



MADE IN FRANCE 

USER MANUAL & INSTRUCTIONS

OF THE RESCUE PARACHUTE FOR DJI MATRICE 300
RTK DRONE WITH CO2 RELEASE DEVICE

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CONGRATULATIONS !
YOU HAVE JUST
ACQUIRED YOUR
ZÉPHYR MATRICE 300
PARACHUTE...

At Dronavia, we have been developing since 2015 a wide range of innovative accessories to secure your professional drones. Based in the east of France, we manufacture all our products in our workshop, according to the DGAC standard, ensuring an unmatched quality. The Zéphyr M300 parachute model is the most reliable, lightest and fastest in the world. You will fly with your DJI Matrice 300 RTK in complete safety.

Thank you for your trust & enjoy the flight!

LUDOVIC PELLETEY, DRONAVIA. CEO





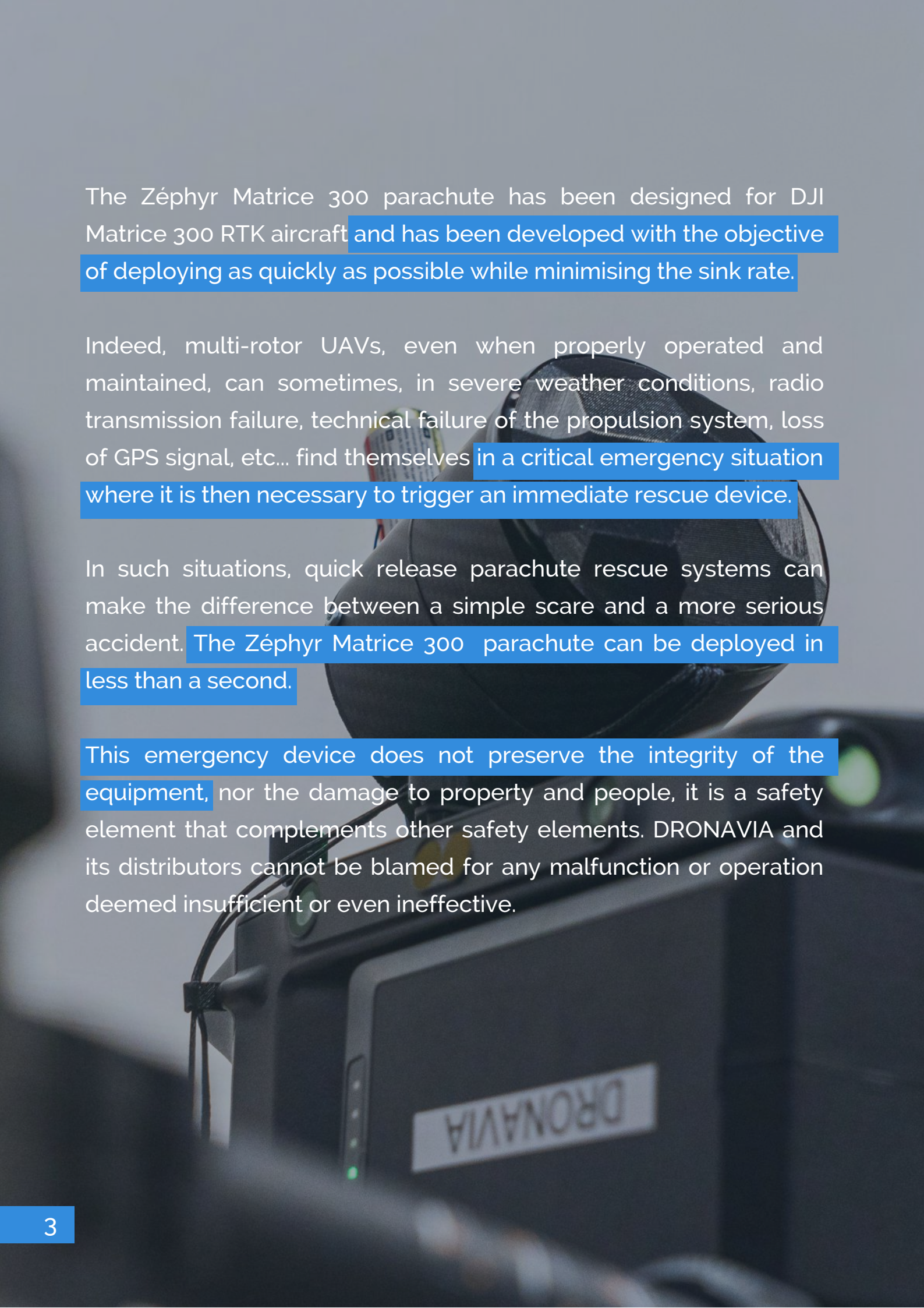
PRESENTATION OF THE ZÉPHYR M300 PARACHUTE SYSTEM

Dear customer,

Congratulations on the purchase of your new DJI Matrice 300 CO2 Rescue Parachute: Zéphyr Matrice 300.

You have chosen the device that 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 rescue systems, we cannot claim to be operating to any operational standard.

Based in Remiremont, France, DRONAVIA is at your service to advise you on the purchase of your Matrice 300 parachute and to answer any technical or commercial questions.



The Zéphyr Matrice 300 parachute has been designed for DJI Matrice 300 RTK aircraft and has been developed with the objective of deploying as quickly as possible while minimising the sink rate.

Indeed, multi-rotor UAVs, even when properly operated and maintained, can sometimes, in severe weather conditions, radio transmission failure, technical failure of the propulsion system, loss of GPS signal, etc... find themselves in a critical emergency situation where it is then necessary to trigger an immediate rescue device.

In such situations, quick release parachute rescue systems can make the difference between a simple scare and a more serious accident. The Zéphyr Matrice 300 parachute can be deployed in less than a second.

This emergency device does not preserve the integrity of the equipment, nor the damage to property and people, it is a safety element that complements other safety elements. DRONAVIA and its distributors cannot be blamed for any malfunction or operation 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 observe the basic safety instructions set out below.

Dronavia accepts no responsibility for damage or injury caused directly or indirectly by the use of CO2 cartridges or by the use of CO2 cartridges that do not meet the safety requirements and standards.

Before handling the Zéphyr Matrice 300 device, you must read this manual carefully. It provides information on how to use the parachute. In addition to the important notes and information mentioned in this manual, the owner of the device must follow all the important instructions listed below.

WARNINGS AND PRECAUTIONS FOR USE

The Zéphyr Matrice 300 parachute is a safety device which, under certain conditions, prevents the free fall of the drone equipped with it. 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 Matrice 300 parachute should not increase your risk taking. Therefore, please respect the rules below.



THE 15 RULES TO RESPECT

1. IT IS FORBIDDEN TO 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 DISASSEMBLE THE VARIOUS PARTS OF THE DEVICE, EXCEPT DURING THE MAINTENANCE PROVIDED FOR THIS PURPOSE AND IN ACCORDANCE WITH THE INDICATIONS PROVIDED IN THIS MANUAL.
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 HIGH TEMPERATURES, SEVERE SHOCKS, CONTACT WITH CHEMICALS, ACIDS, LONG TERM STORAGE IN HIGH HUMIDITY OR DUST. IMPROPER USE MAY CAUSE THE CO₂ CARTRIDGE TO BURST AND ENDANGER YOUR LIFE. THE MAXIMUM OPERATING TEMPERATURE IS 40°C AND THE MINIMUM OPERATING TEMPERATURE IS -15°C.
6. THE CONDITION OF THE ZÉPHYR MATRICE 300 PARACHUTE SYSTEM SHOULD BE CHECKED BEFORE EACH USE. DO NOT USE THE DEVICE IF IT IS DAMAGED, MALFUNCTIONING OR LEAKING. IF NECESSARY, CONTACT YOUR DEALER.
7. THE ZÉPHYR MATRICE 300 PARACHUTE 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 MATRICE 300 PARACHUTE.



THE 15 RULES TO RESPECT

9. THE USE OF A ZÉPHYR MATRICE 300 PARACHUTE SHOULD NOT IN ANY WAY INCREASE YOUR RISK-TAKING.

10. THE ZÉPHYR MATRICE 300 PARACHUTE ATTEMPTS TO COUNTERACT THE FREE FALL OF A MALFUNCTIONING UAV. HOWEVER, THERE ARE DROP SITUATIONS WHERE THE EFFECTIVENESS OF THE ZÉPHYR MATRICE 300 PARACHUTE MAY BE LIMITED OR IMPEDED.

11. THE ZÉPHYR MATRICE 300 PARACHUTE MUST BE ACTIVELY ACTIVATED BY THE USER. REGULAR TRAINING IS NECESSARY TO BE ABLE TO REACT CORRECTLY IN AN EMERGENCY.

12. THE CO2 CARTRIDGE AND THE EJECTION SYSTEM ONLY WORK ONCE. THEY MUST BE RETURNED TO YOUR DEALER TO BE RECHARGED TO MAINTAIN THE SYSTEM'S WARRANTY. HOWEVER, YOU CAN RECHARGE THE SYSTEM YOURSELF BY FOLLOWING THE INSTRUCTIONS IN THIS MANUAL. IT IS YOUR RESPONSIBILITY TO ENSURE THAT THE SYSTEM'S WARRANTY IS MAINTAINED.

13. WHEN RELOADING THE DEVICE, IT IS FORBIDDEN TO DO SO WITH PEOPLE NEARBY, AND ESPECIALLY WITH THE BARREL POINTING IN THEIR DIRECTION. YOU MUST TAKE THE SAME PRECAUTIONS AS WHEN HANDLING A LOADED RIFLE. IN CASE OF UNTIMELY FIRING DURING THIS STAGE OR OF BAD HANDLING, THE FIRING PIN CAN BE EJECTED AND CAUSE SERIOUS INJURIES.

14. AFTER THE DEVICE HAS BEEN TRIGGERED, IT IS RECOMMENDED THAT EACH COMPONENT BE CAREFULLY INSPECTED TO ENSURE ITS INTEGRITY. IF IN DOUBT, CONTACT YOUR DEALER.



15. After switching on the system, if the LED changes to a steady red state, do not use it and contact your dealer for service.

USES OF THE ZÉPHYR M300 PARACHUTE

INTRODUCTION

In this section you will find all the information you need to use your Zephyr M300 parachute.

The activation of a drone rescue system is not a harmless act. It should only be done in an emergency situation. We remind you that limiting the impact on the ground 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 Matrice 300 RTK is prohibited.

The configuration of the parachute system must not be modified (ejection mechanism, connection elements, lines, etc.) so as not to jeopardize its proper functioning.

PRESENTATION OF THE COMPONENTS



ADDITIONAL ACCESSORIES PROVIDED:

- 1 x Allen key & 1 x Torx key
- 4 x hand screws for quick assembly of the parachute
- 4 x spacers / 1 x elastic band (to hold the lines)
- 1 x USB-C cord to extension port (connecting the parachute to the drone)



PRESENTATION OF THE COMPONENTS

TECHNICAL CHARACTERISTICS OF THE PARACHUTE ZÉPHYR M300

TOTAL WEIGHT

450G
(WITH CARTRIDGE)

DEVICE
EJECTOR

CO₂ CARTRIDGE
16G

MINIMUM HEIGHT
EFFICIENCY

FROM
15 METERS

COMMUNICATION
RADIO
WIRELESS

SRD860 WITH
ENCRYPTED KEY

RADIO RANGE

JUST TO 1500
METRES

AUTONOMY
PARACHUTE / RADIO

5 H (PARACHUTE)
30 H (RADIO)

ENERGY ON IMPACT
ON THE GROUND

< 50 JOULES

OPERATING
TEMPERATURE

-15°C À 40°C

THE MOST RELIABLE, FASTEST AND
LIGHTEST IN THE WORLD

THE PARTS OF THE SYSTEM

The Zéphyr parachute module contains the system's dedicated electronics, the wireless communication module and a power supply battery independent of that of the UAV. It is composed of an ignition button, located on the back, and an indication LED (Figure 1).

The Zéphyr module also integrates the CO2 device consisting of a 16G threaded CO2 cartridge allowing the ejection of the parachute canvas. A micro USB port is available to recharge the system's internal battery as well as an extension port allowing the system to be connected to a USB-C socket.



FIGURE 1

THE PARTS OF THE SYSTEM

The remote control module consists of a red adhesive base, an oval ignition button on the back, a triangular parachute release 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). The carbon ejection tube contains a parachute cloth (Figure 5).



FIGURE 2



FIGURE 3



FIGURE 4

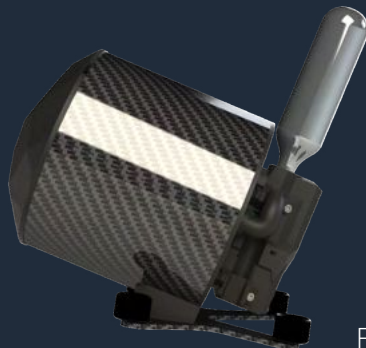


FIGURE 5

INSTALLATION OF THE PARACHUTE

THE ZÉPHYR MATRICE 300 PARACHUTE SYSTEM CAN BE INSTALLED IN A FEW MINUTES. TO INSTALL THE PARACHUTE, PLEASE FOLLOW THESE INSTRUCTIONS IN ORDER:

1

REMOVE THE UPPER SCREWS OF THE 2 FRONT ARMS AND THE LOWER SCREWS OF THE 2 REAR ARMS OF THE DRONE USING THE SPANNER PROVIDED (FIGURES 6 & 7).



FIGURE 6

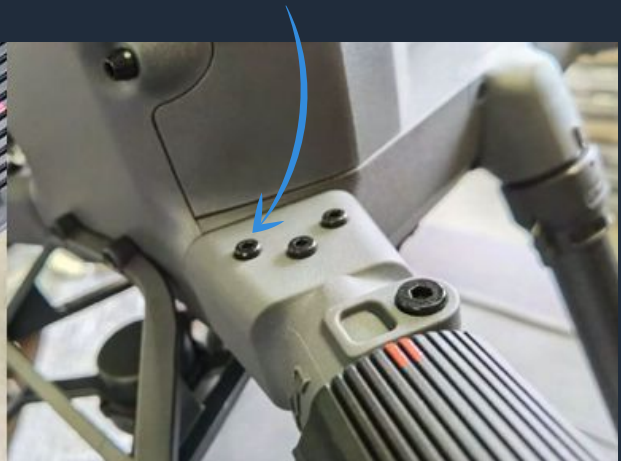


FIGURE 7

2

REPLACE THESE SCREWS WITH THE CARBON LINE BRACKETS WITH THE SCREWS SUPPLIED. THE KIT CONTAINS TWO SIZES OF BRACKETS, THE TWO LARGER ONES FIT IN THE FRONT AND THE TWO SMALLER ONES IN THE BACK.



Each hanger must be held in place by the centre screw of each support.

PARACHUTE INSTALLATION

3

AT THE FRONT A PLASTIC HANGER GUIDE IS TO BE FIXED ABOVE EACH SUPPORT (FIGURE 8).



When assembling, place the parachute assembly on top of the drone so that the lines run upwards.



FIGURE 8

4

ATTACH THE 2 LINE BRACKETS TO THE REAR OF THE DRONE (FIGURE 9).



Chaque suspente doit être maintenue en place par la vis centrale de chaque support.



FIGURE 9

PARACHUTE INSTALLATION

5

LOOSEN THE TWO SCREWS ON THE FRONT OF THE DRONE (FIGURE 10).



FIGURE 10

6

REFIT THESE TWO SCREWS, ADDING THE LINE GUIDES (FIGURE 11).



FIGURE 11

PARACHUTE INSTALLATION

7

TWO MOUNTING CONFIGURATIONS ARE POSSIBLE FOR THIS PARACHUTE:

- MOUNTING ABOVE THE DRONE (REFER TO PARAGRAPH 6.1)
- MOUNTING BELOW THE DRONE (REQUIRES AN OPTIONAL BRACKET, REFER TO PARAGRAPH 6.2)

7.1

MOUNTING ABOVE

PLACE THE PARACHUTE SYSTEM (FIRING PIN MODULE TOWARDS THE FRONT OF THE DRONE) USING THE 4 HAND SCREWS MOUNTED ON THE PARACHUTE SUPPORT CARBON PLATE AND SCREW THEM INTO THE 4 INSERTS LOCATED ON THE TOP OF THE DRONE (FIGURES 12 AND 13).
ALWAYS PLACE THE 4 LINES ABOVE ALL OTHER COMPONENTS !



FIGURE 12



FIGURE 13

PARACHUTE INSTALLATION

7.1.2

MOUNTING ABOVE

PASS THE TWO FRONT LINES ON EACH SIDE THROUGH THE FRONT GUIDES AND THEN THE REAR LINES THROUGH THE BOTTOM GUIDES. ADJUST THE TENSION OF THE LINES BY PASSING THEM UNDER THE ELASTIC BAND AROUND THE PARACHUTE TUBE (FIGURE 14).

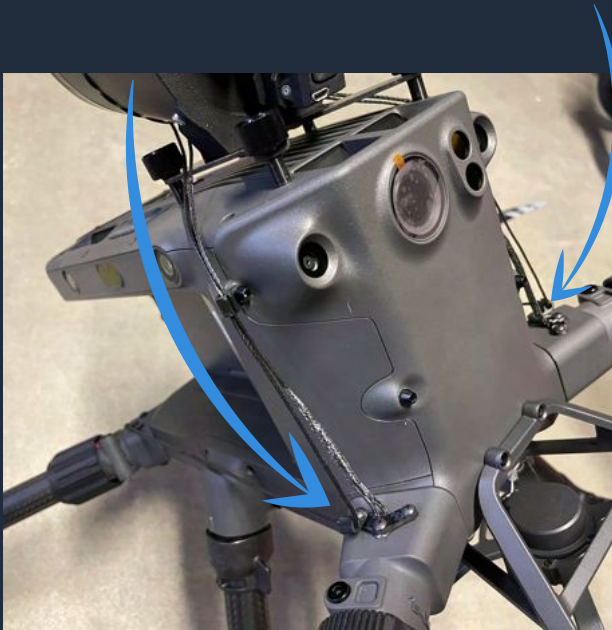


FIGURE 14

7.1.3

BE SURE TO TIGHTEN THE CARABINER AND INSERT THE SMALL SAFETY PIN.

PARACHUTE INSTALLATION

7.2

BOTTOM MOUNTING

UNSCREW THE 4 SCREWS ON THE BOTTOM OF THE DRONE (FIGURE 15).

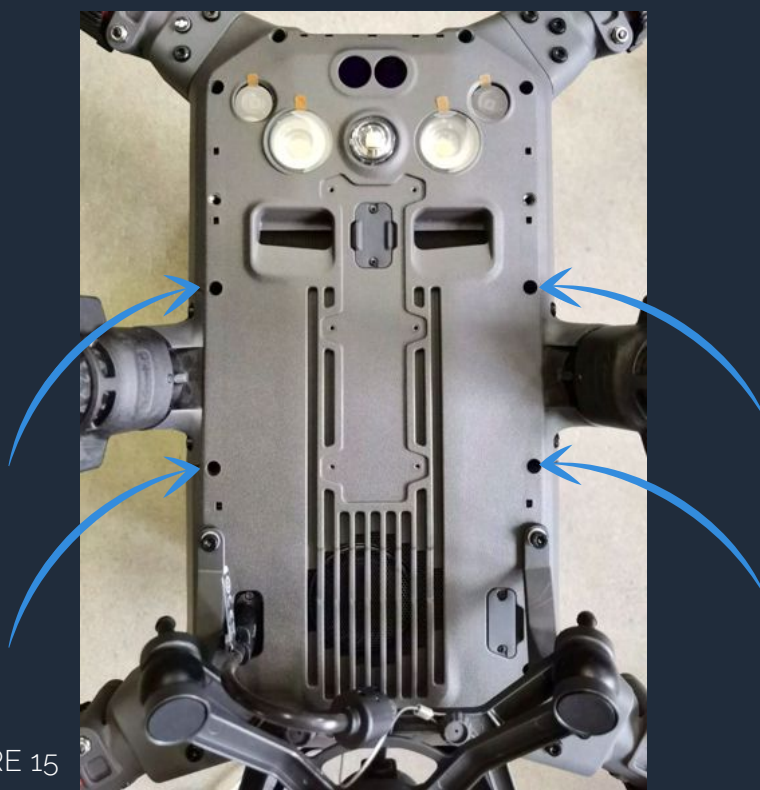


FIGURE 15

7.2.1

USE THE INNER HOLES OF THE OPTIONAL PARACHUTE MOUNTING PLATE (FIGURE 16).

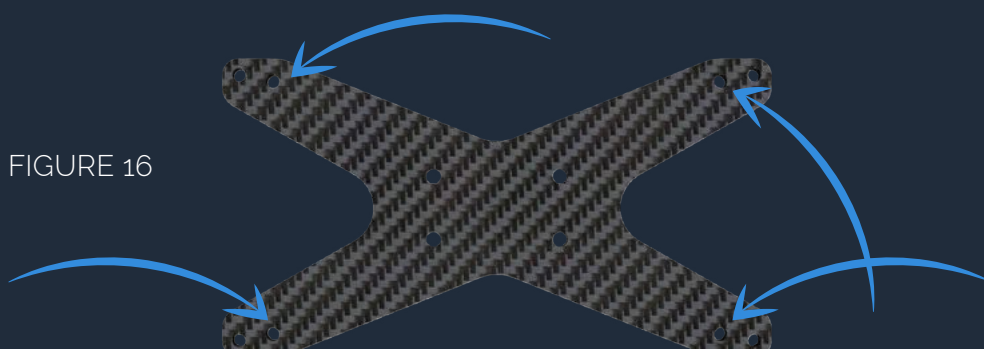


FIGURE 16

PARACHUTE INSTALLATION

7.2.2

BOTTOM MOUNTING

PLACE THE PARACHUTE SYSTEM (FIRING PIN MODULE FORWARD) USING THE HAND SCREWS PROVIDED IN PLACE OF THE PREVIOUSLY REMOVED SCREWS. DO NOT FORGET THE SHORT SPACERS THAT FIT BETWEEN THE PARACHUTE CARBON PLATE AND THE MATRICE 300 (FIGURE 17). **ALWAYS PLACE THE 4 LINES ABOVE ALL OTHER PARTS!**



FIGURE 17

7.2.3

PLACE THE LINES AND ADJUST THEIR TENSION BY PASSING THEM UNDER THE ELASTIC BAND AROUND THE PARACHUTE TUBE (FIGURE 18).



FIGURE 18

PARACHUTE INSTALLATION

8

OPTIONAL (EXTERNAL FTS): CONNECT THE USB-C CORD TO THE PARACHUTE'S EXTENSION SOCKET TO THE EXTERNAL FTS(FIGURE 19) TO ALLOW THE PARACHUTE TO CHARGE AND AUTOMATICALLY TURN ON WHEN THE DRONE IS TURNED ON.



FIGURE 19

9

OPTIONAL (INTERNAL FTS) BUT REQUIRED IN S3: CONNECT THE BUZZER MODULE TO THE USB-C SOCKET ON THE BOTTOM OF THE DRONE. CONNECT THE BUZZER MODULE TO THE PARACHUTE EXTENSION SOCKET WITH THE SUPPLIED CORD (FIGURE 20 & 21) TO ALLOW CHARGING AND AUTOMATIC IGNITION OF THE PARACHUTE WHEN THE DRONE IS SWITCHED ON, AND TO HAVE THE MANDATORY BUZZER IN S3 IN CASE OF A TRIGGER.



FIGURE 20 & 21

PARACHUTE INSTALLATION

10

INSTALL THE RED ZÉPHYR REMOTE CONTROL BASE ON THE MATRICE 300 RTK REMOTE CONTROL USING THE ADHESIVE PROVIDED (FIGURE 22). BEFORE GLUING THE BASE PERMANENTLY MAKE A TEST OF ITS POSITION.



FIGURE 22

11

INSTALL THE RED ZÉPHYR REMOTE CONTROL BASE ON THE MATRICE 300 RTK REMOTE CONTROL USING THE ADHESIVE PROVIDED (FIGURE 23). BEFORE GLUING THE BASE PERMANENTLY MAKE A TEST OF ITS POSITION.

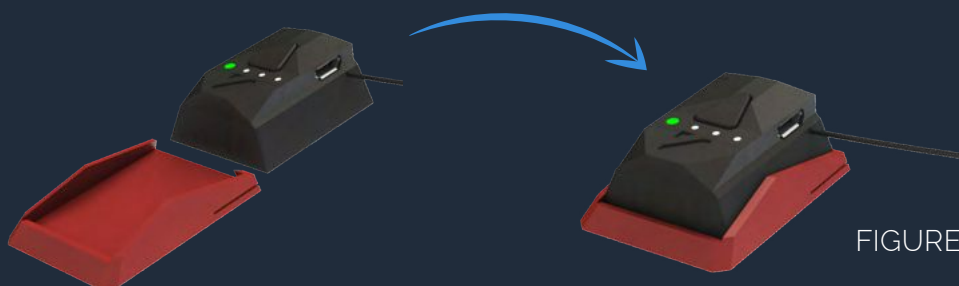


FIGURE 23

PARACHUTE ACTIVATION

1

TO ACTIVATE THE PARACHUTE, FOLLOW THESE STEPS IN ORDER:

TURN ON THE REMOTE CONTROL MODULE BY PRESSING THE POWER BUTTON (ON THE BACK OF THE RADIO) FOR 2 SECONDS.

IF YOU HAVE CONNECTED THE PARACHUTE TO THE DRONE USING THE SUPPLIED CORD, TURN ON THE DRONE AND THE PARACHUTE WILL AUTOMATICALLY TURN ON. OTHERWISE, TURN ON THE PARACHUTE MODULE BY PRESSING THE POWER BUTTON FOR 2 SECONDS. (FIGURE 24)

YOUR ZÉPHYR MATRICE 300 PARACHUTE IS ACTIVE !



FIGURE 24



YOUR PARACHUTE
ZÉPHYR M300 IS
ACTIVE &
OPERATIONAL!



PARACHUTE DISASSEMBLY

1

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

THE REMOTE CONTROL MODULE CAN REMAIN INSTALLED ON THE DJI M30 RADIO WITHOUT DISTURBING ITS OPERATION.



ACTIVATION OF THE PARACHUTE ON A DRONE WITH FTS (OPTIONAL)

TO ACTIVATE THE PARACHUTE ON A DRONE EQUIPPED WITH A FTS, FOLLOW THESE STEPS IN ORDER:

- 1 TURN ON THE REMOTE CONTROL MODULE BY PRESSING THE POWER BUTTON (ON THE BACK OF THE RADIO) FOR 2 SECONDS.
- 2 TURN ON THE DRONE.
- 3 IF YOU HAVE CONNECTED THE PARACHUTE TO THE DRONE OR TO THE EXTERNAL FTS USING THE SUPPLIED CORD, THE PARACHUTE SHOULD AUTOMATICALLY TURN ON WHEN THE DRONE IS TURNED ON. OTHERWISE, TURN ON THE PARACHUTE MODULE BY PRESSING THE POWER BUTTON FOR 2 SECONDS.
- 4 YOUR ZÉPHYR MATRICE 300 PARACHUTE IS ACTIVE !

ACTIVATION OF THE FTS (OPTIONAL) FOR A FLIGHT WITHOUT PARACHUTE

IT IS POSSIBLE TO ACTIVATE ONLY THE FTS ON A DRONE EQUIPPED WITH A PARACHUTE AND A FTS, FOR EXAMPLE IN A S2 SCENARIO FLIGHT. TO ACTIVATE ONLY THE FTS ON A DRONE EQUIPPED WITH A PARACHUTE WITH A FTS, FOLLOW THESE INSTRUCTIONS IN ORDER:

- 1 TURN ON THE REMOTE CONTROL MODULE BY PRESSING THE POWER BUTTON (ON THE BACK OF THE RADIO) FOR 2 SECONDS.
- 2 TURN ON THE DRONE.
- 3 WAIT 30 SECONDS. AFTER 30 SECONDS, THE RADIO STOPS SEARCHING FOR THE PARACHUTE AND ONLY COMMUNICATES WITH THE FTS.
- 4 YOUR ZÉPHYR MATRICE 300 FTS IS ACTIVE !



After a flight without a parachute, if you wish to reactivate the parachute, it will be necessary to switch the radio control module off and on again so that it reconnects to the parachute.

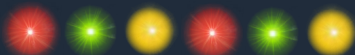


This procedure allows you to test the engine shutdown alone on the ground before take-off without triggering the parachute.

SYSTEM STATUS

TWO LED INDICATORS ON THE REMOTE CONTROL AND PARACHUTE SIDE HELP 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)



FTS ONLY OR PARACHUTE ONLY TRIGGERED



OPERATIONAL SYSTEM (FTS & PARACHUTE)



FTS & PARACHUTE TRIGGERED (FIXED LIGHT)

2 SYSTEM ALERTS



NO RADIO SIGNAL

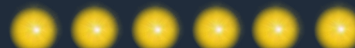


LOW
BATTERY



SYSTEM ERROR (FIXED LIGHT)

3 CHARGING THE BATTERY



BATTERY CHARGING
(STEADY LIGHT)



BATTERY CHARGED
(STEADY LIGHT)

CHECK 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 25).







FIGURE 25

CHECK THE BATTERY LEVEL OF THE PARACHUTE MODULE

A SHORT PRESS ON THE PARACHUTE MODULE'S IGNITION BUTTON INDICATES THE REMAINING CHARGE LEVEL BY THE NUMBER OF TIMES THE INDICATOR FLASHES.

LOAD LEVEL OF THE PARACHUTE MODULE :

1X		25%
2X		50%
3X		75%
4X		100%



PARACHUTE RELEASE

TO ACTIVATE THE PARACHUTE, FOLLOW THESE INSTRUCTIONS:

- 1 NEVER ATTEMPT TO ACTIVATE THE PARACHUTE ON THE GROUND. REFER TO THE "SYSTEM MAINTENANCE" CHAPTER ON PAGE 41, IF NECESSARY.
- 2 THE ZÉPHYR MATRICE 300 PARACHUTE IS DESIGNED TO BE ACTIVATED AT A MINIMUM HEIGHT OF 15M / GROUND IN STANDARD ATMOSPHERIC CONDITIONS.
- 3 FOR A FALL FROM A HEIGHT OF 15 M, THE IMPACT ON THE GROUND IS APPROXIMATELY 45 JOULES WITH THE ZÉPHYR MATRICE 300 PARACHUTE SYSTEM, COMPARED TO 1180 JOULES WITHOUT ANY DEVICE.

THIS DATA MAY VARY DEPENDING ON THE ALTITUDE IN RELATION TO SEA LEVEL, THE RELATIVE WIND AND MANY OTHER EXTERNAL FACTORS. THIS IS WHY WE RECOMMEND A MINIMUM HEIGHT OF 15 M / GROUND TO TRIGGER THE ZÉPHYR MATRICE 300 PARACHUTE SYSTEM AND SUFFICIENTLY LIMIT THE IMPACT OF YOUR DRONE ON THE GROUND.

PARACHUTE RELEASE

IN ORDER TO KEEP THE POSSIBILITY OF TRIGGERING THE PARACHUTE AT YOUR FINGERTIPS AND TO BE AS REACTIVE AS POSSIBLE, A SIMPLE GESTURE ALLOWS YOU TO TRIGGER THE PARACHUTE SYSTEM AND TO CUT THE MOTORS (IF A FTS IS INSTALLED) OF THE MATRICE 300 RTK.

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 OR TURQUOISE RAPIDLY AND TO MAKE SURE THAT THE CONTACT IS MADE CORRECTLY (FIGURE 26).

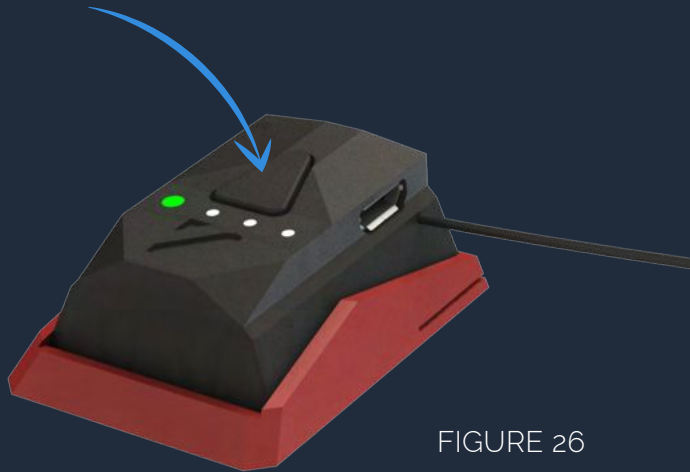


FIGURE 26

ONCE THE LED FLASHES GREEN OR TURQUOISE RAPIDLY, THE SYSTEM HAS BEEN SUCCESSFULLY TRIGGERED.

SYSTEM SHUTDOWN

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

- 1 TURN OFF THE PARACHUTE MODULE BY HOLDING DOWN THE IGNITION BUTTON FOR 5 SECONDS.
- 2 TURN OFF THE REMOTE CONTROL MODULE BY HOLDING DOWN THE POWER BUTTON FOR 5 SECONDS.
- 3 TURN OFF THE DRONE.



FIGURE 27

CHARGING THE BATTERY OF THE REMOTE CONTROL

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

CHARGING THE PARACHUTE BATTERY

TO CHARGE THE PARACHUTE BATTERY, SIMPLY CONNECT A MICRO USB CABLE TO THE MICRO USB SOCKET NEAR THE IGNITION SWITCH AND CONNECT THE CABLE TO A COMPUTER (FIGURE 29). THE STATUS LED WILL CHANGE TO A SOLID YELLOW TO INDICATE CHARGING AND TO A SOLID GREEN ONCE THE BATTERY IS FULLY CHARGED.



LOAD LEVEL OF THE PARACHUTE MODULE :

1X	●	25%
2X	● ●	50%
3X	● ● ●	75%
4X	● ● ● ●	100%

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 30, 31, 32 & 33).

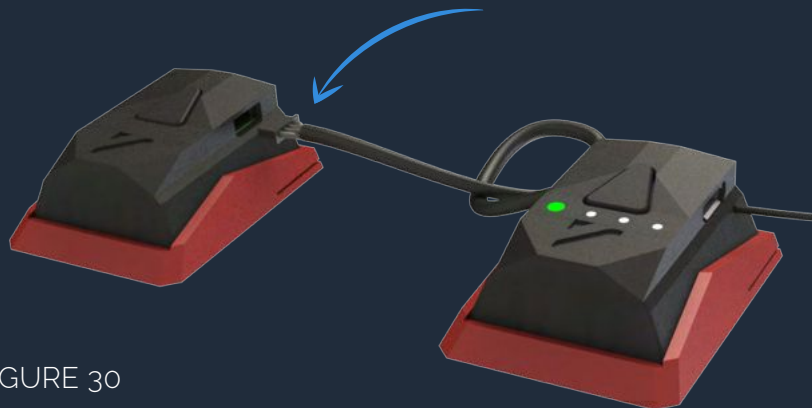


FIGURE 30



FIGURE 31

INSTALLATION OF THE SAFETY BUTTON (OPTIONAL)

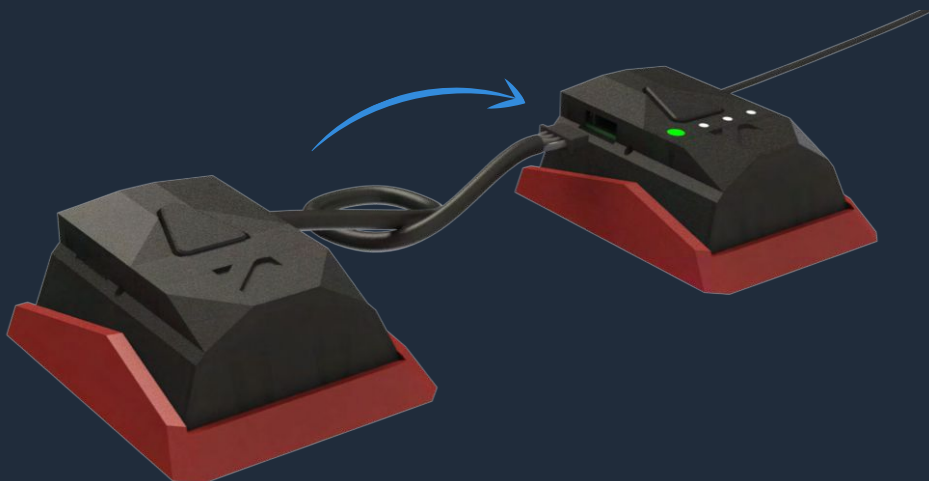


FIGURE 32



FIGURE 33



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

INSTALLATION OF THE SAFETY BUTTON (OPTIONAL)

THE ZÉPHYR REMOTE CONTROL AND THE SAFETY BUTTON CAN BE POSITIONED ON THE MATRICE 300 RTK REMOTE CONTROL AS SHOWN IN FIGURE 34 BELOW.



FIGURE 34

SYSTEM 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 35). ONCE THE LED FLASHES GREEN RAPIDLY, THE MOTORS HAVE BEEN CORRECTLY SWITCHED OFF.



FIGURE 35

ADJUSTMENT OF THE ORIGINAL FLYCASE TO CARRY THE PARACHUTE (OPTIONAL)

IT IS POSSIBLE TO ADAPT THE ORIGINAL CASE TO CARRY THE PARACHUTE AND THE DRONE IN IT. SIMPLY CUT AND REMOVE THE ORIGINAL WALLS AS SHOWN BELOW (FIGURE 36 & 37).



FIGURE 36

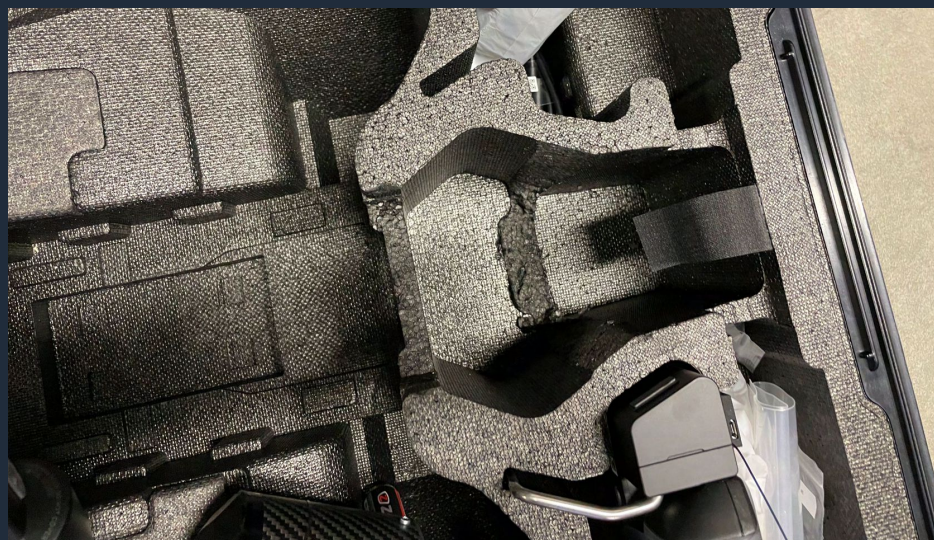


FIGURE 37

ADJUSTMENT OF THE ORIGINAL FLYCASE TO CARRY THE PARACHUTE (OPTIONAL)

TO TRANSPORT THE PARACHUTE IN THE ADAPTED CASE, IT IS NECESSARY TO DISASSEMBLE IT BY LOOSENING THE 4 HAND SCREWS WHICH FIX IT TO THE DRONE, THEN, WHILE LEAVING THE LINES ATTACHED TO THE DRONE, IT IS NECESSARY TO PLACE THE CO₂ CARTRIDGE PARACHUTE DOWNWARDS AS SHOWN BELOW (FIGURES 37, 38 & 40)


FIGURE 38



FIGURE 39



FIGURE 40



OPERATIONAL PROCEDURES & MAINTENANCE

INTRODUCTION

TO KEEP YOUR PARACHUTE FUNCTIONING OPTIMALLY, IT IS NECESSARY TO CARRY OUT REGULAR CHECKING AND MAINTENANCE PROCEDURES.

REPLACING YOUR CO₂ CARTRIDGE, REARMING YOUR PARACHUTE, CHECKING THE SPRING OF YOUR PARACHUTE, FOLDING THE CANVAS, ALL THESE PROCEDURES ARE TO BE CARRIED OUT EITHER IN A PREVENTIVE WAY, OR AFTER A TRIGGERING. SOME PROCEDURES BEING COMPLEX OR DANGEROUS WE ADVISE YOU TO OPT FOR THE MANUFACTURER'S MAINTENANCE SERVICE THAT DRONAVIA OFFERS.

IF YOU WISH TO DO IT YOURSELF, DRONAVIA DISENGAGES ITS RESPONSIBILITY FOR THE SYSTEM, IN ADDITION TO CANCELLING THE WARRANTY IF YOU CHOOSE TO REARM THE SYSTEM YOURSELF.



PREVENTIVE MAINTENANCE

YOU SHOULD CARRY OUT PREVENTIVE MAINTENANCE ON YOUR PARACHUTES EVERY YEAR.

CHANGE THE SPRING EVERY YEAR. A SPRING THAT HAS BEEN LEFT IN COMPRESSION FOR TOO LONG WILL GRADUALLY LOSE ITS ELASTICITY. IT IS THEREFORE RECOMMENDED TO REPLACE IT PREVENTIVELY IN ORDER TO MAINTAIN AN OPTIMAL PERCUSSION SPEED WITH THE CO₂ CARTRIDGE.

UNFOLD, CHECK, VENTILATE AND REFOLD THE CANVAS EVERY YEAR. A TARPAULIN THAT REMAINS FOLDED INSIDE THE EJECTOR BARREL BECOMES MARKED OVER TIME AND MAY TAKE LONGER TO OPEN THAN A NEWLY FOLDED TARPAULIN. IT IS THEREFORE RECOMMENDED TO UNFOLD IT, VISUALLY INSPECT IT AND REFOLD IT PERIODICALLY.



POST-DISARMMENT MAINTENANCE

YOU MUST CARRY OUT POST-TRIGGER MAINTENANCE AFTER EACH ACTIVATION OF YOUR PARACHUTES.

- THE CO₂ CARTRIDGE MUST BE REPLACED AFTER EACH ACTIVATION (SEE CO₂ CARTRIDGE REPLACEMENT).
- CHECK THE TIP OF THE HARDENED STEEL FIRING PIN. THE IMPACT OF THE FIRING PIN ON THE LID OF THE CO₂ CARTRIDGE CAN WEAR OUT THE TIP AND MAKE IT LESS PROMINENT. THE TIP MUST BE REPLACED SYSTEMATICALLY AFTER A MAXIMUM OF 4 FIRINGS.
- VISUALLY INSPECT THE CARBON EJECTION CYLINDER TO ENSURE THAT IT IS NOT DAMAGED AS A RESULT OF PARACHUTE EJECTION (E.G. BARREL CRACKS).
- VISUALLY INSPECT THE CANVAS FOR DAMAGE, HOLES OR CONTAMINATION.
- INSPECT THE LINES FOR DAMAGE.
- MORE GENERALLY, CHECK FOR EXTERNAL DAMAGE.
- VENTILATE THE PARACHUTE FOR ABOUT 12 HOURS.



MAINTENANCE OFFER MANUFACTURER

IN ORDER TO KEEP YOUR SYSTEM IN OPTIMAL WORKING CONDITION, A MANUFACTURER'S MAINTENANCE PACKAGE IS AVAILABLE. THIS MAINTENANCE INCLUDES ALL THE DIFFERENT MAINTENANCE STEPS PRESENTED IN THE SECTIONS "PREVENTIVE MAINTENANCE" AND "POST-TIPPER MAINTENANCE".

THIS PACKAGE ALSO COVERS THE RETURN TRANSPORT COSTS FOR THE PARACHUTE SYSTEM AND ITS REMOTE CONTROL.

BUILDER MAINTENANCE RATE: 130 € EXCL.

FOR ANY MAINTENANCE REQUEST, PLEASE
CONTACT DRONAVIA AT 03 54 40 00 78 OR BY E-MAIL
AT ATELIER@DRONAVIA.COM.

CO2 CARTRIDGE REPLACEMENT

THE CO2 CARTRIDGES ARE SINGLE-USE AND MUST BE CHANGED AFTER USE. THE NEW CARTRIDGE MUST BE INSTALLED IN LINE WITH THE FIRING PIN. WE RECOMMEND THE USE OF ZÉFAL 16G CO2 CARTRIDGES, WHICH HAVE THE FOLLOWING TECHNICAL CHARACTERISTICS:

TYPE	CO2 CARTRIDGE
VOLUME	16 CC
TOTAL WEIGHT	60G (+/- 2G)
CAPACITY	16G (+/- 1G)
OPERATOR	WELDED
CONTAINER	UNWELDED STEEL
RECYCLING	100% RECYCLABLE STEEL



CO2 CARTRIDGE REPLACEMENT

- MAKE SURE TO KEEP THE CO2 CARTRIDGE AT A TEMPERATURE BELOW 45°C
- DO NOT LEAVE FULL CARTRIDGES IN THE CAR WHEN THE TEMPERATURE IS TOO HIGH.
- IN CASE OF PROLONGED INACTIVITY, STORE YOUR CO2 CARTRIDGES AT NORMAL TEMPERATURES OF 10 TO 20°C. CO2 CARTRIDGES CAN BURST AT TEMPERATURES ABOVE 70°C.
- HIGH TEMPERATURES CAN INCREASE THE PRESSURE IN THE CARTRIDGE AND THIS CAN PREVENT THE DEVICE FROM WORKING, POSSIBLY DAMAGING IT.
- AVOID HITTING THE CARTRIDGE.
- IF CORROSION SPOTS APPEAR ON THE SURFACE OF THE CARTRIDGES, CHANGE THEM IMMEDIATELY.
- MAKE SURE THE USED CARTRIDGE IS COMPLETELY EMPTY BEFORE REMOVING IT.
- DO NOT CUT OR PUNCTURE THE CARTRIDGE.
- INSTALL A GAS CARTRIDGE OF THE SAME BRAND, SIZE AND CONTENT AS THE ONE SOLD WITH THE DEVICE.
- ONCE THE GAS CARTRIDGE IS INSTALLED, DO NOT ATTEMPT TO UNSCREW OR REMOVE IT.
- DO NOT THROW THE CARTRIDGE INTO A FIRE.
- KEEP OUT OF REACH OF CHILDREN.
- IN ORDER TO AVOID INSTALLING AN UNPERFORATED CARTRIDGE THAT HAS BEEN EMPTIED OF GAS BECAUSE IT HAS FAILED (AN EXTREMELY RARE OCCURRENCE), WE RECOMMEND WEIGHING THE NEW AND USED CARTRIDGES TO CHECK THAT THE WEIGHTS DIFFER BY ABOUT 16G.

PARACHUTE RESET

AFTER A TRIP, THE SYSTEM CAN BE REUSED IF IT IS RESET ACCORDING TO THE FOLLOWING PROCEDURE, BUT IF THIS IS NOT DONE CORRECTLY, IT MAY NOT WORK PROPERLY. THEREFORE, DRONAVIA ADVISES YOU TO RETURN THE SYSTEM FOR A FACTORY RESET AND DISCLAIMS ITS RESPONSIBILITY FOR THE SYSTEM, IN ADDITION TO VOIDING THE WARRANTY IF YOU CHOOSE TO RESET THE SYSTEM YOURSELF.



The parachute resetting operation is an operation that presents potential risks of injury at certain stages. We recommend that you be particularly vigilant and attentive to the following steps.

PARACHUTE RESET

1

TO RESET THE SYSTEM, PLEASE FOLLOW THESE STEPS IN ORDER:
TURN OFF THE PARACHUTE MODULE AND THEN THE REMOTE-
CONTROL MODULE.

2

REMOVE THE CO₂ CARTRIDGE (FIGURE 41). INSERT THE RESET TOOL
INTO THE HOLE LEFT BY THE CO₂ CARTRIDGE (FIGURE 42).

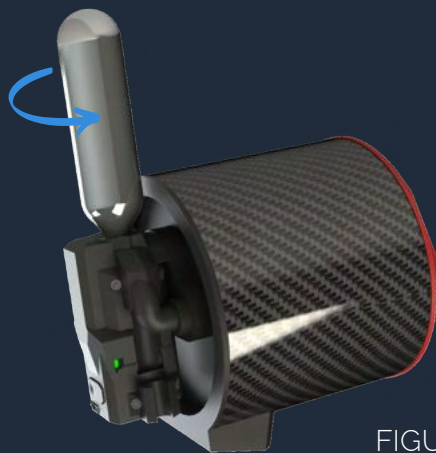


FIGURE 41

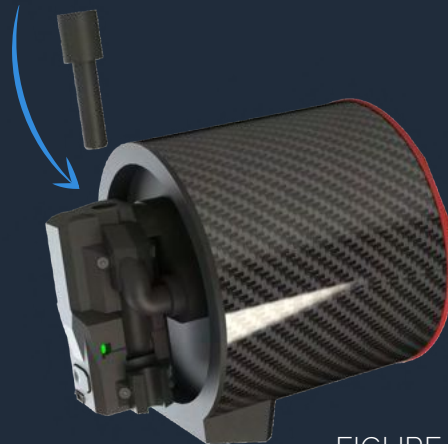


FIGURE 42

PARACHUTE RESET

- 3 SCREW THE TOOL IN AS FAR AS IT WILL GO (FIGURE 43). A FORCE MUST BE APPLIED AGAINST THIS OPERATION.

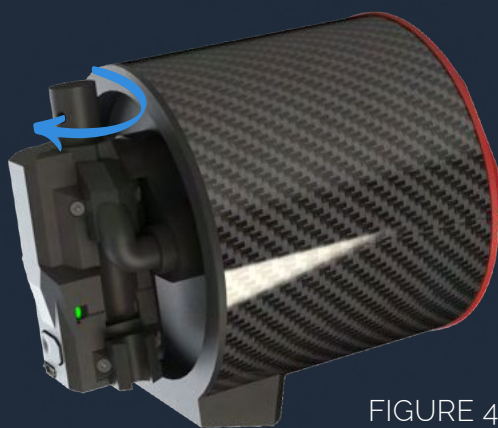


FIGURE 43

- 4 SWITCH ON THE REMOTE CONTROL AND THE ELECTRONIC MODULE. WAIT FOR THE INITIALIZATION OF THE LATTER. THE FORCE DESCRIBED ABOVE SHOULD DISAPPEAR AND THE LED ON THE MODULE SHOULD BLINK GREEN (IF THIS IS NOT THE CASE, REPEAT STEPS 4 AND 5 UNTIL THE FORCE DISAPPEARS AND THE LED BLINKS GREEN)
- 5 TURN OFF THE PARACHUTE MODULE.
- 6 REMOVE THE TOOL, INSTALL A NEW CO₂ CARTRIDGE.
- 7 FOLD THE PARACHUTE CANVAS INTO THE CARBON TUBE (SEE SECTION ON FOLDING THE PARACHUTE CANVAS).



SPRING CHECK

TO CHECK THE SYSTEM'S SPRING OR PERCUSSION TIP, FOLLOW THESE STEPS IN ORDER:

- 1 TURN ON THE REMOTE CONTROL MODULE AND THEN THE PARACHUTE MODULE.
- 2 REMOVE THE CO₂ CARTRIDGE.
- 3 INSERT THE ARMING TOOL AS FAR AS IT WILL GO, HOLDING IT FIRMLY IN PLACE.
- 4 TRIGGER THE PARACHUTE.
- 5 GENTLY PULL OUT THE TOOL AND REMOVE THE FIRING PIN AND SPRING FOR INSPECTION.
- 6 FOLLOW THE RESET STEPS TO RESTORE THE SYSTEM TO WORKING ORDER.

REMOTE CONTROL RESET

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 44).



FIGURE 44

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

PARACHUTE MODULE RESET

RESET OF REMOTE CONTROL AND PARACHUTE MODULE :

TO RESET THE PARACHUTE MODULE, THE RESET BUTTON IS LOCATED ON THE BACK OF THE PARACHUTE MODULE (FIGURE 45). SLIP A PAPER CLIP OR OTHER THIN OBJECT INTO THE BUTTON AND A SHORT PRESS WILL RESET THE PARACHUTE.



FIGURE 45

IF YOUR PROBLEM PERSISTS, CONTACT YOUR DEALER.



FOLDING OF THE CANVAS

FOLDING THE CANVAS :

FOLDING THE CANVAS OF THE ZÉPHYR MATRICE 300 REQUIRES METHODOLOGY AND RIGOUR AS IT IS ESSENTIAL TO FOLD THE CANVAS ACCORDING TO PRECISE CRITERIA AND A DEFINED CHRONOLOGY. IF YOU DO NOT FEEL CAPABLE OF DOING THIS, WE STRONGLY ADVISE YOU TO CALL ON COMPETENT OR SPECIALISED PEOPLE, OR TO CONTACT DRONAVIA FOR A WORKSHOP RETURN.

BEFORE FOLDING, TAKE THE OPPORTUNITY TO :

VISUALLY INSPECT THE CANVAS FOR DAMAGE, HOLES OR CONTAMINATION.

INSPECT THE LINES FOR DAMAGE.

VENTILATE THE CANVAS FOR A DOZEN HOURS.



MAINTENANCE & GUARANTEES

PARACHUTE STORAGE

STORE THE ZÉPHYR MATRICE 300 RESCUE PARACHUTE IN A DRY, COOL, CLEAN AND UV PROTECTED PLACE.

SPECIFIC MAINTENANCE

IN CASE OF CONTACT WITH MOISTURE, YOU MUST DRY THE CANVAS IMMEDIATELY TO AVOID MOULD. CONTACT WITH PETROL OR OTHER SOLVENTS AND CHEMICALS CAN CONSIDERABLY REDUCE THE STRENGTH OF THE CANVAS. THE PARACHUTE AND LINES SHOULD BE CLEANED ONLY WITH WATER WITHOUT SOAP AND THEN DRIED.

GUARANTEE

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

NOTICE OF LIABILITY

FLYING A DRONE, WHETHER MANUAL OR AUTOMATIC, IS AN ACTIVITY THAT REQUIRES ATTENTION, SPECIFIC KNOWLEDGE AND GOOD JUDGMENT. BE CAUTIOUS, TRAIN IN APPROPRIATE STRUCTURES, TAKE OUT INSURANCE AND COMPLY WITH THE REQUIREMENTS DEFINED BY THE DGAC ORDERS OF 11 APRIL 2012 AND 17 DECEMBER 2015.



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



www.dronavia.com +33 (0) 354 400 078