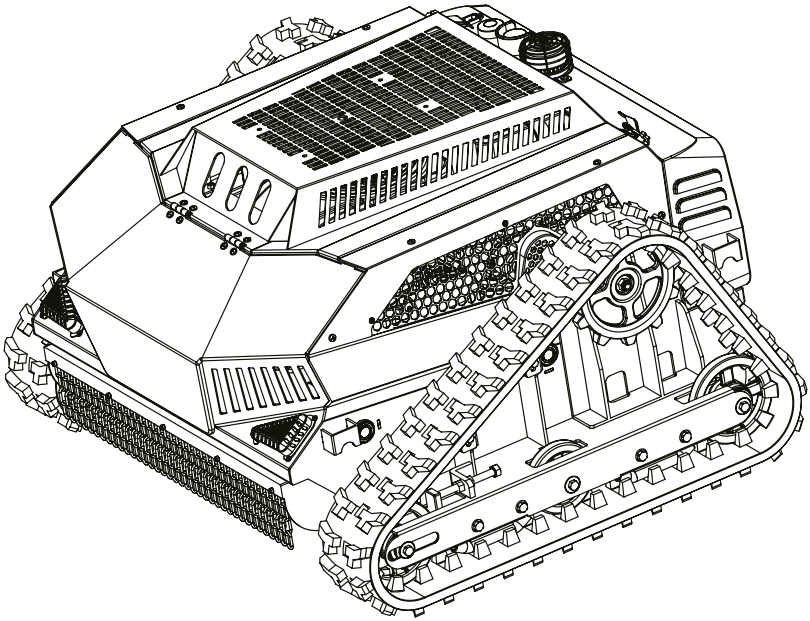
BLUEBIRD INDUSTRIES

Remote-controlled brushcutter

FM 24-70



Product user manual

-translation of the original instructions-

EN

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Dear users:
Thank you for choosing our product. We develop and manufacture high-quality products according to the needs of our customers. Our products demonstrate excellent reliability, even in extreme conditions. The company is also synonymous with excellent quality of service. Our professional dealers provide services and support to resolve your doubts regarding our products.
Thank you for your trust in our company. We wish you a happy user experience.

Attention

Read all warnings and safety instructions carefully. Failure to follow warnings and instructions could result in electric shock, fire or other serious injury.

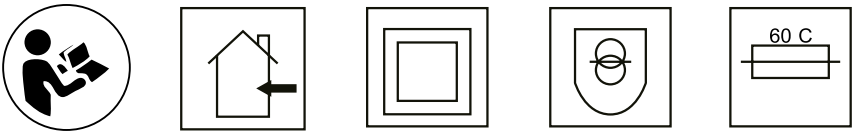
Retain all warnings and instructions for future reference.

Environmental Protection

Please comply with national laws and regulations relating to waste disposal. Electronic and power tools should not be treated as household waste. The equipment, accessories and packaging must be recyclable.

It is forbidden to dispose of the tool at will.

Product overview



Description of the symbols

1. Read the manual carefully
2. Charging can only be done indoors
3. Double insulation without grounding
4. Safety transformer
5. When the charger overheats, it will automatically shut down

Read all safety warnings and instructions carefully. Failure to follow these instructions may cause electric shock, fire, serious burns and other accidents

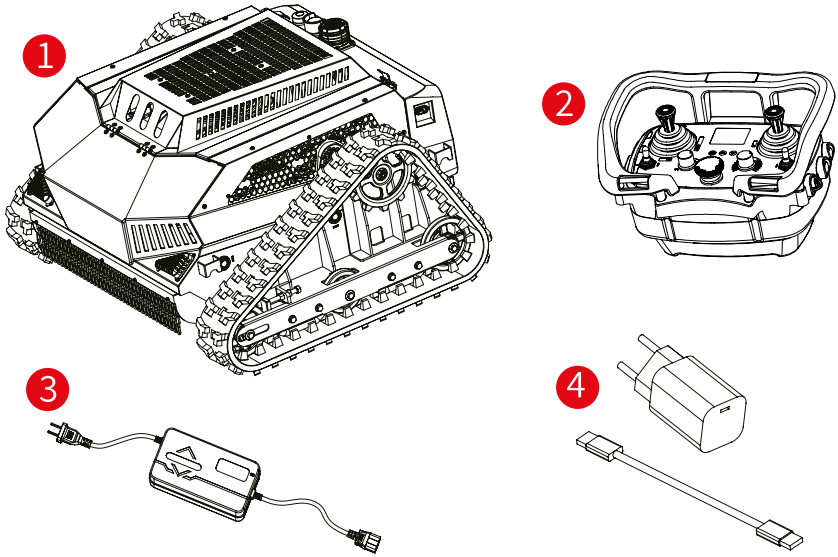
Do not use or expose the machine to rain

When using the machine, do not stand in front or behind to avoid injury

Do not bring the machine close to live objects to avoid injury

Parts list

1. Remote control machine
2. Remote control
3. Charger for Remote control machine
4. Remote control charging cable



Note: This charger is equipped according to the model of the product you purchased to decide, the charger is one-to-one charging.

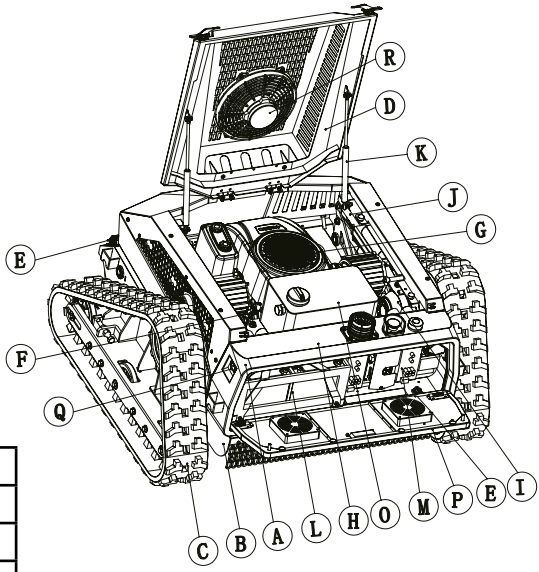
Product Description

This product is a remote-controlled hybrid flail mower, equipped with blade, motor, movement mechanism and control components. It is simple and practical to use, allowing efficient control via remote control. This makes garden maintenance easy and significantly improves work efficiency.

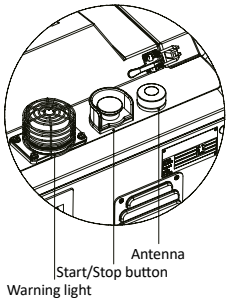
Technical specifications

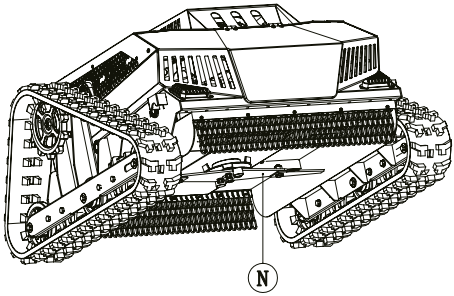
Item	Parameter	Unit
Dimensions (length x width x height)	990x1150x640	mm
Net weight	285	kg
Blade size	27” (685 mm)	inches
Type of blade	Swing knife	
Gasoline engine	13	HP
Charger input voltage	AC 100-240	V
Charging voltage	28V (Special charger)	
Traveling motor power	1200	W
Travel speed	47	m/minute
Rocker stepless speed	Yes	
Chassis height remote control adjustment	30~120mm above the ground	mm
Remote control size (LxWxH)	171x114x79	mm
Remote control charging voltage	DC 5	V
Remote control frequency band	2.4G (2400-2483.5Mhz)	
Remote control transmission power	6.24	dBm
Remote control communication distance	<= 200	m
Remote control start/stop	Yes	
Remote control display	Yes	
Remote control voice announcement	Yes	
Outdoor working enviroment temperature	0-40C°	
Track size	150x60x35	cm
Maximum slope	30°	
Ground pressure	8800	g/cm²
Type of vegetation	grass, shrubs, bushes	

Name and diagram of components



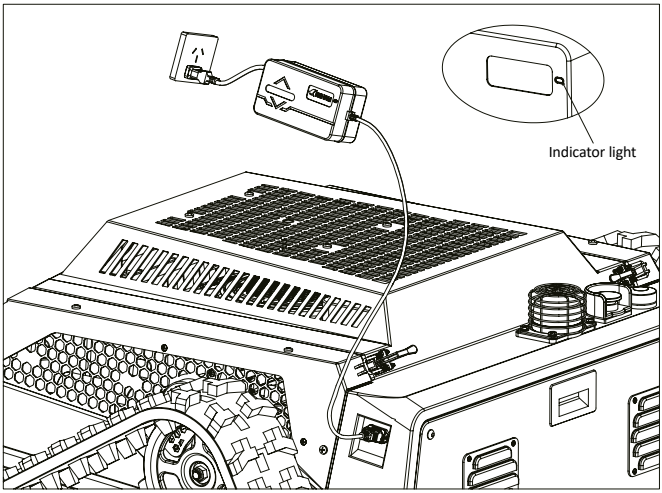
No.	Name	Quantity
A	Deck	1
B	Chassis	1
C	Tracks	2
D	Top cover	1
E	LED	2
F	Throttle assembly	1
G	Engine	1
H	Generator	1
I	Gear box	2
J	Piston rod	1
K	Lifting piston	2
L	Battery	2
M	Motherboard	1
N	Blade plate	1
O	Fuel tank	1
P	Electrical box lid	1
Q	Charging port	1
R	Condensing fan	1





Notes for battery use and maintenance

Charging the machine battery
When the battery of the new product is not fully charged, insert the charging cable of the charger into the charging port of the flail mower and the other end into the power socket. When the charging indicator is red, it indicates that the charger is charging. When the charging indicator is green, it indicates that the charging operation is completed.

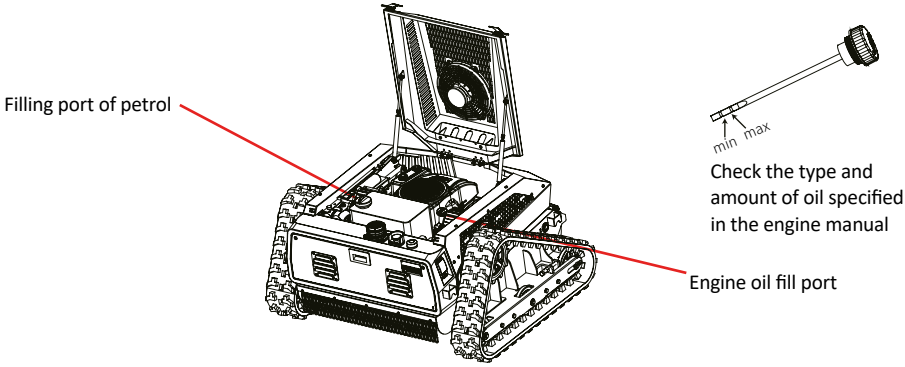


Precautions

1. It is normal for the charger to heat up slightly while charging.
2. If the battery is not used for a long time, to prolong its useful life, it should be recharged once every 3 months.
3. A new or unused battery needs approximately 5 charge-discharge cycles before reaching maximum capacity.
4. Do not recharge the battery after a certain period of operation, as this may reduce its life and performance.
5. Do not use damaged battery packs and do not disassemble chargers and battery packs.
6. The battery will explode if it is thrown into fire. Do not overheat the battery.
7. Do not charge the battery indoors.
8. When the battery charge gradually decreases, it is normal for the cutting capacity to decrease.
9. During the charging process, the machine must be turned off, and it is strictly prohibited to use it while charging.
10. It is forbidden to store the battery pack in a humid environment.

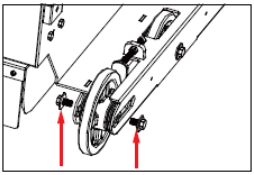
Fill in the engine oil and petrol

Note: Make sure the machine's power is turned off before refilling the engine oil and petrol!

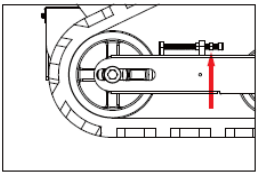


Track tension adjustment

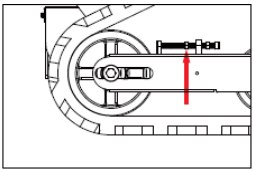
Note: Before adjusting the track, make sure the power to the machine is turned off.



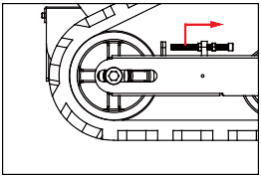
Loosen the screws on both sides of the drive wheel



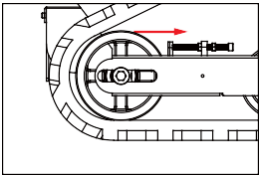
Loosen the adjustment screw 1



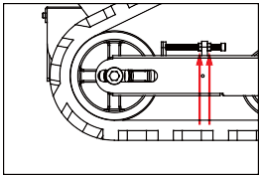
Loosen the adjustment screw 2



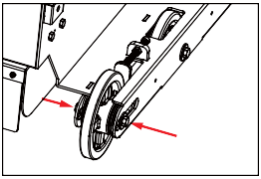
Return the screw to the right position



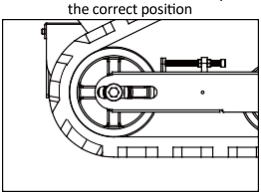
Return the drive wheel assembly to the correct position



Lock the adjustment screw 1,2



Tighten the screws on both sides of the drive wheel



Adjustment completed

Note: Moving the sprocket rearward increases track tension, and moving it forward reduces track tension.

Product use and maintenance

Instructions before use:

1. Check the battery level of the machine and remote control before use.
2. When the device is not in use, make sure the main switch on the machine is in the down position and the transmitter battery is disconnected.
In particular, remember to disconnect the remote control and the remote control's power supply during the refueling and blade replacement process.
3. Check the tightness of the blade and track screws before use.
4. If the device will not be used for an extended period (for example, during the winter), make sure the machine's main switch is in the down position and the transmitter battery is disconnected. The machine and transmitter batteries must be recharged at least every 3 months!

Pairing the remote control

If the remote control was purchased as a pair with the machine, the connection will already be established and the machine can be used directly. Otherwise, follow the steps below to establish the connection.

1. Turn on the remote control and the machine.
2. Navigate through the functions using the arrows until the connection function appears on the display, press the button and the display will show that pairing is in progress.
When the machine is pairing, the warning light will flash quickly and the signal value will be 0.

When the frequency has been successfully established, the warning light will be off and the signal value will be at maximum.

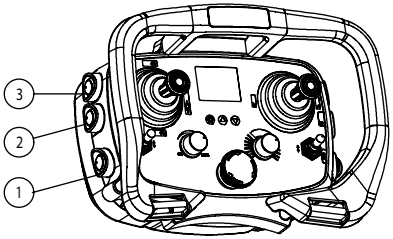
*** Please keep the distance between the machine and the remote control at least 1m when you are pairing.**
*** If the new remote control has been connected to the machine correctly the original remote control will automatically be disconnected.**

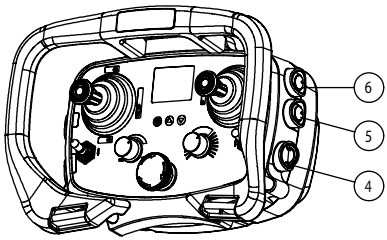
Loading operation:
1. Turn off the power
2. Organize, tidy up, box up

Battery maintenance considerations

1. Do not charge below 0°C or above 45°C, as this may damage the battery and charger.
2. Turn off the switch before connecting the battery. When the switch is on, it is easy to connect the battery to the tool and cause accidents.
3. Only use the charger specified by the manufacturer to charge the battery. Using a charger that is not compatible with the battery may cause fire and other hazards when charging the battery.
4. Do not disassemble or reassemble the battery.
5. Do not short-circuit the battery.
6. Do not use near heat sources.
7. Do not place the battery in fire or water.
8. Do not charge the battery near fire or in direct sunlight.
9. Do not insert nails into the battery, knock or throw the battery, hammer or step on the battery.
10. Do not solder directly onto the battery.
11. Do not connect the battery to the charging socket or car cigarette lighter socket.
12. Do not use on unspecified equipment.
13. Do not use the battery in places with static electricity (over 64V).
14. When using the battery for the first time, if you notice corrosion, a bad smell, or any other abnormal phenomenon, do not use it and return it to the point of sale.
15. If you do not use the mower for a long period of time, you must fully recharge the battery to save it.

Introduction to the remote control function





1. Remote control On/Off button
Press and hold the button for 2 seconds to turn on the remote control.

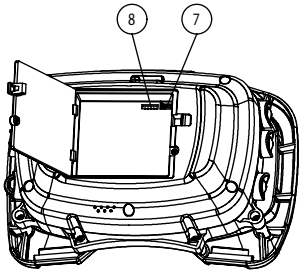
2. Engine stop button
Controls engine shutdown when devices are paired.

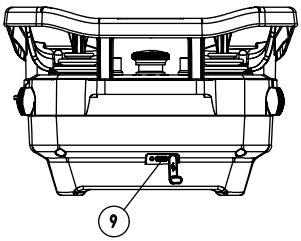
3. Engine start button
Controls engine ignition when devices are paired.

4. Remote control keys
Keys must be inserted into the remote control in order to use it. If you have lost the keys, contact the dealer.

5. Engine speed reduction button
Check the reduction of engine speed.

6. Engine speed increase button
Check the increase in engine rpm.

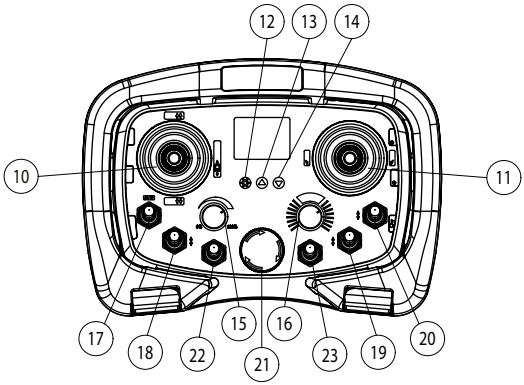




7. Battery connector
Remote control battery connector.

8. Software update connector
Connector used for software updating.

9. Charging port (TYPE-C)
Remote control charging port.



10. Left analog stick
Controls the forward and backward movement of the machine.

11. Right analog stick
Controls the left and right movement of the machine.

12. Settings button
Press to set the language on the display.

13. Mode up button
Press to navigate display options.

14. Down mode button
Press to navigate display options.

15. Speed adjustment button + knob
When clicked, the display automatically switches to the walking speed interface. Rotate to the right to increase the speed value, and to the left to decrease it. The speed value ranges from 0% to 100%

16. Track engine thrust calibration lever
After pressing, the display will automatically switch to the straight-line calibration interface. Rotate to the right to increase the calibration value and to the left to decrease it. The calibration value ranges from -60% to +60%.

17. Headlight switch
Flip the top switch up to turn on the headlight, the light icon will appear on the display. Flip the switch down to turn off the headlight and the icon will disappear.

18. Working head switch
Flip up to activate the working head, flip down to deactivate it.

19. Baffle height switch
Flipping up will raise the working head baffle; flipping down will lower it. In both cases, the display will automatically switch to the working head baffle interface.

20. Frame or front accessory raising/ lowering lever (depending on model)
Raise the switch to raise the front accessory or the frame, lower the switch to lower the front accessory or the frame. In both cases, the display will automatically show the specific screen.

21. Emergency button
Press to immediately stop machine operation.
Press and rotate the button in the direction of the arrows to resume machine operation.

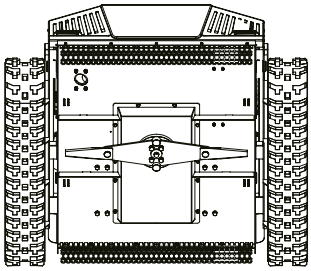
22. Travel direction adjustment knob
Turning the dial up activates the direction switch, which enables the front and back control mode and the left and right rotation operation mode. Turning the dial down will deactivate these functions (factory default is the dial in the off position).

23. Function to be determined, will be updated going forward.

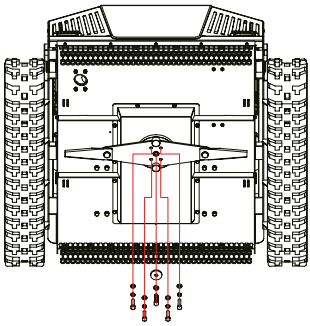
Note: The full function remote control has all the functions listed above;
The standard remote control will not have 18, 19, 22, 23 functions for now.

Replace the blade

Note: Before disassembling the blade, make sure the machine's power is turned off!

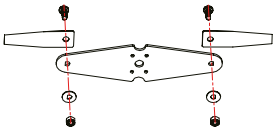


Disassembly begins



1. Loosen the center shaft screw, washer and gasket
2. Loosen 4 sets of screws, spring washers and spacers

Remove the blade support bracket

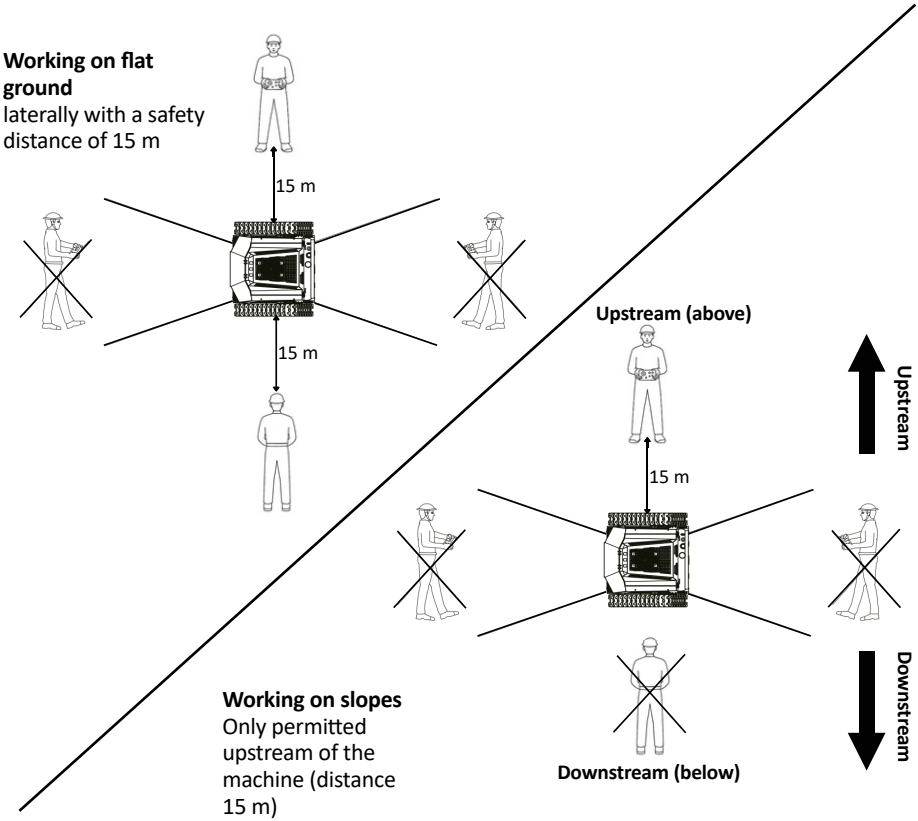


Loosen the two locking nuts, remove the washers and remove the floating blades

Note: Before installing the blade, please apply an adequate amount of 243 grade threadlocker to the screws.

Safety distance in the work area

No parking in front of or behind the car:
It is strictly forbidden to stand in front of or behind the machine during operation.
There is a risk that foreign objects may be sucked in and ejected at high speed by the cutting system.
Side safety distance:
During use, always maintain a minimum safety distance of 15 meters from the sides of the machine.
This distance reduces the risk of injury due to accidentally thrown objects.
Operation on sloping terrain:
On slopes, it is forbidden to stand below the mower: the machine could tip over and slide downhill.
You may only stand above the machine, maintaining a minimum distance of 15 meters.
Always ensure that the ground is stable and non-slip, so as to avoid falling or slipping towards the machine while it is in operation.



Fault display on the remote control: The remote control's LCD display can display 11 different error messages, identified by the abbreviation E***

Code	Error	Solution
E001	Unstable voltage	Verify that the contactor coil connector is properly connected.
E002	Current reference error (check the emergency light flashing code)	Perform a power cycle. If the problem persists, replace the affected component.
E004	1. Current protection intervention 2. Hall sensor fault	1. Move the joystick or power the machine off and on again to clear the fault. 2.1 Check the Hall sensor connector. Gently pull the connector wires to verify that no wire is broken. Inspect the metal contacts for oxidation or deformation. After reconnecting the connector, restart the machine and check whether the fault has been cleared. 2.2 Replace the Hall sensor connector with that of the right (or left) motor and verify whether the fault remains associated with the original position. If so, the Hall sensor inside the motor is damaged or has a poor connection; in this case, replace the motor.
E005	Overvoltage protection or MOSFET fault	Perform a power cycle. If the fault persists, replace the affected electronic control board (PCBA).
E006	Motor stall protection	Reset the alarm by moving the joystick or by restarting the machine.
E008	Undervoltage or overvoltage	**Low voltage:** Recharge the battery. **Normal voltage:** Possible fault in the voltage detection circuit on the electronic board; replace the PCBA. **High voltage:** Battery fault or excessive generator output voltage; replace the battery or the generator.
E009	Temperature protection	**Normal over-temperature condition:** Wait until the temperature decreases, then restart the machine. The alarm will be cleared. **Abnormal over-temperature condition:** Disconnect the motor temperature sensor and restart the machine. If the alarm disappears, the motor temperature sensor is faulty and must be replaced.
E010	Communication fault (2.4 GHz module / gyroscope / battery / main unit)	1. Communication fault between the main control board and the remote controller: re-pair the devices. 2. Communication fault between the main control board and the gyroscope: recalibrate the gyroscope. 3. Communication fault between the main control board and the battery pack: check the electrical connections (electric models only). 4. Communication fault between the main control board and the main unit: check the electrical connections (electric models only).

E015	Gyroscope communication fault	Operate the joystick to clear the alarm once the inclination angle has dropped below 40°.
E016	Low battery alarm during startup	The alarm will automatically clear after 15 seconds; however, the battery must be recharged.
E017	Brake malfunction	Power off and restart the machine. If the fault persists, there is likely a problem with the brake assembly. Check the brake circuit fuse, wiring, and electrical connections, or manually release the brake to perform further inspection.

The warning indicator will flash twice in sequence: the first flash indicates the fault location, while the second flash indicates the fault type. There is a short pause between the two flash sequences.

First flash	
0 flash	Main system
1 flashes	Main blade
2 flashes	Left motor
3 flashes	Right motor
4 flashes	Lift actuator
5 flashes	Engine
6 flashes	Lighting system

Second flash	
1 flash	Abnormal shutdown
2 flashes	Current reference error
3 flashes	MOSFET fault
4 flashes	Current protection activated or Hall sensor fault
5 flashes	Overcurrent protection activated
6 flashes	Motor stall protection activated
7 flashes	Phase loss protection activated
8 flashes	Undervoltage or overvoltage condition
9 flashes	Overtemperature alarm
10 flashes	Communication fault
11 flashes	EEPROM memory error
12 flashes	Motor phase detection fault
13 flashes	Programming error
14 flashes	Gyroscope module communication fault
15 flashes	Rollover detected by the gyroscope
16 flashes	Remote control low battery alarm at startup
17 flashes	Brake system fault

Safety instructions

Become familiar with the correct use of the operator and the machine and learn how to turn it off the engine quickly, as failure to follow the warnings and instructions could cause fire or personal injury.

- Do not allow children or people who are not familiar with these regulations to use the machine; local regulations may limit the age of the operator.
- Do not operate the machine if the user is physically tired or ill, or if he has taken drugs, alcohol or other things that impair judgment.
- Children or other people are not allowed to drive the appliance.
- The operator or user is responsible for the safety of others. It is the user's responsibility to evaluate the potential risks in the area where the machine will be used and to take all necessary precautions to ensure the safety of himself and others, especially on slopes or rough and slippery surfaces.
- If the appliance is sold or rented to others, the operator must ensure that he has read the relevant provisions of this manual.

Personal protective equipment

- Wear suitable work clothes, safety shoes (non-slip soles) and long trousers; do not use the appliance barefoot or in sandals; wear protection for hearing.
- Do not wear scarves, shirts, necklaces, bracelets or clothing with pendants. If the hair they are long, it is recommended to tie them.

Machine/work area

- Thoroughly inspect the entire work area and remove any debris that may have been thrown from the machine; or objects that could damage the cutting attachment, such as rocks, wires, etc.

Internal combustion engine: fuel

DANGER! Fuel is highly flammable

- Store fuel in a safe place, away from sources of light or heat.
- Make sure fuel containers and storage areas are free of debris of grass, leaves or grease.
- Place the fuel out of the reach of children.
- Do not smoke when refueling or handling fuel.
- Use a funnel to refuel in an open area.
- Do not breathe fuel exhaust.
- Do not remove the fuel tank cap or fill the tank while the engine is running or hot.
- Slowly open the fuel tank cap to gradually reduce fuel consumption internal pressure.
- Do not use an open flame near the fuel tank opening.
- Do not attempt to start the engine if fuel is leaking. Move the machine away from the area that loses and avoid.
- Any ignition source until the fuel has evaporated and dissipated.

- Immediately clean up any fuel spilled on the machine or on the ground.
- Tighten the fuel tank cap securely.
- Must start the engine at least 10 meters away from the refueling station.
  If fuel spills on your clothing, replace it before starting the engine.

Maintenance

- Do not use the machine when the parts are worn or damaged. Defective or worn parts must be replaced promptly.
- Check the machine regularly for oil or fuel leaks to avoid fires. Be careful when dismantling the machine to avoid fingers getting caught between the moving parts of the cutting unit and the fixed parts of the machine.
- Clean dirt and grass residues from the blade and machine body after each job.
- Change the oil once a week when the machine is running for a long time.

WARNING: any maintenance on the machine must be carried out with the machine switched off, with protective gloves and with care to avoid accidental injury from the blades!

Engine oil precautions

- 1. This engine requires 10W-40 type oil.
- 2. Replace new oil 20 hours after first use.
- 3. Replace the oil every 40 hours of use. Check the oil level every 20 hours and, if it is lower than normal, add new oil.

Conservation

- Do not store machines with fuel in hazardous areas where it could cause a fire.
- To reduce the risk of fire, do not keep oil drums and miscellaneous items together.

Environmental protection

- Strictly comply with local environmental protection laws.
- Dispose of or recycle waste such as used oil.
- Strictly observe local waste disposal regulations.
- When the machine needs to be disposed of, take it to the waste disposal facility in accordance with local regulations.

☼	We recommend replacement and maintenance at an authorized center.
▲	Clean or wash
○	Inspect, fill, or adjust
◙	Replace

Periodic maintenance program	Before work	After work	Every 50 hours	Every 200 hours	Every 500 hours	Prolonged stopping	Notes
Clean with compressed air		▲		▲	▲	▲	
Charge the battery		○				○	Work: 100% - Rest: 50%
Cable conditions				○		○	
Remote control battery		○				○	Recharge every time
Blade conditions	○			◙		○	
Secure the blades	○			◙		○	
Add oil to the transmission					☼		
Track condition	○					○	
Lubrication			○			○	
Screws and nuts	○	○	○				General fixation
Electrical system			○	▲		▲	
Safety switches	○						

Maintenance

- Have the machine repaired by professional service personnel who use the same replacement parts. This ensures the safety of the repaired power tool.
- A damaged battery should only be repaired by the manufacturer or its authorized service provider.
- For cordless tools:
  a) instructions for charging the battery pack, temperature limits and recommended charging temperature range for use and storage of the tool and battery pack.
  b) For cordless tools using removable battery packs or split packs, instructions to specify the appropriate battery pack by category number, serial number or equivalent
  c) Instructions for specifying the appropriate charger by category number, serial number, or equivalent.

Work area

- Do not start in an enclosed space where carbon monoxide fumes are generated, and all starting operations should be performed in an open or well-ventilated area.
- When starting the machine, do not direct exhaust gases from the exhaust port at flammable materials.
- Do not use the machine in an explosive environment with flammable liquids, gases or dust.
- Only use the machine in daylight or under good visibility. Keep people, children and animals away from the work area and instruct another adult to supervise nearby children.
- Avoid using the machine to cut wet grass in rainy or stormy conditions.
- Be aware of: hills, plains, slopes and obstacles that can affect visibility.
- Be careful when using near ravines, ditches or embankments, inadvertent use may cause it to tip over. On slopes, special care must be taken to avoid overturning or losing control. The main causes of loss of control are:
  - Insufficient adhesion.
  - Excessive speed.
  - Slopes greater than 30 degrees.
  - Use of a type of machine that does not correspond to the operational activity
  - Lack of attention to the terrain environment (particularly the slopes).
  - Incorrect use of the machine as a tractor.

Behavior

- Maintain a high level of concentration and never get distracted when working remotely.
- Always keep your hands and feet away from the cutting attachment when starting and using the machine.
- Move away from air vents.
- Do not touch engine parts that overheat during use, there may be a risk of burns.
- To avoid fires, do not place the appliance in tall grass while the engine is running.

To avoid fire, in case of malfunction or accident during operation, immediately turn off the engine and remove the machine to avoid further damage. In case of personal injury or injury to a third party, take immediate first aid measures. Remove any debris that could cause injury to people or animals.

Restrictions on use

- Do not use the machine with damaged or missing guards or with correct assembly. Do not use the machine without accessories/tools in place.
- Do not loosen/deactivate/disassemble or tamper with the installed safety system.
- Never use a small machine for heavy work, use a machine with adequate power.
- The machine cannot be used on public roads without authorization and must not be used in private areas where access is prohibited.

Maintenance/Storage

- Ensure regular maintenance and proper storage to maintain machine safety and high performance.

After-sales service

If you have any questions about the usage procedure, please contact us in time. We have professional staff ready to answer questions and solve problems and maintenance personnel who use the same replacement parts, thus maintaining the necessary safety standards.

Declaration

The company reserves the right to make technical improvements to the products described in this manual. If there are changes, please understand. If there are any discrepancies between the graphic images and textual description contained in this manual and the actual material, please refer to the actual material.

Warranty conditions

- Our company guarantees the correct and good functioning of all the agricultural and industrial machines we sell for a period of 24 months (12 months for professional use) from the moment of sale. For the purposes of the warranty period for the product, the receipt and/or purchase invoice for the product itself is valid.
- This guarantee takes the form of free replacement of the various components, mechanical and electrical, which should become unusable due to manufacturing or material defects, ascertained by our Company.
- The technical staff will intervene as soon as possible, within the time limits allowed by organizational needs, to correctly restore the product.
- The warranty is limited to the pure and simple replacement of defective and/or faulty parts after they have reached us within two months from the date on which the defect was discovered.
- Except for defects in origin and/or manufacturing, all those parts whose wear is due to normal use are excluded from the guarantee. These, for example, are: cutting discs, mowing sections, circular saws, knives, cutters, chain saws, chainsaw bars, spark plugs, etc.
- All components recognized by us as defective and replaced free of charge under warranty will be retained by us.
- Any free replacement of components, even if recognized by us as defective, will not, under any circumstances, be a reason or pretext to prolong or suspend the payment terms already previously agreed upon.
- During the entire warranty period, the machines subject to the aforementioned warranty cannot be permanently transferred for use, resold or exported, under penalty of forfeiture of the warranty itself.
- Our Company declines all responsibility for damage resulting to people or things following the improper use of the machines we built, even if such damage were to be caused by machines still covered by warranty.
- The warranty does not cover set-up and maintenance interventions that may occur during this warranty period.
- The warranty excludes updates and/or improvements to the product. The warranty becomes void in the event of:
  - obvious lack of maintenance;
  - incorrect use of the product or tampering;
  - use of unsuitable lubricants or fuels;
  - use of non-original spare parts or accessories;
  - interventions carried out by unauthorized personnel.
- For engines of other brands (Kawasaki, Honda, Briggs & Stratton, etc.) mounted on our machines, the warranty granted by the engine manufacturers applies.

EC DECLARATION OF CONFORMITY - HERSTELLERERKLARUNG - DECLARATION 'CE' DE CONFORMITE - DECLARACION DE CONFORMIDAD - DICHIARAZIONE DI CONFORMITA' EUROPEA - GELIJKVORMIGHEIDSVERKLARING - EC DEKLARATION I OVERENSSTEMMELSE - DECLARAÇAO CE DE CONFORMIDADE - EY ILMOITUS - FORSAKRAN OM OVERENSSTAMMELSE - BEKREFTENDE EU ERKLÆRING - ΔΉΛΩΣΗ ΕΚ ΣΥΜΜΌΡΦΩΣΗς - EUROPEJSKA DEKLARACJA ZGODNOSCI

1) MANUFACTURER – HERSTELLER – FABRICANT – FABRICANTE – COSTRUTTORE – CONSTRUCTEUR – PRODUCENT – FABRICANTE – VALMISTAJA – TILLVERKARE – FABRIKANT – Κατασκευαστής – PRODUCENT:
Blue Bird Industries Fabbrica Motori s.r.l.
Via Due Camini 19, 36010 Zanè (VI), Italia

2) DESCRIPTION OF THE MACHINERY – BESCHREIBUNG DER MASCHINE – DESCRIPTION DE LA MACHINE – DESCRIPCION DE LA MAQUINARIA – DESCRIZIONE DELLA MACCHINA – BESCHRIJVING VAN DE MACHINE – BESKRIVELSE AF MASKINEN – DESCRIÇAO DA MAQUINA – KONEEN NIMITYS – MATERIELSLAG – BESKRIVELSE AV MASKINERIET – ΠΕΡΙΓΡΑΦΗ ΤΩΝ ΜΗΧΑΝΩΝ – OPIS MASZYNY:
TRINCIASARMENTI RADIOCOMANDATO – REMOTE CONTROL BRUSHCUTTER

a) MAKE – FABRIKAT – MARQUE – MARCA – MARCA – MERK – MÆRKE – MARCA – MERKKI – FABRIKAT – FABRIKANT – MAPKA – MARKA:
BLUE BIRD

b) TYPE / TYP / TYPE / TIPO / TIPO / TYPE / TYPE / TIPO / MALLI / TYPBE / TYPE / ΤΥΠΟΣ / TYP:

FM 24-70

2000/14/EC (2005/88/EC) – Livelli di potenza sonora come da allegato V – Sound Power Levels performed per annex V	
TIPO	Livelli di Potenza Sonora Misurata / Livelli di Potenza Sonora Garantita LWA Sound Power Levels Measured / Sound Power Level Guaranteed LWA (dB)
FM 24-70	103 / 105

c) Il prodotto è conforme alle direttive - The product complies with the directives - Das Produkt entspricht den Richtlinien - Le produit est conforme aux directives - El producto cumple con las directivas - Het produkt is conform met de richtlijnen:

- 2006/42/EC – 2014/30/EU – 2000/14/EC (2005/88/EC) – 2011/65/EU - 2014/53/EU

d) REFERENCE TO STANDARDS/HARMONIZED STANDARDS - VERWEIS AUF NORMEN/HARMONISIERTE NORMEN - REFERENCE AUX NORMES/NORMES HARMONISEES - REFERENCIA A ESTANDARES/ESTANDARES ARMONIZADOS - RIFERIMENTO ALLE NORME/NORME ARMONIZZATE - REFERENTIE NAAR STANDAARDEN/GEHARMONISEERDE STANDAARDEN - REFERENCE TIL STANDARDER/HARMONISEREDE STANDARDER - REFERENCIA AS NORMAS/NORMAS HARMONIZADAS - VITTAUS STANDARDEIHIN/YHTEISIIN STANDARDEIHIN - REFERERANDE TILL STANDARDER/HARMONISERADE STANDARDER - HENVISNING TIL STANDARD/FELLES STANDARD - ΑΝΑΦΟΡΑ ΣΤΑ ΠΡΟΤΥΠΑ/ΕΝΑΡΜΟΝΙΣΜΕΝΑ ΠΡΟΤΥΠΑ - ODNIESIENIE DO NORM/NORM ZHARMONIZOWANYCH:

EN ISO 12100:2010 *EN ISO 4254-1:2015/A1:2021* *EN ISO/IEC 17067:2013* *EN ISO 11850:2011/A2:2022*

EN 301.489 *EN 300.440*

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ZANE' (VI) – ITALIA 05-05-2026
The chairman – Der vorsitzender – Le président – El presidente – Il presidente – De voorzitter – Daglig leder – O presidente – Toimitusjohtaja – Verkställande direktör – Administrerende direktør – O ΠΡΟΕΔΡΟΣ - Prezes

VANDA VITELLA

(GB) Technical documentation maintained by
(F) Documentation technique maintenue par
(I) Documentazione tecnica conservata da
(DK) Teknisk dokumentation tillhandhallen av
(FI) Teknisten asiakirjojen yiläpitäjä
(NO) Teknisk dokumentasjion vedlikeholdt av
(PL) Dokumentacja techniczna utrzymywana przez
(D) Technische Dokumentation aktualisiert durch
(E) Documentacion tecnica mantenida por
(NL) Technische documentatie onderhouden door
(P) Documentaçao tecnica mantida por
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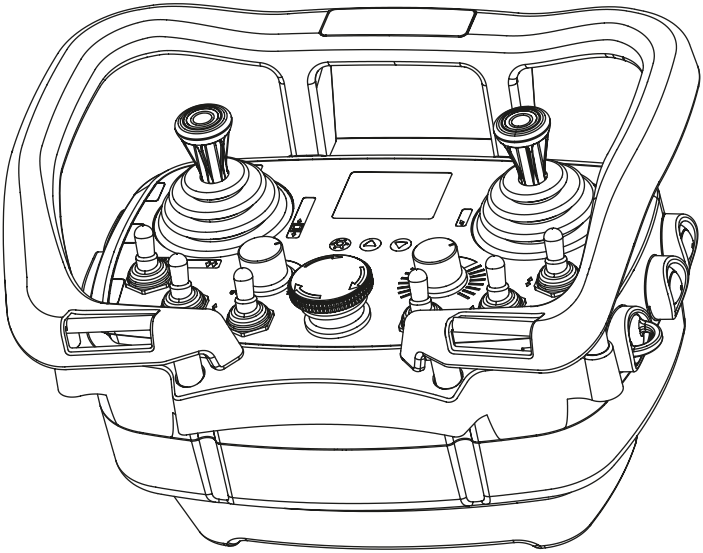
(GR) τεχνικό φάκελο που τηρείται από

BLUE BIRD INDUSTRIES – FABBRICA MOTORI s.r.l.

VANDA VITELLA

BLUEBIRD INDUSTRIES

Remote Control



Product user manual

-translation of the original instructions-

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Description of symbols

1. Operation Symbols

Please read the instructions carefully.

Please do not dispose of it in the rubbish.

Command symbol with warning message to prevent damage.

Do not touch the tool to an electrically charged object as this may cause injury.

Wear a helmet.

2. Battery Symbols

Labelled as nickel-metal hydride or lithium-ion batteries, don't dispose of them as rubbish.

Do not throw the battery into the fire as this may cause an explosion.

Do not place the battery in a water or humid environment as the battery may explode or be damaged.

Do not handle the battery for a long time under bright light or high temperature, surface (Max temperature 60°C).

Batteries can be recharged and recycled, and waste batteries are recycled in an environm entally friendly way.

3. Charger Symbols

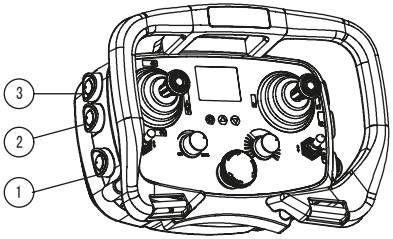
Warning symbol

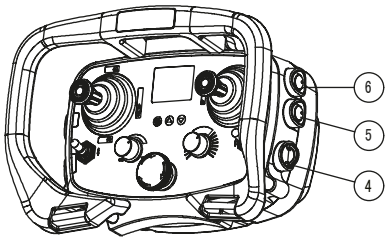
Do not dispose of in the rubbish

Product Overview

This remote control adopts 2.4G wireless technology, working in the 2.4~2.5GHz communication band. With complete function buttons to ease the work, built-in colour screen display, real-time feedback connectivity equipment information, timely response to the state of the equipment.

Components Introduction





1. Remote control On/Off button
Press and hold the button for 2 seconds to turn on the remote control.

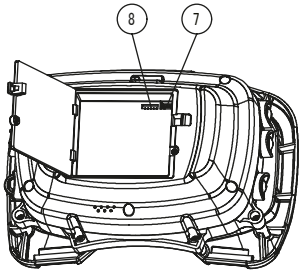
2. Engine stop button
Controls engine shutdown when devices are paired.

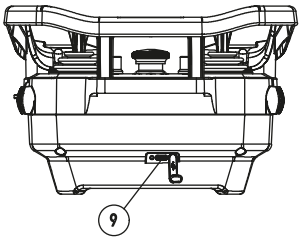
3. Engine start button
Controls engine ignition when devices are paired.

4. Remote control keys
Keys must be inserted into the remote control in order to use it. If you have lost the keys, contact the dealer.

5. Engine speed reduction button
Check the reduction of engine speed.

6. Engine speed increase button
Check the increase in engine rpm.

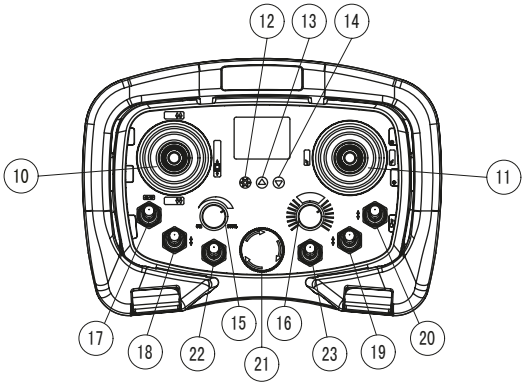




7. Battery connector
Remote control battery connector.

8. Software update connector
Connector used for software updating.

9. Charging port (TYPE-C)
Remote control charging port.



10. Left analog stick
Controls the forward and backward movement of the machine.

11. Right analog stick
Controls the left and right movement of the machine.

12. Settings button
Press to set the language on the display.

13. Mode up button
Press to navigate display options.

14. Down mode button
Press to navigate display options.

15. Speed adjustment button + knob
When clicked, the display automatically switches to the walking speed interface. Rotate to the right to increase the speed value, and to the left to decrease it. The speed value ranges from 0% to 100%

16. Track engine thrust calibration lever
After pressing, the display will automatically switch to the straight-line calibration interface. Rotate to the right to increase the calibration value and to the left to decrease it. The calibration value ranges from -60% to +60%.

17. Headlight switch
Flip the top switch up to turn on the headlight, the light icon will appear on the display. Flip the switch down to turn off the headlight and the icon will disappear.

18. Function non available at the moment.

19. Function non available at the moment.

20. Frame or front accessory raising/ lowering lever (depending on model)
Raise the switch to raise the front accessory or the frame, lower the switch to lower the front accessory or the frame. In both cases, the display will automatically show the specific screen.

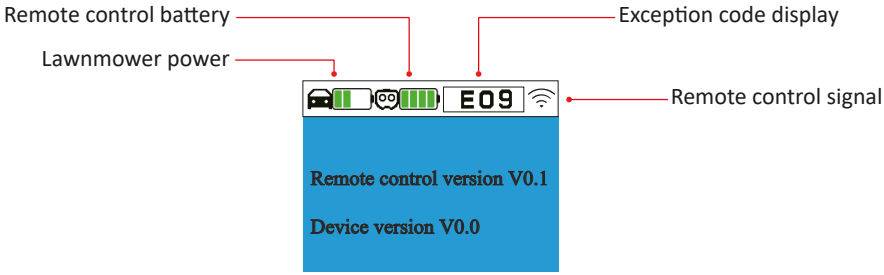
21. Emergency button
Press to immediately stop machine operation.
Press and rotate the button in the direction of the arrows to resume machine operation.

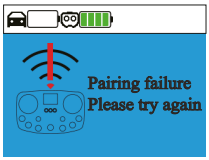
22. Function non available at the moment.

23. Function non available at the moment.

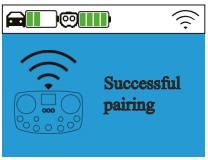
<u>Note:</u> The full function remote control has all the functions listed above;
The standard remote control will not have 18, 19, 22, 23 functions for now.

Remote control function introduction

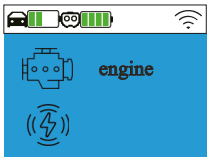




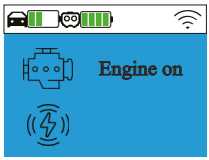
Pairing failed



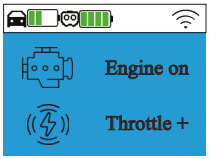
Successful pairing



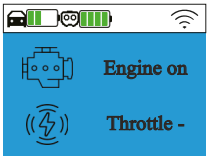
Turn off the engine



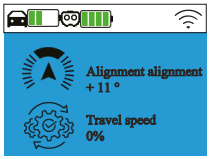
Turn on the engine



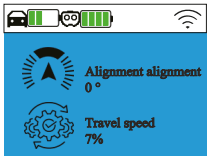
Throttle incease



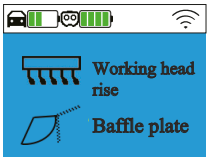
Throttle reduction



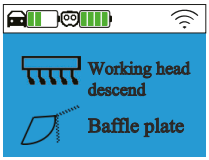
Alignment



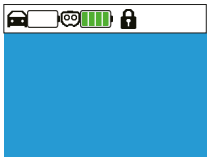
Travel speed



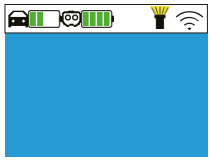
Working head rise



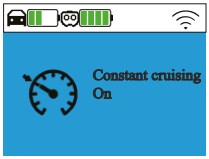
Working head descend



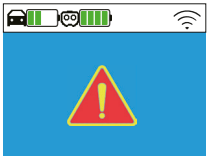
Key not inserted



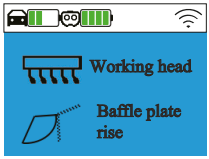
Headlights on



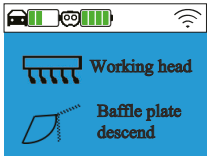
Cruise control on



Scram



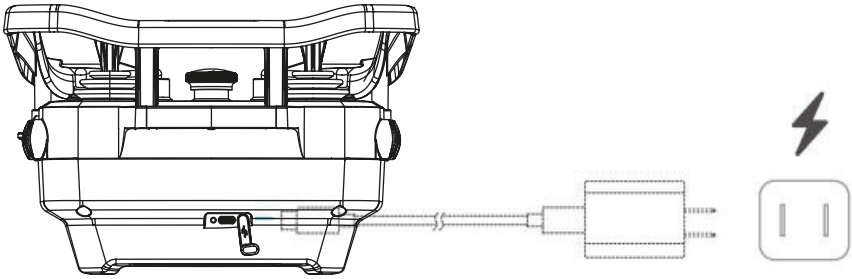
Baffle height rise



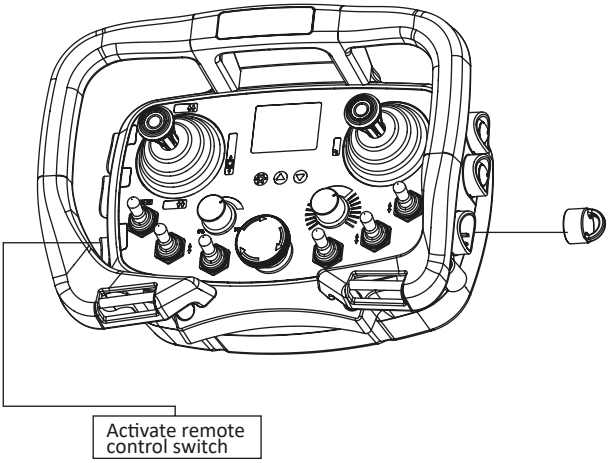
Baffle height descend

Charging the battery

To charge, connect the charger to the type-c port of the remote control, the time to fully charge it is about 75 minutes.
***To keep your remote control batteries in optimal condition, be sure to fully charge your remote control every 3 months.**



Startup operations

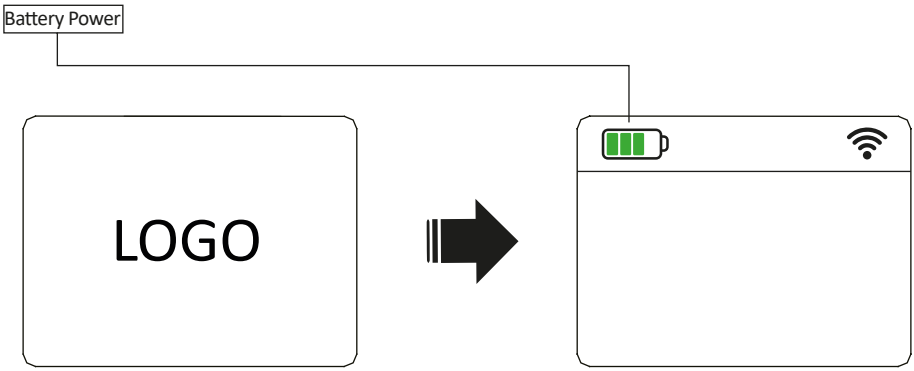


Insert the key into the remote control, then press the start remote control switch for 2S, the display will light up and the remote control will be switched on.

Basic operation of remote control

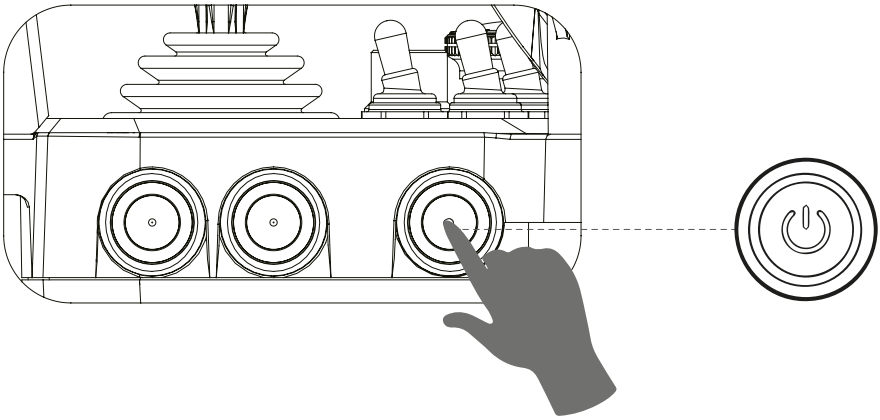
Check Battery Power

LOGO screen is displayed after the remote control is activated and the display enters the function interface after pressing any function key. The top of the display shows the current battery power.



Switch on and off/standby

After inserting the remote control key, then press and hold it for 2 seconds to switch on and off the remote control. The display will go black and the remote control will go into standby mode after more than 30min without any operation.



Remote control frequency pairing

If the remote control was purchased as a pair with the machine, the connection will already be established and the machine can be used directly. Otherwise, follow the steps below to establish the connection.

1. Turn on the remote control and the machine.
2. Navigate through the functions using the arrows until the connection function appears on the display, press the button and the display will show that pairing is in progress.
When the machine is pairing, the warning light will flash quickly and the signal value will be 0.

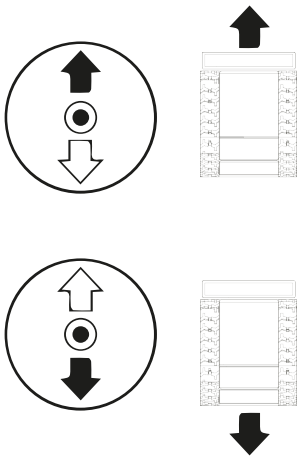
When the frequency has been successfully established, the warning light will be off and the signal value will be at maximum.

*** Please keep the distance between the machine and the remote control at least 1m when you are pairing.**
*** If the new remote control has been connected to the machine correctly the original remote control will automatically be disconnected.**

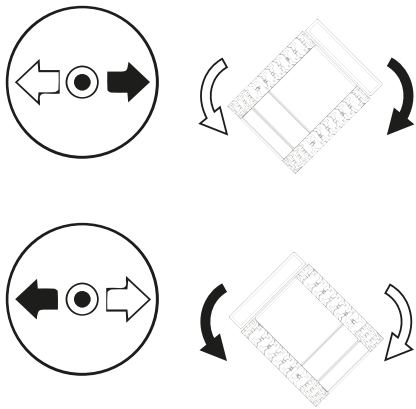
Machine manoeuvrings

Remote control lever control mode, as shown in the figure below

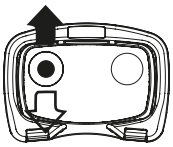
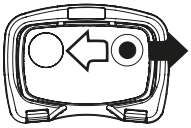
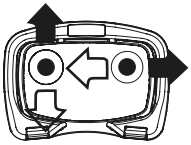
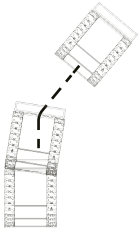
Left analog stick



Right analog stick

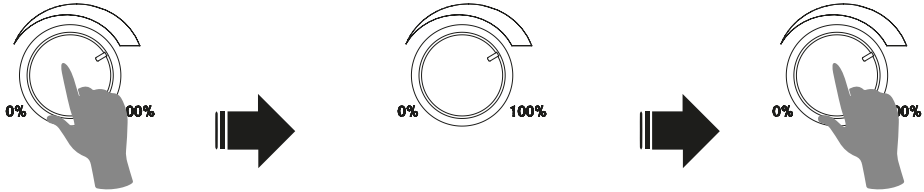


The analog stick stick of the remote control has a speed control function, which determines the speed of movement based on the travel of the lever.
*** Return to center/neutral position: the remote control analog stick stick is in the center position.**
*** Volume: indicates the distance the analog stick stick moves from its central position.**

Remote controls	Equipment Machines	Control mode
		Throttle Lever: Used to control the forward and backward movement of the machine. - Push the lever upwards, the device moves forward. - Push the lever downwards, the equipment moves backwards. - The unit remains stationary in neutral position. When the machine is moving, the throttle lever must be pushed up beyond the center position for the machine to operate. (push the lever slowly to prevent the equipment from moving suddenly and rapidly upwards).
		Directional lever: Used to control the direction of the machine. - Push the lever to the left to rotate the machine counterclockwise. - Push the lever to the right to rotate the machine clockwise. - The rotation angle is zero in the center, the device does not rotate. The movement of the lever corresponds to the rotation angle of the machine. The greater the lever movement, the greater the rotation angle. When the lever is operated independently, the machine rotates around the center point.
		Throttle Lever: Used to control the forward and backward movement of the machine. Directional lever: Used to control the direction of the machine. When the throttle lever and directional lever are pushed together beyond the center position, the device will move forward/backward in a left/right direction.

Travel speed adjustment

Press the movement speed adjustment button to check the current forward speed of the device (expressed as a percentage). Adjust the appropriate average speed and, once done, press the button again. The device will then move at a uniform speed based on the current setting.



1. Press the Settings button to access the remote control options.

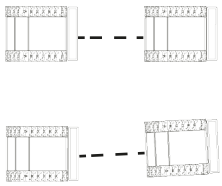
2. Adjust the desired travel speed to the right (left).

3. Press the button again to confirm the current speed.

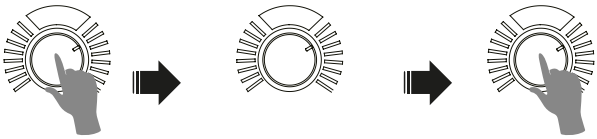
Calibration of electric motors

Alignment can be used to adjust the angle of the forward swing of the machine when there is a deviation in the alignment, so that the machine operates in a straight line as it moves forward.

Device deflects when travelling straight ahead



Straightening Calibration Adjustment



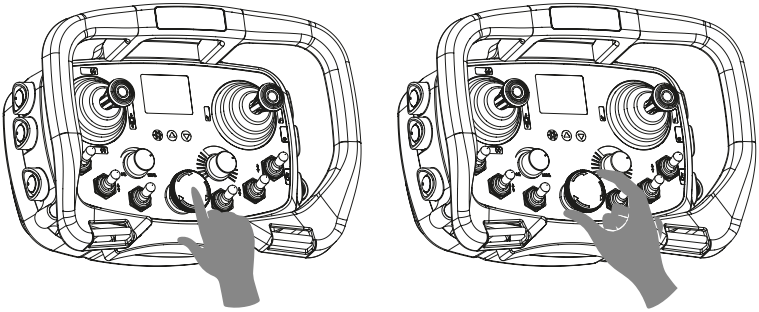
1. Press the Calibration button to access the function panel when the machine moves forward but deviates.

2. If the machine veers to the left, finely adjust the angle by turning the knob to the right until the device moves straight ahead. Likewise, turn the knob to the left if adjustment is necessary.

3. Once the machine is aligned on a straight line, press the knob again to confirm. The calibration angle on the function panel will then be displayed as zero degrees.

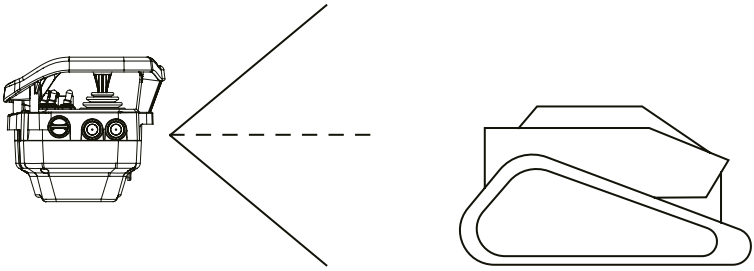
Emergency stop button lock and reset mechanism

The emergency stop button must be pressed quickly in case of unexpected situations; will immediately cut off power to the control circuit, stopping the machine to ensure the safety of personnel and equipment in emergency situations. This button has a lockout feature: once pressed, it will remain activated until manually reset. To reset it, rotate the button clockwise approximately 45° and release to complete the operation.



Communication range of remote control

When maneuvering the machine, the orientation and distance between the remote control and the machine should be adjusted in a timely manner, and the position of the antenna should be adjusted to ensure that the machine is always within the optimal communication range.
The signal quality between the remote control and the car can be optimized when the remote control is placed in a positive position and the position of the antenna matches the direction of the car.



*** Please do not use other communication devices with the same frequency band at the same timem to cause interference to the remote control signal.**
*** Maximum communication range of the remote control is 150m, please control the direction of the remote control towards the device according to the position of the antenna to ensure that the device is in the best communication range.**

Cruise control

When the analog stick stick is pushed forward and the machine is moving in the direction, switch the option by pressing the up and down buttons until the cruise occurs. Press the button, the device will maintain the current speed and direction and slowly release the analog stick stick; Cruise control deactivates when any of the following operations are performed: 1. Toggle the left analog stick stick; 2. Press the emergency stop button; 3. Press the engine off button; 4. Press the button when cruise control is active.

Remote control errors

In certain situations, if the device malfunctions or the remote control encounters an issue, it will display an error code. For information on the alarm content and a detailed description of the fault code, please consult the manual for the respective equipment and machine.

Specifications

Operating ambient temperature	-10~50°C
Storage ambient temperature	-20~40°C
Charging ambient temperature	5~40°C
Charging time	Approx. 1.5 hours
Charging method	TYPE-C
Battery Voltage	14.4V
Battery Capacity	3.3Ah
Battery Type	lithium battery
Display Resolution	320*240
Display Size	2.0inches
Product Weight	Approx.1.5KG
Product Size	25.8x18.5x16.5CM

*** Frequency bands allowed in each country and region vary, please refer to local laws and regulations for details.**
*** The remote control works normally under the temperature of 5~40° and all communication functions operate normally, for reference only.**

Precautions for the use and maintenance of the remote control

1. Never use batteries other than the original batteries, as this may cause damage to the remote control.
2. Please do not place the remote control and battery pack in any liquid such as water.
3. Please follow the instructions to use the device, if the remote control or the battery is damaged, do not use it.
4. Do not use the remote control if the switch does not turn the device on or off properly.
5. Keep the remote control out of the reach of children.
6. Charge the battery completely every three months.
7. When using the remote control and accessories, follow the instructions and use method, consider the working environment and the work to be done, using the tool for operations that do not match the requirements may lead to danger.

Safety Precautions

Warning! Read all instructions carefully, failure to follow all instructions below may result in electric shock, fire or other serious injury!

Safety instructions for the workplace

1. Keep the workplace clean and bright, messy and dark workplaces may cause accidents.
2. Do not operate the remote control in explosive, flammable and humid environment.
3. Keep children and bystanders away before operating the remote control normally to avoid accidental injury during operation.

Electrical safety instructions

1. The battery port of the remote control must match the battery connection port, do not modify the socket and plug in any way.
2. Do not expose the remote control to humid environment, water or other liquids, it will increase the risk of electric shock and cause electrical damage.
3. Never abuse the cord. Do not use the power cord to lift, pull or unplug it. Do not use the charger when the power cord or plug is damaged. Damaged or tangled cords increase the risk of electric shock.

Physical security statement

1. Stay alert and focused when operating the remote control machine. Do not operate it if you are tired, under the influence of medication, alcohol, or are distracted, as this can lead to serious personal injury.
2. Always use appropriate safety equipment, such as goggles. In certain conditions, additional protection like dust masks, non-slip safety shoes, helmets, or hearing protection can help reduce the risk of injury.
3. Before starting the remote control, remove any keys or tools from the machine. Tools left on rotating parts can cause injury.
4. Maintain a distance of at least 3 meters from the machine when operating it remotely to prevent injury from a possible collision.
5. Never stand in front of the machine's working area when switching it on or operating the remote control.

Anomalous situations and related management methods

1. If the key is lost, please contact your dealer.
2. Please charge the battery in time when it shows a low battery level.
3. If electrical or mechanical failure occurs, please turn off the power immediately.
4. Lithium battery is included in this product, please do not drop or puncture this product, otherwise it may cause damage, fire and other phenomena.
5. When the machine appears abnormal code and alarm display, please stop the machine and consult the abnormal code and solution.

After-sales service

If you have any questions about the usage procedure, please contact us in time. We have professional staff ready to answer questions and solve problems and maintenance personnel who use the same replacement parts, thus maintaining the necessary safety standards.

Declaration

The company reserves the right to make technical improvements to the products described in this manual. If there are changes, please understand. If there are any discrepancies between the graphic images and textual description contained in this manual and the actual material, please refer to the actual material.

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