

LITTLE BEAVER

DUELM-RC40

Instruction Manual for Tracked Remote Controlled Lawnmower

Read this Manual to understand all warnings and instructions

Strictly follow the warnings and declarations in this Manual. Avoid electric shock, fire, and/or serious injury.

Unauthorized use of this equipment by untrained personnel is strictly prohibited!

Violators shall bear the consequences themselves, and we are not liable for any losses or liabilities arising therefrom.

This Manual outlines the potential risks associated with the use of the equipment. Please carefully read all warnings and instructions.

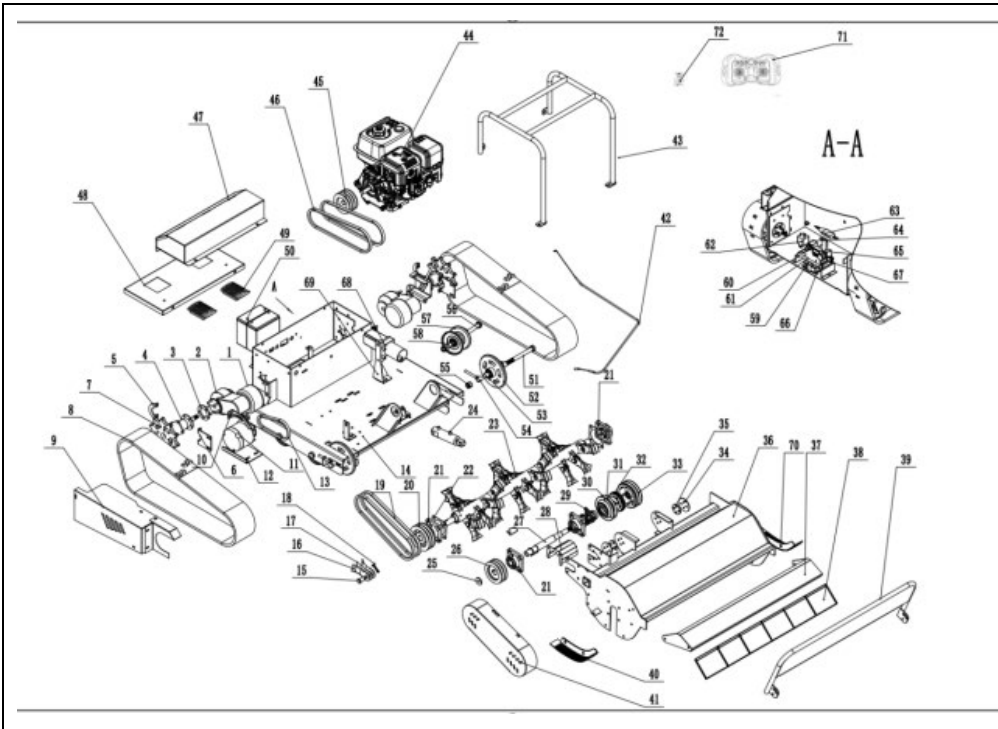
DUELM-RC40

LITTLE BEAVER

Instructions

About the tracked remote controlled
lawnmower

Please carefully read the operating instructions for the
product provided in this Manual.

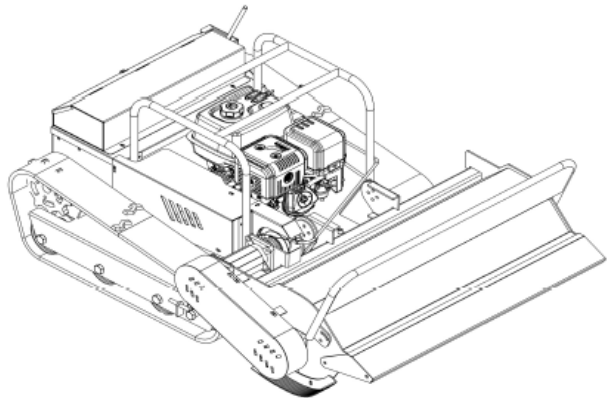


This Manual covers the product's operating instructions, safe operation guidelines, and after-sales maintenance.



Product After-Sales Maintenance Card / Customer Stub

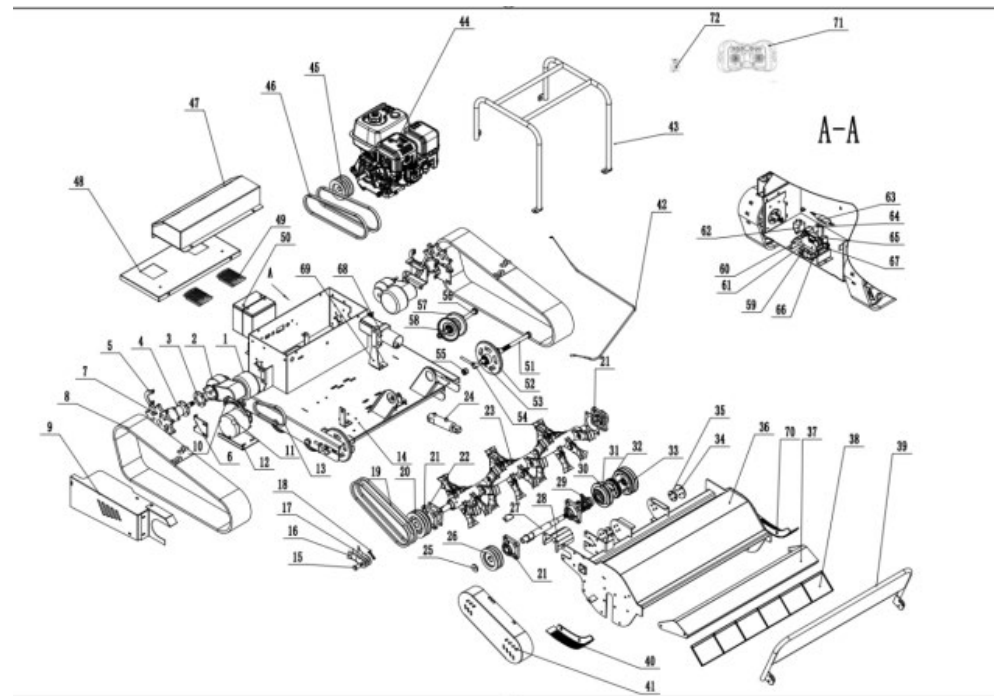
User Information		Purchase Channel	
	Name:		Name and Address:
	Address:		
	Tel.:		
Product Model/No.		Purchase Date	

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01/

Product Structure

Product Structure Diagram



		48	Seal cover	23	Cutter shaft welded
72	Remote control receiver	47	Tool box	22	Adjustable gasket
71	Remote control	46	Intermediate shaft V-belt	21	UCF206 unit bearing assembly
70	Left pallet welded	45	Three-groove pulley	20	130 two-groove belt pulley
69	Support	44	Power engine	19	Cutter shaft V-belt
68	Hydraulic motor	43	Protective frame	18	Split pin
67	Charging port	42	Clutch cable	17	Straight grass chopping knife
66	Emergency stop switch	41	Shield 1	16	Grass chopping curved channel
65	Battery indicator	40	Right pallet welded	15	Blade pin shaft
64	Power switch	39	Grass pressing support	14	Frame welded
63	Hydraulic lifting control	38	Slab rubber	13	Generator V-belt
62	Relay	37	Grass board support	12	Generator fixing base
61	Controller	36	Grass chopping housing welded	11	24v generator
60	Controller support	35	Bushing	10	Generator tensioning frame
59	Exhaust fan	34	Gland	9	Belt hood
58	sb6204 bearing	33	Clutch pulley	8	Track
57	Load-bearing wheel welded	32	Clutch plate assembly	7	Track driving wheel
56	20 Bolt 2	31	Paper pad	6	Half-shaft buckle 2
55	M20 self-locking nut	30	Clutch dust cover	5	Half-shaft buckle 1
54	Tensioning rod	29	Separator assembly	4	Drive half-shaft assembly
53	Spacing sleeve	28	Shaft guard	3	Reducer adjusting shim
52	Track tensioning wheel	27	Intermediate spline shaft	2	Drive reducer
51	20 Bolt 1	26	150 two-groove belt pulley	1	Drive motor
50	Lead-acid battery	25	Gasket	S/N	Description
49	Air inlet	24	Hydraulic cylinder		

03/Safety Warnings



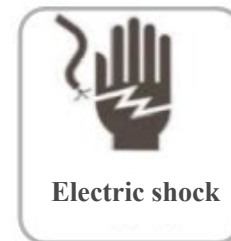
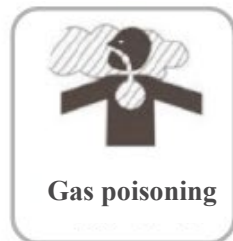
Read all warnings and all instructions. Failure to follow the warnings and instructions below may result in electric shock, fire, or serious injury.

Unauthorized use of this equipment by untrained personnel is strictly prohibited! Violators shall be responsible for their own consequences.

We are not liable for any losses or liabilities arising therefrom.

- ① Moving parts may come into contact with hands, feet, hair, clothing, or other objects.
- ② Rotating components shall be equipped with protective measures.
- ③ Keep hands, feet, long hair, and other items away from the engine's rotating components.
- ④ Do not wear loose clothing, and avoid clothing with dangling strings or straps.

This equipment may present the risks illustrated below. Please keep all warnings and instructions for future reference.



1.1 Safety in use

- 1.1.1** This product is a specialized machine designed for lawns, landscaping, and orchards. It must be operated by trained professionals.
- 1.1.2** Do not operate this product in explosive environments, such as those containing flammable liquids, gases, or dust.
- 1.1.3** After starting the lawn mower engine, operate the machine from a distance of 25 meters. Never stand in front of or behind the machine. Do not allow the machine to scrape the ground or hit hard objects such as soil, stones, metal, or trees.

1.2 Electrical safety

- 1.2.1** The electric control connector must be compatible with the battery pack socket. Never modify the plug in any way. Unmodified plugs and matching sockets will reduce the risk of electric shock.
- 1.2.2** Do not expose power tools to rain or humid environments. Water entering the power tool will increase the risk of electric shock.

1.3 Personal safety

1.3.1 Stay alert, focus on the operation being performed and remain sober while using this product. Do not operate power tools when you are tired, or under the influence of drugs, alcohol, or medical treatment. A momentary lapse in attention while operating power tools can result in serious personal injury.

1.3.2 Wear personal protective equipment (PPE). Always wear safety goggles. Safety devices such as dust masks, non-slip safety shoes, safety helmets, and hearing protection—when used under appropriate conditions—will reduce personal injury.

1.3.3 Prevent accidental startup. Ensure the switch is in the off position when connecting to a power source or battery pack, or when picking up or carrying the tool. Keeping fingers on a powered-on switch or plugging in the plug while the switch is on may cause hazards.

1.3.4 Remove all adjustment keys or wrenches before the power tool is turned on. Wrenches or keys left on the rotating parts of the power tool can cause personal injury.

1.3.5 Dress appropriately. Do not wear loose clothing or accessories. Keep clothing, gloves, and hair away from moving parts. Loose clothing, accessories, or long hair may get caught in moving parts.

06/Precautions

2.1 Tool use and precautions

2.1.1 Before using the machine each time, tighten the connecting screws of the track, motor, engine, and blades. Check the connection of the electrical circuits and ensure they are properly connected before operation.

2.1.2 Before each use, check the condition of the diesel engine, clean the air filter, inspect the engine oil level, check the diesel level, and ensure the fuel tank cap is tightly screwed on.

2.1.3 During the engine startup process, the operator shall stand on either the left or right side of the machine. Never stand at the front or rear, and guard against injuries caused by blade detachment.

2.1.4. After using the machine, turn off the power supply, place it in a cool and ventilated area, and do not expose it to direct sunlight.

2.1.5 Check the blade connections and tighten all screws before each operation.

2.2 Safety precautions for working area

- 2.2.1 **Operate this tool only in conditions with good visibility and sufficient lighting. Never operate this tool in dark or hazy conditions.**
- 2.2.2 **Do not operate this machine in explosive environments, such as those containing flammable liquids, gases, or dust. Sparks generated by damage to this machine may ignite dust or gas.**
- 2.2.3 **Never stand on slippery, unstable surfaces or steep slopes during operation. In cold seasons, be alert to ice and snow and always ensure stable footing.**
- 2.2.4 **During operation, keep bystanders or animals at least 25 meters away from the tool. Stop the tool immediately when someone approaches.**
- 2.2.5 **Never operate this tool when there are people (especially children) or pets nearby.**
- 2.2.6 **Before operation, check the work area for stones or other hard objects. These foreign objects may be thrown up, causing serious personal injury or property damage.**



2.3 Electrical and battery precautions

- 2.3.1 **Do not expose this tool to rain or humid environments. Moisture exposure of the tool will increase the risk of electric shock.**
- 2.3.2 **If the tool's switch fails to turn the tool on and off, do not use it. Any tool that cannot be controlled by its switch is extremely dangerous and must be repaired.**

- 2.3.3 Prevent accidental startup.** Before installing the battery pack, picking up or moving the tool, ensure the switch is in the off position. Keeping your fingers on the switch while carrying the tool, or powering it on when the switch is on, may lead to accidents.
- 2.3.4 Avoid dangerous environments.** Do not use the tool in humid or rainy conditions. Moisture exposure of the tool will increase the risk of electric shock.
- 2.3.5 Do not discard batteries into fire.** otherwise, it may cause the battery to explode. Refer to local regulations for proper disposal instructions.
- 2.3.6 Do not open or disassemble the battery.** The leaked electrolyte is corrosive and may cause damage to the eyes or skin. Ingestion can be toxic.
- 2.3.7 Do not charge in rain or humid areas.**
- 2.3.8 Only use the charger specified by the manufacturer for charging.** Using a charger suitable for one type of battery pack on other types of battery packs may cause a fire.
- 2.3.9 Only use the specified battery pack for the power tool.** Using other types of battery packs may result in personal injury or fire.
- 2.3.10 When not using the battery pack, store it away from paper clips, coins, keys, nails, screws or other small metal objects.** These objects may short-circuit the battery terminals. Short-circuiting of battery terminals may cause burns or fire.
- 2.3.11 Overuse may cause liquid to leak from the battery.** Avoid contact with battery leakage. If you accidentally come into contact with battery leakage, rinse with water immediately. If the liquid comes into contact with the eyes, seek medical attention immediately. Battery leakage may cause allergic inflammation or burns.




2.4 Engine safety precautions

The engine is one of the core components of the machine. When in use, monitor the engine status closely and perform regular maintenance on it. Non-professionals must not disassemble or repair the engine by themselves. Caution! Caution!

 	<p>The engine generates heat during operation, especially the muffler, which produces a large amount of heat.</p>
	<p>A running engine may ignite dry materials.</p>

Do not touch the hot muffler, engine radiator fins, or other similar components.

Keep flammable materials away from the muffler and other heat-generating components.

  	<p>The engine may produce sparks or electric shocks during startup and operation.</p>
	<p>A running engine may cause harm to the human body.</p>

Keep away from flammable and explosive materials before repairing and commissioning the engine.

Before inspecting and repairing the engine, disconnect the machine from the power supply.

2.4.1 For refueling

1. Shut down the engine and let it cool down outdoors for at least 2 minutes before removing the fuel tank cap.
2. Refuel the engine outdoors or in a well-ventilated area.
3. Do not overfill the fuel tank. Fill it to approximately 20-30mm below the fuel tank opening.
4. Ensure gasoline is kept away from sparks, smoking, lighting fixtures, heat sources and other ignition sources.
5. Check for cracks in the fuel pipes, fuel tank cap, fuel tank, and other related components. Replace them promptly if necessary.

2.4.2 For starting the engine

1. Ensure that the power cord, muffler, fuel tank cap, air filter, and other components are properly installed.
2. Ensure that an appropriate amount of engine oil is added to the machine's oil sump.
3. If fuel spills, it must be thoroughly cleaned up and allowed to evaporate completely before starting the engine.

2.4.3 For operating the engine

1. Operate the engine on a stable flat surface; otherwise, it may cause fuel spillage.
2. Stop the engine using the stop switch.

2.4.4 For transporting the engine

1. Ensure that the engine fuel tank is free of fuel or the fuel tank switch is turned off.

2.4.5 For storing the engine when the fuel tank contains fuel

1. Keep away from stoves, water heaters, high-power lighting fixtures and other sources of ignition.

2.5 Precautions for operators

2.5.1 Do not allow persons unfamiliar with the operating instructions, those with physical, sensory or mental impairments (including children), or individuals lacking experience and knowledge to use this tool. Supervise children closely and do not let them play with this tool.

2.5.2 Before starting the tool, please read the operation manual and familiarize yourself with its operation methods.

2.5.3 Do not lend this tool to anyone lacking experience or knowledge in operating lawn mowers and brush cutters.

2.5.4 When lending this tool, be sure to attach the operation manual.

2.5.5 Before assembling or adjusting this tool, please disconnect the battery pack connection cable.

2.5.6 Before installing the battery pack, please check if the tool is damaged, if screws/nuts are loose, or if there is improper assembly. Replace the cutting tool if it is missing or damaged. Please check and ensure that all control levers and buttons function properly.

- 2.5.7** Do not attempt to start the tool if it is damaged or not fully installed. Otherwise, it may result in personal injury.
- 2.5.8** When inserting the battery pack, keep the cutting device away from your body or other objects, including the ground. During installation, the cutting device may rotate, causing personal injury, tool damage or property damage.
- 2.5.9** Remove all adjustment keys and wrenches before starting the tool. If there are any attachments left on the tool's rotating parts, it may cause personal injury.
- 2.5.10** In case of an emergency, turn off the tool immediately.
- 2.5.11** If you notice any abnormalities (such as unusual noise or vibration) during operation, turn off the tool and remove the battery pack immediately. Only after identifying and resolving the problem can you use this tool.
- 2.5.12** If the tool is severely hit or dropped, inspect its condition before resuming work. Check whether the control and safety devices are faulty. If there is any damage or doubt, please contact our service center for inspection and repair.
- 2.5.13** Take regular breaks to avoid loss of control due to fatigue during operation. It is recommended to take a 10 to 20-minute break every hour.
- 2.5.14** Be sure to turn off the power if you leave the tool, even for a short time. When a tool with a battery pack is left unattended, it may be used by unauthorized persons, leading to serious accidents.
- 2.5.15** If grass or branches get stuck between the cutting device and the protective cover, be sure to turn off the tool and disconnect the power before cleaning. Otherwise, the cutting device may rotate unexpectedly, resulting in personal injury.

- 2.5.16 Do not touch the dangerous moving parts until they have completely stopped and the power is disconnected.
- 2.5.17 If the cutting device hits a stone or other hard objects, immediately turn off the tool, disconnect the power, and inspect the cutting device.
- 2.5.18 During operation, regularly check the cutting device for cracks or damage. Before inspection, disconnect the power and wait for the cutting device to come to a complete stop. Damaged cutting devices must be replaced immediately, even if there are only shallow surface cracks.
- 2.5.19 Do not operate the machine in severe weather or thunderstorms.
- 2.5.20 Only operate this tool when you are in good physical condition. All work should be completed calmly and carefully. Use common sense during operation and always remember that the operator or user is liable for any damage caused to others or their property.
- 2.5.21 Except in emergencies, do not throw or drop the tool onto the ground; otherwise, it may cause serious damage to the tool.

014/ Storage and Transportation

3.1 Transportation

- 3.1.1 Before transporting this tool, turn off the tool and remove the battery pack.
- 3.1.2 When transporting this tool, hold the shaft and carry it horizontally.
- 3.1.3 When transporting this tool by vehicle, secure it to prevent rolling. Otherwise, it may damage the tool or other luggage.

3.2 Maintenance

- 3.2.1 Have the tool repaired at an authorized service center and use genuine original replacement parts. Incorrect repairs and improper maintenance will reduce the tool's service life and increase the risk of accidents.
- 3.2.2 Before performing maintenance, repairs, or cleaning on this machine, be sure to turn it off and remove the battery pack.
- 3.2.3 Be sure to clean off the dust and dirt from the machine. Do not use gasoline, benzene, thinners, alcohol, or similar substances to clean the tool. Otherwise, it may cause discoloration, deformation, or cracking of some components.
- 3.2.4 After each use, tighten all screws and nuts.

3.2.5 Do not attempt any maintenance or repairs not mentioned in this operation manual. Have such work performed by an authorized service center.

3.2.6 Only use genuine original accessories and attachments. Using third-party accessories and attachments may cause tool malfunctions, property damage, or serious personal injury.

3.2.7 Regularly inspect and maintain the machine.

3.2.8 Be sure to keep the machine in good working condition. Improper maintenance will lead to reduced performance and shortened service life of the tool.

3.2.9 Keep the machine dry, clean, and free of oil and grease. Ensure the cooling air intake is free of debris.

3.2.10 After use, turn off the power and check if the tool is damaged.

3.3 Storage

3.3.1 Before storing the machine, perform a thorough cleaning and maintenance. Disconnect the power supply.

3.3.2 Please store the machine in a dry, protected, or locked location to keep it out of reach of children.

3.3.3 Do not lean the machine against walls or other objects. Otherwise, it may fall and cause personal injury.

016/Equipment Introduction

4.1 Component instructions

- 4.1.1 Remote control: Powered by a rechargeable lithium-ion battery.
- 4.1.2 Lead-acid battery: The high-capacity 24V 20AH battery supplies power for the drive control and travel motor.
- 4.1.3 Drive motor: The drive motor drives the drive wheels through a coupling to achieve the overall walking function of the machine.
- 4.1.4 Mowing height adjustment: The mowing height is adjusted remotely via hydraulic control for lifting and lowering.
- 4.1.5 Engine oil filler: Add special oil through this opening. The oil grade is specified in the engine's detailed instructions, and the bolt below serves as the oil drain.
- 4.1.6 Engine gasoline filler: Add Premium (91 octane) gasoline through this opening. Do not overfill with fuel to avoid spillage.
- 4.1.7 Engine throttle adjustment: Toggle the throttle lever left or right to adjust the knob. Pushing it toward the mowing head increases the throttle, while pulling it in the opposite direction decreases it. Release the adjustment button to lock the position.
- 4.1.8 Engine stop switch: After the engine starts, press and hold the stop switch until the engine shuts down.
- 4.1.9 Engine start button: Close the choke, set the throttle to two-thirds position, press the button gently and hold it for two to three seconds to start the machine. Release the start button and open the choke.

4.2 Remote control instructions

4.2.1 Joystick 1: Controls the machine's forward and backward movement. Push the joystick up to move the machine forward, and down to move it backward.

4.2.2 Joystick 2: Controls the machine's turning and the lifting/lowering of the mower. Push the Joystick 2 forward to lower the mower; pull it backward to raise the mower. When pushing Joystick 1 upward, push Joystick 2 to the left to make the machine turn left. When pushing Joystick 1 downward, push Joystick 2 to the right to make the machine turn right. When Joystick 1 is not pushed (in the neutral position), push Joystick 2 to the left to make the machine spin left on the spot; push it to the right to make the machine spin right on the spot. (Corresponding to 1.2 of the receiver.)

4.2.3 Power switch: Press it to turn on the remote control; release it to turn off the remote control.

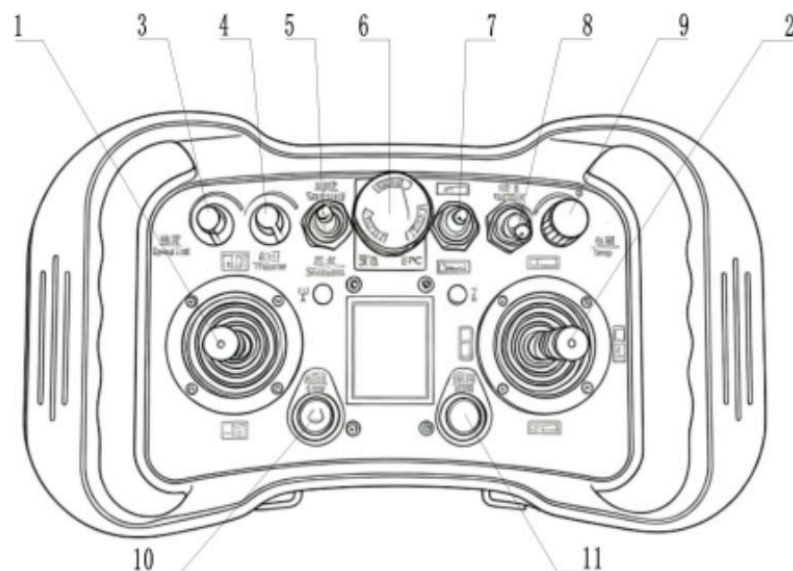
4.2.4 Speed setting: Set the maximum speed of the machine.

4.2.5 Emergency stop button: Press it, and the machine will stop moving.

4.2.6 Cruise control switch: When Joystick 1 is used for forward or backward movement, activate the cruise control. Push Joystick 1 again to cancel the cruise control.

4.2.7 Battery indicator: Steady on for normal power; Flashing for low voltage.

4.2.8 Signal transmission indicator: The remote control's signal transmission light is on, and the signal reception light is off.



		5	Start and shutdown
11	Lighting	4	Throttling
10	Power supply	3	Speed regulation
9	Setting	2	Joystick 2
8	Cruise control	1	Joystick 1
7	M1 control	S/N	Description
6	Emergency button		

4.3 Circuit power-on test run

4.3.1 Connect the battery to the lawn mower's power interface via the power cable, and ensure a secure connection.

4.3.2 The voltage displayed on the voltmeter below should be within the normal range: above 24V and below 27.5V. Then the electrical power is successfully applied.

4.3.3 Turn on the remote control's power switch, then gently push, pull the trigger and rotate the knob to test the lawn mower's forward, backward, left and right turning functions.

019/Normal Use

5.1 Startup

- 5.1.1 Ensure the machine's power supply is properly connected, turn on the power switch, and check that the voltmeter displays normally.
- 5.1.2 Turn on the remote control's power switch and wait for 2 seconds for the self-check to complete.
- 5.1.3 Gently push and pull the joystick to test the functions of the electric components.
- 5.1.4 Press the decompression valve, set the throttle to two-thirds position, then press the start button or pull the handle to start the machine.
- 5.1.5 Set the mowing clutch to the "Engaged" position, turn the throttle up to maximum, and control the machine to start mowing.

5.2 Shutdown

- 5.2.1 Release the remote control trigger to put the machine in a stopped state. Turn off the remote control.
- 5.2.2 Turn off the stop switch, and the engine will shut down. Set the mowing clutch to the "Disengaged" position.
- 5.2.3 Turn off the main power switch of the machine.

020/Abnormality Handling

Abnormal state	Failure analysis	Handling measure
The motor fails to operate	No display on the voltmeter	Abnormal battery connection
	One motor rotates while the other remains stationary	ESC (Electronic Speed Controller) damage or connection component detachment
	Neither motor rotates, and there is a continuous beep from the buzzer	Detachment of the motor connection component
	Neither motor rotates, and there is no continuous beep from the buzzer	Detachment of the power connection component
Abnormal walking direction	Occasional abnormality	Re-plug the battery
	Wrong forward/backward direction	Adjust the direction selection of the remote control
	Wrong left/right deflection direction	Swap the left and right electronic speed controllers
Abnormal connection of the remote control	The indicator light of the receiver is not on	Check the power supply
	The indicator light of the receiver is red	Re-pair the frequency
	The indicator light of the receiver is green	Replace the battery of the remote control
Engine abnormality	Abnormal engine status	Please refer to the engine instruction manual