

ICARUS blue

BASIC



USER MANUAL

The ICP Group (manufacturer of this product) updates the user manual from time to time. When purchasing the product, the customer / user undertakes to request the latest documentation from the ICP Group.



ABOUT THIS USER MANUAL

This manual is intended for installers and users of the ICARUS blue BASIC receiver (called „the receiver“ in the following).

This manual provides installers and users with all the necessary information to ensure a correct, efficient and safe installation and use of the receiver (during its lifetime), even in the event of foreseeable misuse.

This manual must be read carefully by installers and users and must be fully understood without leaving uncertainty prior to installation and use of the receiver.

INTRODUCTION AND PURPOSE OF THE PRODUCT

The ICARUS blue BASIC receiver is a Bluetooth® receiver with four outputs. Via these four outputs electrical loads can be switched on and/or off.

The receiver is operated via a corresponding ICARUS blue BASIC app for smartphones and/or tablets (called „the app“ in the following). The app establishes a wireless connection via Bluetooth technology between the receiver and the smartphone / tablet.

The user interface of the app visualizes the respective outputs as well as their status (on / off) and allows the user to configure, activate and deactivate the outputs accordingly.

The receiver can only be used in systems with a voltage range of 9 - 36 volts. The load of the entire system must never exceed a maximum total current of 10 amperes.

The receiver also has an internal memory to store the configured settings. When another user connects his device to the receiver, the stored settings are automatically loaded and displayed.

CONTENTS OF THE PACKAGE

Please check the completeness of the box's contents:

- ICARUS blue BASIC receiver
- Connection cable
- Short User Manual

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SAFETY INSTRUCTIONS

Before installing or using the receiver, you must read carefully through the „Short User Manual“ as well as this manual, to ensure that you install and use the receiver correctly.

To ensure safety you must have fully understood the manuals without leaving uncertainty prior to installation and use of the receiver. If there still are questions and / or uncertainties after reading the manual, contact your supplier for clarification before installing or using the receiver! The „Short User Manual“ must also be included when this device is used by any third party. Improper operation, by NOT having read the manual and having full understanding of it as well as how to use the receiver, can bring the operator, bystanders and other matters in danger, depending on its application, and may cause personal injury and / or damage to personal possessions as well as to the device.

ABOUT THE SYMBOLS

Various symbols are used in this manual, the „Short User Manual“ and on the receiver itself to ensure correct installation and usage, to prevent danger to the user and others, and to prevent property damage. The meanings of these symbols are described below. It is important that you read these descriptions carefully and fully understand the contents.



Indicates a hazardous situation which, if not avoided, could result in property damage.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

SAFETY PRECAUTIONS

- **DO NOT** leave packaging material lying around. This can be hazardous material for children.
- **DO NOT** open and / or disassemble and / or alter the receiver to avoid electric shock, malfunction or fire. This will also expire the warranty.
- **DO NOT** put the receiver under mechanical pressure to avoid electric shock, malfunction or fire.
- **DO NOT** operate the receiver in an environment with flammable gases, vapours or solvents, as this may increase the risk of fire and explosions.
- **DO NOT** use the receiver or/and any of its components (cable, plug, button ...) and/or the parts of the application the receiver is used in, if it/they is/are damaged. In this case, discard the receiver in an environmental friendly manner.
- **DO NOT** use the receiver
 - if it begins to malfunction or is not functioning at all.
 - if it is producing smoke or burnt smell / odor.
 - if it is discoloured or has other sustainable visible damage.
- **DO NOT** cover the receiver with a cloth (or similar) to avoid fire or injury by overheating.
- Make sure that the power supply is interrupted and that the cables are not crushed, kinked or damaged in any way, for instance by sharp edges, when installing the receiver.
- Make sure the receiver is neither mechanically nor electrically overloaded. This may damage the receiver and cause fire or electric shock.
- Only use the receiver within a range of 9 to 36 Volt dc. The load of the entire system must never exceed a maximum total current of 10 amperes.



SAFETY INSTRUCTIONS (CONTINUED)

NOTES ON USE

- Loss and damage incurred due to non-observance of the safety requirements are not covered by the warranty. The manufacturer is not liable for subsequent damage.
- The receiver may not be used to operate systems/applications in which the user is not protected by system-mounted safety functions.
- The manufacturer will not be liable for damage or injuries caused by improper use or non-compliance of safety provisions. In these cases, the warranty will become null and void.
- The receiver is not a toy and is not suitable for children.
- Contact an expert if you have any questions about the use/operation, safety or connection of the receiver.
- Observe the safety regulations, the valid laws and warnings of the respective application/machine manufacturers (dealer, supplier) in which the receiver is used.
- The installer and user must always comply with the safety and operating instructions. This also applies to all other devices and / or applications associated with the receiver.

1. ICARUS BLUE BASIC RECEIVER

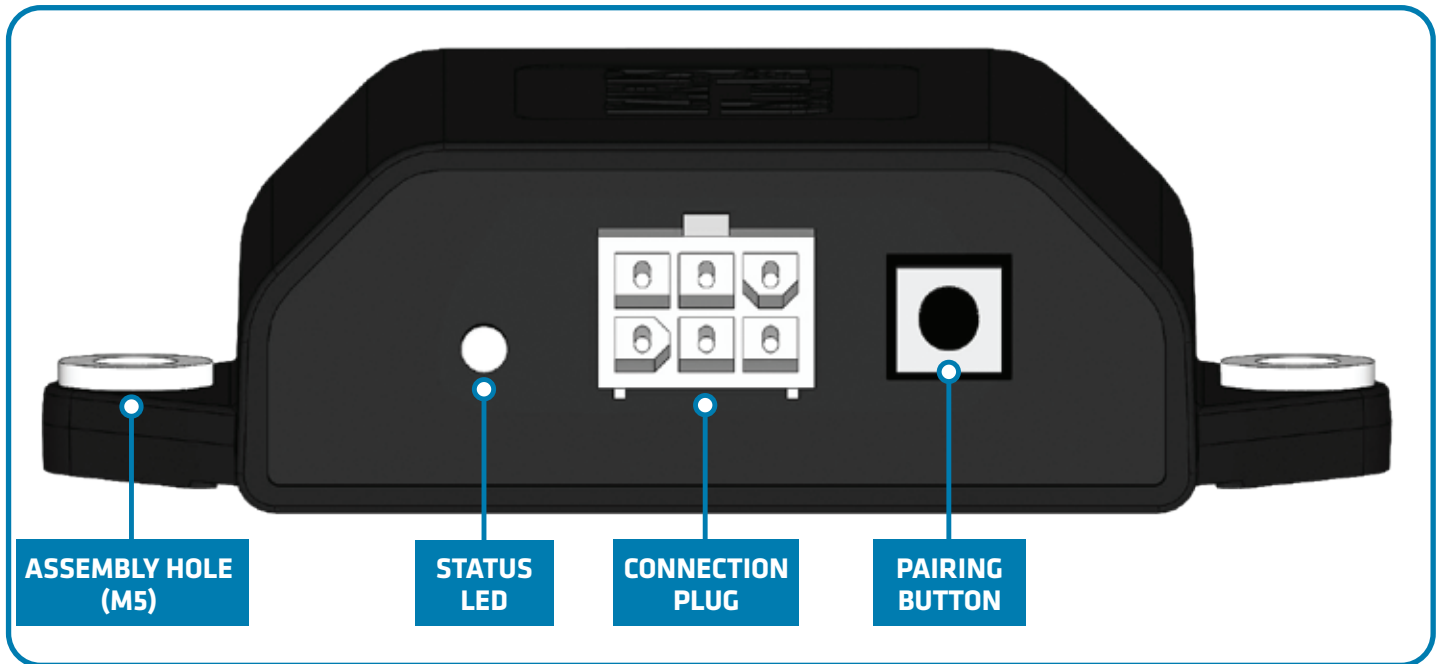


Figure 1: ICARUS blue BASIC receiver.

Pin	Wire-colour	Function
4	Black	0Vdc
1	Red	9-36V
2	Green	Output 1
5	Yellow	Output 2
3	Purple	Output 3
6	Grey	Output 4

Figure 2: Pin and wire assignment

1.1 TECHNICAL SPECIFICATIONS

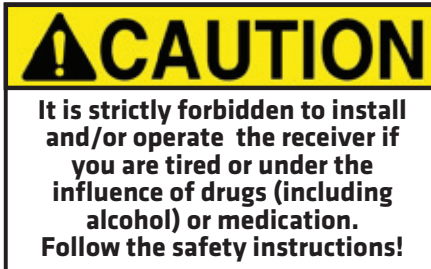
Frequency	2,4 GHz
Transmission power	7,5 dBm
Operating range	approximately 100 ft
Power consumption	~4mA on 12V
Supply voltage	9-36 Vdc
Outputs	4 outputs with a rated current of 3.7A
Total current	max. 10A
Dimensions	3,11" x 3,42" x 1,02" (L x W x H)
Weight	138g
Casing	moulded casing (IP65)
Temperature range	-40°F to +131°F
Optical feedback	Dual colour LED (red / green)
Platform	Android and iOS
Max. number of paired devices	24

For min. system requirements see <https://www.icarus-blue.com>

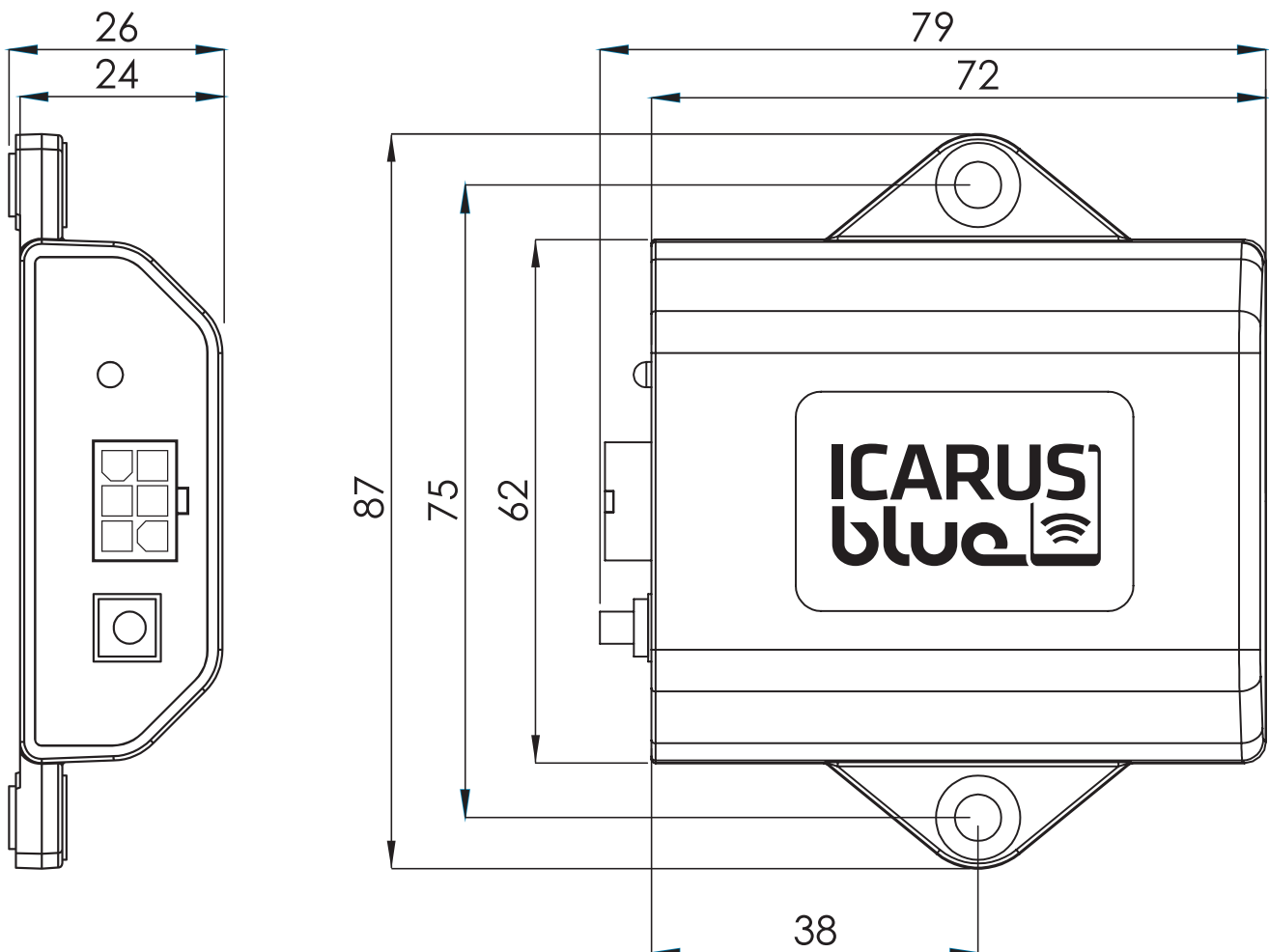
1.2 PRODUCT TYPE IDENTIFICATION

Each ICARUS blue BASIC receiver is marked on the back with a corresponding product sticker, which enables a clear identification of the product.

1.3 INSTALLATION REQUIREMENTS



- **Only qualified personnel may install / mount the receiver.**
- Incorrect installation can endanger the user, bystanders or others (depending on the application) causing injuries or damage to personal property and the receiver itself.
- When installing / mounting the receiver, ensure that the work / assembly environment is clean, tidy and dry.
- Unplug the receiver from a connected power source before installation and assembly.
- Install the receiver in sight of the user, if possible.
- DO NOT install the receiver in the immediate vicinity of motors, relays or power cables.
- DO NOT install the receiver on the inside of a metal casing (this limits the connection range).
- Always observe a supplied wiring diagram before use.
- Always use adequately thick and correctly insulated cables that are suitable for the application.
- **Connect the wires to the correct cable connectors and do not use any insulation tape. Improper connections can cause fire and / or electric shock and lead to personal injuries and may damage the product.**
- The receiver must be attached / mounted with two screws (M5) through the corresponding assembly holes (see chapter 1, fig. 1).
- Always observe the valid safety instructions.
- Install the receiver with the connector facing down for maximum water resistance!



1.4 CONNECTING THE CABLES



- 1. The following tasks may only be carried out by qualified electricians or by other persons supervised by qualified electricians.**
2. Connect the supplied cable to the receiver by inserting the cable plug to the receiver (see chapter 1, fig. 2).
Note: Only use the supplied cable and plug!
3. Connect the loose end of the black wire (of the supplied cable) to the earth (0 Vdc) of the connected unit/part.
4. Connect the loose ends of the green, yellow, grey and/or purple wires (of the supplied cable) to the respective unit / part that you want to control.
5. Connect the loose end of the red wire (of the supplied cable) to the power supply. Note: The voltage range is 9 - 36 Vdc.
6. Check that all cables have been connected correctly.
7. Switch the power supply back on. Information: The LED on the receiver starts to flash green during the start process. As soon as the start process has been completed successfully, the LED flashes green every two seconds.

You can now start to activate the pairing mode (see 1.5) and pair the receiver with your smartphone (see 2.3).

1.5 ACTIVATING THE PAIRING MODE

The „pairing button“ of the receiver (see chapter 1, fig. 1) is used to activate the pairing mode (pairing smartphones / tablets with the receiver).

- STEP 1** Make sure that the receiver is correctly wired, supplied with power and started up (see 1.4).
- STEP 2** Press the pairing button on the receiver three times within 4 seconds. **Information:** The LED on the receiver starts flashing green rapidly.
- STEP 3** Wait until the LED alternates between red and green.

The pairing-mode of the receiver is now activated. Continue by pairing the receiver with your smartphone / tablet (see 2.2) or deactivate the pairing-mode, by pressing the pairing button once more.

1.6 STATUS LED

START UP

LED flashing green rapidly.



NO SMARTPHONE/TABLET CONNECTED

LED flashing green 1x with a 2 second pause inbetween.



SMARTPHONE/TABLET CONNECTED

LED lighting up green (permanently).



PAIRING MODE ACTIVE

LED flashing alternately red and green.



ERROR CODE

Example: Flashing 3x red with short pause inbetween.



Flashing	Description
3x (red)	Undervoltage (<6,5V for 1,5s)
4x (red)	Overvoltage (>36V for 60ms)
5x (red)	Sum of separate currents > 10A
6x (red)	Overcurrent output 1
7x (red)	Overcurrent output 2
8x (red)	Overcurrent output 3
9x (red)	Overcurrent output 4

SEE CHAPTER 5. TO SOLVE THE ERRORS!

2. ICARUS BLUE BASIC APP

The receiver can only be controlled and configured via the corresponding free ICARUS blue BASIC app. Once you have downloaded and installed the app (see 2.1) you will be able to:

- add and manage multiple ICARUS blue BASIC receivers to the app,
- control the separate outputs of the receiver,
- configure the behaviour and function of the control buttons,
- configure individual options per control button and output,
- change the icons of the control buttons,
- activate or deactivate live monitoring of the battery voltage,
- set a password to protect the configuration from unauthorized changes by third parties.

Since most of the settings and options are self-explanatory and / or are explained within the app (see 2.2), this manual is limited to explaining the essential processes and options.

2.1 DOWNLOAD AND FIRST START

STEP 1 Open the „Play Store“ (only for Android devices) or the „App Store“ (only for iOS devices) on your device.

STEP 2 Search for „ICARUS blue BASIC“ (by ICP Group).

STEP 3 Download and install the free ICARUS blue BASIC app.

STEP 4 Start the app.

STEP 5 Activate the Bluetooth function of your device if the app prompts you to do so.







STEP 6 Read the displayed general terms of usage / disclaimer carefully. **Note:** *To continue using the app, you must accept those terms.*

STEP 7 Follow the short instructions shown in the „Welcome to the first installation“-screen. **Note:** *If this screen is not showing (for example because it is not the first time that you are using the app), follow the instructions in 2.3.*

NOTICE

Make sure that your device meets the min. requirements (www.icarus-blue.com).
Otherwise you will not be able to download the app and / or the app will not work properly.

2.2 BUTTON LAYOUTS AND DESCRIPTIONS

BUTTON LAYOUT	BUTTON NAME AND DESCRIPTION
	<p>MAIN MENU BUTTON</p> <ul style="list-style-type: none"> · Located at the top left corner of the app screen. · Opens the main menu when pressed.
	<p>INFORMATION BUTTON</p> <ul style="list-style-type: none"> · Located on the right side of several setting options. · Shows additional / corresponding information and / or instructions when pressed.
   	<p>CONTROL BUTTON</p> <ul style="list-style-type: none"> · Located on the „Home“ screen. · Activates the assigned output(s) and functions when pressed. · Icon can be changed (Main menu → Settings → Icon) · Control button can have several states (from top to bottom, as shown on the left): <ol style="list-style-type: none"> 1) Control button is not pressed and output is not active 2) Control button is pressed, but output is not active 3) Control button is not pressed but output is active 4) Control button is pressed and output is active

2.3 ADDING A NEW RECEIVER

Note: To add a new receiver, the corresponding receiver must be in „pairing- mode“ (see chapter 1.5). Make sure that there is only one receiver in „pairing-mode“ at a time. Otherwise you will not be able to identify the respective receiver correctly.

- STEP 1** Open the main menu via the main menu button.
- STEP 2** Select the menu item „New receiver“. **Note:** The app will automatically begin to search for receivers within your range, that are currently in pairing mode.
- STEP 3** Select the receiver you want to connect.
- STEP 4** Enter a description / name for the receiver.
- STEP 5** Press „Pair“ to confirm the entered description / name.

Your smartphone now connects to the selected receiver and synchronises the settings. After the connection-process has been successfully completed, you will get redirected to the „Home“ screen of the smartphone app.

2.4 BUTTON AND OUTPUT SETTINGS

Once you have paired and connected the receiver with your smartphone, you can control and configure the „control buttons“ and outputs of the receiver within the smartphone app.

STEP 1 Open the main menu.

STEP 2 Select the „settings“ menu item.

STEP 3 Press the gearwheel-icon of the „control button“ whose options you want to change.

You will get the following four basic setting options:

OPTION	DESCRIPTION
NO FUNCTION	When this option is selected, the corresponding „control button“ is disabled and does not appear on the home screen of the smartphone app.
BUTTON	When this option is selected, the corresponding „control button“ functions like a push button. This means that the corresponding output of the receiver remains active only as long as the „control button“ is pressed continuously. When the „control button“ is released, the output switched off.
SWITCH	When this option is selected, the corresponding „control button“ functions like a switch. This means that when the button is pressed, the corresponding output of the receiver is activated and remains active until the button is pressed again.
SAFETY FUNCTION	<p>When this option is active, the corresponding output of the receiver will be turned off after:</p> <ul style="list-style-type: none"> · the smartphone app lost focus, · the Bluetooth connection has been interrupted, · or the receiver can not be reached. <p>If you deactivate the safety function option, the corresponding output of the receiver remains active under all circumstances.</p> <div data-bbox="1062 1323 1458 1626" style="border: 1px solid black; padding: 5px;"> <p>! DANGER</p> <p>THIS FUNCTION MAY ONLY BE DEACTIVATED AS LONG AS THE CORRESPONDING OUTPUT DOES NOT CONTROL ANY SAFETY-RELEVANT FUNCTIONS!</p> </div>

STEP 4 If you want to configure more advanced settings, press the „Advanced“ button at the bottom of the pop-up.
Note: The advanced settings include timer functions, button interlock, output selection and button visibility. All advanced settings are self-explanatory. However, additional explanatory information is stored in the app, which you can call up by pressing the respective information buttons.

STEP 5 Press „Save“ at the bottom of the pop-up to save all settings made and return to the settings screen. Otherwise, press „Cancel“ to return to the settings screen without saving the settings you made.

2.5 GENERAL APP SETTINGS

In addition to the buttons and output settings (see 2.4), you can also change the general app settings.

- STEP 1** Open the main menu.
- STEP 2** Select the „settings“ menu item.
- STEP 3** Press „App Settings“ at the bottom of the screen.

You will get the following app setting options:

OPTION	DESCRIPTION
RESTORE FACTORY SETTINGS	Here you have the possibility to reset all button and output settings of the receiver to the factory state.
SET PASSWORD	Here you can set a password to prevent the receiver settings from being changed by unauthorized persons. Once a password is set, the receiver settings can only be changed after entering the correct password.
BATTERY STATUS	Enabling the battery status will show the actual system voltage in the home screen. It could also help to prevent the system against undervoltage. The detailed setting options of the battery status function are explained via the respective information buttons in the app.

2.6 CONTROL BUTTON ICONS

The app contains a large selection of different icons, which you can assign to the respective control buttons individually.

- STEP 1** Open the main menu.
- STEP 2** Select the „settings“ menu item.
- STEP 3** Press the „Icon“ button of the control button whose icon you want to change.
- STEP 4** Select the desired icon by pressing on it. A pop-up will appear with the message „Settings are stored“.
- STEP 5** Confirm the pop-up message by pressing „OK“. The icon has now been assigned to the selected button.

3. USING THE RECEIVER

Improper operation, by NOT having read the user manual and having full understanding of it as well as how to use the device, can bring the operator, bystanders and other matters in danger, depending on its application, and may cause personal injury and / or damage to personal possessions as well as to the receiver.

4. MAINTENANCE AND CLEANING

The receiver is maintenance-free for the user. Maintenance and repairs must be done by a specialist. The receiver should be cleaned only with a damp cloth and without chemicals. Doing otherwise may damage the receiver.

5. SOLVING OF DTCs (DIAGNOSTIC TROUBLE CODES) FOR A DETAILED ILLUSTRATION OF THE DTCs, PLEASE SEE 1.6!

FLASHING 3X: UNDERVOLTAGE

This error appears if the supply voltage of the receiver drops under 6,5V for at least 1,5sec. A pop-up will be shown in the smartphone app. To reset the error raise up the supply voltage over 6,5V again and click on „reset error“ in the smartphone app.

Note: Undervoltage can be triggered by heavy loads (large powerful motors).

FLASHING 4X: OVERVOLTAGE

This error appears if the supply voltage of the receiver raises over 36V for at least 60ms. A pop-up will be shown in the smartphone app. To reset the error lower the supply voltage under 32V again and click on „reset error“ in the smartphone app.

Note: Overvoltage can be a result of defect components in the system or external voltage sources which are connected to the system (e.g. battery charger). Make sure that those sources are removed before resetting the error.

FLASHING 5X: OVERCURRENT OF ALL OUTPUTS COMBINED

This error appears if the total current of the receiver is too high. To reset the error, a smartphone needs to be connected. After connecting, a pop-up will be shown in the smartphone app and the error can be resetted by clicking on „reset error“. The error won't be resetted by a current drop.

Note: Overcurrent can be a result of connecting to many loads to the receiver. Make sure those loads won't exceed a total maximum current of 10A.

FLASHING 6X - 9X: OVERCURRENT OF A SINGLE OUTPUT

This error appears if the current of one of the outputs is too high. To reset the error, a smartphone needs to be connected. After connecting, a pop-up will be shown in the smartphone app and the error can be resetted by clicking on „reset error“. The error won't be resetted if the current will drop down again.

Note: Overcurrent of an output can be a result of connecting the output to a component which needs to much current. Make sure the current won't exceed the maximum current of 3,7A per output.

Overcurrent of an output can also be a result of a short circuit in the wiring. Make sure that all short circuits are removed before resetting the error.



6. DISPOSAL

Electronic devices are recyclable waste and **DO NOT** belong in the garbage. If the receiver does not work anymore, dispose it in accordance with applicable legal regulations.

By following the above recommendation you comply with your legal obligations and contribute to the protection of the environment.

7. WARRANTY

The ICARUS blue BASIC receiver was tested in a controlled environment and has proven resistant to moisture and dust under certain circumstances (corresponds to the requirements of the classification IP66 pursuant to the international norm IEC 60529).

The supplier / manufacturer is not able to ensure that the content of these operating instructions and the use of the receiver have been understood and observed by the user. Incorrect and/or faulty installation and/or assembly as well as incorrect / faulty operation can lead to injuries and damage of materials.

The manufacturer will not accept liability for injuries and damage to materials and/or personal property or any other costs incurred due to incorrect and/or faulty assembly, incorrect use and/or application for which the product was not designed and produced, or non-observance of maintenance or incorrect servicing and/or anything else connected to this.

The manufacturer is relieved of any responsibility in case of unauthorized dismantling and/or modification. All necessary and used parts must be approved by the manufacturer so that the receiver maintains its guaranteed safety and operation throughout its service life.

8. SIMPLIFIED DECLARATION OF CONFORMITY

ICP Systems b.v. (Handelsweg 48, 7451 PJ Holten, The Netherlands) herewith declares that the radio system ICARUS blue BASIC complies with the Directive 2014/53/EU. The complete text of the EU Declaration of Conformity is available at the following address: <https://www.icarus-blue.com>