ORQA
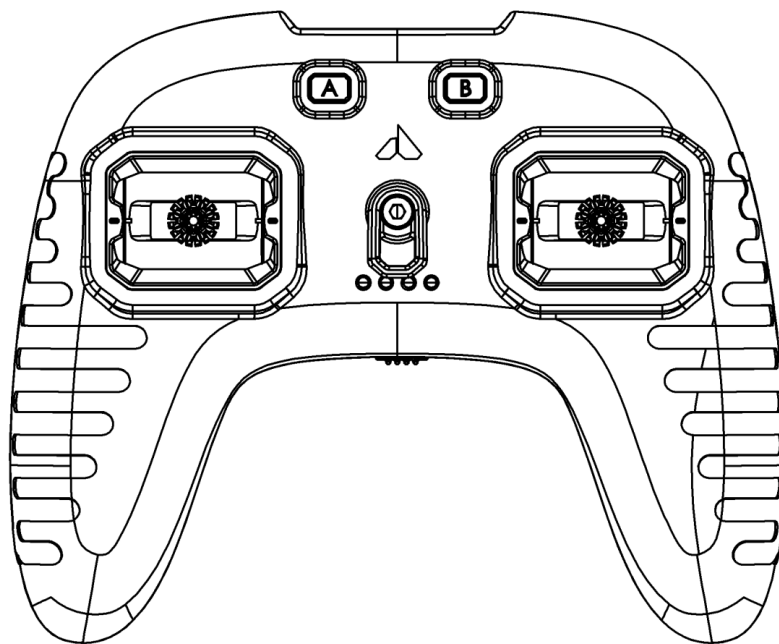
RADIO CONTROL TRANSMITTER
FPV.Ctrl

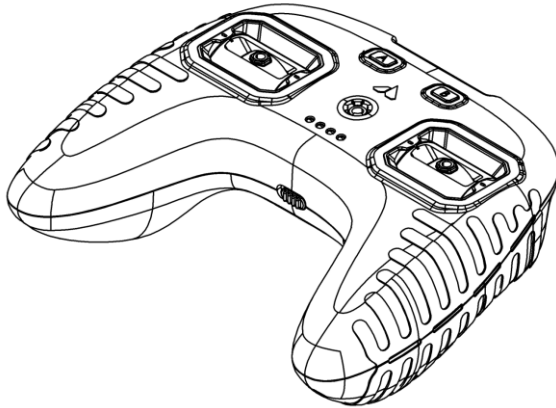## User Manual
Rev. 1.0 | December 2021
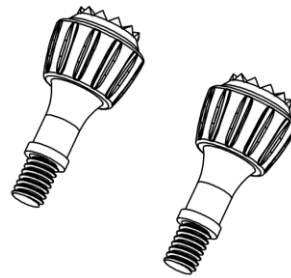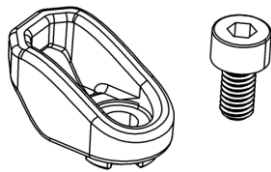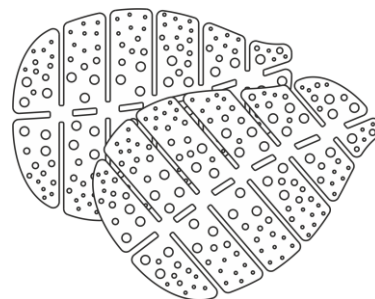
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PACKAGE CONTENTS

RADIO TRANSMITTER

M4 GIMBAL STICKS
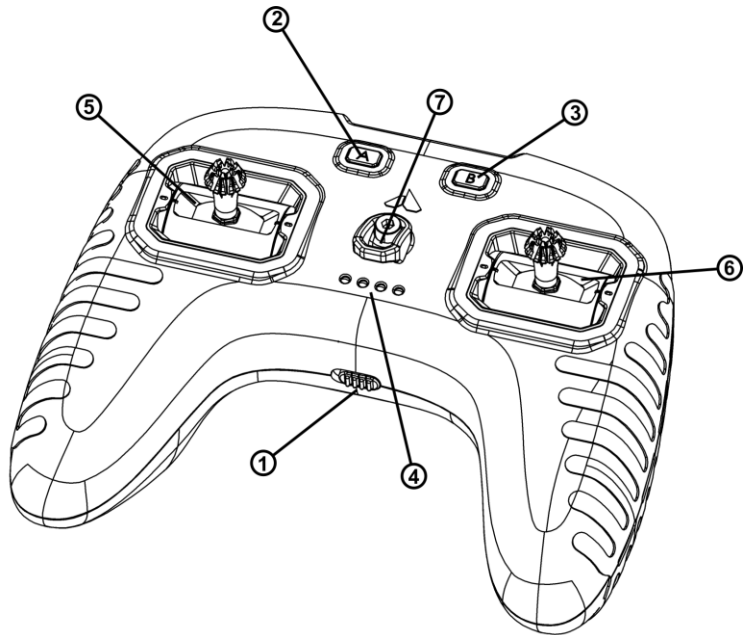
LANYARD HOOK
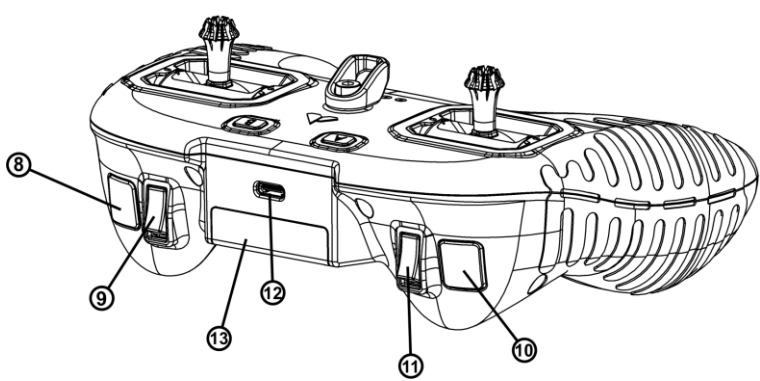
SELF ADHESIVE GRIPS

FEATURES

1. Power On/Off
2. Button A
3. Button B
4. LED Indicators
5. Left Gimbal
6. Right Gimbal
7. Lanyard Clip

8. R1 Switch (Non-latching)
9. R2 Toggle Switch (3-way)
10. L1 Switch (Latching)
11. L2 Toggle Switch (3-way)
12. USB Type-C Connector
13. Radio Module Bay

GETTING STARTED

- By default, the controller is in sleep mode and can't be powered on. To wake up the controller, it is necessary to connect it to a charging device. After a successful connection, controller powers up on power switch.

- Once the controller is powered on, LEDs will indicate the battery state.

- Controller and transmitter settings can be modified with a smartphone application available on iOS or Android store.

- Controller has two models (in future updates, another two will be added for RC planes, wings, etc.) for quads with default channel map AETR1234. "Orqa" model is fixed on AERT1234 map, "Quad" model can be changed to any channel map through the smartphone app. To check which model is currently being used, the user can short press the "A" button and controller will indicate the status with white LED. Additionaly, you can use the smartphone app. To switch between models, hold the "A" button until the white LED lights or use a smartphone app.

- When connected via Bluetooth, controller will remember connected device bind information and will only connect to that device. If you want to connect the controller to another device, hold the "B" button until the "running" red light. After that, controller will clear the connection information and change the Bluetooth MAC address and will be ready to connect with another device.

- Controller Bluetooth name will contain a unique word that is the same as on the sticker inside of controller's module bay.

GETTING STARTED

First-time user – simulator

1. Unpack and screw on the gimbal sticks
2. Connect the controller to a charging device via USB-c.
3. Power on with a power switch located below the LEDs.
4. Connect controller to a PC or a smartphone.
    1. If connecting with USB, plug one side of USB cable to a controller and the other one into a PC or smartphone.
    2. If using Bluetooth, connect with a PC or smartphone like you would connect your Bluetooth headphones or keyboard.
    3. Controller Bluetooth name will contain a unique word that is the same as on the sticker inside of controller's module bay.
5. Controller is now ready!

First-time user - FPV Drone

1. Unpack and screw on the gimbal sticks.
2. Plug your Ghost radio module in the controller bay.
3. Connect the controller to a charging device via USB-c.
4. Power on with a power switch located below the LEDs.
5. Download the smartphone app and connect your controller. If you don't see your device in the scanned devices list, hold the B button until the "running" red LEDs start, then scan again.
6. After connecting, adjust the channel map in models to match your Betaflight configuration.
7. Bind your ghost receiver in "Ghost Menu" section. Ghost menus are the same as on Ghost JR module screen.
8. Controller is now ready to fly the drone!

CHARGING THE BATTERIES
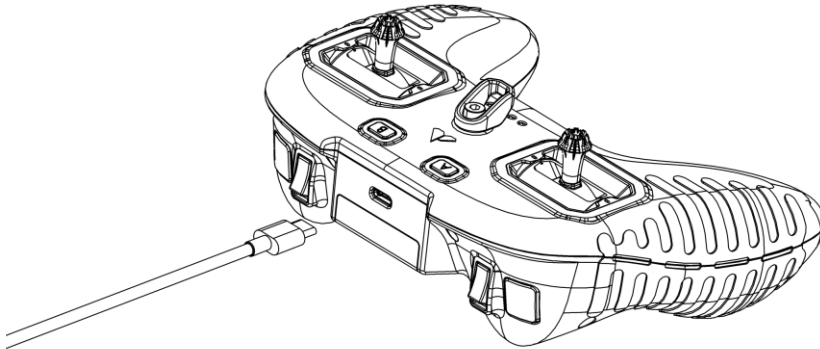
Connect the USB Type-C cable to the controller.

Connect the Cable to the computer or USB charger.

Maximum charging current is set to the 1.5A.

While charging, the 4 LEDs on the controller indicate the charging status.

When charging, LEDs will pulse in green light.

When charging while powered off, the first LED lights green.

EMPTY   FULL
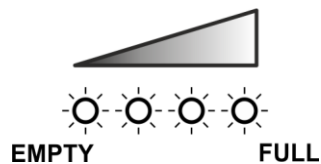
Charging time will vary, depending on the maximum output current of the USB charging device. Generally, the batteries should be fully recharged in aproximately 2 hours.

After the controller is disconnected from the USB charger, the 4 LEDs show the battery status.

UPDATING THE FIRMWARE

Firmware update is done with the Orqa mobile app over the air or with a Windows desktop application via USB.

To start the update, hold the A button while powering on the controller.

Controller is in update mode when LEDs flash in "white-blue-blue-white" light.

BLUETOOTH PAIRING

Bluetooth pairing is done in a smartphone application or in native Windows or Mac application. If controller does not appear in Bluetooth scanner it means that it is already connected to a Bluetooth device.

To delete previously connected device hold "B" button until "running" red light indication and after that the controller will start.

RADIO MODULE

Remove the radio module bay cover and slide in the IRC Ghost radio module.

Push in the module until it clicks in place. Once the module is in its final position the front surface of the module will align with the front surface of the controller.
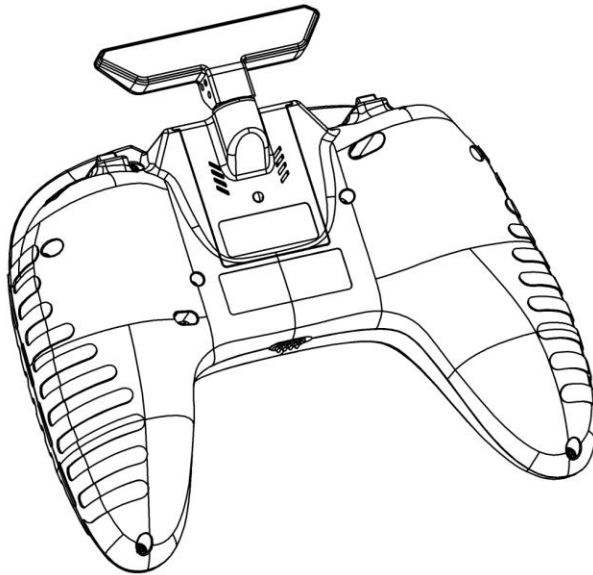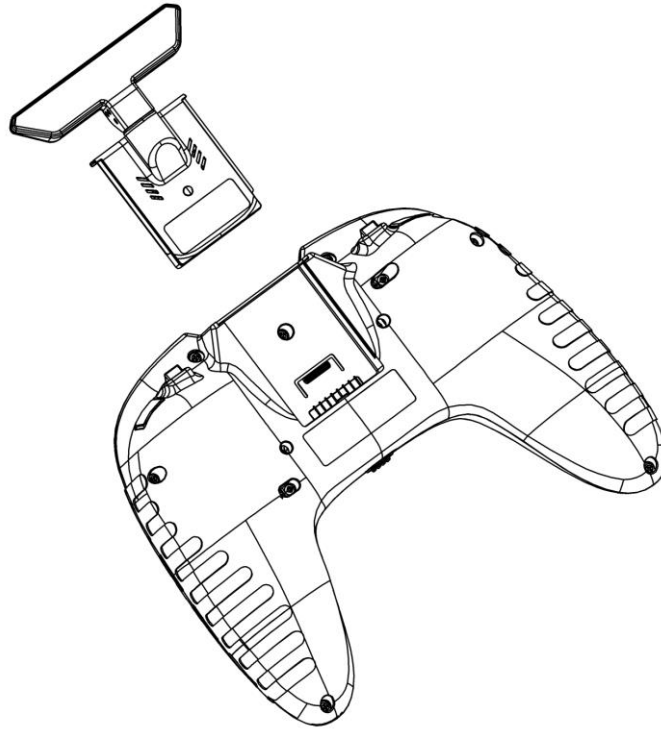
As soon as the controller is powered on, the Ghost radio module will be functional.

The detailed setup of the Radio module is done in the Orqa Ctrl mobile app.

GIMBALS

Custom HAL gimbals designed by Orqa, with adjustable y-axis with a self-centering, ratchet effect and resistance, without any disassembling.

Controller is calibrated when it leaves the factory, so no calibration is needed. If gimbal is off-center or it was disassembled, recalibration is needed. Recalibration is done over a smartphone app where user can activate it and do the calibration by following the instructions.

The gimbals can be adjusted on the backside of the controller. To adjust the gimbals, use the 1.5mm hex driver.
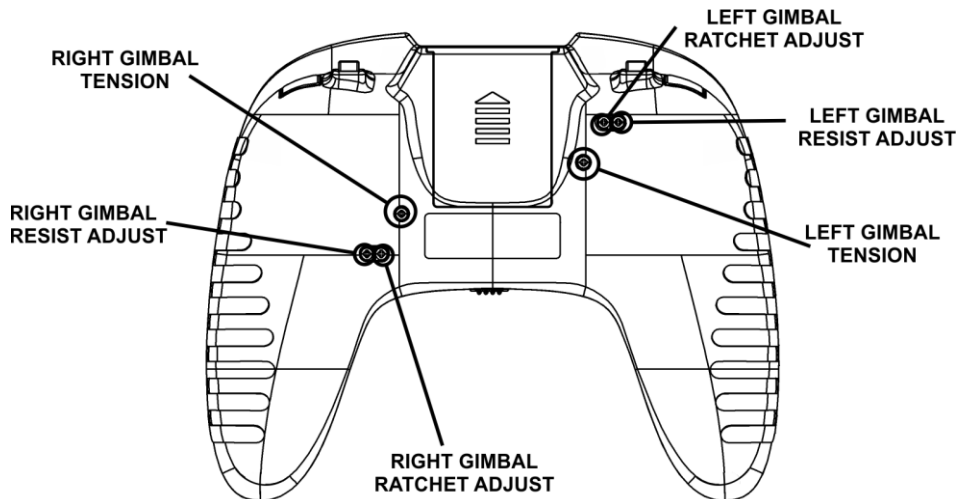
TECHNICAL SPECIFICATIONS

- Gimbals   High-precision Hall Sensors

- Operating Voltage   6.4V-8.4V (2S Li-ion Battery)

- Power consumption   150mW, typical

- Built-in Battery Type   2x LiIon 18650

- Connectivity   Bluetooth 5, USB Type-C

- Maximum Charge Current   1.5A

- Charging time   2 hours (approx.)

- Weight (without battery)   309g

- Dimensions   170 x 140 x 58 mm

WARRANTY AND REPAIR POLICY

Warranty Period

Exclusive Warranty - ORQA d.o.o., (Orqa) warranties that the Product purchased (the "FPV.CTRL") will be free from defects in materials and workmanship for a period of 1 year from the date of purchase by the Purchaser.

1 year Limited Warranty

Orqa reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(a)   This warranty is not limited to the original Purchaser ("Purchaser") and is transferable exclusively with Proof of purchase for all warranty claims.

(b)   Limitations - ORQA MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c)   Purchaser Remedy - Orqa's sole obligation hereunder shall be that Orqa will, at its option, (i) repair or (ii) replace, any Product determined by Orqa to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Orqa reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the discretion of Orqa, or in agreement with the Purchaser, when possible. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Orqa. Return of any Product by Purchaser must be approved in writing by Orqa before shipment.

Damage Limits

ORQA SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Orqa exceed the individual price of the Product on which liability is asserted. As Orqa has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase. Law: These Terms are governed by Croatian law (without regard to conflict of law principals).

Warranty Services

Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Orqa directly. This will enable Orqa to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to support@orqafpv.com. You may also find information on our website at https://orqafpv.com/.

Inspection or Repairs

If this Product needs to be inspected or repaired, please contact Orqa support at support@orqafpv.com first in order to determine the best course of action. Shipping will be arranged in agreement with Orqa support agent via DHL by default (unless arranged otherwise in agreement with Orqa support agent and/or Orqa logistical team) which provides tracking and insurance for lost or damaged parcels, as Orqa is not responsible for merchandise until it arrives and is accepted at our facility. When arranging shipment with Orqa support agent, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. All additional information and instructions required will be provided by the Orqa support agent.

Notice: Do not ship batteries to Orqa. If you have any issue with the battery, please contact the Orqa customer service.

Warranty Inspection and Repairs

To receive warranty service, you must provide your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Orqa, or in agreement with the Purchaser, when possible.

Non-Warranty Repairs

Should your repair not be covered by warranty, the repair will be completed after the Product has been assessed by Orqa and subsequent payment has been completed by the Purchaser, if required. Repair and payment cost estimates will be provided after the Product assessment by Orqa. In addition, you will be billed for return freight.