



MADE IN FRANCE 

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# USER MANUAL & INSTRUCTIONS

AUTONOMOUS FTS FOR DJI MATRICE 30 :  
ZÉPHYR CC M30 EXTERNAL



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**WE CONGRATULATE  
YOU ON THE PURCHASE OF  
YOUR NEW DJI M30 DRONE  
FTS : ZÉPHYR CC M30**

At Dronavia, we have been developing since 2015 a wide and innovative range of accessories to secure your professional drones. Based in Remiremont we manufacture all our products in our workshop in France, in accordance with DGAC standards, ensuring unparalleled quality. The Zéphyr M30 FTS model is the lightest and most reliable in the world. You will fly with your DJI Matrice 30 in total safety.

Thank you for your trust & enjoy the flight!

LUDOVIC PELLETEY, DRONAVIA CEO



# PRESENTATION OF THE ZÉPHYR CC M30 FTS

Dear customer,

Thank you for purchasing the new FTS for **DJI M30 Series drone : Zéphyr CC M30**. You have chosen the device which we are sure is the most efficient system of its kind.

**A lot of research and testing has been done on this system to make it as safe and effective as possible.** However, we would like to inform you that, as there is no testing or certification centre for drone FTS, we cannot claim that it works to any operating standard.

**Based in Remiremont, France, DRONAVIA is at your service to advise you on the purchase of your Zéphyr CC M30 FTS and to answer any technical or commercial questions.**

**The Zéphyr CC M30 FTS has been designed for the DJI M30 series aircraft.**



It has been developed with the objective of meeting the requirement of paragraph 2.6.c) of Annex III of the "Aircraft" Order of 17 December 2015, which came into force on 1 January 2017, for design certificates in scenario S2.

Indeed, paragraph 2.5.1.c) states:

"The remote pilot may at any time force an emergency landing by stopping propulsion in flight and the control of this function may be tested on the ground by the remote pilot prior to flight."

Paragraph 2.6.c) adds:

"The emergency landing function required in paragraph 2.5.1.c) is independent of the aircraft's automatic trajectory control systems. "

The purpose of this requirement is to allow the remote pilot to intervene in the event of a drone escape caused by a failure of the flight controller or its sensors. In such situations, autonomous FTS can make the difference between a simple scare and a more serious accident. The Zéphyr CC M30 FTS can be activated in less than a second.

This emergency device does not preserve the integrity of the equipment, nor damage to property or people, it is a safety element that complements other safety elements. DRONAVIA and its distributors cannot be blamed for any malfunction, or for operation that is deemed insufficient or even ineffective.

# WARNINGS AND PRECAUTIONS FOR USE

DRONAVIA may suspend the warranty and disclaim any liability to any person who fails to comply with the basic safety instructions set out below.

Before using the Zéphyr CC M30, you must read this manual carefully. It provides information on how to use the FTS. In addition to the important notes and information in this manual, the owner of the device must follow all the important instructions listed below.

The Zéphyr CC M30 FTS is a safety device which, under certain conditions, prevents the drone equipped with it from leaving its regulatory flight envelope by cutting its engines.

The activation of the FTS inevitably implies the crash of the drone.

This equipment does not prevent technical problems from occurring on the drone. Any flight with a drone implies the existence of a danger for the equipment and the people in the vicinity, independently of the equipment used. The use of the Zéphyr FTS for DJI M30 should not increase your risk.





# THE 11 RULES TO BE RESPECTED

1. DO NOT CARRY OUT ANY MANIPULATIONS OTHER THAN THOSE SPECIFIED IN THE MANUAL.
2. THE DEVICE SHOULD ONLY BE USED BY OR UNDER THE SUPERVISION OF A RESPONSIBLE ADULT. ALWAYS KEEP THE DEVICE OUT OF THE REACH OF CHILDREN. DO NOT LET THEM PLAY WITH IT.
3. UNDER NO CIRCUMSTANCES SHOULD YOU DISMANTLE THE VARIOUS PARTS OF THE DEVICE.
4. DO NOT PLACE THE DEVICE IN A DAMP OR WET ENVIRONMENT AND KEEP IT OUT OF DIRECT SUNLIGHT.
5. DO NOT EXPOSE THE SYSTEM TO LOW OR HIGH TEMPERATURES, STRONG SHOCKS, CONTACT WITH CHEMICALS, ACIDS, LONG TERM STORAGE IN HIGH HUMIDITY OR DUST. THE MAXIMUM OPERATING TEMPERATURE IS 40°C AND THE MINIMUM OPERATING TEMPERATURE IS -15°C.
6. THE CONDITION OF THE ZÉPHYR CC M30 FTS SYSTEM SHOULD BE CHECKED BEFORE EACH USE. DO NOT USE THE DEVICE IF IT IS DAMAGED OR MALFUNCTIONING. IF NECESSARY, CONTACT YOUR DEALER.
7. THE ZÉPHYR CC M30 FTS CANNOT PREVENT THE DRONE FROM MALFUNCTIONING.
8. ANY FLIGHT WITH A DRONE IMPLIES THE EXISTENCE OF A RISK FOR THE EQUIPMENT AND PEOPLE IN THE VICINITY, WITH OR WITHOUT A ZÉPHYR CC M30 FTS.
9. THE USE OF A ZÉPHYR CC M30 FTS SHOULD NOT INCREASE YOUR RISK.
10. THE ZÉPHYR CC M30 FTS MUST BE ACTIVELY TRIGGERED BY THE USER. REGULAR TRAINING IS NECESSARY TO BE ABLE TO REACT CORRECTLY IN AN EMERGENCY. THEREFORE, FOR THE SAFETY OF THE EQUIPMENT AND THIRD PARTIES, CARRY OUT A DUMMY GROUND EXERCISE ONCE A DAY.
11. AFTER SWITCHING ON THE SYSTEM, IF THE LED CHANGES TO A SOLID RED STATE, THE SYSTEM WILL NOT BE IN WORKING ORDER. CONTACT YOUR DEALER FOR ASSISTANCE.

# USES OF THE FTS ZÉPHYR M30

## INTRODUCTION

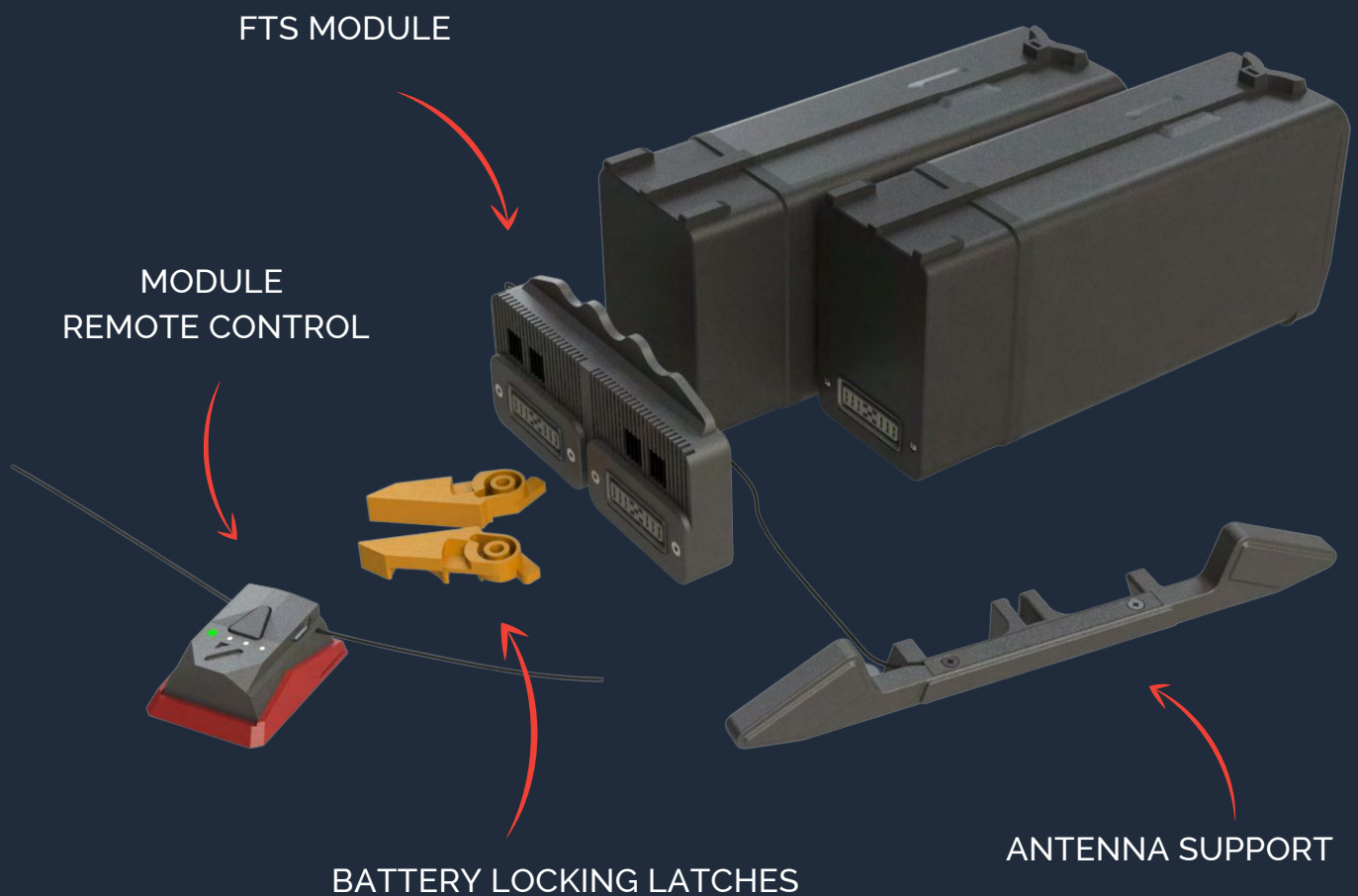
The FTS module contains the electronics for the motor cut-off system and the wireless communication module. A drone equipped with a Zéphyr CC M30 FTS is not distinguishable from the exterior of a DJI M30.

Triggering a drone FTS Module it should only be done in an emergency situation. We remind you that switching off the engines does not guarantee the preservation of the aircraft, nor the absence of damage to the ground or injury to persons.

Any use on a drone other than a DJI M30 is prohibited. The configuration of the FTS system must not be changed in order to ensure proper operation.



# PRESENTATION OF THE ELEMENTS



# THE PARTS OF THE SYSTEM

The Zéphyr FTS module contains the electronics for the FTS system and the wireless communication module (Figure 1).

The Zéphyr remote control module consists of a red adhesive base, an oval ignition button on the back, a triangular motor cut-off button, an indicator LED, three white battery level LEDs, an extension port on the left side and a USB port on the right side for recharging (figures 2, 3 & 4).



FIGURE 2



FIGURE 3



FIGURE 4

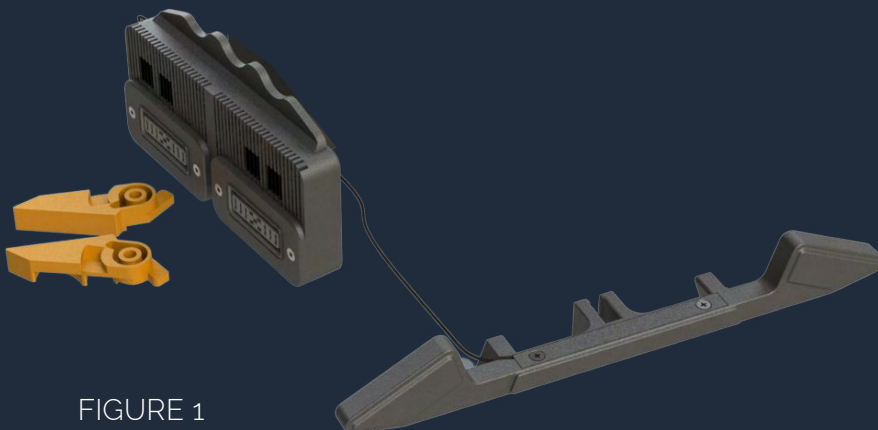


FIGURE 1





# PRESENTATION OF THE ELEMENTS

## CHARACTERISTICS OF THE FTS ZÉPHYR CC M30

MODULE WEIGHT  
FTS

55 GRAMS

COMMUNICATION  
WIRELESS RADIO

SRD860 WITH  
ENCRYPTED KEY

RADIO RANGE

UP TO 1500  
METRES

RADIO AUTONOMY

30 HOURS

OPERATING  
TEMPERATURE

-15°C À 40°C

THE MOST RELIABLE, FASTEST  
AND LIGHTEST IN THE WORLD

# INSTALLATION OF THE ZÉPHYR CC M30 FTS

1

REMOVE THE BATTERIES FROM THE MATRICE 30. USING A SCREW, UNLOCK THE ORANGE BATTERY LOCKING LUGS INSTALLED ON THE MATRICE 30 (FIGURE 5 & 6)



FIGURE 5



FIGURE 6



Handle your Matrice 30 drone with care when turning it over.



# INSTALLATION OF THE ZÉPHYR CC M30 FTS

2

REPLACE THE ORIGINAL LATCHES WITH THE LOCKING LATCHES SUPPLIED BY DRONAVIA WITH A SCREW TURN. (FIGURE 7,8 & 9,10)



FIGURE 7 & 8



FIGURE 9 & 10

# INSTALLATION OF THE ZÉPHYR CC M30 FTS

3

INSERT THE FTS MODULE INTO THE BOTTOM OF THE MATRICE 30'S BATTERY SLOT. (FIGURE 11 & 12).



FIGURE 11

4

PASS THE ANTENNA OF THE FTS THROUGH THE GAP SITUATED ON THE SIDE OF THE DRONE AS BELOW. (FIGURE 12 & 13)



FIGURE 12 & 13



# INSTALLATION OF THE ZÉPHYR CC M30 FTS

5

TURN THE DJI MATRICE 30 DRONE OVER CAREFULLY. CLIP THE ANTENNA SUPPORT ONTO THE DRONE STAND AS SHOWN BELOW. (FIGURE 14 & 15)



FIGURE 14 & 15



FIGURE 16 & 17



Be careful not to pinch the antenna cable with the zip tie of the Zéphyr parachute.

# INSTALLATION OF THE ZÉPHYR CC M30 FTS

6

INSERT THE BATTERIES ALL THE WAY IN AND CHECK THAT THE LOCKING CATCHES HOLD THE BATTERIES SECURELY. (FIGURE 18)



FIGURE 18



THE LATCHES SUPPLIED BY DRONAVIA HAVE TWO LOCKING NOTCHES. THE FIRST NOTCH IS TO BE USED WHEN THE FTS IS INSTALLED ON THE M30. IF YOU WISH TO FLY WITHOUT THE FTS WITH THE DRONAVIA LATCHES, SIMPLY PUSH THE BATTERY TO THE SECOND LOCKING POSITION.



# INSTALLATION OF THE ZÉPHYR CC M30 FTS

7

INSTALL THE RED ZÉPHYR REMOTE CONTROL CRADLE ONTO THE DJI M30 REMOTE CONTROL USING THE ADHESIVE PROVIDED (FIGURE 19).



FIGURE 19

8

INSERT THE ZÉPHYR REMOTE CONTROL INTO ITS CRADLE BY SLIDING IT IN FROM THE BACK (FIGURE 20).

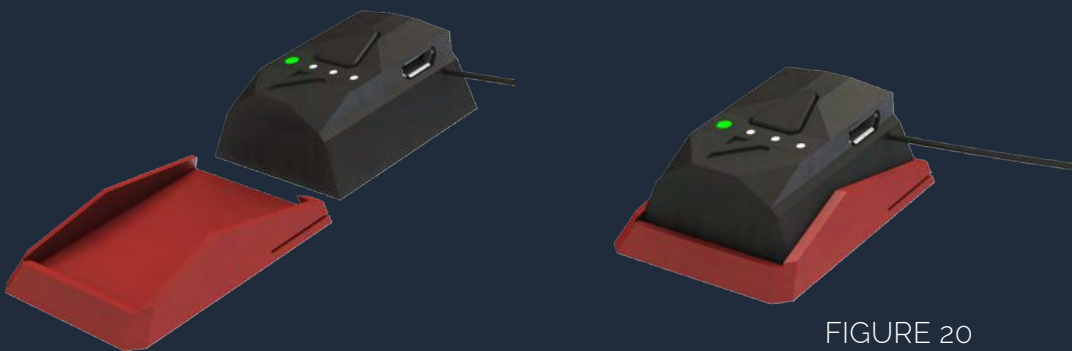


FIGURE 20

YOUR ZÉPHYR CC M30 FTS IS OPERATIONAL!

# INSTALLATION OF THE ZÉPHYR CC M30 FTS

9

THE ZÉPHYR REMOTE CONTROL CAN BE POSITIONED IN DIFFERENT PLACES ON THE DJI M30 REMOTE CONTROL (FIGURE 21).



FIGURE 21

10

TO DISMANTLE THE SYSTEM, SIMPLY FOLLOW THE INSTALLATION INSTRUCTIONS IN REVERSE ORDER.



# ACTIVATION OF THE ZÉPHYR CC M30 FTS

TO ACTIVATE THE FTS, FOLLOW THESE STEPS IN ORDER:

- 1 TURN ON THE REMOTE CONTROL MODULE BY HOLDING DOWN THE OVAL IGNITION BUTTON (LOCATED ON THE BACK) FOR 1 SECOND.
- 2 TURN ON THE DRONE
- 3 YOUR ZÉPHYR CC M30 FTS IS ACTIVE !



FIGURE 22





 YOUR ZÉPHYR CC  
M30 FTS IS  
OPERATIONAL &  
ACTIVE!



# ADAPTATION OF THE ORIGINAL CASE FOR THE TRANSPORT OF THE FTS

IT IS POSSIBLE TO ADAPT THE ORIGINAL CASE TO CARRY THE FTS ON THE DRONE IN IT. SIMPLY CUT OUT THE ORIGINAL WALLS AS SHOWN BY THE DOTTED LINES AND ARROWS BELOW. (FIGURE 23 & 24).

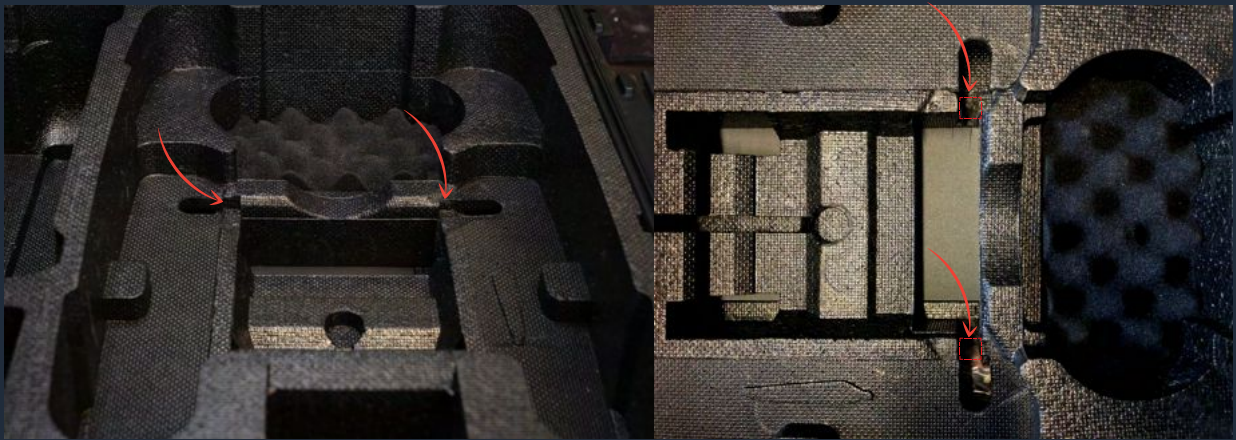
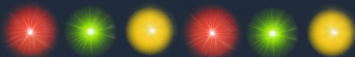


FIGURE 23 & 24

# SYSTEM STATES

AN LED INDICATOR ON THE REMOTE CONTROL HELPS YOU CHECK THE SYSTEM STATUS IN REAL TIME. HERE IS A SUMMARY OF THE DIFFERENT STATES:

## 1 NORMAL OPERATION



INITALISATION OF THE SYSTEM



OPERATIONAL SYSTEM



FTS ONLY OR PARACHUTE ONLY TRIGGERED



OPERATIONAL SYSTEM (FTS & PARACHUTE)



FTS & PARACHUTE TRIGGERED (FIXED LIGHT)

## 2 SYSTEM ALERTS



NO RADIO SIGNAL



LOW  
BATTERY



SYSTEM ERROR (FIXED LIGHT)

## 3 CHARGING THE BATTERY



BATTERY CHARGING  
(STEADY LIGHT)



BATTERY CHARGED  
(STEADY LIGHT)



# TRIGGERING OF FTS

IN ORDER TO KEEP THE FTS AT YOUR FINGERTIPS AND TO BE AS RESPONSIVE AS POSSIBLE, THERE IS A SIMPLE GESTURE THAT ALLOWS YOU TO TRIGGER THE SYSTEM TO SHUT DOWN THE DJI M30'S MOTORS.

SIMPLY PRESS THE TRIANGULAR BUTTON ON THE REMOTE CONTROL. FOR SAFETY REASONS, IT IS NECESSARY TO HOLD THE POSITION FOR AT LEAST 1 SECOND UNTIL THE LED FLASHES GREEN RAPIDLY AND TO ENSURE THAT THE CONTACT IS MADE CORRECTLY (FIGURE 25).



FIGURE 25

ONCE THE LED FLASHES GREEN RAPIDLY, THE MOTORS HAVE BEEN CORRECTLY SWITCHED OFF.

# SHUTDOWN AND RESET SYSTEM

TO STOP, TURN OFF AND RESET THE FTS, FOLLOW THESE STEPS IN ORDER:

- 1 TURN OFF THE REMOTE CONTROL MODULE OF THE FTS BY HOLDING DOWN THE IGNITION BUTTON FOR 5 SECONDS.
- 2 TURN OFF THE DRONE.
- 3 THE ENGINE CUT-OFF IS DEACTIVATED AND RESET EACH TIME THE SYSTEM IS RESTARTED.



FIGURE 26



# CHECKING THE BATTERY LEVEL OF THE REMOTE CONTROL

FOUR INDICATOR LIGHTS ALLOW YOU TO CHECK THE BATTERY LEVEL OF THE ZÉPHYR REMOTE CONTROL. A SHORT PRESS ON THE REMOTE CONTROL'S POWER BUTTON INDICATES THE REMAINING BATTERY LEVEL ACCORDING TO THE NUMBER OF INDICATORS LIT (FIGURE 27).



FIGURE 27

# CHARGING THE REMOTE CONTROL BATTERY

TO CHARGE THE REMOTE CONTROL BATTERY, SIMPLY CONNECT A MICRO USB CABLE TO THE MICRO USB SOCKET ON THE RIGHT AND CONNECT THE CABLE TO A COMPUTER (FIGURE 28). THE STATUS LED WILL TURN SOLID YELLOW TO INDICATE CHARGING AND SOLID GREEN ONCE THE BATTERY IS FULLY CHARGED.



FIGURE 28

# INSTALLATION OF THE SAFETY BUTTON (OPTIONAL)

YOU HAVE THE OPTION TO PURCHASE AND INSTALL AN OPTIONAL SAFETY BUTTON. THE SAFETY BUTTON ADDS A SECOND RELEASE BUTTON TO THE SYSTEM TO PREVENT UNWANTED TRIGGERS FROM INADVERTENTLY PRESSING THE RELEASE BUTTON ON THE ZÉPHYR REMOTE. THE SECURITY BUTTON COMES WITH A CONNECTION CABLE, TO CONNECT IT TO YOUR ZÉPHYR REMOTE CONTROL, SIMPLY CONNECT THE CABLE BETWEEN THE SECURITY BUTTON AND THE REMOTE CONTROL (FIGURES 29, 30, 31 & 32).

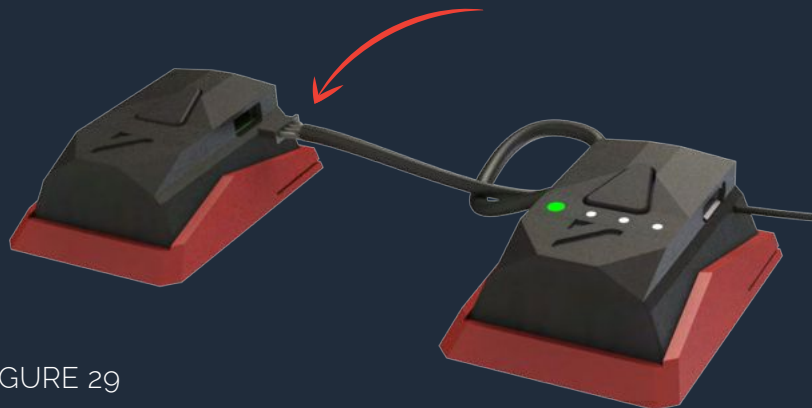


FIGURE 29



FIGURE 30



# INSTALLATION OF THE SAFETY BUTTON (OPTIONAL)



FIGURE 31



FIGURE 32



Check before each take-off that the safety button is correctly connected to the Zephyr remote control.

# INSTALLATION OF THE SAFETY BUTTON (OPTIONAL)

THE ZÉPHYR REMOTE CONTROL AND THE SAFETY BUTTON CAN BE POSITIONED ON THE DJI M30 REMOTE CONTROL AS SHOWN IN FIGURE 33 BELOW.



FIGURE 33

# AFTS RELEASE WITH SAFETY BUTTON (OPTIONAL)

IF YOUR ZÉPHYR REMOTE CONTROL IS EQUIPPED WITH AN OPTIONAL SECURITY BUTTON, SIMPLY PRESS THE TWO TRIANGULAR BUTTONS ON THE REMOTE AND THE SECURITY BUTTON SIMULTANEOUSLY.

FOR SAFETY REASONS, IT IS NECESSARY TO HOLD THE POSITION FOR AT LEAST 1/2 SECOND UNTIL THE LED FLASHES GREEN RAPIDLY AND TO ENSURE THAT THE CONTACTS ARE MADE CORRECTLY (FIGURE 34). ONCE THE LED FLASHES GREEN RAPIDLY, THE MOTORS HAVE BEEN CORRECTLY SWITCHED OFF.



FIGURE 34



# RESET OF THE REMOTE CONTROL

TO RESET YOUR REMOTE CONTROL, FOLLOW THESE STEPS :

IN CASE OF A MALFUNCTION, A BUG OR IF THE SYSTEM DOES NOT RESPOND ANYMORE, A RESET MANOEUVRE ON THE REMOTE CONTROL CAN SOLVE YOUR PROBLEM.

TO RESET THE REMOTE CONTROL, YOU WILL FIND A SMALL HOLE ON THE LEFT SIDE (FIGURE 35).



FIGURE 35

SLIP IN A PAPER CLIP OR OTHER THIN OBJECT, A SHORT PRESS WILL RESET THE RADIO.



# STORAGE AND WARRANTY

## STORAGE OF THE FTS

STORE THE ZÉPHYR CC M30 FTS IN A DRY PLACE, AT A TEMPERATURE BETWEEN 10°C AND 30°C, CLEAN AND PROTECTED FROM UV LIGHT.

## WARRANTY

DRONAVIA TAKES GREAT CARE IN THE DESIGN AND PRODUCTION OF ITS PRODUCTS. WE GUARANTEE OUR FTS FOR ONE YEAR FROM THE DATE OF PURCHASE AGAINST ANY DEFECTS IN DESIGN OR WORKMANSHIP THAT MAY OCCUR DURING NORMAL USE OF THE PRODUCT. ANY MISUSE OR INCORRECT USE, ANY EXPOSURE TO AGGRESSIVE FACTORS (HIGH HUMIDITY, HIGH TEMPERATURE, ETC.) THAT WOULD LEAD TO DAMAGE WILL INVALIDATE THIS WARRANTY.

## LIABILITY NOTICE

THE TECHNICIAN PERFORMING THE INSTALLATION OF THE FTS IS RESPONSIBLE FOR THE COMPANY FOR WHICH HE/SHE PERFORMS THE INSTALLATION. DRONAVIA SHALL NOT BE HELD RESPONSIBLE IN THE EVENT OF INCORRECT INSTALLATION OF THE FTS ON THE DRONE. IN CASE OF DOUBT, WE CAN TRAIN AND EMPOWER PEOPLE, PREVIOUSLY QUALIFIED IN ELECTRONICS, TO ASSEMBLE THE FTS IN OUR WORKSHOPS.



# USEFUL LINKS

FOR FRANCE, WE RECOMMEND THAT YOU CONSULT THE WEBSITE OF THE MINISTRY OF ECOLOGY, SUSTAINABLE DEVELOPMENT AND ENERGY IF YOU HAVE ANY DOUBTS OR QUESTIONS.

## WEBSITE OF THE MINISTRY OF ECOLOGY & SUSTAINABLE DEVELOPMENT AND ENERGY

<http://www.developpement-durable.gouv.fr/quelle-place-drones-dans-ciel-francais>

## DETAILS OF THE ORDER OF 11/04/2012 :

<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000025834986>

## DETAILS OF THE ORDER OF 17/12/2015:

<https://www.legifrance.gouv.fr/eli/arrete/2015/12/17/DEVA1528469A/jo>

## MAP OF DRONE RESTRICTION AREAS BY THE IGN

<https://www.geoportail.gouv.fr>

## THE DIRECTORATE GENERAL OF CIVIL AVIATION (DGCA)

<https://www.ecologie.gouv.fr/direction-generale-laviation-civile-dgac>



Remember that you are flying under your own responsibility!



# MORE ABOUT DRONAVIA

AT DRONAVIA, WE HAVE BEEN DEVELOPING A WIDE RANGE OF INNOVATIVE ACCESSORIES TO SECURE YOUR PROFESSIONAL DRONES SINCE 2015. BASED IN THE EAST OF FRANCE, WE MANUFACTURE ALL OUR PRODUCTS IN OUR WORKSHOP, IN ACCORDANCE WITH THE DGAC STANDARDS, ENSURING AN UNRIVALLED QUALITY.

FROM PARACHUTES, FTS, IDENTIFICATION BEACONS, APPROVALS FOR S1, S2, S3 SCENARIOS, WE COVER ALL THE NEEDS OF PROFESSIONAL DRONE PILOTS. CURRENTLY THE LEADER IN THE FRENCH MARKET WITH A GROWTH RATE OF 45% PER YEAR & ALWAYS AT THE LEADING END OF INNOVATION IN ITS SECTOR, DRONAVIA ANTICIPATED THE FUTURE EUROPEAN REGULATIONS EN-4709 AND WILL OFFER A NEW RANGE OF PRODUCTS MEETING THIS NEW CERTIFICATION AS OF 2023.

WE HAVE ALREADY EQUIPPED & CERTIFIED NEARLY 5000 DRONES.

JOIN US ON



Approved by

