REMdevice® Radio Control Equipment

USER MANUAL

move
SERIES
RADIOCONTROLS

Transmitter units:

- T 3,5,7 move
- BRICK move
- PAIL move
- GENESIS move

Receiver units:

- RUBYBOX move
- ECOBOX move
- DIN move

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EN

contents

WARNING!

The remote control is to be **installed**, and subsequently **used**, by suitably **authorized** and **qualified personnel** only; incorrect installation or use can result in serious injury or damage to property. Before using the REMdevice move series radiocontrols, **read carefully** this instruction manual and comply with the instructions herein.

DESCRIPTION

The **move** radio control system consists of one or more transmitter units:

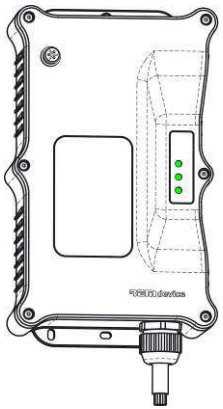
GENESIS move

BRICK move

PAIL move

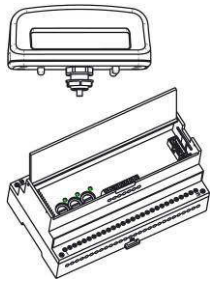
T3,5,7 move

and of one or more receiver units:



RUBYBOX move

ECOBOX move



DIN move

How TO USE the DEVICE CORRECTLY and SAFELY

The remote control has been designed strictly for **use** by qualified operators only, who are required to first read the instructions on how to use the device and comply with the safety standards prescribed by the law in the area where work is carried out.

REMdevice shall not be liable for any bodily injury or damage to property resulting from:

- misuse or inexpert use of the device
- incorrect wiring or electrical connections
- tampering
- changes to the radiocontrol's design features
- replacement of parts with non-original spare parts
- failure to perform maintenance
- failure to replace worn, faulty or defective parts
- the device being used with its intrinsic safety features disabled or its original features altered in any way.

Warning: This device works using radio signals; it can operate the machinery it is connected to even if barriers are blocking its line of sight, such as brick walls, metal or wooden panels, other machinery, equipment, buildings, vehicles; it is important operators exercise the utmost care when activating the controls in order to avoid uncontrolled movements.

Activating the radiocontrol

- Stand with the transmitter unit so that there is a perfectly clear full line of sight between it and the machinery
- do not linger under overhead loads
- do not operate from an unstable position
- take proper note of the control's identification plates located next to each button or actuator
- do not press any button or actuator if you do not know exactly what it does

Transmitter units

Transmitter units are made so as to comply with the control functions of the machine they control. The figures shown are generic.
For your model, please refer to the datasheet attached to this manual.

GENESIS move transmitter unit

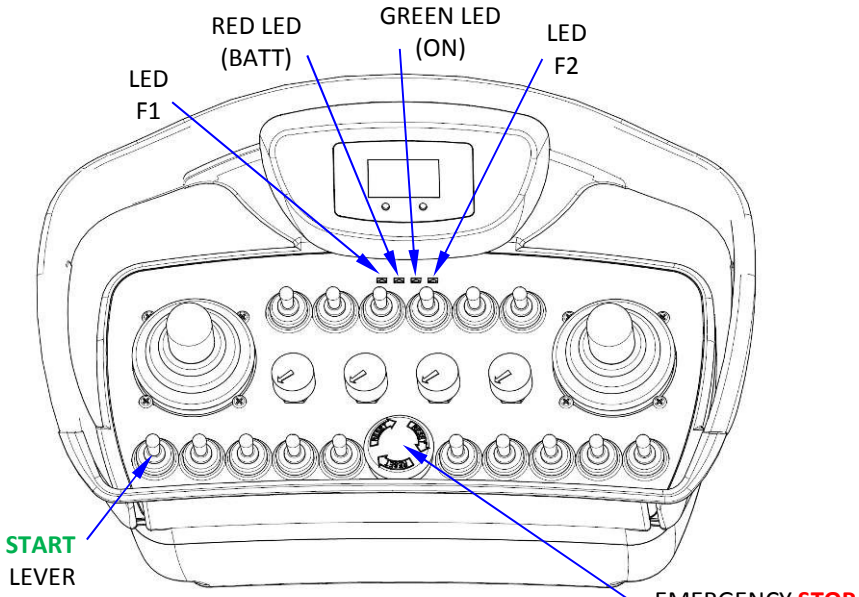


Figure 1 – GENESIS

PAIL move transmitter unit

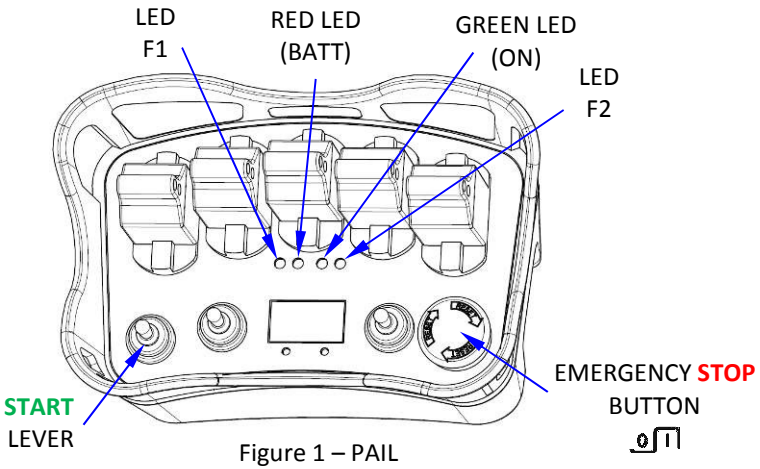


Figure 1 – PAIL

BRICK move transmitter unit

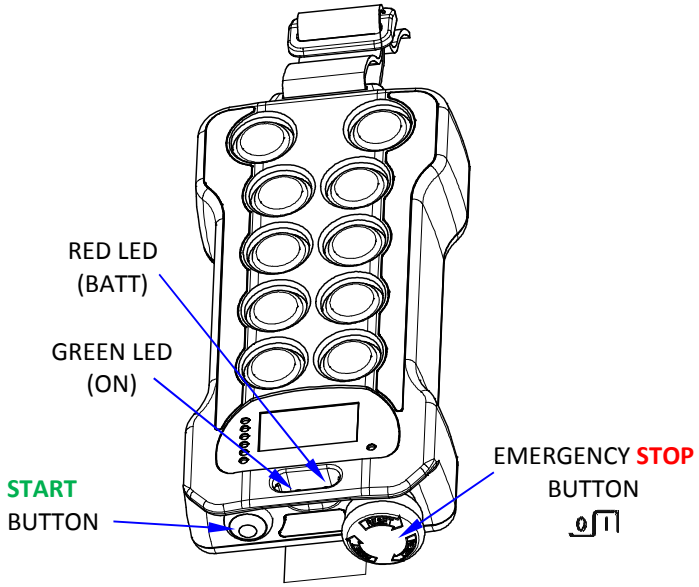


Figure 1 – BRICK

T move transmitter unit

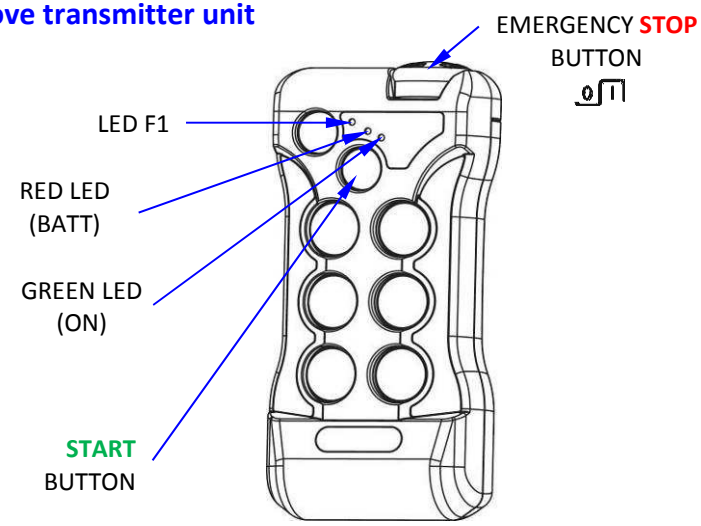


Figure 1 – T

Switching on, Activation, Use, Automatic shutdown

Switching on

If not otherwise stated in the datasheet, the mushroom EMERGENCY **STOP** BUTTON is used to switch the transmitter on and off. To switch on, rotate and disconnect the mushroom EMERGENCY **STOP** BUTTON
Check that the GREEN LED (ON) flashes (just once), indicating that the unit is switched on (see Figure 1, corresponding model).

Activation

Press the **START** BUTTON or activate the **START** LEVER or turn the key to **START**, depending on the model. The GREEN LED (ON) flashes quickly to indicate that the unit has been activated.
If, on the other hand, the transmitter bleeps and the RED LED (BATT) comes on, check no controls are on via the other buttons or actuators that prevent activation. At the same time, the audible warning of the operating machine can be heard (if any).

Use

Press the relevant buttons or operate the relevant control actuators for the operation you want to perform, paying attention to how the machine behaves.

If you experience any kind of trouble controlling the machine (for mechanical or electrical reasons or if it is not performing as you intended in any way), press the EMERGENCY **STOP** BUTTON straight away.

Never leave the transmitter unit unattended when it is switched on, even for just a few seconds. Always switch off the transmitter unit at the end.
Put the transmitter unit away in a safe place where it cannot be reached by unauthorized personnel; never allow inexperienced personnel to use the transmitter unit.

Automatic shutdown

If this function is enabled (default factory setting), the transmitter unit will switch off automatically after approx. 4 minutes of inactivity.
To restart the unit, press the **START** actuator.

LAYOUT and DESCRIPTION of CONTROLS

The various models differ in terms of the number of controls available and how they are arranged. A different **appendix** is associated with each configuration (see page 27) and is an integral part of this manual.

Note: on the GENESIS, PAIL, BRICK and T transmitters, the symbols of the respective controls are featured on the plates on the product and/or provided with the unit. If labels or plates other than the ones provided are used, the symbols must match the machine's functions and movements exactly and must comply with current regulations.

SERVICE FUNCTIONS

Electronic key

It is possible to prevent unauthorized staff to use the transmitter via the function:

LOCKING and UNLOCKING the transmitter unit

In page **I** of the appendix (see page 27 of this manual) the actuators assigned to this function are shown.

To **lock** the use of the transmitter, identify actuator **Sp3** (or **U1**) as specified in the appendix and follow the following instructions:

a) power up the transmitter using the mushroom EMERGENCY **STOP** BUTTON (or using the key selector, where applicable);
b) operate **Sp3** (or **U1**) and operate the **START** at the same time;
keep on and **count 5** beeps and flashes of the F1 LED (if applicable);
after exactly 5 beeps and flashes, release the **START** and **Sp3** (or **U1**);
c) the GREEN LED (ON) will produce a long flash accompanied by a beep to confirm that the procedure has been performed correctly.

If the procedure is not performed in this exact sequence or the controls are held any longer, the operation will be aborted and you will need to repeat the sequence from the beginning.
If you attempt to activate the transmitter following this operation, the indicator lights (LEDs) will flash in turn and the transmitter unit's audible alarm will sound (ring).

To **unlock** the transmitter, repeat the sequence.
If the transmitter is locked out, you will hear a long ring; if the transmitter is unlocked, it will play a short melody.
On models with a display, the count will come up on the display.

TWIN auxiliary transmitter unit

TWIN systems are constituted by two transmitting units: a **main** and an **auxiliary**. To use the system correctly:

- switch on the operating or lifting machine powering the receiver unit;
- switch on **one** of the two transmitters provided (primary or auxiliary) and send the **START** command for approx. 10 seconds.

Once the receiver (RUBYBOX move or ECOBOX move) recognizes the transmitter, it starts the machine, which sounds:

- ONCE (**primary** transmitter);
- THREE TIMES (**auxiliary** transmitter).

From now on, the machine can be controlled **only** by this transmitter until power to the receiver unit (RUBYBOX move, ECOBOX move or DIN move) is cut off or until the **FREE** command (described in the next paragraph) is activated.

The other transmitter unit will never be able to take control of the machine.

The Twin system complies with the EN 60204-32 standard (Safety of machinery) and **does not allow using the two transmitters simultaneously**.

There are available two different ways to transfer the machine control from one transmitter unit to another:

1) Activate the **FREE** function (as described in the following paragraph)
2) **Turn** the receiver unit **off** and on again after a few seconds (normally the receiver unit is powered by the operating machine: in that case you may power off and on again after a few seconds directly the machine).

ATTENTION: The machinery may lose **power** for reasons outside the operator's control.

In this case, it is possible for a second operator with one of the two transmitters to take control of the machine if he happens to press the **START** button when power is resumed. The different **audible alarm** sounds to warn the operators.

FREE function

Only the unit controlling the machine can perform the FREE function that is freeing the receiver to accept control of the other unit.

In page **I** of the appendix (see page 23 of this manual) the actuators assigned to this function are shown.

To carry out the FREE command, identify the **Sp4** (or **D1**) actuator as specified in the appendix and follow the following procedure:

a) power up the transmitter using the mushroom EMERGENCY **STOP** BUTTON (or using the key selector, where applicable);
b) operate **Sp4** (or **D1**) and operate the **START** at the same time;
keep that position, paying attention that the beep and the F1 LED (if any) are activated only once;
after just one flash (or beep), release the **START** and **Sp4** (or **D1**);
c) the GREEN LED (ON) will produce a long flash accompanied by a short melody to confirm that the procedure has been performed correctly.

If the procedure is not performed in this exact sequence or the controls are held any longer, the operation will be aborted and you will need to repeat the sequence from the beginning.

In case of error, the LEDs will flash alternately and the transmitter will sound.

On models with a display, all stages are shown on the display and the message "FREE" comes up to confirm the operation.

CHANGING transmitter FREQUENCY

There is no need to open either the transmitter unit or receiver unit to change frequency. Locate actuator **Sp4** (or lever **D1**, as specified in greater detail on page I of the appendix on page 19 of this manual) and proceed as follows:

a) power up the transmitter using the mushroom EMERGENCY **STOP** BUTTON (or using the key selector, where applicable);
b) operate **Sp4** (or **D1**) and operate the **START** at the same time;
keep on and count 5 beeps and flashes of the F1 LED (if applicable, on the left);
after exactly 5 beeps and flashes, release **START** and **Sp4** or **D1**;
c) the Green LED flashes accompanied by a short melody to confirm that you have entered the band/frequency change menu;
d) activate **Sp4** or **D1** again together with **START**; keep on and count 3 beeps and flashes of the F1 LED (if any, on the left); after exactly 3 beeps and flashes, release **START** and **Sp4** or **D1**;

e) the Green LED flashes accompanied by a short melody to confirm that you have entered the menu via which you can change the channel.

If you stay in state **b** or **d** for anything other than the stated time, the operation is aborted and you will need to repeat the sequence from the beginning.
On models with a display, the display will show the count, the number of the set channel and advise you that you have entered the various menus.

From the channel change menu, you can:

- Activate **Sp4** or **D1** to get to the **CHANNEL -** function (unit);
- Activate **Sp3** or **U1** to get to the **CHANNEL +** function (unit);
- Activate **START + Sp4** or **D1** to get to the **CHANNEL -10** function (tens);
- Activate **START + Sp3** or **U1** to get to the **CHANNEL +10** function (tens);
- Once you have set the value you want for the frequency, press the EMERGENCY **STOP** BUTTON and reset it;
- Hold the **START** button down for **a few seconds** and keep holding it down until the machine starts.

The set channel is shown with the tens first (number of times the red LED flashes) and then the units (number of times the green LED flashes).

The frequency band to be set varies depending on the laws and standards in the country where the product is due to be used.

In order to operate, the radio control system with the remote-controlled machine, must **respect the laws and the regulations** in the country where it is used.

REMdevice S.r.L **can not be held responsible** if the radio controls are set to prohibit frequencies in the country of use.

Models: **EC**

Band 433.050 – 433.790 MHz				
CH**1** 433,0625	CH**2** 433,0875	CH**3** 433,1125	CH**4** 433,1375	CH**5** 433,1625
CH**6** 433,1875	CH**7** 433,2125	CH**8** 433,2375	CH**9** 433,2625	CH**10** 433,2875
CH**11** 433,3125	CH**12** 433,3375	CH**13** 433,3625	CH**14** 433,3875	CH**15** 433,4125
CH**16** 433,4375	CH**17** 433,4625	CH**18** 433,4875	CH**19** 433,5125	CH**20** 433,5375
CH**21** 433,5625	CH**22** 433,5875	CH**23** 433,6125	CH**24** 433,6375	CH**25** 433,6625
CH**26** 433,6875	CH**27** 433,7125	CH**28** 433,7375	CH**29** 433,7625	CH**30** 433,7875

Models: **EC** *(…continues)*

Band 434.050 – 434.790 MHz				
CH**31** 434,0625	CH**32** 434,0875	CH**33** 434,1125	CH**34** 434,1375	CH**35** 434,1625
CH**36** 434,1875	CH**37** 434,2125	CH**38** 434,2375	CH**39** 434,2625	CH**40** 434,2875
CH**41** 434,3125	CH**42** 434,3375	CH**43** 434,3625	CH**44** 434,3875	CH**45** 434,4125
CH**46** 434,4375	CH**47** 434,4625	CH**48** 434,4875	CH**49** 434,5125	CH**50** 434,5375
CH**51** 434,5625	CH**52** 434,5875	CH**53** 434,6125	CH**54** 434,6375	CH**55** 434,6625
CH**56** 434,6875	CH**57** 434,7125	CH**58** 434,7375	CH**59** 434,7625	CH**60** 434,7875

Models: **EC** *(…continues)*

Band 869.700 – 870.000 MHz				
CH**61** 869,7125	CH**62** 869,7375	CH**63** 869,7625	CH**64** 869,7875	CH**65** 869,8125
CH**66** 869,8375	CH**67** 869,8625	CH**68** 869,8875	CH**69** 869,9125	CH**70** 869,9375
CH**71** 869,9625	CH**72** 869,9875			

Models: **FCC-IC**

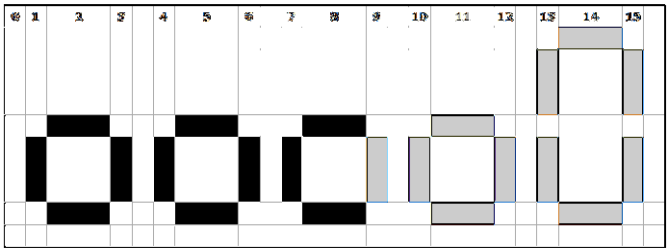
Band 902.5 – 915 MHz				
CH**1** 902,5	CH**2** 903,0	CH**3** 903,5	CH**4** 904,0	CH**5** 904,5
CH**6** 905,0	CH**7** 905,5	CH**8** 906,0	CH**9** 906,5	CH**10** 907,0
CH**31** 907,5	CH**12** 908,0	CH**13** 908,5	CH**14** 909,0	CH**15** 909,5
CH**16** 910,0	CH**17** 910,5	CH**18** 911,0	CH**19** 911,5	CH**20** 912,0
CH**21** 912,5	CH**22** 913,0	CH**23** 913,5	CH**24** 914,0	CH**25** 914,5

Models: **FCC-IC** *(…continues)*

Band 915.0 – 927.5 MHz				
CH**26** 915,0	CH**27** 915,5	CH**28** 916,0	CH**29** 916,5	CH**30** 917,0
CH**31** 917,5	CH**32** 918,0	CH**33** 918,5	CH**34** 919,0	CH**35** 919,5
CH**36** 920,0	CH**37** 920,5	CH**38** 921,0	CH**39** 921,5	CH**40** 922,0
CH**41** 922,5	CH**42** 923,0	CH**43** 923,5	CH**44** 924,0	CH**45** 924,5
CH**46** 925,0	CH**47** 925,5	CH**48** 926,0	CH**49** 926,5	CH**50** 927,0
CH**51** 927,5				

Signalling the signal level received

Available only for models with the display option (GENESIS, PAIL and BRICK), reporting shows the signal intensity that the base unit receives the transmitter with and takes place through 15 bars that light up in sequence.



To activate this function:

a) power up the transmitter using the mushroom EMERGENCY **STOP** BUTTON (or using the key selector, where applicable);

b) activate **Sp3** or **U1** together with **START**; keep on and count 2 beeps and flashes of the F1 LED (if any);

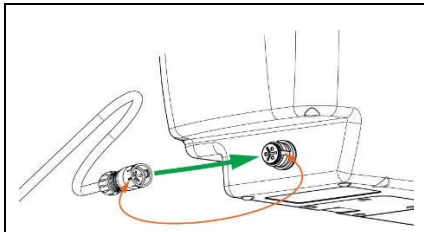
If no signalling takes place, "FAIL" is displayed.

Wired control option

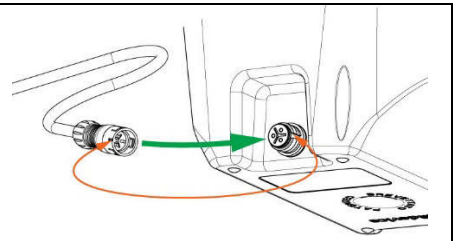
The wired control connection is an option available only for transmitters GENESIS and PAIL with receivers ECOBOX and RUBYBOX.

Activating the wired control

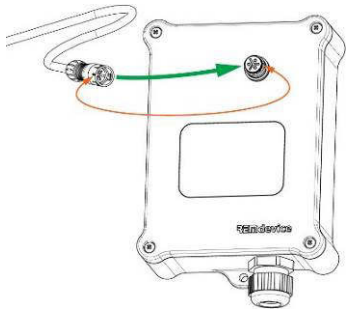
- Switch off both the transmitter (GENESIS or PAIL) and receiver (ECOBOX or RUBYBOX).
- Remove the protection caps from the connectors.
- Connect the cable supplied paying attention to the white mark on the connectors.



GENESIS transmitter unit



PAIL transmitter unit

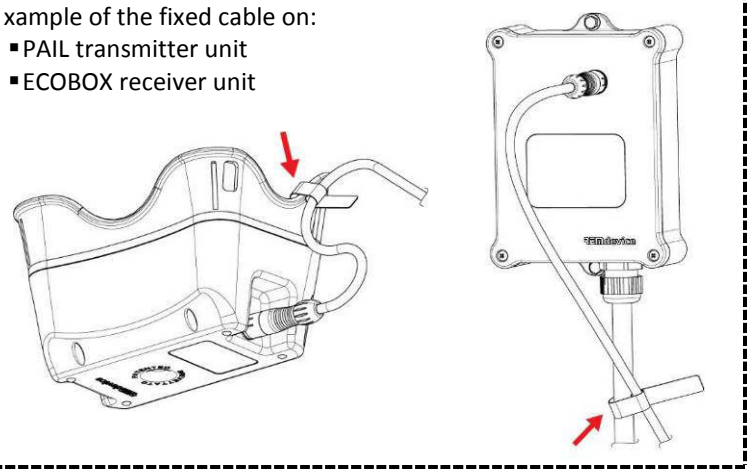


ECOBOX receiver unit

RUBYBOX receiver unit

- Fix the cable using the Velcro strap supplied:
  - on the transmitter handle
  - on the receiver output cable

E xample of the fixed cable on:
- PAIL transmitter unit
- ECOBOX receiver unit



- Power the receiver and start the transmitter.

Wired control operation

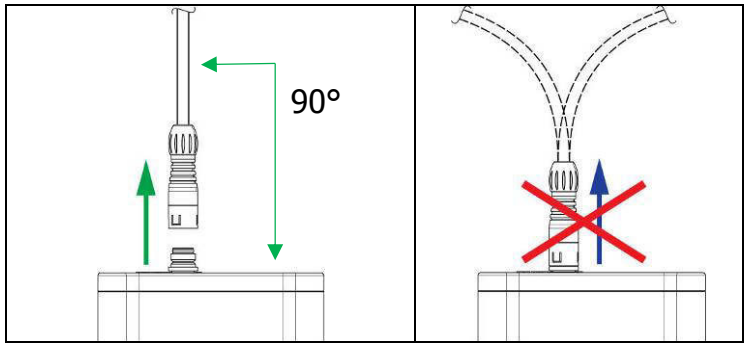
When the wired control is working, radio transmission is disabled and data is transmitted via the wire in both directions (control and data feedback functions) as per normal operation.
Supply of the transmitter takes place via the power cable that recharges the internal accumulators too.

Deactivating the wired control

- Switch off both the transmitter (GENESIS or PAIL) and receiver (ECOBOX or RUBYBOX).
- Disconnect the cable supplied removing the Velcro straps.
- Reposition the protection caps on the connectors.
- Power the receiver and start the transmitter.

WARNING:
Pull the plugs with the cable perpendicular to the socket. If the cable is bent in any direction, the plug does not separate from the socket!

(See the figure on the next page)



MAINTENANCE

Transmitter supply

The transmitter supply varies according to the models and version purchased.

Model	Power supply types
GENESIS	Internal accumulators with induction recharge or rechargeable removable battery
PAIL	Internal accumulators with induction recharge
BRICK	Internal accumulators with induction recharge
T3,5,7	Long-life non-rechargeable internal lithium battery

Recharging the induction accumulators

In the GENESIS, PAIL and BRICK models, the accumulators are housed inside the transmitter device and are recharged using an exclusive **patented** electromagnetic induction system involving no metal electrical contacts or connecting cables.

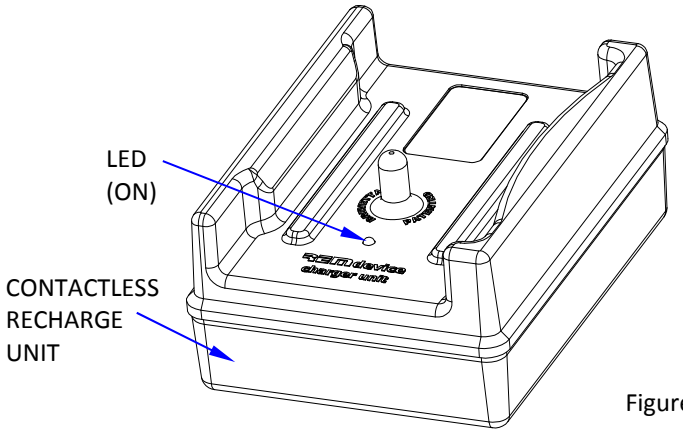


Figure 2

ATTENTION: the contactless charger the system comes with must be located in a safe, dry place out of direct sunlight and sheltered from rain; it must be plugged into the mains so that the outlet is easy to reach at all times.

The transmitter shows the accumulator discharge limit value has been reached when the GREEN LED (ON), the RED LED (BATT) and a long sound are activated all at the same time. Recharge the batteries as soon as possible:

- check that the (ON) LED is lit on the charger (see Figure 2 on page 9), (it means it is being powered correctly);
- switch the transmitter off as described above;
- place the transmitter in the appropriate housing on the contactless recharge unit, paying attention the peg in the centre of the recharge base enters the hole in the bottom of the transmitter;
- if ON, the transmitter automatically deactivates when resting on the recharge base;

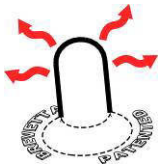
the RED LED (BATT) on the transmitter unit flashes to indicate that the accumulators are being charged properly recharging is controlled electronically:
the recharge time is controlled automatically

- when the RED LED (BATT) on the transmitter unit is steadily lit, it means the batteries have finished charging.

With new and fully charged batteries, the transmitter unit has a runtime (for continuous duty) of around 30 hours at 20°C.

Under normal operating conditions, you will only need to charge the batteries once a week (during the weekend, for example).

The electronic charge status control means you can leave the device on the charger base for long periods of time without doing any damage to the batteries.



It is normal for the peg sticking out of the charger and the hollow on the underside of the transmitter unit to heat up while the batteries are charging.

If the accumulators are completely discharged but efficient, 30 minutes' recharge time will be enough to guarantee the radio control operation for 8 hours.

Do NOT open the charger to attempt repairs: if there is a fault, use the services of authorized personnel or contact REMdevice directly.

Unplug the charger when it is not in use.

GENESIS transmitter with removable battery

The innovative 24/7 non-stop system guarantees continuous operation also during the replacement of the removable external battery.

The radio control is fitted with two external and a group of internal batteries. The external removable battery gives about 20 hours' operation autonomy, while the internal group gives autonomy for 1.5 hours.

Therefore, the internal group allows the unit to work without the removable battery while this recharges. The removable battery can then be replaced when the RED LED (BATT) lights up, without interrupting the radio control operation.

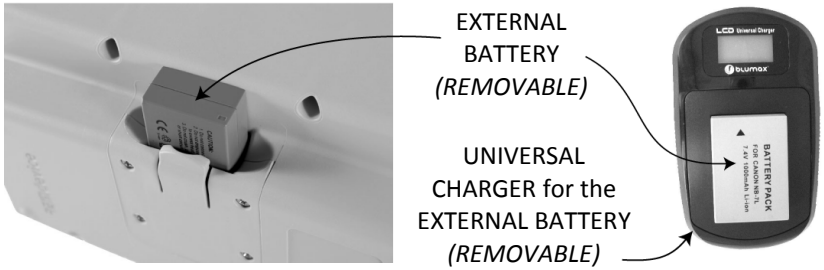
Indications

The RED LED (BATT) on the transmitter flashes when:

- the external battery is low
- the external battery has been removed or reinserted incorrectly
- the contacts of the external battery are dirty, oxidized or damaged

NOTE
This happens also when the radio control is OFF and for about 20 days, that is until the internal group is fully discharged.

If the internal group is completely discharged, the removable external battery must be inserted for the whole time required for the recharge; during this time the radio control can anyway be used.



For further information on the Universal Charger**, check the Instruction Manual** supplied with this product.

Attention: this charger is NOT waterproof; keep it in a cool and dry place and recharge at ambient temperature.

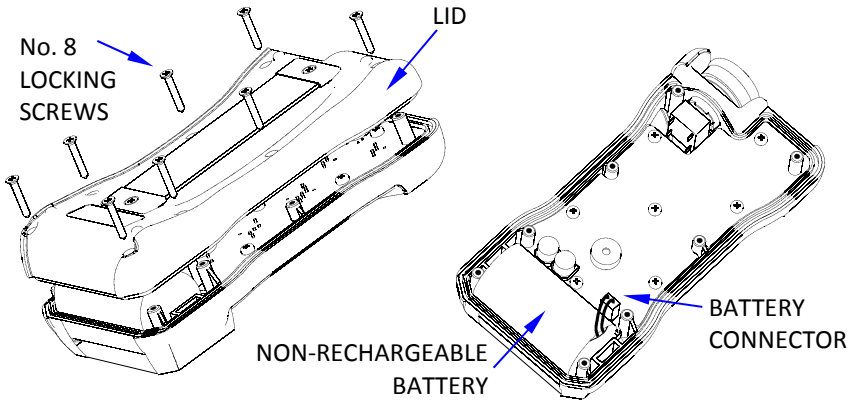
The **external** (removable) battery lasts ≈ 22 hours at 20°C
The **internal** battery lasts: ≈ 1 hour at 20°C

The charge of the internal battery is sufficient to completely recharge and replace the external battery.

T transmitter: replacing the lithium battery

The battery is inside the transmitter: to replace it, it is necessary to open the unit. This operation must be carried out in a clean place, with no humidity and only by specialized personnel, authorized by REMdevice.

- Remove the 8 screws and open the transmitter lid
- Remove the connector and replace the battery with a new one



- Use the sticker applied to the battery body peeling off the protective film and removing the residues of the old adhesive.
- Before closing the keypad, be careful in folding the red and black wires back against the battery and prevent them from being crushed while closing.

Strong shocks to the transmitter and its battery can permanently damage the battery.

Risk of fire, explosion and serious burns.
The lithium battery is not rechargeable: do not dismantle, recharge, apply voltage, short-circuit, expose to high temperatures or flames, do not burn or immerse in water.

If the unit is not used for over 3 months, proceed to "awake" the battery by repeating the transmitter's START procedure until stabilized, that is until the transmitter is stabilized and remains ON without showing any error of low battery. The operation normally lasts a few minutes.

The life expectancy of the battery can be reduced if subjected to extreme temperatures. Batteries must be stored in cool, clean and ventilated rooms with a temperature of between 10°C and 30°C.
If batteries are stored for over 8 years they might experience a loss of performance.

Spent batteries must not be disposed of in the environment or together with the normal domestic waste. Batteries must be disposed of in compliance with local regulations, using the waste disposal service available in the area.

Keeping the radio control system in proper working order

Preventive maintenance and routine checks

Clean the transmitter unit at regular intervals to stop sediment building up and becoming extremely hard to remove later on and/or obscuring graphic symbols showing what functions are assigned to the control buttons. Should symbols become illegible or come off, you must replace them with new labels.

In induction recharge models, clean the cavity at the bottom of the units periodically to prevent debris build-up.
Do not use solvents to clean the devices. Do not immerse the transmitter unit in water.
Check that the transmitter unit's seal is perfectly watertight, check for cracks in the housing and make sure the rubber on buttons or control actuators is not damaged in any way. The ingress of liquid can seriously damage or compromise the proper operation of the electrical circuits inside the radio control.
Non-routine maintenance and any repairs needed must be carried out only by specialist personnel authorized by REMdevice.
Above all, replacing accumulators with unsuitable parts can result in a risk of explosion.

Checking that the EMERGENCY STOP BUTTON and all functions are working properly

Press the EMERGENCY **STOP** BUTTON (see Figure 1) and check the radio control has switched off and deactivated.
To carry on with the testing procedure, **reset** the EMERGENCY **STOP** BUTTON by turning it roughly a ¼ turn until it clicks, then activate the **START** control on the transmitter unit again.
Press a button or operate a machine control actuator associated with a movement and, keeping it held down, press the EMERGENCY **STOP** BUTTON at the same time: the machine must stop immediately!

Reset the EMERGENCY **STOP** BUTTON to continue.
Once you have reactivated the transmitter unit, press one button or actuator at a time and check that the machine performs the operation indicated by the relevant symbol.

NEVER use the device if the EMERGENCY STOP BUTTON is not in working order. This pushbutton has to be working properly to ensure that all machine operations are stopped immediately and the remote control system is disabled. If this pushbutton is not in perfect working order, or even if it is only partially broken, system safety is compromised, meaning the unit is no longer complying with the regulations and operators are exposed to serious danger.

TECHNICAL SPECIFICATIONS

Conformity

All move series radio controls operating in the frequency band 433.050 - 434.790 MHz and/or 869.700 - 870 MHz comply with the essential requirements and the other pertinent regulations set in directive R&TTE 99/5/EC. The **EC** declaration of conformity attached contains the list of the harmonised regulations the radio controls comply with (as far as it is applicable).

All the move series radio controls operating in the frequency band 902 - 928 MHz comply with the essential requirements of the following standards:

- FCC (Federal Communication Commission) Part 15
- IC (Industry Canada) RSS-102

Transmitter Unit	**BRICK** move	FCC ID = RTF-BRBPM6 IC number = 11555A-BRBPM6
	PAIL move	FCC ID = RTF-PABPM6 IC number = 11555A-PABPM6
	GENESIS move	FCC ID = RTF-GEGM6 IC number = 11555A-GEGM6
	T move	FCC ID = RTF-TTM6 IC number = 11555A- TTM6

Receiver Unit	**ECOBOX** move	FCC ID = RTF-EBEBM6 IC number = 11555A-EBEBM6
	RUBYBOX move	FCC ID = RTF-RBRBM6 IC number = 11555A-RBRBM6
	DIN move	FCC ID = RTF-DDM6 IC number = 11555A-DDM6

Federal Communications Commission (FCC)

This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada (IC)

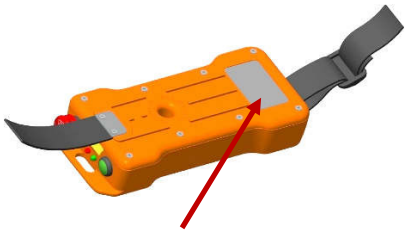
This device complies with RSS-210 of the Industry Canada Rules.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Place the antenna of the receiving unit in a position that ensures a minimum separation distance of 20 cm with all the people that can be in the working area.

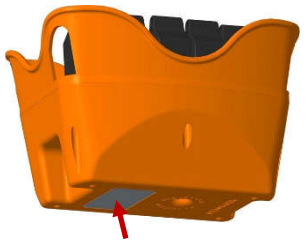
Serial Number

It appears on the ID plates of the receiver units:

GENESIS move



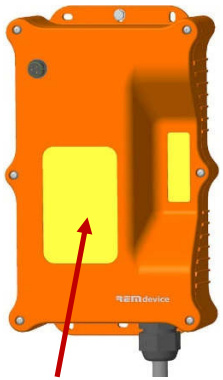
BRICK move



PAIL move

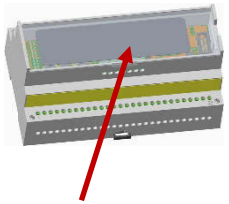
T3,5,7 move

and on the receiver units:



RUBYBOX move

ECOBOX move



DIN move

TECHNICAL SPECIFICATIONS

Full-Duplex multi-band operating frequency:
433.050 – 434.790 MHz/ Channel spacing 25kHz/ No. of channels 60
869.700 – 870.000 MHz/ Channel spacing 25kHz/ No. of channels 12
902 – 928 MHz/ Channel spacing 500kHz/ No. of channels 51

The frequency band varies depending on the standards in the country where the product is due to be used.

Hamming code distance: > 4
Response time to commands: 20 ms min, 80 ms max (according to the model)
Active emergency stop command response time: 20 ms
Command passive emergency response time: 1 s

Command	PL	Category	SIL
STOP	**e**	4	3
Button/Lever *(UMFS)*	**c**	2	1
Joystick *(UMFS)*	**d**	3	2

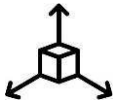
PL *(EN ISO 13849-1)*
SIL *(EN IEC 62061)*

Range: 100 m *(≈330 ft)*
Operating and storage temperature: -20°C to +70°C *(-4°F to +158°F)*

Transmitter unit

Housing protection rating: IP 65 - Material: PA6 GF

Model	Dimensions [mm] (L×H×P) *[in] (L×W×H)*	Weight [g] *[lb] (depending on the configurations)*
GENESIS	310 × 193 × 163 *(12.2 × 7.6 × 6.42)*	1580 *3.48*
PAIL	200 × 135 × 130 *(7.87 × 5.31 × 5.12)*	930 *2.05*
BRICK	97 × 210 × 44 *(3.82 × 8.27 × 1.73)*	470 *1.04*
T 3,5,7	83 × 174 × 42 *(3.27 × 6.85 × 1.65)*	350 *0.77*



Battery low advance warning and operating autonomy at 20°C (68°F)

Model	**Advance** warning time	**External** battery (removable)	**Internal battery** (rechargeable)	**Internal battery** (not rechargeable)
GENESIS non-stop 24/7	≈ 20 mins	≈ 22 hrs Type: NB-7L – Li-Ion 7.4V 1000 mAh	≈ 1 hour Type: 3 × Size AAA 1.2V Ni-MH	NOT available
GENESIS	≈ 30 mins	NOT available	≈ 30 hrs Type: 3 × Size AA 1.2V Ni-MH	NOT available
PAIL	≈ 30 mins	NOT available	≈ 30 hrs Type: 3 × Size AA 1.2V Ni-MH	NOT available
BRICK	≈ 30 mins	NOT available	≈ 30 hrs Type: 3 × Size AA 1.2V Ni-MH	NOT available
T 3,5,7	≈ 30 hrs	NOT available	NOT available	≈ 1000 hrs Type: Size D Lithium 3.6V 19 Ah

Receiver unit

Radiofrequency receiver: Single Chip
Antenna (according to model):
integrated or external (with automatic selection)
Rp1, Rp2 relay contact capacity: 8A (DC1/AC1)* / 115V (RUBYBOX and ECOBOX)
Command relay contact capacity: 4A (DC1/AC1)* / 115V (RUBYBOX and DIN)
Stop relay contact capacity: 4A (DC1/AC1)* / 115V

* the same current can be supported also in category DC13 (inductive load) connecting a diode in parallel to the load. For use in category AC15, we recommend connecting a suitable RC circuit in parallel to the load for extra voltage damping. (Ref. IEC/EN60947).

Power supply (depending on model):
DC 12-24V ±25% or AC 24-115V ±10%
RUBYBOX move: waterproof enclosure for external installation
Material: PA6 GF V0 - Degree of protection: IP65
Dimensions: 166 × 279 × 91 mm (L×W×H) *6.53 × 10.98 × 3.58 in*
ECOBOX move: waterproof enclosure for external installation
Material: PA6 GF V0 - Degree of protection: IP65
Dimensions: 129 × 178 × 51 mm (L×W×H) *2.08 × 7.01 × 2.01 in*
DIN move: ModulBox housing to be fitted on DIN EN 50022 rail
Material: ABS - Degree of protection: IP20
Dimensions: 158 × 90 × 75 mm (L×W×H) *6.22 × 3.54 × 2.95 in*

NOTES:

INSERT HERE

THE ANNEXES

WITH THE

REMOTE CONTROL

SPECIFICATIONS

WARRANTY TERMS

REMdevice covers the device with a 12-month warranty.
The date of the transport document is used as the start date of the warranty period.
The warranty is valid only for devices affected by defects in manufacturing. The radio control must NOT have undergone attempted repairs, been tampered with or had parts replaced by personnel who have not been authorized by REMdevice.
The warranty shall be voided in the event of misuse or incorrect installation.
Devices under warranty must be repaired at an authorized support centre or at REMdevice's own facility.
Parts affected by defects in manufacturing will be replaced free of charge; this does not include transport costs for sending and returning the device.
The warranty does not cover wear parts and batteries.
REMdevice shall not accept claims for compensation for downtime since machinery is required to have its own manual controls.
REMdevice shall not be liable for damage, loss or theft to/of new or repaired devices, or devices due to be repaired, while in transit.
REMdevice shall not perform work (under warranty or outside warranty) on devices with missing serial numbers or without previous arrangements having been made with the person requesting the work.

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