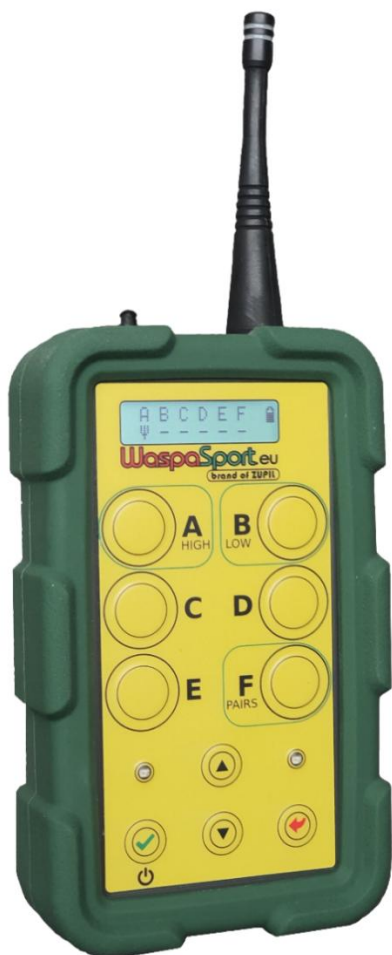# WASPACON RC

User manual

INTRODUCTION

This manual contains all necessary information regarding the proper and safe use of the device. All information, specifications and technical tips are consistent with our best knowledge and experience.

We reserve the right to change data and descriptions at any time, which will not always be reflected in this manual. Therefore, the description contained in the manual cannot constitute the basis for any claims.

SAFETY INFORMATION

This symbol alerts the user to important safety information when using or maintaining the device.

Such tips should be read with special attention to avoid any undesirable consequences.

This symbol warns of the risk of electric shock in certain circumstances, so follow the instructions to avoid.

WARRANTY

WASPASPORT guarantees to the Customer that all components of the device are covered by warranty for 12 months.

Warranty covers repair of damaged components or replacement of remote control itself if repair of individual elements will not be possible.

WASPASPORT's material liability under the warranty does not include:

- damage resulting from negligence, carelessness, misuse;
- losses resulting from downtimes, loss of profits or sales;
- any indirect costs.

CORRECT USE OF THE DEVICE

This device must be used in temperature between -5˚C to 40˚C.

This device is equipped with rubber housing, but do not drop it from a height.

Buttons as well as the remote control itself is designed to hand use only. The manufacturer is not responsible for any damage caused by improper use.

This device is powered by 2xR6(AA) batteries. Trying to use other powers supplies is forbidden. In case of store the remote control for a longer time please remove batteries.

CONSTRUCTION OF THE REMOTE CONTROL

1. Antenna
2. Handle for lanyard
3. Rubber housing
4. LCD display
5. Clay sending buttons
6. LED
7. Navigation buttons: up, down
8. Green functional button: Accept and On/Off
9. Red functional button: Cancel and Quit
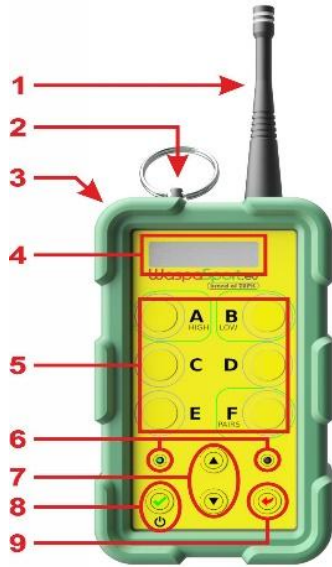
GENERAL DESCRIPTION

The WASPACON™ RC has a built in LCD with the ability to change backlight intensity to give comfort of use in all weather conditions.

Removable rubber housing is a protection against impact while at the same time giving comfort when using the remote only with one hand.

The antenna is flexible and durable and its size does not affect comfortable use.

The remote control has a battery charge indicator which will help you to keep it always operational.

This device has a so-called sleep mode which is designed to save battery power. The remote automatically turns off when not in use for more than 10 minutes.

The device can display the number of clays thrown from a paired launcher. It can be either the number of clays thrown from the beginning of the so-called "global" counter or from the last counter reset, the so-called "daily" counter.

USER GROUPS

The WASPACON™ RC software gives the ability to assign proper permissions to certain groups of users. These users are divided into three groups, where each of them has the appropriate competences to use remote/traps. These groups are:

1. Shooter: Is permitted to send clay targets from assigned traps, to review the number of clays thrown so far and to control the movement of traps (if this function has been made available by the Administrator.
2. Administrator: Has the ability to pair devices and to give permissions to use them, reset "daily" clay counter as well as to enable/modify credits function.
3. Service: In addition to access to all previous functions he has the ability to check the "global" clay counter, change passwords and access to several diagnostic functions of assigned traps.

The Administrator and Service groups are password protected.

AVAILABLE FUNCTIONS FOR EACH GROUP

SHOOTER mode	ADMINISTRATOR mode	SERVICE mode

• Sending clay targets
• Preview on quantity of clays send/left*
• Preview on occured failures
• Traps movement control*
• Loging panel
	• All Shooter group functions
	• Traps permission settings
	• Clay counter reset
	• Device pairing
	• Switch on/off and modify the credits mode
	• Remote control settings:
	  • Sound volume
	  • LCD Brightness
	  • Language change
	  • Switching on/off traps movement control
	  • Switching on/off and modifying Parcour mode
	  • Default settings
		• All Administrator group functions
		• Failure counter
		• Global clay counter for each trap
		• Batteries voltage
		• Motors' current
		• Devices control box software version previev
		• Password change

* Functions available when enabled by Administrator or Service.

A-F BUTTONS

The WASPACON™ RC remote control is equipped with 6 buttons marked A-F, which can be assigned (paired) to work with up to six different devices or five, when user will use "Doubles" ("Pairs") function – the F button must be unpaired then and when pressed it results in sending clays from traps assigned to A and B buttons simultaneously.

"PAIRS" FUNCTION

"Pairs" function is generally used in SKEET shooting, therefore the assignment of traps must be like this: high tower must be assigned to A (HIGH) button, low tower to B (LOW) button, and the F (PAIRS) button must remain unpaired, because only then you will be able to send clays from those traps simultaneously. Buttons C,D,E can be assigned as you require.

For proper operation of "Pairs" function, it is to give permissions to F button, about what you can read more in section MENU OPTIONS – 4. PERMISSION SETTINGS

WHAT DOES SIGNALS MEAN??

Each press of any of A-F button is accompanied by a short beep (if sound is enabled). A second beep that comes shortly after confirms, that a clay has been send from a particular throwing machine.

GREEN BUTTON

Green functional button has two tasks. It turns ON and OFF the remote control (when pressed for longer time) and accepts selections in the menu.

RED BUTTON

Red functional button is intended to cancel selections or to exit to higher level in the menu.

NAVIGATION BUTTONS

Navigation buttons are used to navigate through menu items as well as to change specific options or enter digits e.g. when login or pairing devices.

LED LIGHTS

Green and red LED indicates right or incorrect action of remote or throwing machine.
Detailed description of LED lights you will find later in this manual in section DESCRIPTION OF LED INDICATIONS.

FIRST START

Before first start check if there are suitable and charged batteries in place (at the back of remote under rubber housing). Close the battery cover and put rubber housing on.

Turn the remote control ON by long pressing the green functional button .
IMPORTANT! Press the button with gently and sensitively.
After a while the display will illuminate and software name and its version will be shown.

```
   WASPACON--RC
>>      v4.2      <<
```

To pair a device to required button please go to section MENU OPTIONS - 6. DEVICES PAIRING.

To give permission (to give user the ability to use paired devices) go to section MENU OPTIONS - 4. PERMISSION SETTINGS.
At this point, you're ready to use your remote control. To learn more please go to section USE OF THE REMOTE CONTROL below.

To turn the remote control OFF press and hold green functional button .

USE OF THE REMOTE CONTROL

After each start (after the software version screen) home screen appears.

```
  A  B  C  D  E  F    
  x  ✓  !  —  —  ψ    
```

The remote control is now ready to be used in SHOOTER mode.

Home screen displays current status of all assigned traps and battery (). Here you can find out whether is there connection between remote control and all assigned traps, is there any malfunction or does the battery needs to be changed.
At the top of the screen there are letters from A to F that represents buttons on the remote control. Below are displayed icons representing the current state of assigned under particular button device. Meaning of all icons is explained later in section MEANING OF DIAGNOSTIC SYMBOLS.

From the home screen using the navigation buttons you can go to diagnostic screen, where detailed information from different devices are shown such as number of clay targets sent as well as possible cause of failure. You can only review diagnostic information from traps that have currently assigned permission.

```
>F:  175
>!:  NO RF LINK
```

In the first row of diagnostic screen (Fig. 4) there is a letter corresponding to assigned device (F:) and the number of clay targets sent by this trap since the last reset (175).

⚠️ IMPORTANT! The number of sent clays will only be displayed when communication with corresponding device is correct. The clay counter is located in the device's controller therefore you need to stand in range of working device in order to read the counter and other information.

In the second row, next to icon (!) the cause of possible fault is displayed (NO RF LINK). For a complete list of faults and how to deal with them go to section LIST OF FAULTS AND TROUBLESHOOTING.

To go to login screen, you need to press green functional button 🟢 when you're located in the home screen. For more information go to section LOGIN below.

When the Credits function is enabled, pressing the navigation button UP, when you're located in the home screen, will display the credits screen where you will be able to find the remaining credits (clays) quantity to be used (bottom row) as well as the initial number of credits (top row).

```
>CREDITS:     0100
>$:           0059
```

Learn more about Credits function in section OPTIONS MENU – 2. CREDITS SYSTEM.

When the Traps movement control is enabled, user can control the movement of the traps.

```
►H MOVEMENT      ✓
 V MOVEMENT      -
```

Eagle LH240 and LHV240 traps has the automatic ability to establish a new throwing angle after each clay is thrown in horizontal and/or vertical position. With WASPACON™ RC remote control user can turn on/off that positioning.

To enter the Traps movement control menu (Fig. 6) go to diagnostic screen of a trap you want to control and press green functional button 🟢.

To enable/disable horizontal positioning (applies to Eagle LH240 and LHV240 only), choose H MOVEMENT and press green functional button 🟢. You'll see (-) if horizontal positioning has been disabled or (✓) if enabled. To enable/disable vertical positioning (applies to Eagle LHV240 only) proceed as above, but this time choose V MOVEMENT.

Please note that positioning is triggered automatically after sending a clay, therefore to maintain the same flight path, don't forget to disable positioning before sending a clay.

LOG IN
To enter to ADMINISTRATOR or SERVICE menu you need to log in. There are information and settings not available for unauthorized person like SHOOTER. Passwords to both menus consist of four digits.

Default log in passwords are:
- ADMINISTRATOR menu: 1111
- SERVICE menu: 9999

Default passwords may be changed in SERVICE menu 13. PASSWORD CHANGE.

HOW TO LOG IN?

In order to login, go to home screen (if is not currently displayed) and press green functional button
. The sing LOGIN and four stars (****) will appear on the screen.

```
1.    LOGIN
          ****
```

Then to confirm that you want to enter your password press the same button again . You will
see that the stars are replaced by 0000, and the first one will begin to flash.

```
1.    LOGIN
          0000
```

At this point you can start entering a 4-digit password, starting with the first digit.

Change digits by using navigation buttons . Pressing the up-arrow button, you change digits in
ascending order and down arrow button in descending order. After establishing the first digit press
the green functional button to move to the next one. Repeat until the whole password is
entered. After entering the last digit press the green functional button . If the entered password
is correct, you will be taken to the first menu item in the selected menu.

```
1.    LOGOUT
      >  SERVICE  ?
```

To return to the home screen press the red functional button .

HOW TO LOG OUT?

Pressing the red functional button will move you from menu to home screen but it will not log
you out. To log out properly go to first item in menu (1.   LOGOUT) and accept by pressing .
You will be moved to login screen. If the remote is not used for a while it will log out automatically.

NAVIGATING THROUGH THE MENU

Navigating through menu is easy and intuitive with navigation and functional   buttons.
Available items in ADMINISTRATOR menu:

```
1.  LOGOUT  >  ADMIN  ?
2.  CREDITS  SYSTEM
       •  State
       •  Credits
3.  PARCOUR  FUNCTION
4.  PERMISSION  SETTINGS
5.  COUNTERS  RESET
6.  DEVICE  PAIRING
7.  RC  SETTINGS
       •  Sound
       •  Brightness
       •  Language
       •  HV  Movement
       •  Default
```

Available items in SERVICE menu: (Full ADMINISTRATOR menu and)

```
8.   FAILURE  COUNTER
9.   GLOBAL  COUNTER
10.  BATTERIES  VOLTAGE
11.  MOTORS'  CURRENTS
12.  FIRMWARE  VERSIONS
13.  PASSWORD  CHANGE
       •  Admin
       •  Service
```

Each menu item is described down below.

MENU ITEMS

1. LOGOUT > ADMIN / SERVICE ?

This function is used to log out from ADMINISTRATOR or SERVICE menu. To logout press green functional button ✅.

```
1.   LOGOUT
     >  SERVICE  ?
```

2. CREDITS SYSTEM ($)

Credits function gives the opportunity to restrict shooter the ability to use paired devices to limited quantity of clays only. It may be e.g. prepaid number of clays. After reaching that limit, remote control will not respond to pressing A-F buttons which are responsible to sending clays from particular devices.

When Credits system is enabled, in the bottom right corner of the home screen you will find ‡, and after pressing UP arrow, you will get credits screen, where you can check initial quantity of credits (clays) as well as remaining credits.

```
>CREDITS:      0100
 $:            0059
```

To enable Credits function, go to State and press green functional ✅. On the right-hand side ON will appear that informs the Credits function has been enabled. Pressing ✅ again will disable Credits function and OFF will appear.

```
▶State:        ON
 Credits:      0100
```

To determine number of credits (number of clays to be sent) go to second row Credits, press ✅, and enter desired number just like entering e.g. entering menu password, starting from thousands. The maximum available number of credits is 9999.

3. PARCOUR FUNCTION

The Parcour function allows you to operate a maximum of 6 devices on each of the 5 available stands (30 devices in total). When this function is enabled on the main screen, the current stand number is indicated at the top, and the devices available at this stand are indicated below.

```
Parcour:  3         ▯
AB----
```

You can toggle between stands by pressing navigation buttons 🔼🔽.

To enable Parcour function go to menu and press green functional button ✅ when State is highlighted.

```
▶State:        ON
 Stands  Qty:     3
```

To choose how many stands you want go to Stands Qty and press green functional button ✅ until desired number of stands will be shown on the right.

Pairing and granting permissions is done the same way as if Parcour function was disabled.

4. PERMISSION SETTINGS

Permission settings in another meaning is to let user to use certain, previously paired device. You can pair up to six different devices under **A-F** buttons, but you can let user to use only selected traps depending on your or his needs.
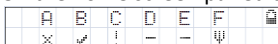
To grant or cancel permission press green functional button ✅ when desired device is highlighted.

Next to this device an icon (✔) will appear or disappear depending on your will to grant or cancel permission.

```
▶A:  111001
 B:  111002          ✔
```

On the home screen paired device without permission to use will be marked with (⋮⋮).

	A	B	C	D	E	F	🔋
	×	✓	!	–	–	Ψ	

On figure above the device B has granted permission to use and device **A** hasn't. It means that the user will be able to send clays from device **B** only.

5. COUNTERS RESET

This device is able to count clays that was thrown by specific trap. It may be helpful e.g. to common settlements between the shooter and the shooting range owner.

The clay counter is located in the WASPACON™ AC/DC control box and it counts a clay every time the throwing arm is fired. The counter is not associated with the button on remote control so there are only truly thrown clays counted. The remote control communicates with controller on throwing machine and reads data from the built-in counter there.

To reset the counter highlight using navigation buttons (⬆⬇) the desired device and press the green functional button (✓). To confirm that the counter has been reset properly the icon (✓) will appear briefly next to zeroed device and the number representing counter value will change to 0.

	A:	0
▸	B:	249
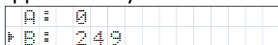
⚠️ **This operation must be performed within range of desired working device. The clay counter is located on device's control box therefore the remote control needs to communicate with chosen trap.**

6. DEVICES PAIRING

Pairing function is used to assign traps equipped with WASPACON™ AC/DC controller to desired button on the remote control. In order to pair a device, enter the 6-digit code provided with trap machine. Entering the code is the same as entering the password during log in.

▸	A:	111001
	B:	111002
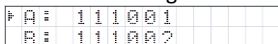
To one remote control you can assign up to six different devices.

When pairing SKEET set traps it is recommended that you assign traps to

A and **B** buttons. This is due to the fact that the **F (PAIRS)** button will function (send clays simultaneously) only, when two SKEET set traps are assigned to **A** and **B** buttons.

IMPORTANT! When configuring remote control to work with SKEET set, the **F (PAIRS)** button must remain UNPAIRED, which means in place for 6-digit code for **F (PAIRS)** button you must enter 000000. For each other button, **C**, **D**, **E**, you can assign any device you want.

7. RC SETTINGS

There are number of options that allow to adjust the remote control to your needs. To change a setting highlight it by using navigation buttons (⬆⬇) and choose it by pressing green functional button (✓), until you reach the desired setting. Settings that can be customized are:

- Sound - Beep sound can be heard when you press any button. Available settings: from 1 (the quietest) to 4 (the loudest) and 0 (no sound).
- Brightness - The brightness of the display. Available settings: 0 (no illumination), from 1 (the darkest) to 5 (the brightest).
- Language - You can choose between the available language versions. Language version is represented by the abbreviation e.g. EN (English), PL (Polish) etc.
- HV Movement – It enables user to disable the horizontal or vertical movement of the throwing machine (applies to Eagle LH240 and LHV240 only). How to deal with this function is described above in the section USE OF THE REMOTE CONTROL.

Default - Restore to default settings. After pressing the green functional button ✅ all settings are restored to factory settings.

⚠️ **IMPORTANT! Restoring to default settings will cause the loss of all pairing data. You will need to re-enter pairing codes for all devices.**
After restoring is completed the remote control will turn OFF automatically.

8. FAILURE COUNTER

One of diagnostic tools which can check the number of registered failures. Failure counter can be reset by pressing green functional button ✅ when desired device is highlighted.

9. GLOBAL COUNTER

Global counter records the number of clays thrown since its first use. This counter cannot be reset.

```
 A:  0
▸B:  1275
```

10. BATERRIES VOLTAGE **(applies to 12V traps only)**

You can check the voltage of batteries connected to appropriate traps. For proper operation throwing machine needs to have battery voltage above 12.0V. Below this value (12.0-10.5V) the machine will work but its function may be incorrect, for example excessive power consumption of main motor may occur. The decrease of battery voltage below 10.5V will shut the throwing machine off.

Figure below shows that device **B** is powered by battery voltage of 12.74V, which is more than sufficient for proper operation the throwing machine.

```
 A:  -----V
▸B:  12.74V
```

11. MOTORS' CURRENTS

Motor's currents is a diagnostic tool that will show real time amperage consumed by motors of each device. Preview is provided for main motor that tightens the spring (S), motor responsible for horizontal movement (H) (applies to Eagle LH and LHV only) and motor responsible for vertical movement (V) (applies to Eagle LHV only).

Indication of S motor is displayed continuously, while indications for H and V motors are displayed alternately.

```
 A:S----A H----A    A:S----A V----A
▸B:S60.3A H----A   ▸B:S60.3A V----A
```

The above figures shows that the device **A** doesn't have granted permission, thus the motor consumption parameters are not visible.

12. FIRMWARE VERSIONS

This menu shows the firmware versions installed in the control box located on appropriate throwing machine assigned to each button.

10. PASSWORD CHANGE

You can change the default ADMINISTRATOR and SERVICE passwords here.

To change the password, highlight with navigation buttons 🔼🔽 desired password (Admin or Service) and accept by pressing green functional button ✅.

```
▸Admin:      ****
 Service:    ****
```

The **** will be changed to 0000, and the first digit will start to flash.

```
▶Admin:      0000
 Service:    ****
```

Define the first digit of your new password. Select digits with navigation buttons ⊙⊙ and confirm them by pressing the green functional button ⊙. After selecting last digit press green functional button ⊙ to confirm the new password.

⚠️ **Keep your passwords safe. You will not be able to enter to ADMINISTRATOR/SERVICE mode without these passwords. Contact your dealer when you lose your passwords.**

MEANING OF DIAGNOSTIC SYMBOLS

When you use your remote control on the home and diagnostic screen certain icons will appear that represents device's state and malfunctions. The meaning of all possible symbols is explained below.

⣿	Device is ready. The corresponding device is paired with the remote control, has granted permission, is communicating properly and no malfunctions are detected.
⣿ (miganie)	No communication. The device is out of reach. • Solution to be found in LIST OF FAULTS AND TROUBLESHOOTING section.
⣿	No permission granted. The device is properly paired but no permission is granted. • To grant permission go to ADMINISTRATOR or SERVICE menu.
⣿	A malfunction has occurred. To read the possible reason of malfunction use navigation buttons to go to diagnostic screen of desired device, where the reason is shown in the second row. Then find the cause and a way how to resolve the problem in section LIST OF FAULTS AND TROUBLESHOOTING**.**

DESCRIPTION OF LED INDICATIONS

The remote is equipped with green and red LED, which task is to signal proper operation or a malfunction. Read the following to understand how and what does these LEDs indicate.

- Green LED - When flashing indicates proper communication between remote control and all permitted devices.
- Red LED - when flashing indicates that there is a malfunction on at least one permitted device.

LIST OF FAULTS AND TROUBLESHOOTING

On the diagnostic screen you can check the cause of malfunction that is signaled by ($\vdots$) in the home screen.

NO RF LINK	No communication. The device is out of reach. • Check if the device is turned ON. • Get closer to the device. • Check for any interference. • If possible, put the receiver's antenna located on throwing machine's controller in such way that the best possible contact between transmitter and receiver is obtained.
Is	Main motor fault. The threshold current value is exceeded for motor that is intended for spring tensioning. • Check for obstacles in the way of a moving throwing arm e.g., throwing arm is blocked by debris. • Check if the throwing arm in damaged or bent. • Check whether the motor in blocked or damaged. • Charge or replace the battery (12V version only).
Ih	Horizontal movement motor fault (Eagle LH and LHV only). The threshold current value is exceeded for motor that is responsible for horizontal movement. • Check for obstacles in the way of moving machine. • Check whether the motor is blocked or damaged e.g., if the engine emits smoke. • Charge or replace the battery (12V version only).
Iv	Vertical movement motor fault (Eagle LHV only). The threshold current value is exceeded for motor that is responsible for vertical movement. • Check for obstacles in the way of moving machine. • Check whether the motor is blocked or damaged e.g., if the engine emits smoke. • Charge or replace the battery (12V version only).
🕐	Spring tension timeout. Spring tensioning time after sending a clay is exceeded. • Charge or replace the battery (12V version only). • Check for obstacles in the way of a moving throwing arm e.g., throwing arm is blocked by debris. • Check if limit switch cable is damaged • Check if limit switch is damaged or blocked.

WAYS TO IMPROVE WORKING RANGE

There are a few simple ways to improve the working range of WASPACON™ RC:

1. Replace batteries.
2. There's an antenna provided with the radio receiver to be connected with WASPACON™ AC/DC control box located on the throwing machine. Ensure that the antenna is firmly connected to the socket.
3. Make sure, that the way between the antenna and the remote control isn't obscured in the best possible way.
4. Open the control box on the remote control, there is a radio receiver (red, similar to SIM card). Make sure that it is not moved.
5. Check if the wires from radio receiver to the antenna socket aren't broken.

DECLARATION OF CONFORMITY
ZUPIL sp. z o.o.   WaspaSport.eu   47-430 Rudy   Ul. Szkolna 6   POLAND   Declares that the: **WASPACON RC**   Complies with directives: EMC: 2004/108/WE, EN 55022:2010, EN 55024:2010   GPS: 2001/95/WE, EN 60950-1:200   Manufacturer's signature: C E