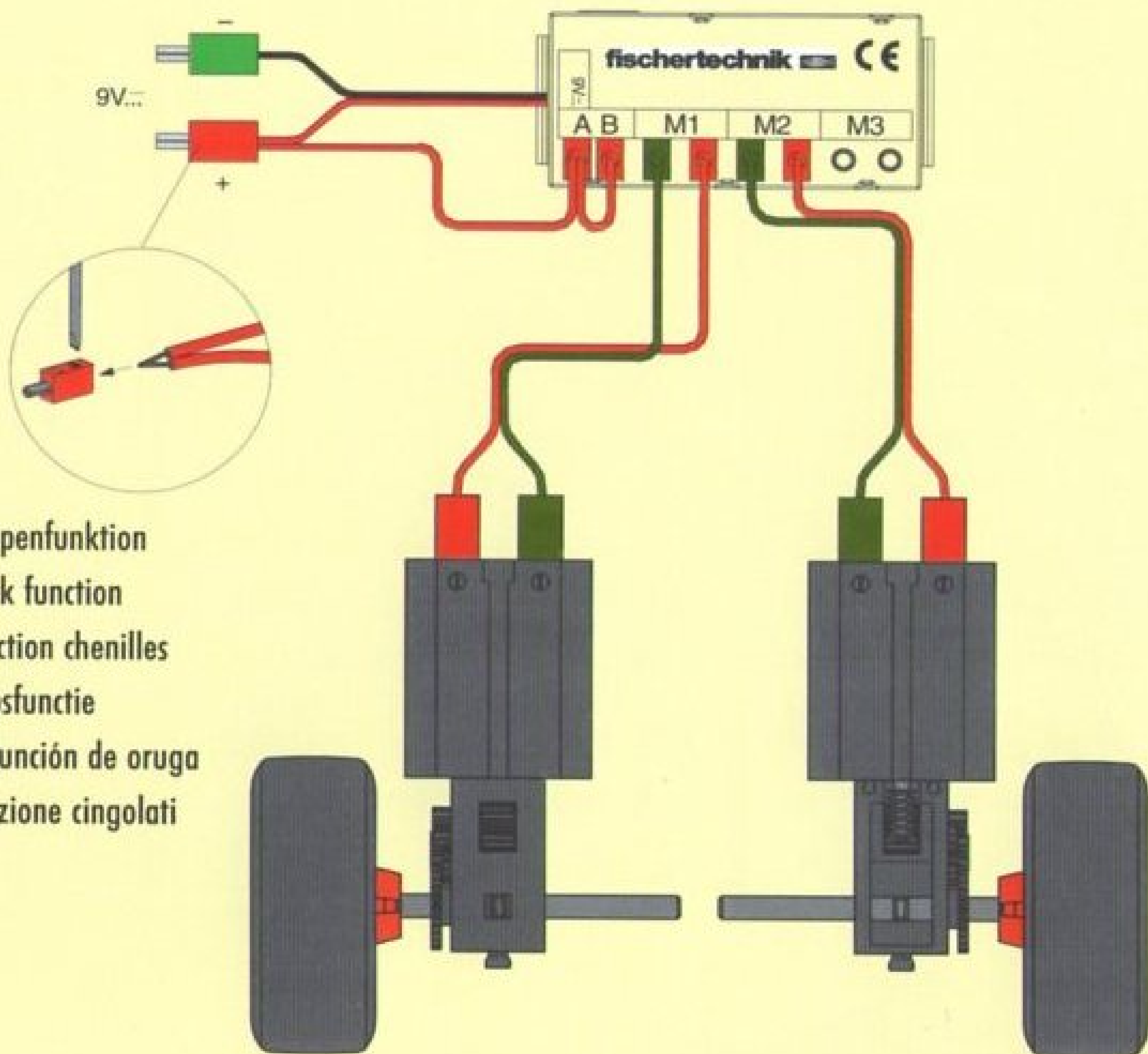
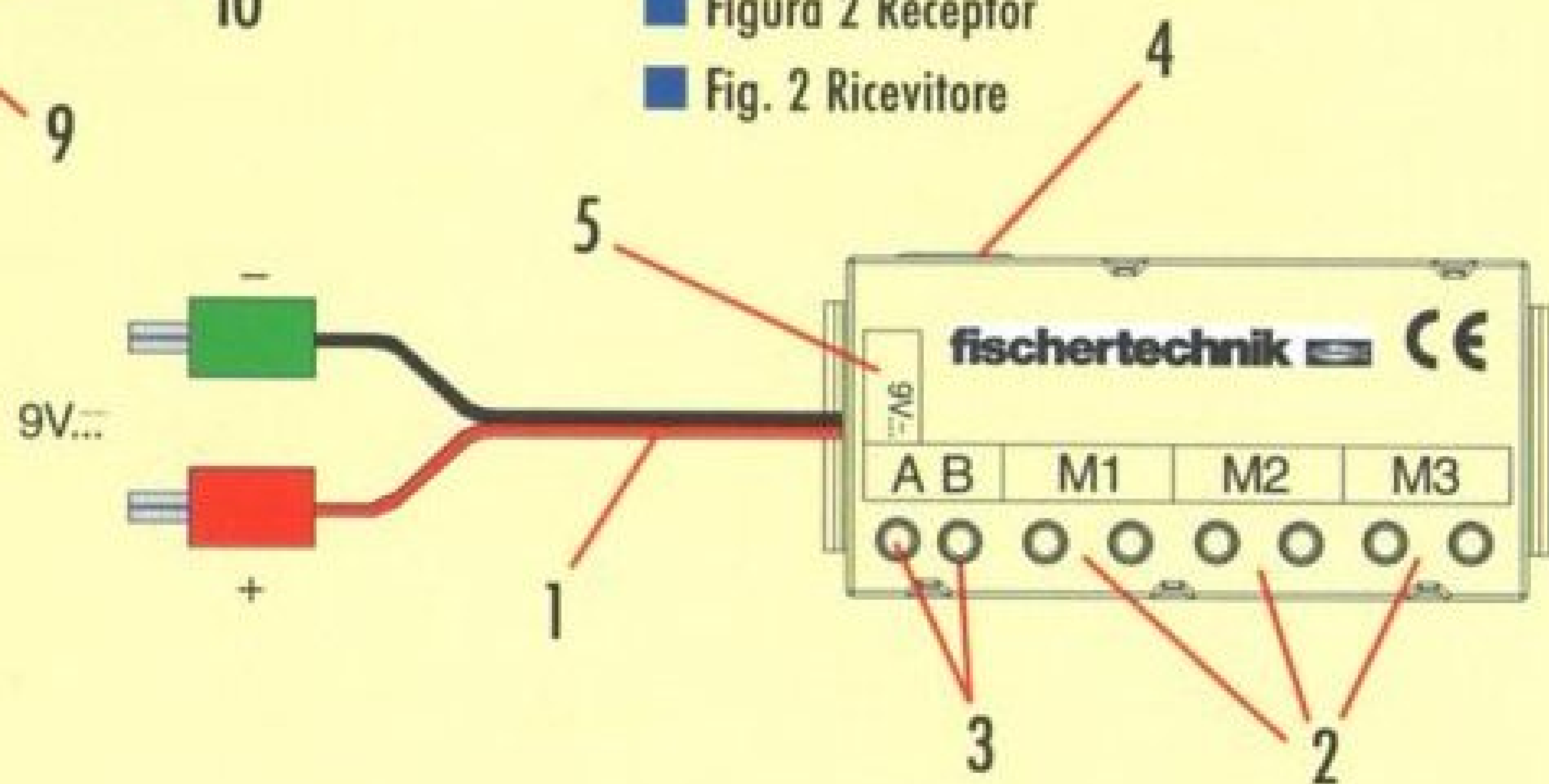
fischertechnik® 



- Abb. 1 Sender
- Fig. 1 Transmitter
- Fig. 1 Emetteur
- Afb. 1 Zender
- Figura 1 Emisor
- Fig. 1 Trasmittitore

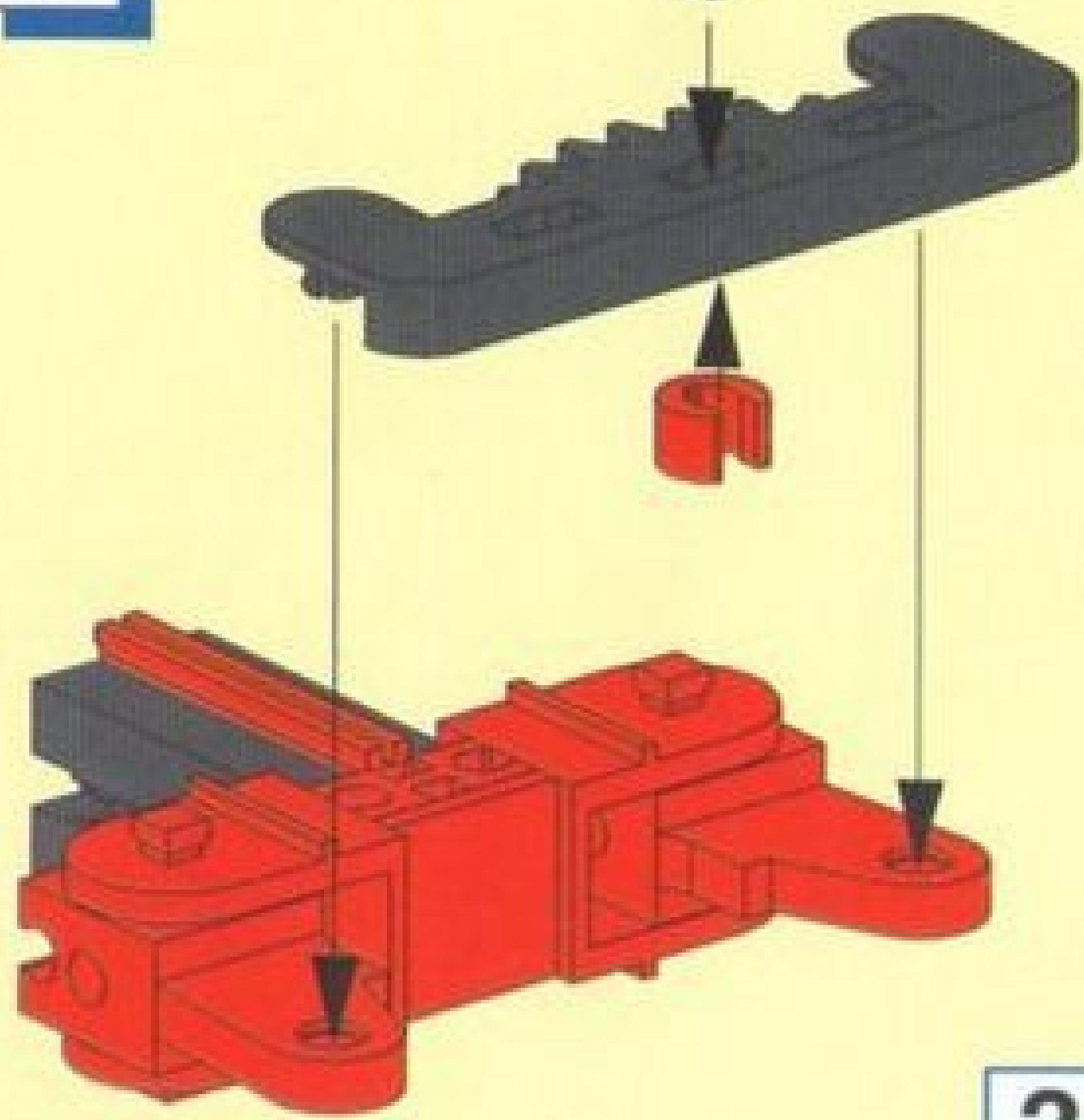


- Abb. 2 Empfänger
- Fig. 2 Receiver
- Fig. 2 Récepteur
- Afb. 2 Ontvanger
- Figura 2 Receptor
- Fig. 2 Ricevitore

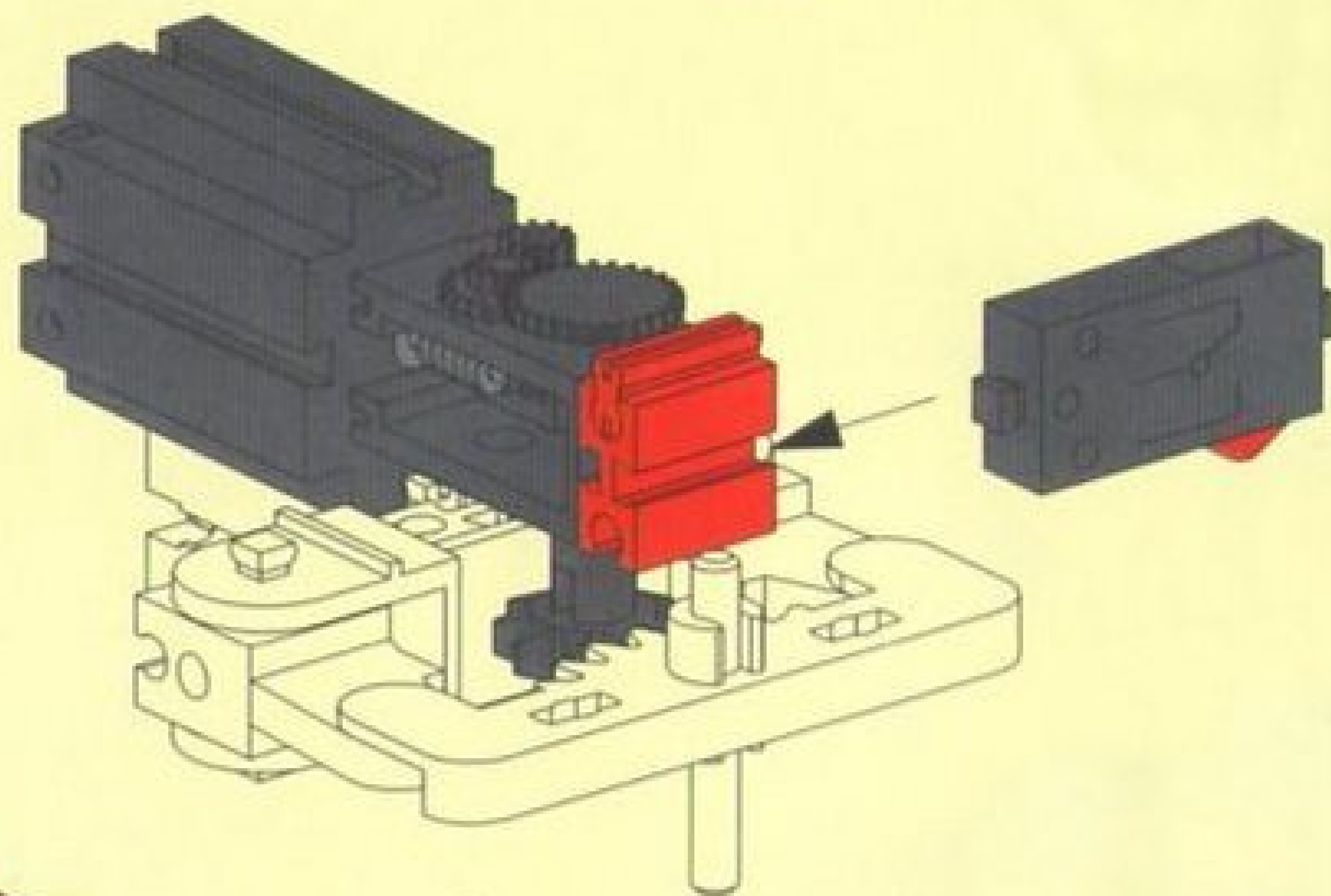


- Abb.3 Raupenfunktion
- Fig. 3 Track function
- Fig. 3 Fonction chenilles
- Afb. 3 Rupsfunctie
- Figura 3 Función de oruga
- Fig. 3 Funzione cingolati

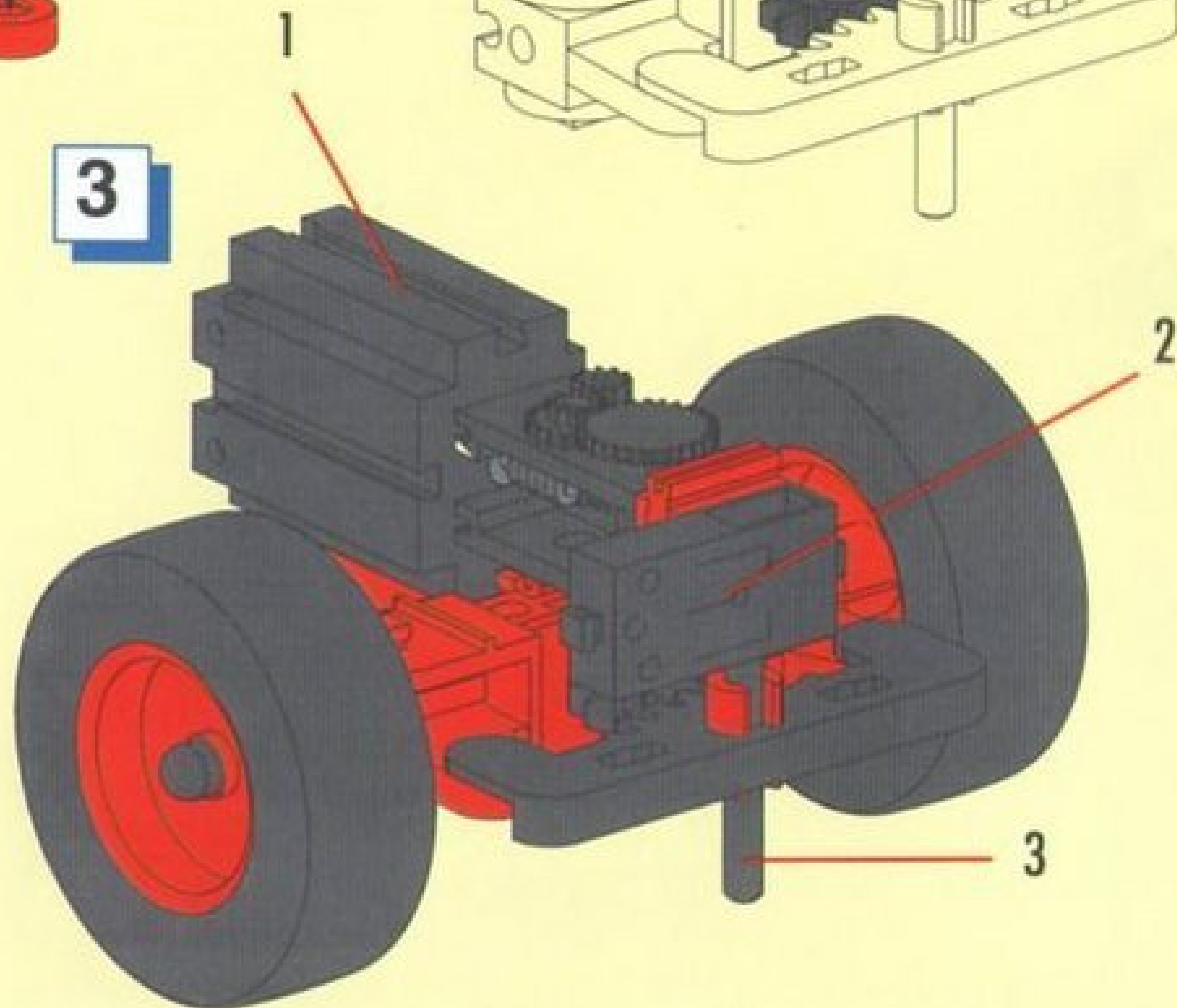
1



2

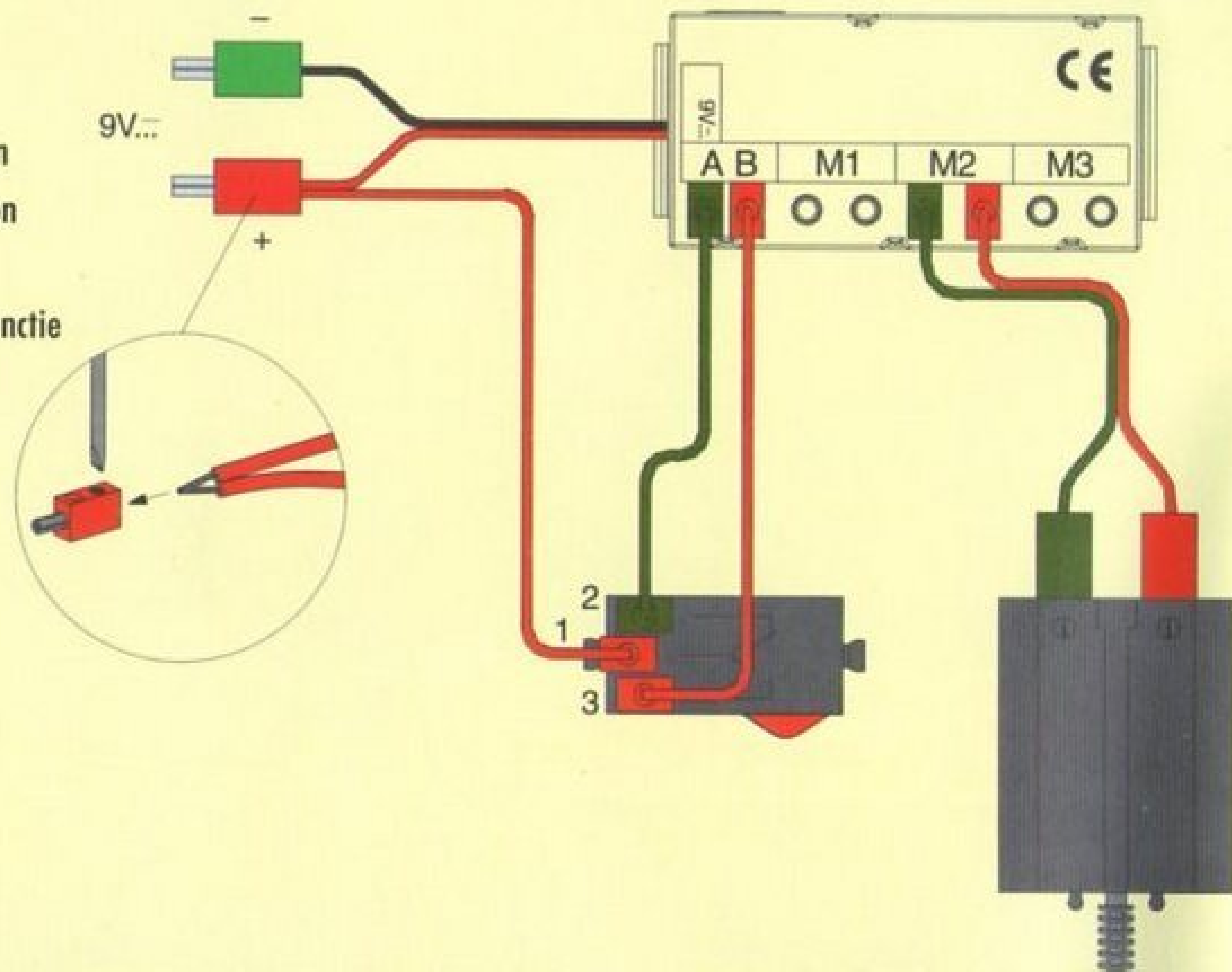


3



- Abb. 4 Aufbau Servofunktion
- Fig. 4 Layout of servo function
- Fig. 4 Construction de la fonction direction assistée
- Afb. 4 Bekrachtigingsfunctie
- Figura 4 Montaje de la servofunción
- Fig. 4 Struttura servofunzione

- Abb. 5 Schaltplan Servofunktion
- Fig. 5 Wiring diagram of servo function
- Fig. 5 Schéma de câblage de la fonction direction assistée
- Afb. 5 Schakelschema bekrachtigingsfunctie
- Figura 5 Diagrama de circuitos de la servofunción
- Fig. 5 Schema elettrico servofunzione



1. The IR Control Set

This infrared remote control makes it even easier to control many functions of fischertechnik models.

The set comprises a powerful transmitter and a microprocessor-controlled receiver.

Install the receiver directly into the model and connect up to three motors or lamps.

The transmitter works using „invisible“ infrared light. A microcontroller is located on the receiver device. It receives the light signals and controls the motors you specify. In closed rooms, the range exceeds 10 metres.

You can add a second receiver to the system (see also 3.2). You can control both receivers independently from each other using one transmitter.

2. The transmitter

Power supply

You require 2 batteries, type Micro 1.5 V, LR03 AAA (not contained in pack).

Key assignment (Fig. 1, p. 3)

● Keys 7 and 8

Motor 1 forward/reverse. Press key to switch on motor 1. Press again to switch off motor 1.

● Keys 9 and 10

Motor 2 left/right. Press key to switch on motor 2. Release key to switch off motor 2.

● Keys 1 and 2

Motor 3 left/right. Press key to switch on motor 3. Release key to switch off motor 3.

● Keys 3 to 5

Switch over speed from slow to fast for motors 1 to 3. Press key: the motor rotates slowly. Press again to turn the motor back to fast.

● Key 6

Switch over to receiver 2

Additional receiver 2 (see also 3.2, Control of up to 6 motors) requires a different code than receiver 1 contained in the IR Control Set. Press this key to activate the code for receiver 2.

Receiver 1 no longer responds to the transmitter signals.

● Key 11

Return to receiver 1.

Press this key to return to receiver 1. (Caution: If receiver 1 does not respond for any reason, you may have switched over to receiver 2 accidentally. Then press this key.)

LED

The LED lights up as long as you hold down a key and a signal is sent.

3. The receiver

3.1 Connections (Fig. 2, p. 3)

(1) Power supply

9V DC, red cable +, (mount red plug), black cable (-) (mount green plug). We recommend fischertechnik power supplies „Energy Set“ Art. No. 30182 (9V, 1000 mA), or Power Block (Art. No. 30263) for 6 batteries, 1.5 V Mignon or rechargeable batteries).

(2) Motor outputs M1 to M3

Connections for 3 motors (9 V/250 mA for each output, total max. 1 A)

(3) Inputs A-B

Connections for additional functions (see Chapter 3.2)

(4) Receiver diode

Signals are received from the transmitter. Always install the receiver into the model so that the receiver diode points upward and the IR receiver can receive signals from the transmitter without any hindrance.



(5) LED

The green LED lights up when the receiver is supplied with power. It flashes when it receives a signal.

3.2 Additional functions

Simultaneous control of motor 1 and motor 2 (track function)

Models, e.g. tracks, forklift trucks or mobile robots are normally driven by two motors. One motor drives the left side and the second motor drives the right one. If both motors are rotating in the same direction, the model runs forward in a straight line. If the motors run in different directions, the model rotates. To control both motors simultaneously at a press of a key, connections A and B of the receiver are switched as described in Fig. 3 (p. 3). This activates the track function. Connect the motors to M1 and M2.

Then you can control the model using the transmitter by pressing the keys 7 to 10 forward, back, left and right (marked by arrows).

C A U T I O N :

Since inputs A and B are only scanned when the receiver is started, these connections must be wired before switching on the power supply.

To return to normal mode, disconnect the receiver from the power supply. Then remove the cables from connections A and B. The next time you switch on the power supply, the receiver will run in normal mode again.

Steering with automatic reset (servo function)

You can assemble a motorised steering for a vehicle using only a few fischertechnik components (as depicted in Fig. 4, p. 4). These parts are not contained in the IR Control Set.

The S Motor (1) (Art. No. 32293) is a steering motor. Connect it to output M2 of the receiver (Fig. 5). Activate the mini-push-button (2) (Art. No. 37783) from the vertically standing axis (3) to set the motor in forward motion, i.e. when the steering is in centre position. As described in Fig. 5, connect the mini-pushbutton to inputs A and B and the positive pole of the power supply.

When wiring connections A and B, the receiver knows that motor M2 is used for steering. If you press the key „M2 left“ on the receiver, the steering locks to left. If you release the key, the steering automatically swivels back to centre position and motor M2 stops as soon as you activate the minipushbutton from the vertically standing axis.

C A U T I O N :

Since inputs A and B are only scanned when the receiver is started, wire up these connections before switching on the power supply.

To return to normal mode, disconnect the receiver from the power supply. Then remove the cables from connections A and B. The next time you switch on the power supply, the receiver will run in normal mode again.

Control of up to 6 motors

If you want to control more than three motors, you can purchase an additional „receiver 2“ (Art. No. 30183) from fischertechnik Single Part Service. You do **not** need an additional transmitter to actuate receiver 2. Only switch over to receiver 2 by pressing key 6 on the transmitter. The transmitter then triggers the three outputs of receiver 2. Press key 11 to return to receiver 1. When the LED in the receiver component flashes, you can determine which receiver gets its signals from the transmitter.

LED flashing codes

When you switch on the power supply, the LED (5) of the receiver shows the operating mode and the receiver type by various flashing codes. First the LED comes on, then it goes out for a while and afterwards it lights up again. The dark phases which vary in length inform you of the mode setting.

Operating mode	Flashing code
Normal (Connections A and B are not assigned)	•••• rapid flashing
Servo function	•••••••••••••••••••• longer dark phase (approx. 0.6 s)
Track function	•••••••••••••••••••• very long dark phase (approx. 1 s)
Receiver 1	•••••••••••••••••••• flashes once
Receiver 2	•••••••••••••••••••• flashes twice

4. Important notes

If the receiver does not respond to the transmitter signals despite correct power supply and correct connection wiring, you may have accidentally pressed key 6 and switched over to receiver 2. If so, press key 11 to switch over to receiver 1.

If the receiver is disturbed by extreme electromagnetic influences, you can re-use it again after the fault has been eliminated. If necessary, interrupt the power supply for a short time.

Warranty conditions

We grant you a warranty of 6 months from the date of sale based on the following warranty conditions:
fischertechnik will eliminate any faults which were caused by material or production faults. Functional faults or damages caused by improper handling shall not be contained in the warranty conditions and shall not be carried out free of charge. It shall lie within the discretion of fischertechnik to exchange the defective part or deliver the spare parts within the framework of the warranty. Further claims shall be excluded. The warranty shall only be demanded against presentation of the cash voucher.

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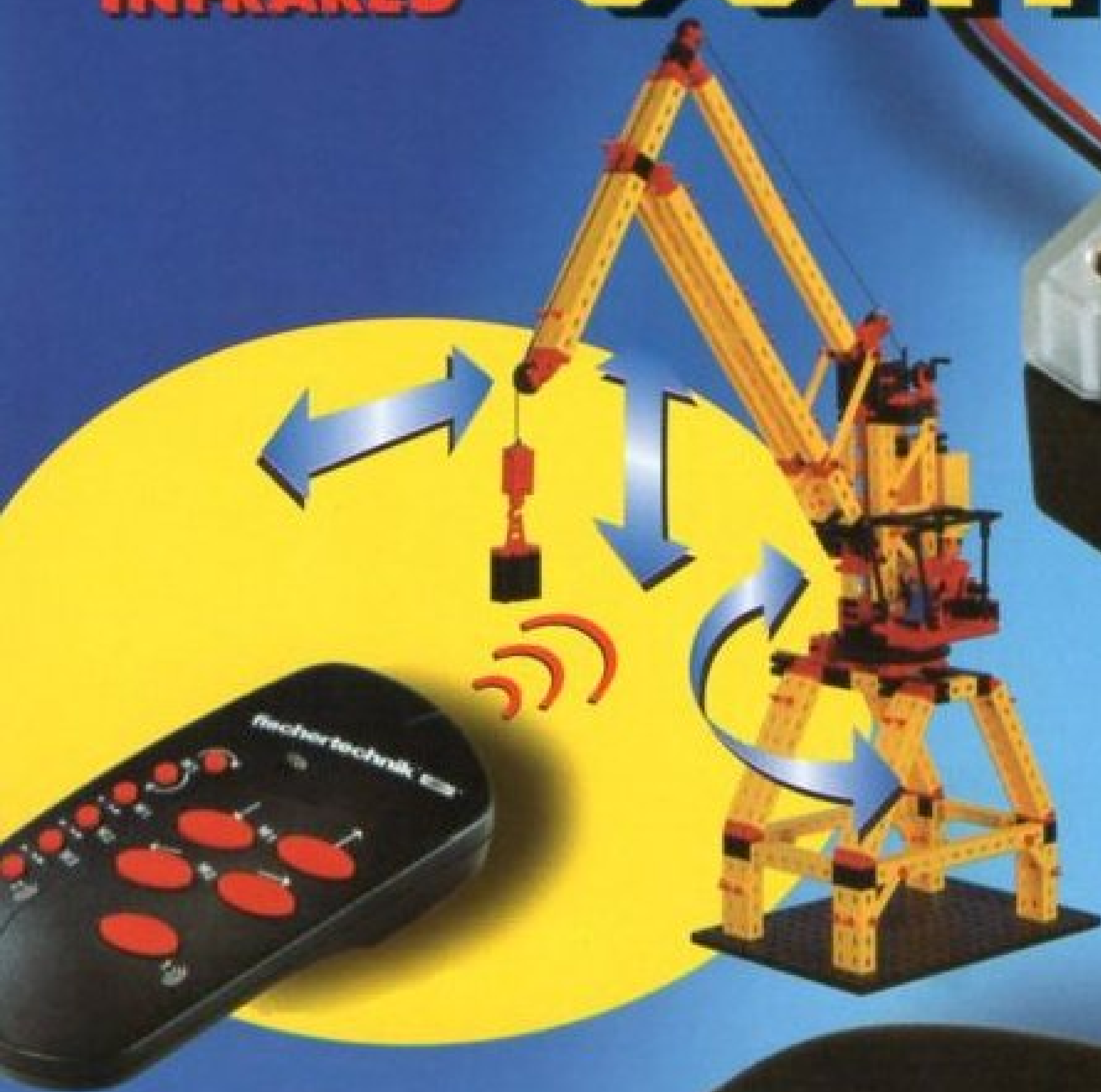
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IR
INFRARED

CONTROL SET



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