

REELY

Ⓒ Operating Instructions

Remote Control „GT2 EVO“ 2.4 GHz

Item No. 1302221

CE

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1. Introduction

Dear Customer,

thank you for purchasing this product.

This product complies with the statutory national and European requirements.

To maintain this status and to ensure safe operation, you as the user must observe these operating instructions!



These operating instructions are part of this product. They contain important notes on commissioning and handling. Also consider this if you pass on the product to any third party.

Therefore, retain these operating instructions for reference!

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If there are any technical questions, please contact:

International: www.conrad.com/contact

United Kingdom: www.conrad-electronic.co.uk/contact

2. Explanation of Symbols



The symbol with the exclamation mark points out particular dangers associated with handling, function or operation.



The arrow symbol indicates special advice and operating information.

3. Intended Use

The 2-channel remote control „GT2 EVO“ is solely designed for private use in the field of model construction and the operating times associated with it. This system is not suitable for industrial use, such as controlling machines or equipment.

Any use other than that described above can damage the product and involves additional risks such as short circuit, fire, electric shock, etc. The product must not be technically changed or converted!



Observe all safety information in these operating instructions. They contain important information on handling of the product.

You are solely responsible for the safe operation of your remote control and your model!

4. Product Description

The 2-channel remote control system „GT2 EVO“ is a radio control system that is ideal for controlling model vehicles or model ships. The driving and steering functions can be remote-controlled separately using the two proportional control channels. The ergonomic casing of the transmitter can be held and operated comfortably and allows you to safely control the model.

For operation, 4 AA/mignon batteries (e.g. Conrad item no.: 652507, pack of 4, order 1x) are required for the transmitter.

Where no drive controller with BEC switch is used, you also need 4 AA/mignon batteries for the receiver (e.g. Conrad item no. 652507, order once) or 4 AA/mignon rechargeable batteries with the corresponding battery/rechargeable battery holder. Alternatively, you may also use a 4- or 5-cell NiMH receiver battery.

5. Scope of Delivery

- Remote control transmitter
- Remote control receiver
- Binding plug
- Aerial tube
- Operating instructions

Up-to-date operating instructions

To download the latest operating instructions, visit www.conrad.com/downloads or scan the QR code on this page. Follow the instructions on the website.



6. Safety Information



The guarantee/warranty will expire if damage is incurred resulting from non-compliance with these operating instructions. We do not assume any liability for consequential damage!

We do not assume any liability for property damage and personal injury caused by improper use or non-compliance with the safety instructions! In such cases the warranty/guarantee is voided.

Normal wear and tear in operation and damage due to accidents (like the receiver aerial being torn off, the receiver casing broken etc.) are excluded from the warranty.

Dear customer, these safety instructions are not only for the protection of the product but also for your own safety and that of other people. Therefore, read this chapter very carefully before taking the product into operation!

a) General Information

- The unauthorised conversion and/or modification of the product is prohibited for safety and approval reasons.
- This product is not a toy and not suitable for children under 14 years of age.
- The product must not become damp or wet.
- Taking out private liability insurance is recommended. If you already have one, get some information on whether or not the operation of a radio-operated model is covered by your insurance.
- Do not connect the drive motor to electric models before the receiver system has been installed completely. This ensures that the drive motor does not start unintentionally.
- Do not leave packaging material unattended. It may become a dangerous toy for children.
- Please check the functional safety of your model and of the remote control system each time before you use the model. Watch out for any visible damage such as defective plug connections or damaged cables. All movable parts on the model have to be running smoothly. However, there must be no tolerance or ‚play‘ in the bearing.
- The operation and handling of RC models must be learned! If you have never controlled such a model, start especially carefully to get used to how it responds to the remote commands. Do be patient!
- Should questions arise that are not answered with the help of this operating manual, contact us (contact information, see chapter 1) or another expert.



b) Operation

- If you do not yet have sufficient knowledge on how to deal with remote-controlled models, please contact an experienced model sportsman or a model construction club.
- When putting the device into operation, always turn on the transmitter first. Then switch on the receiver in the model. Otherwise, the model might show unpredictable responses!
- Before operating the model, check whether the stationary model reacts as expected to the commands of the remote control.
- When you operate the model, always make sure that no parts of your body, other people or objects come within the dangerous range of the motors or any other rotating drive parts.
- Improper operation can cause serious damage to people and property! Always make sure that the model is in your line of sight and do not operate it at night.
- Only operate your model if your ability to respond is unrestricted. Fatigue or the influence of alcohol or medication can lead to wrong responses.
- Operate your model in an area where you do not endanger any other persons, animals or objects. Only operate it on private sites or in places which are specifically designated for this purpose.
- In case of a fault stop operating your model straight away and remove the cause of malfunction before you continue to use the model.
- Do not operate your RC system during thunderstorms, beneath high-voltage power lines or in the proximity of radio masts.
- Never switch off the remote control (transmitter) while the model is in use. To switch off the model, always switch off the motor first, then switch off the receiver. Only then may the remote control be switched off.
- Protect the remote control from dampness and heavy dirt.
- Do not expose the remote control to direct sunlight or excessive heat for a long period of time.
- If the batteries in the remote control are low, the range decreases. If the receiver batteries or rechargeable battery in the receiver are low, the model will not respond correctly to the remote control.
If this is the case, stop driving immediately. Replace the batteries with new ones or recharge the receiver's rechargeable battery.
- Do not take any risks when operating the product! Your own safety and that of your environment depends completely on your responsible use of the model.

7. Notes on Batteries and Rechargeable Batteries



- Keep batteries/rechargeable batteries out of the reach of children.
- Do not leave any batteries/rechargeable batteries lying around openly. There is a risk of batteries being swallowed by children or pets. If swallowed, consult a doctor immediately!
- Batteries/rechargeable batteries must never be short-circuited, disassembled or thrown into fire. There is a danger of explosion!
- Leaking or damaged batteries/rechargeable batteries can cause chemical burns to skin on contact; therefore, use suitable protective gloves.
- Do not recharge normal batteries. There is a risk of fire and explosion! Charge only rechargeable batteries intended for this; use suitable chargers.
- Always observe correct polarity (positive/+ and negative/-) when inserting the batteries/rechargeable batteries.
- If the device is not used for an extended period of time (e.g. storage), remove the inserted batteries/rechargeable batteries from the remote control and the car to avoid damage from leaking batteries/rechargeable batteries.
- Recharge the rechargeable batteries about every 3 months. Otherwise, so-called deep discharge may result, rendering the rechargeable batteries useless.
- Always replace the entire set of batteries or rechargeable batteries. Never mix fully charged batteries/rechargeable batteries with partially discharged ones. Always use batteries or rechargeable batteries of the same type and manufacturer.
- Never mix batteries and rechargeable batteries!
- For reasons of operational safety, only use batteries and rechargeable batteries for the remote control transmitter.

8. Charging Rechargeable Batteries

If you use rechargeable batteries for power supply of the transmitter/receiver, they are usually flat at delivery and must be charged.

→ Note:

Before a rechargeable battery reaches maximum capacity, several complete discharge and charge cycles are necessary.

Always discharge the rechargeable battery at regular intervals, since charging a „half-full“ rechargeable battery several times can cause a so-called lazy battery effect. This means that the rechargeable battery loses capacity. It no longer provides all of its stored energy, and the operating time of the model is reduced.

If you use several rechargeable batteries, purchasing a high-quality charger may be worthwhile. Such a charger usually has a quick-charging feature.

9. Transmitter Controls

- 1 Transmitter aerial
- 2 Control wheel for the steering function
- 3 Operating lever for the drive function
- 4 Transmitter base with integrated battery case
- 5 PC interface jack
- 6 Operating panel cover



Figure 1

If you fold the operating panel cover (6) upwards, you will gain access to the other transmitter operating elements:

- 7 Reverse switch for the drive function
- 8 Green LED for display of undervoltage and special function
- 9 Dual rate button for the steering function
- 10 On/off switch
- 11 Trimming button for the drive function
- 12 Trimming button for the steering function
- 13 Red LED for operating check
- 14 Binding button
- 15 Reverse switch for the steering function

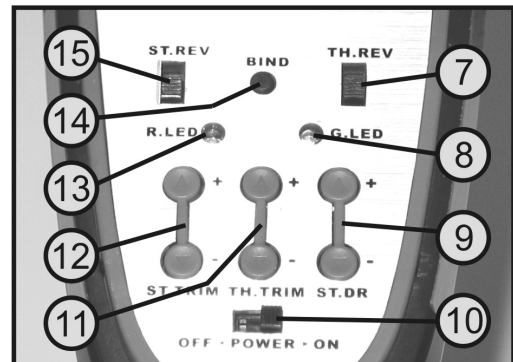


Figure 2

10. Setting up the Transmitter

→ In the further course of these instructions, figures in the text always refer to the adjacent figure or the figures within the section. References to other figures are indicated with the corresponding figure number.

a) Inserting the Batteries

For the power supply of the transmitter you will need 4 alkaline batteries (e.g. Conrad item no. 652507, pack of 4, order 1) of the size AA/mignon.

Proceed as follows to insert the batteries:

The battery compartment lid (1) is located at the bottom of the transmitter. Press the corrugated area (2) and push off the lid sideways in the direction of the arrow.

Now put the 4 batteries in the battery compartment. Always make sure the polarity of the batteries is correct. The minus pole of the battery (3) must be in contact with the spiral spring (4).

A corresponding note (5) is located on the bottom of the battery compartment.

Once the four batteries have been inserted in the proper polarity, push the battery compartment lid on again and let the latch catch.

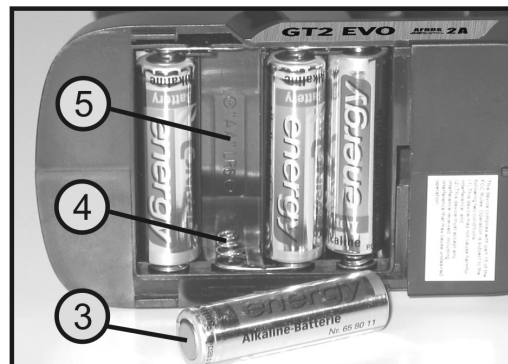
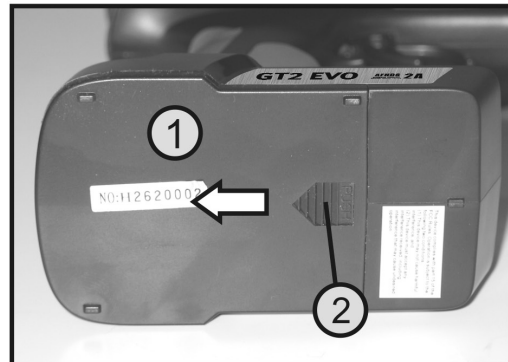


Figure 3

b) Switching on the Transmitter

When new batteries are inserted, switch on the transmitter with the function switch (see figure 2, item 10) for test purposes. For this, slide the operating button from the left (OFF) to the right (ON).

The red operating control LED (see figure 2, item 13) is lit and indicates the on/off state of your transmitter. The green under-voltage display LED (also see figure 2, item 8) remains lit to indicate sufficient power supply of the transmitter.

If the supply voltage drops below 4,3 V, the green under-voltage LED starts flashing. In this case, stop operation of your model as quickly as possible. Insert new batteries again for further operation of the transmitter.

After you have verified the correct function of your transmitter, switch it off.

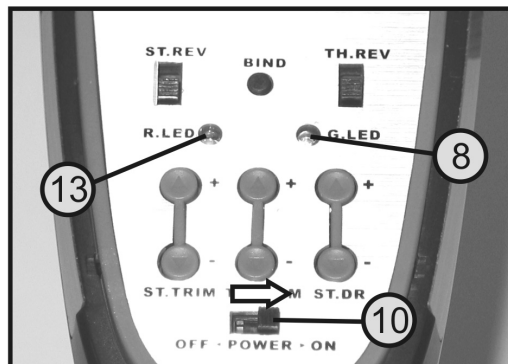


Figure 4

11. Setting up the Receiver

a) Receiver Connection

The receiver offers the possibility of connecting 3 servos (receiver output CH1, CH2, CH3) and one rechargeable receiver battery (Bind / VCC). The connections are intended for Futaba plugs protected against polarity reversal and can also be used with JR plugs if required.

When connecting servos and speed controllers, always make sure of correct polarity of the plug connectors.

The plug-in connection for the positive lead (yellow, white or orange, depending on the manufacturer) must be connected to the inner (left) pin contact. The plug-in connection for the negative lead (black or brown, depending on the manufacturer) must be connected to the outer (right) pin contact.

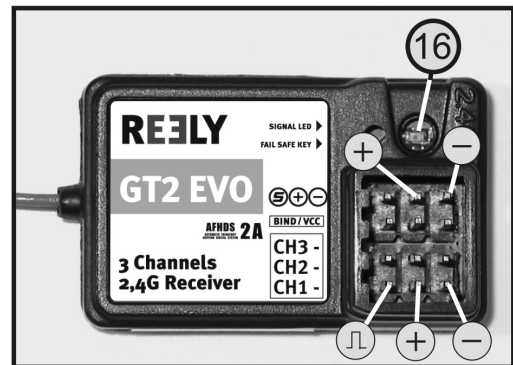


Figure 5

Depending on the model for which you use the remote control system, the servo and power supply connection of the receiver can be carried out in different ways:

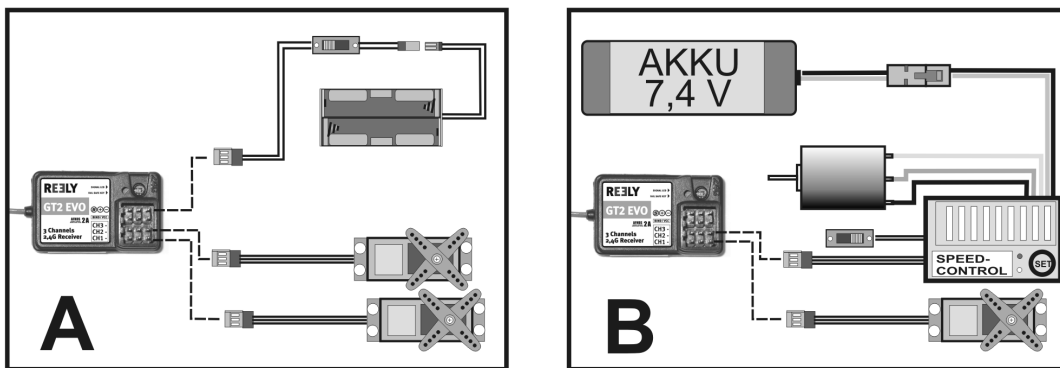


Figure 6

Output	Output combustion model (connection chart figure 6 A)	Electro model with speed controller (connection chart figure 6 B)
CH1	Steering servo	Steering servo
CH2	Throttle/brake servo	Speed controller
CH3	Channel 3 *	Channel 3 *
BIND / VCC	Battery box/rechargeable receiver battery	**

* Since the transmitter supports no other control channels than those for drive and steering functions, the CH3 output of the receiver is not used.

** For electric models with electronic speed controller, a separate rechargeable receiver battery is only required on the „Bind/VCC“ connection if the speed controller used does not have a BEC. For further information, refer to the technical documents of the speed controller unit.



Attention!

If you still use a mechanical speed controller that has a BEC transmitter, it must not be used to supply the receiver with power. The voltage pending at this plug is too high.

Instead, use a separate voltage source with four batteries or a 4- to 5-cell receiver battery.

Switch the transmitter on and then take the receiver into operation. If transmitter and receiver are bound correctly (usually set ex works) the red control LED in the receiver lights up (see figure 5, item 16). Verify correct function of the receiver and the connected servos and then switch it off again.

b) Installing the Receiver

Installation of the receiver depends on the model. For this reason, you should always follow the recommendations of the model manufacturer regarding the installation.

Regardless of the model, you should always try to install the receiver so that it is protected from dust, dirt, moisture, heat and vibration in the best possible way. Two-sided adhesive foam (servo tape) or rubber rings that hold the foam-wrapped receiver securely in place are suitable for fastening.



Attention!

The aerial wire (1) length is determined precisely.

For this reason, you must not roll up the wire, place it in a loop or cut it off. This would decrease the range significantly and thus pose a considerable safety risk.

Route the aerial wire out of the mode through an opening in the fuselage. Best use the aerial tube enclosed with the remote control for this.

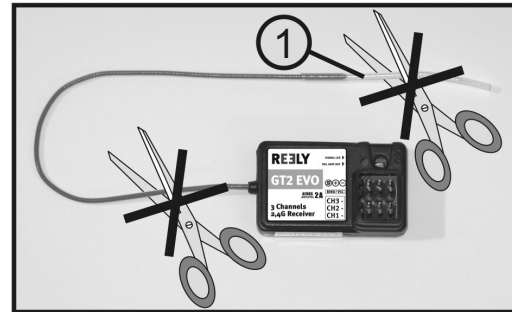


Figure 7

12. Installing the Servos

The installation of a servo (1) always depends on the particular model used. Detailed information on this can be found in the construction documents of the model.

Generally, however, try screwing in the servos in a vibration-dampened manner. This is why rubber bushings (2) with metal sleeves (3) are usually included with the servos.

When servos are obstructed, the servos cannot assume the required positions. This causes higher power consumption and the model cannot be controlled properly.

The linkages must work as smoothly as possible without having any play in the bearings or deflections.

Before installing the servo lever, take the transmitter and then the receiver into operation and check the trim at the remote control transmitter for correct middle position (see following chapter).

Then always mount the servo stick at a 90° angle to the linkage rods (see figure 9, sketch A).

The servo lever is at an angle to the linkage rod (see figure 9, sketch B), the control paths of the two control directions will be unequal.

A slight mechanical inclination due to interlock of the servo levers may be corrected with the trim later.

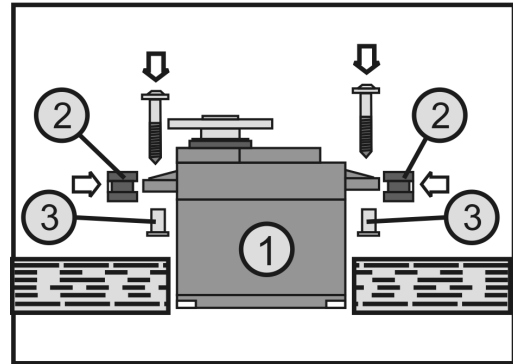


Figure 8

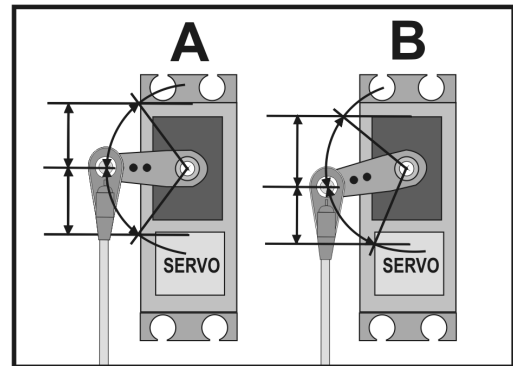


Figure 9

13. Setting the Trim

The trim mostly serves to correct the slight inclination of the servo levers due to the interlock and the connected irregular control movements. Additionally, there is the option of precisely adjusting the model in operation, e.g. if it is not running straight although the control wheel is in the middle position.

Then the linkage rods must be adjusted so that the trim has its original value (90°-range between servo lever and linkage) again and the model still runs straight.

The remote control „GT2 EVO“ has a precise digital trim in which each control channel can be adjusted individually with two buttons each.

a) Setting the Steering Trim

Push and hold the lower one of the two trim buttons (-) for steering trim (also see figure 2, item 12).

The green LED display (also see figure 2, item 8) starts to flicker after a while. With the receiver system switched on, the servo lever of the steering servo will turn step by step from the middle position to the end of the trimming area.

When the green LED stops flickering, the end of the trimming area has been reached and the servo lever stops.

Now push and hold the upper one of the two trim buttons (+) for the steering trim (12). The green LED display (8) starts flickering again after a while and the servo lever returns to the middle position.

When the green LED flashes briefly twice, release the trim button without delay. The middle position has been reached and the set value is saved automatically.

The last value set is retained even after switching off and on.

When the middle position of the digital trim for steering has been set on the transmitter, the position of the servo lever can be inspected at the steering servo and the lever installed in the correct position if required. Slight inclinations due to the servo lever interlock can then be corrected with the trim.

→ Practical advice:

The trim for the steering function is exactly at the centre if the steering servo lever no longer moves if you try operating the reverse switch (see figure 2, item 15). The steering wheel must be in the middle position for this.

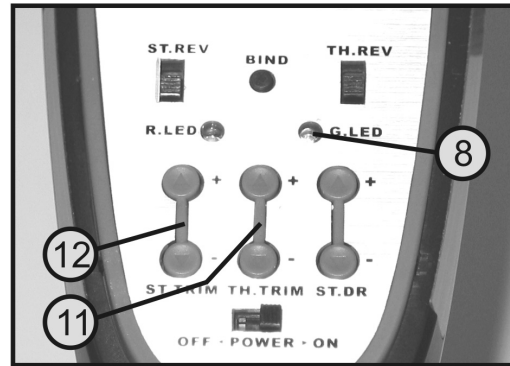


Figure 10

b) Setting the Driving Trim

When using a combustion engine with throttle/brake servo, the trim setting is made just as for the steering servo. However, the two trim buttons for drive trimming (see figure 10, item 11) are used to adjust the trim value.

When using the electrical model with speed controller, the trim also needs to be set to the average value. If the speed controller does not offer any option for teaching in the respective positions for forward, stop and reverse, the middle position of the driving trim must be set so that the drive motor is off when the operating lever for the driving function (see figure 1, item 3) is not pushed.

14. Verification of Steering and Driving Functions

Now connect the servos or speed controllers used in your model and the power supply to the receiver.

→ For better understanding, the steering function is explained using the example of a model car. To prevent the model from driving off inadvertently while testing the steering and drive functions, place the model chassis on a suitable basis (wooden block, etc.). The wheels should turn freely.

a) Checking and Setting the Steering Function

Switch on the transmitter and, if you have not done so yet, set the trim for the driving and steering function to the middle position according to the instructions in chapter 13.

Then switch on the receiver. If everything was connected and installed correctly, the model steering should react to turns of the steering wheel (see figure 1, item 2).

When the steering wheel is in its central position, the wheels must point straight ahead. If the wheels are inclined even though the steering wheel is in the middle position, check the correct position of the lever at the steering servo. On demand, the steering linkages of the steering may be adjusted as well.

If you are turning the steering wheel at the transmitter to the left, the wheels at the vehicle must deflect to the left (see figure 11, sketches A). If you are steering to the right, the wheels must turn to the right (see figure 11, sketches B).

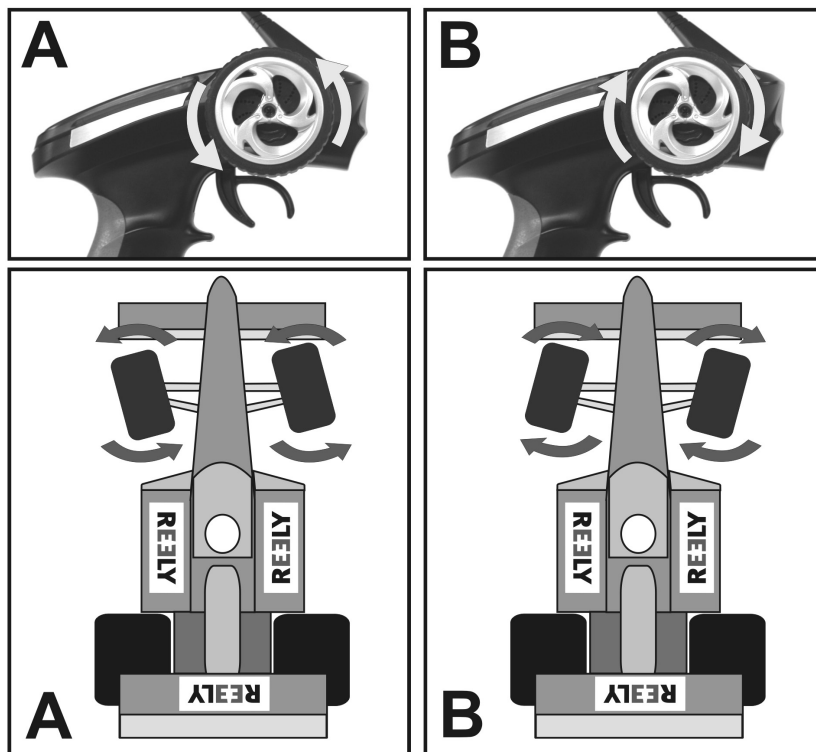


Figure 11



Attention!

Operation of the steering wheel at the transmitter only requires little power. Therefore, it is entirely sufficient to operate the steering wheel with your finger tips. If you try to turn the steering wheel further when reaching the end stop, the steering mechanics in the transmitter may be destroyed.

If the wheels react opposite to the direction indicated in figure 11, use the steering function reverse switch (15) to switch the effective direction of the steering wheel and thus the steering servo rotational direction.

Readjustment of the steering trim may be required.

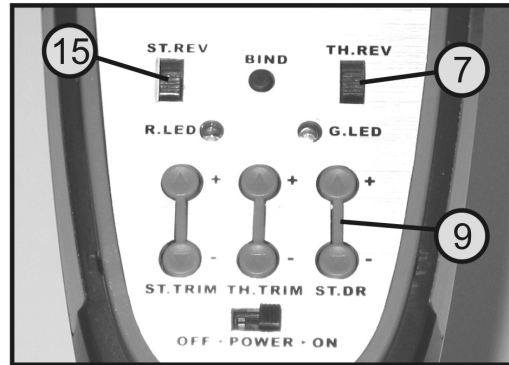


Figure 12



Important!

Set the steering linkages at your model so that they can reach their full deflection to the right and left without the steering stopping or being limited mechanically. If the steering deflection proves to be too large when operating the model, reduce it using the dual rate button for the steering function (see figure 12, item 9).

Pushing and holding the lower button (-) will cause the green LED display to flicker and the maximum possible steering deflection reduces. If the upper button is pushed and held, the steering deflection increases further. If you deflect the steering wheel at the transmitter fully to the side during adjustment, you can observe the change of the setting very well.

The setting of the maximum steering deflection acts on both steering directions at the same time. The set value is automatically saved and is retained even after switching the remote control off and on.

b) Checking and Setting the Driving Function

When you move the operating lever for the drive function (see figure 1, item 3) towards the handle to the stop, the model must accelerate (see figure 13, sketches A). If you press the lever forwards, the model must decelerate or switch to reverse driving (see figure 13, sketches B).

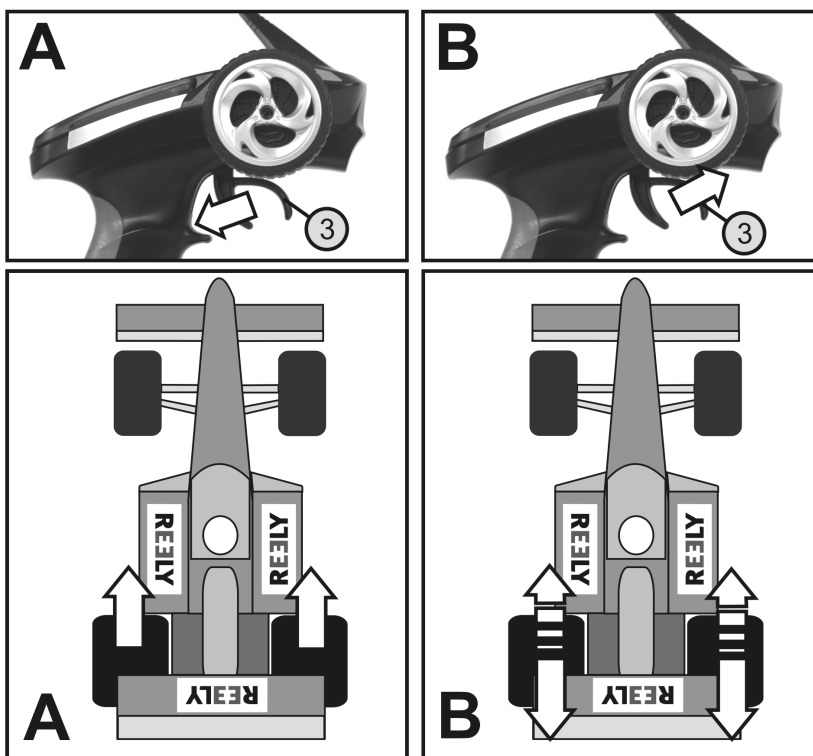


Figure 13

If your model's drive reacts opposite to the indication in figure 13, use the drive function reverse switch (see figure 12, item 7) to switch the effective direction of the operating lever.



Important!

In a model with a combustion engine, set the linkage for carburettor and brake linkage so that the throttle/brake servo is not limited mechanically. The trim setting for the driving function must be in the middle position.

For a model with an electronic speed controller, the different positions of the operating lever for the drive function (forwards, stop, reverse) may have to be programmed into the speed controller. Further information on this can be found in the documents for the speed controller. If the speed controller is not programmable, adjust the trim so that the vehicle will stand when the operating lever for the driving function is not in the middle position.

When you have verified or set the correct driving and steering function, first switch off the receiver and then the transmitter.

Your model is now ready for its first test run.

15. Fail-Safe Function

Your remote control receiver offers the option of taking the throttle servo or the electronic speed controller to a certain position or to the stop function if no correct remote control signal is received any longer in case of an interference.

If the idle position (central position of the operating lever for driving) was selected as a fail safe position, the vehicle comes to a halt automatically if the radio transmission is interfered with or the model drives out of the remote control's range.

You can also select any brake position (e.g. 50% brake effect) as the fail safe position (sensible e.g. for a combustion vehicle). In this case, fix the operating lever for driving in the desired position with a rubber ring when setting the fail safe function.

In order perform the fail safe settings, proceed as follows:

- Take the operating lever for driving to the desired position.
- First, switch on the transmitter and then the receiver.
- Right after that, push and hold the fail-safe button at the receiver (17).
- The receiver LED (16) on the receiver starts to flash after approx. 3 seconds.
- When the LED flashes, release the button.
- When the LED is lit again permanently, the fail safe position is stored.
- The saved fail-safe position remains saved even after switching the receiver off and on again.



Figure 14

Then perform a function test; proceed as follows:

- When using the throttle servo, accelerate a little with the combustion engine out and then switch off the transmitter. The throttle servo then has to go into the fail safe position immediately.
- For electronic models with an electronic speed controller, support the vehicle so that the wheels can turn freely for the test. Then take the vehicle into operation as usual. Move the operating lever for the driving function towards the handle so that the motor starts up and the wheels turn.

If you switch off the transmitter now, the motor must stop if the middle position of the operating lever for the driving function was saved as the fail-safe position first.

16. Switching the Digital Code

The transmitter enables you to control receivers with the digital code „AFHDS“ and „AFHDS2A“. Ex works, the transmitter is set to the enclosed „AFHDS2A“-encoded receiver.

If you want to operate a REELY receiver with the digital code „AFHDS“, the transmitter must be switched first and then the receiver must be bound to the transmitter (see following chapter).

To switch the digital code at the transmitter, proceed as follows.

- Switch off the transmitter.
- Move the steering wheel for the steering function (see figure 1, item 2) to one side to the stop and keep it there.
- Push and hold the binding button (see figure 2, item 14).
- Switch on the transmitter with the on/off switch with the steering wheel deflected and the binding button pushed.
- Release the steering wheel and the binding button.
- If the green LED for undervoltage is flashing continually, the transmitter has switched to the digital code „AFHDS“.
If the green LED is flashing with interruptions, the transmitter has switched to the digital code „AFHDS2A“.
- Pushing the binding button again saves the currently set digital code.
- Switch the transmitter off and then on again so that it sends in the set digital code.



Important!

The receiver enclosed with the remote control system „GT2 EVO“ works with code „AFHDS2A“. Therefore, always observe that the right code is programmed at the transmitter!

17. Binding Function

To enable transmitter and receiver to work together, they must be bound by the same digital code. In the delivery state, transmitter and receiver are aligned with each other and can be used at once. The binding settings must be renewed mainly after a replacement of the transmitter or receiver or to remove any interferences.

Before you can bind the receiver to the transmitter, check if the transmitter works in the right digital code (see previous chapter).

To perform the binding procedure, proceed as follows:

- Transmitter and receiver must be in direct proximity (distance approx. 50 cm).
 - Switch off the transmitter.
 - Disconnect any servos that may be connected from the receiver.
 - Connect the enclosed programming plug (18) to the VCC connection of the receiver.
 - The power supply of the receiver (receiver battery or speed controller with BEC) is connected to the output CH3 of the receiver.
 - Switch on the receiver. The receiver LED (16) starts to flash quickly.
 - Press the binding button at the transmitter (see figure 2, item 14) and keep the button pressed.
 - Switch on the transmitter while the button is pressed. The LED for the under-voltage display flashes at the transmitter.
 - When the LED in the receiver (16) flashes slowly after a few seconds, binding, binding has been completed.
 - Release the binding button at the transmitter.
 - Switch off the receiver and transmitter and remove the programming plug.
 - Re-connect the servos/controllers to the receiver.
 - Check the function of the system. If the system is not working properly, perform the process again or check the digital code of the transmitter; see chapter 16.
- If you have switched the transmitter to the digital code „AFHDS“ and bind an „AFHDS“-encoded receiver, the LED in the receiver will not flash slowly but be lit permanently after binding.

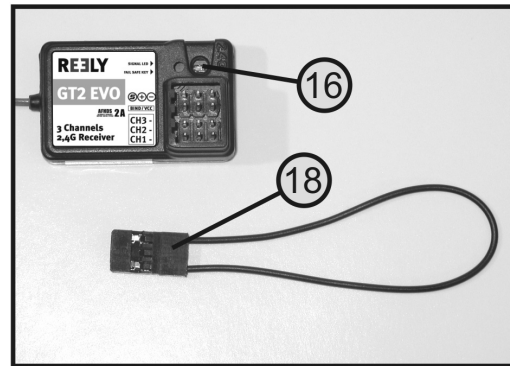


Figure 15

18. Simulator Function

If required, you can also use the transmitter at the PC for simulations or games. In this case, you will require the optional USB cable (Conrad item no. 517956) and suitable computer software (e.g. car racing games).

The USB cable is connected to the PC interface socket (see figure 1, item 5). At correct connection and proper installation, the activated transmitter is recognised by the operating system (e.g. at least Windows XP or higher) and can be used like a commercial joystick.

For all further information on this, see the operating instructions of the USB cable.

19. Maintenance and Care

The product is maintenance-free for you. Never disassemble it (except for the procedure describe din the operating instructions for insertion of the batteries into the remote control).

The outside of the transmitter and receiver should only be cleaned with a soft, dry cloth or brush. Never use abrasive cleaning agents or chemical solutions as these could damage the surfaces of the casings.

20. Disposal

a) Product



Electronic devices are recyclable waste and must not be disposed of in the household waste. Always dispose of the product according to the relevant statutory regulations.



Remove any inserted batteries/rechargeable batteries and dispose of them separately from the product.

b) Batteries

You are required by law to return all used batteries (Battery Directive). Batteries must not be placed in household waste.



Batteries containing harmful chemicals are labelled with this symbol to indicate that disposal in household waste is forbidden. The abbreviations for heavy metals in batteries are: Cd = Cadmium, Hg = Mercury, Pb = Lead (indicated on the battery, e.g. below the waste bin icon on the left).

Used batteries can be returned to local collection points, our stores or battery retailers.

You thus fulfil your statutory obligations and contribute to the protection of the environment.

21. Declaration of Conformity (DOC)

Conrad Electronic SE, Klaus-Conrad-Straße 1, D-92240 Hirschau, hereby declares that this product conforms to the 2014/53/EU Directive.



Click on the following link to read the full text of the EU Declaration of Conformity:

www.conrad.com/downloads

Select a language by clicking on the corresponding flag symbol and then enter the product order number in the search box. The EU Declaration of Conformity is available for download in PDF format.

22. Troubleshooting

Even though the remote control system was built to the state of the art, there can still be interferences or faults. For this reason, we would like to give you some information on how to deal with possible problems.

Problem	Remedy
Transmitter doesn't respond	<ul style="list-style-type: none">• Check the batteries in the transmitter.• Check the polarity of the batteries.• Check the on/off switch.
The servos do not respond	<ul style="list-style-type: none">• Check the batteries in the receiver.• Test the switch cable.• Test the BEC function of the controller.• Check the polarity of the servo connector.• Check digital code.• Perform binding.
The servos vibrate	<ul style="list-style-type: none">• Check batteries in the remote control and the receiver.• Carefully dry any possible dampness in the receiver with a hair dryer.
One servo is humming	<ul style="list-style-type: none">• Check the batteries in the receiver.• Make sure the linkage rods run smoothly.• Operate the servo without the servo arm for test purposes.
The range of the system is very short	<ul style="list-style-type: none">• Check batteries in the remote control and the receiver.• Check the receiver aerial for damage and electrical continuity.• Install the receiver aerial in a different position in the model for test purposes.
Transmitter switches off on its own at once of after a short period	<ul style="list-style-type: none">• Check or replace the batteries in the transmitter.
Vehicle does not steer.	<ul style="list-style-type: none">• Check ease of movement of the steering linkage.• Check steering servo.• Check steering servo connection at the receiver.• Enlarge dual rate value at the transmitter.

23. Technical Data

a) Transmitter

Frequency range	2.4055 - 2.475 GHz
Transmission power.....	<20 dBm
Number of channels	2
Signal output.....	3.5 mm jack socket (PPM)
Operating voltage	6 V/DC via 4 type AA/mignon batteries
Dimensions (W x H x D)	160 x 210 x 95 mm
Weight incl. batteries	Approx. 335 g

b) Receiver

Number of channels	3
Encoding.....	AFHDS2A
Connector system.....	Futaba/Graupner JR
Operating voltage	4.0 - 6.5 V/DC
Dimensions (W x H x D)	35 x 22 x 12 mm
Weight	Approx. 5 g

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