



dji 2021.04 ROBOMASTER TT Swarm Combo Drone User Guide

[Home](#) » [DJI](#) » dji 2021.04 ROBOMASTER TT Swarm Combo Drone User Guide 

Contents

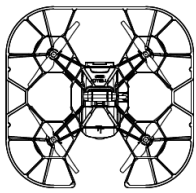
- [1 dji 2021.04 ROBOMASTER TT Swarm Combo Drone](#)
- [2 In the Box](#)
- [3 Disclaimer](#)
- [4 Regulations](#)
- [5 Flight Limit](#)
- [6 Specifications](#)
- [7 Documents / Resources](#)
 - [7.1 References](#)
- [8 Related Posts](#)



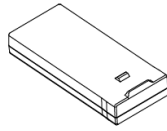
dji 2021.04 ROBOMASTER TT Swarm Combo Drone



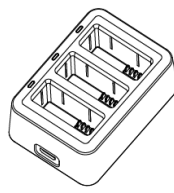
In the Box



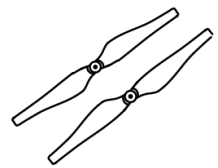
× 10



× 30



× 10



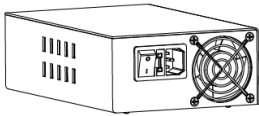
× 10

RoboMaster TT aircraft (inc. Propellers,

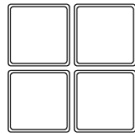
Flight Battery

Charging Hub

Spare Propellers Set



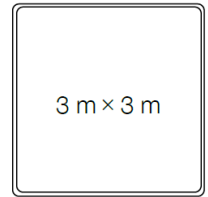
× 1



× 10



× 11



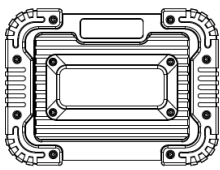
× 1

10-Port USB Charger

Mission Pad

Micro USB Cable

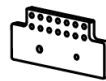
Luminescent Flight Map



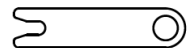
× 1



× 1



× 10



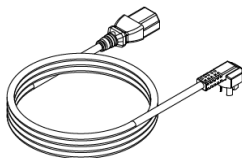
× 10

Ultraviolet Lamp

Carrying Case

Extension Board

Propeller Removal Tool



× 1



× 40



× 2

10-Port USB Charger Power Cable

Propeller Guards

Manual Documents

Disclaimer

It is not recommended for children under the age of 14 to use this product without adult supervision. Please note that in Japan the recommended age is 15 years. Adults should keep the aircraft out of the reach of children and exercise caution when operating this aircraft in the presence of children.

This product incorporates various advanced control technologies. However, inappropriate use of the product could result in personal injury or property damage. Please read the materials associated with the product before your first use of the product. These documents are included in the product package and/or are available online on the SZ RYZE TECHNOLOGY CO., LTD ("Ryze Tech") website (<http://www.rzyzerobotics.com>).

This product is a flying camera that offers easy flight when in good working order as set forth below. Visit <http://www.rzyzerobotics.com> for the most current instructions and warnings. Users operating their aircraft in the United States should visit <http://knowbeforeyoufly.org> for more information about flight safety and compliance.

The information in this document affects your safety and your legal rights and responsibilities. Read this entire document carefully to ensure proper configuration before use. Failure to read and follow the instructions and warnings in this document may result in serious injury to yourself or others, damage to or loss of your Ryze Tech product, or damage to other objects in the vicinity.

By using this product, you hereby signify that you have read this disclaimer carefully and that you understand and agree to abide by the terms and conditions herein. EXCEPT AS EXPRESSLY PROVIDED IN RYZE TECH AFTER-SALES SERVICE POLICIES AVAILABLE AT [HTTP://RZYZEROBOTICS.COM/SERVICE](http://RZYZEROBOTICS.COM/SERVICE), THE PRODUCT AND ALL MATERIALS, AND CONTENT AVAILABLE THROUGH THE PRODUCT ARE PROVIDED "AS IS" AND ON AN "AS AVAILABLE" BASIS, WITHOUT WARRANTY OR CONDITION OF ANY KIND, EITHER EXPRESS OR IMPLIED. RYZE TECH DISCLAIMS ALL WARRANTIES OF ANY KIND, EXCEPT AS EXPRESSLY PROVIDED IN RYZE TECH AFTER-SALES SERVICE POLICIES, WHETHER EXPRESS OR IMPLIED, RELATING TO THE PRODUCT, PRODUCT ACCESSORIES, AND ALL MATERIALS, INCLUDING, BUT NOT LIMITED TO: (A) ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, QUIET ENJOYMENT, OR NON-INFRINGEMENT; AND (B) ANY WARRANTY ARISING OUT OF COURSE OF DEALING, USAGE, OR TRADE. RYZE TECH DOES NOT WARRANT, EXCEPT AS EXPRESSLY PROVIDED IN RYZE TECH LIMITED WARRANTY, THAT THE PRODUCT, PRODUCT ACCESSORIES, OR ANY PORTION OF THE PRODUCT, OR ANY MATERIALS, WILL BE UNINTERRUPTED, SECURE, OR FREE OF ERRORS, VIRUSES, OR OTHER HARMFUL COMPONENTS, AND DOES NOT WARRANT THAT ANY OF THOSE ISSUES WILL BE CORRECTED.

NO ADVICE OR INFORMATION, WHETHER ORAL OR WRITTEN, OBTAINED BY YOU FROM THE PRODUCT, PRODUCT ACCESSORIES, OR ANY MATERIALS WILL CREATE ANY WARRANTY REGARDING RYZE TECH OR THE PRODUCT THAT IS NOT EXPRESSLY STATED IN THESE TERMS. YOU ASSUME ALL RISKS FOR ANY DAMAGE THAT MAY RESULT FROM YOUR USE OF OR ACCESS TO THE PRODUCT, PRODUCT ACCESSORIES, AND ANY MATERIALS. YOU UNDERSTAND AND AGREE THAT YOU USE THE PRODUCT AT YOUR OWN DISCRETION AND RISK, AND THAT YOU ARE SOLELY RESPONSIBLE FOR ANY PERSONAL INJURY, DEATH, DAMAGE TO YOUR PROPERTY (INCLUDING YOUR COMPUTER SYSTEM OR MOBILE DEVICE OR RYZE TECH HARDWARE USED IN CONNECTION WITH THE PRODUCT) OR THIRD PARTY PROPERTY, OR THE LOSS OF DATA THAT RESULTS FROM YOUR USE OF OR INABILITY TO USE THE PRODUCT.

SOME JURISDICTIONS MAY PROHIBIT A DISCLAIMER OF WARRANTIES AND YOU MAY HAVE OTHER RIGHTS THAT VARY FROM JURISDICTION TO JURISDICTION.

Ryze Tech accepts no liability for damage, injury or any legal responsibility incurred directly or indirectly from the use of this product. The user shall observe safe and lawful practices including, but not limited to, those set forth in these Safety Guidelines. You shall be solely responsible for all your behaviors when flying Tello.

WARNINGS

1. Stay away from rotating propellers and motors.
2. DO NOT touch the underside of the aircraft as it may be hot.
3. Never use non-Ryze Tech batteries and DO NOT short-circuit the Flight Battery.
4. Important information is included on the product package and in the documentation included in the product package. Read all of this information carefully and retain the product package and documentation for future

reference.

5. Always use the provided charger to charge the flight batteries.
6. Ensure the aircraft is powered off before charging. It cannot be charged when it is powered on.

Regulations

1. DO NOT operate in the vicinity of manned aircraft, regardless of altitude. (Land immediately if necessary.)
2. DO NOT fly the aircraft in or at densely populated areas including cities, sporting events, exhibitions, and performances.
3. DO NOT fly the aircraft above the relevant maximum altitude set forth in your local laws and regulations.
4. Remain well clear of and DO NOT interfere with manned aircraft operations. Be aware of and avoid other aircraft and obstacles at all times.
5. DO NOT fly the aircraft near or inside no fly zones specified by local laws and regulations. The no fly zone list includes: airports, borders between two sovereign countries or regions, and major cities/regions, and is continuously updated. DO NOT fly around sensitive infrastructure or property such as power stations, water treatment facilities, correctional facilities, heavily traveled roadways, government facilities, or military zones.
6. Maintain visual line of sight with your aircraft at all times and use an observer to assist if needed.
7. NEVER use the aircraft to carry illegal or dangerous goods/payloads.
8. Make sure you understand the nature/type of your flight operation (such as for recreation, for public use, or for commercial use) and have obtained corresponding approval and clearance from the related government agencies before flight. Consult with your local regulators for comprehensive definitions and specific requirements. Users operating their aircraft in the United States should first visit <http://www.knowbeforeyoufly.org> and take the most appropriate action for their circumstances.
9. Please note that remote-controlled aircraft may be banned from conducting commercial activities in certain territories and regions. Check and follow all local laws and regulations before flying as those rules may differ from those stated here.
10. Respect the privacy of others when using the camera. Make sure you comply with local privacy laws, regulations, and moral standards. DO NOT conduct surveillance operations such as image capture or video recording on any person, entity, event, performance, exhibition, or property without authorization or where there is an expectation of privacy, even if the image or video is captured for personal use.
11. Please be advised that in certain areas, the recording of images and videos from events, performances, exhibitions, or commercial properties by means of a camera may contravene copyright or other legal rights, even if the image or video is shot for personal use.

Flight Limit

1. Fly NO higher than 33 ft (10 m) above ground level and stay away from any surrounding obstacles.
2. The Vision Positioning System is only effective when the aircraft is at altitudes of 1.0 to 98.4 ft (0.3 to 30 m) and works best at altitudes of 1.0 to 19.7 ft (0.3 to 6 m).
3. The performance of the Vision Positioning System is affected by the surface being flown over. The aircraft automatically changes to Attitude mode when the Vision Positioning System is unavailable. In Attitude mode the aircraft is not able to position itself. Operate the aircraft with great caution in the following situations, which may cause the aircraft to enter Attitude mode:
 - Flying at high speed below 2 ft (0.5 m).

- Flying over monochrome surfaces (e.g. pure black, pure white, pure red, pure green).
 - Flying over highly reflective surfaces.
 - Flying over water or transparent surfaces.
 - Flying over moving surfaces or objects.
 - Flying in an area where the lighting changes frequently or drastically.
 - Flying over extremely dark (< 10 lux) or bright (> 100,000 lux) surfaces or towards bright sources of light (e.g. towards sunlight).
 - Flying over surfaces without clear patterns or texture.
 - Flying over surfaces with identical repeating patterns or textures (e.g. tiling).
 - Flying over small and fine objects (e.g. tree branches or power lines).
 - Flying at speeds of over 11 mph (18 kph) at 3.5 ft (1 m) or lower.
4. If the aircraft's Vision Positioning system fails for 3 seconds when its flying altitude is above 20 ft (6 m), Failsafe Protection will automatically initiate landing. If the Vision Positioning system recovers during landing, Failsafe Protection will shut off and the aircraft will hover.
 5. The Vision Positioning System may not be able to recognize patterns on the ground in very dark (< 100 lux) environments. DO NOT take off if there is a warning prompt in the Tello app telling you that the environment is too dark.

Specifications

Aircraft

- **Tello (Model: TLW004)**

Weight (Propeller Guards Included)	87 g
Max Speed	17.8 mph (28.8 kph)
Max Flight Time	13 minutes (0 wind at a consistent 9 mph (15 kph))
Operating Temperature	32° to 104° F (0° to 40° C)
Operating Frequency	2.4 to 2.4835 GHz
Transmitter (EIRP)	< 20 dBm (FCC) < 19 dBm (CE) < 19 dBm (SRRC)

- **Camera**

Max Image Size	2592×1936
Video Recording Modes	HD: 1280×720 30p
Video Format	MP4

- **Flight Battery**

Capacity	1100 mAh
Voltage	3.8 V
Battery Type	LiPo
Energy	4.18 Wh
Net Weight	25±2 g
Charging Temperature Range	41° to 113° F (5° to 45° C)
Max Charging Power	10 W

- **Open-Source Controller**

Model	RMTTOC
Operating Mode	Direct Connection Mode, Router Mode
Wi-Fi	2.4 GHz , 5.8 GHz*
Bluetooth	2.4 GHz
Transmitter (EIRP)	2.4 GHz: <18.5 dBm (FCC/SRRC/MIC) <17 dBm (CE) 5.8 GHz: <15 dBm (FCC/SRRC) <13 dBm (CE)
MCU	ESP32-D2WD, Dual-Core Main Frequency: 160 MHz, Calculation ability: 400 MIPS
Open-Source	Supports SDK, Arduino, Scratch and MicroPython
Expansion	14-pin expansion port (I2C, UART, SPI, GPIO, PWM, power source)
LED	Full Color LED

- **Dot-Matrix Display & Distance Sensing Module**

Dot-Matrix LED	Red and blue LED 8×8
Dot-Matrix Driver function	IIC data port, auto dot-matrix scan, adjustable 256 global brightness, adjustable single-pixel red and blue LED 256 brightness
Distance Sensing Module	TOF
Maximum Sensing Distance of TOF	1.2 m (indoors with white wall)

- **Extension Board**

DIY Connection	14-pin extension port to 2×7 pin, 2.54 mm dual in-line package, two reserved positions for 5V/3.3V power indicators, two reserved positions for test indicators
----------------	--

* Only 2.4-2.4835GHz available in Japan.

<http://www.dji.com/support>

For more information, read the User Manual:


www.dji.com/cn/robomaster-tt-combo

This content is subject to change without prior notice.





TELLO is a trademark of Ryze Tech.



Documents / Resources

	<p>dji 2021.04 ROBOMASTER TT Swarm Combo Drone [pdf] User Guide 2021.04, ROBOMASTER TT Swarm Combo Drone</p>
---	--

References

-  [Home - Know Before You Fly](#)
-  [Support - DJI](#)
-  [Home - Know Before You Fly](#)
-  [Tello Official Website-Shenzhen Ryze Technology Co.,Ltd.](#)