




MADE IN FRANCE 



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# USER'S MANUAL & INSTRUCTIONS

MOC M2 PARACHUTE RECOVERY SYSTEM & MOC2511 FLIGHT  
TERMINATION SYSTEM FOR **dji** MATRICE 350 

PRS-FTS KRONOS AD MATRICE 350

# SUMMARY

Kronos M350 MOC M2/MOC2511

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# SUMMARY

Kronos M350 MOC M2 / MOC2511

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# INTRODUCTION

by our CEO



Ludovic Pelletay, Dronavia's CEO.



At Dronavia, we've been developing a wide, innovative range of accessories to secure your professional drones since 2015. Based in France, we think up all our products in our design office, before bringing them to life in our workshop, with unique technological know-how.

The fruit of more than 8 years of research and innovation, our new range of Kronos parachutes and FTS has been developed and tested in accordance with the standards imposed by the EASA and the DGAC, to comply with MOC2511 and the MOC M2.

Thanks to its standardised safety accessories, Dronavia ensures that remote pilots have the best risk management and safety measures at their disposal during their flying missions. You'll be flying your DJI Matrice 350/300 in complete safety.

Thank you for your confidence & enjoy your flight!

# GENERAL

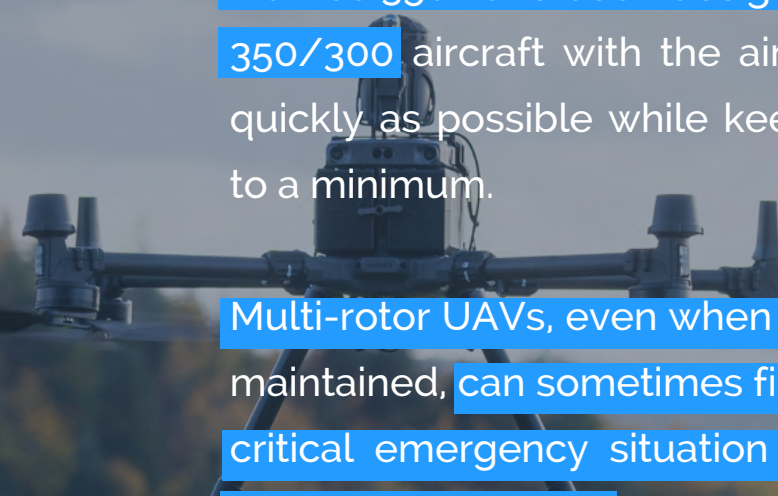
## presentation

Dear customer,

Congratulations on the purchase of your new accessories MOC M2 & MOC 2511, including a CO2-triggered rescue parachute & a stand-alone external FTS system for your DJI Matrice 350 drone.

You've chosen what we're sure are the best performing systems of their type. Extensive research and testing have gone into making them as safe and effective as possible.

Based in Remiremont, France, DRONAVIA is at your service to advise you on the purchase of your accessories MOC M2 & MOC 2511 for DJI Matrice 350 and to answer any questions of a technical or commercial nature.



The MOC M2 Kronos parachute for Matrice 350 and the MOC2511 Kronos external FTS for Matrice 350/300 aircraft have been designed for DJI Matrice 350/300 aircraft with the aim of deploying as quickly as possible while keeping the sink rate to a minimum.

Multi-rotor UAVs, even when properly used and maintained, can sometimes find themselves in a critical emergency situation where immediate rescue is required, due to severe weather conditions, radio transmission failure, technical failure of the propulsion system, loss of GPS signal, and so on.

In such situations, the FTS system coupled with the quick-release parachute system can make the difference between a simple scare and a more serious accident. The MOC M2 Kronos parachute for Matrice 350/300 and the MOC2511 Kronos external FTS for Matrice 350/300 can be activated & deployed in less than a second.



# GENERAL

## presentation



TO BE READ CAREFULLY

These emergency devices do not protect the integrity of the equipment or prevent damage to property or persons; they are a safety feature that complements other safety features. Neither DRONAVIA nor its distributors may be held responsible for any malfunction or operation deemed insufficient or even ineffective.

# CERTIFICATION

by EASA

The Kronos M350 MOC M2 parachute system has been developed to meet the requirements of the Means of Compliance with Light-UAS.2512 published by the EASA:

The Light-UAS.2512 standard offers several options for complying with the SORA's M2 mitigation measures. M2 mitigation measures are designed to reduce the effect of ground impact once control of the operation is lost. This is done by reducing the effect of the UA impact dynamics (i.e. area, energy, impulse, transfer energy, etc). "



The Kronos M350 MOC 2511 FTS has been developed to meet the requirements of the Means of Compliance with Light-UAS.2511 published by the EASA:

"A Flight Termination System (FTS) is a system which, when activated, terminates the flight. By its very nature, it is an emergency measure and not a precautionary one. Its purpose is to ensure that an out-of-control UAS does not enter adjacent areas with an indefinite trajectory but, on the contrary and preferably, that it stops, and that its crash/debris zones are kept strictly within the ground risk buffer zone. "





# WARNINGS

## & precautions for use

TO BE READ CAREFULLY

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

Dronavia accepts no responsibility for damage or injury caused directly or indirectly by the use of CO<sub>2</sub> cartridges or by the use of CO<sub>2</sub> cartridges that do not comply with safety requirements and standards.

Before handling the Kronos systems for Matrice 350/300 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 comply with all the important instructions set out below.

# WARNINGS

## & precautions for use

TO BE READ CAREFULLY

The Kronos system for Matrice 350 consists of 2 safety devices which, under certain conditions, prevent the drone fitted with them from leaving its regulatory flight envelope by cutting its engines, and prevent the drone fitted with them from free-falling.

Activation of the FTS and/or parachute inevitably involves the drone falling.

This equipment does not prevent technical problems occurring on the drone. Any flight with a drone implies the existence of a danger for the equipment and people in the vicinity, regardless of the safety equipment used. Using the Kronos FTS and parachute for the DJI Matrice 350/300 should in no way increase your risk.



# 15 INSTRUCTIONS

to follow

- 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 Do not under any circumstances dismantle the various parts of the device, except when resetting it in accordance with the instructions 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, strong shocks, shock hazards, contact with chemicals or acids, or long-term storage in a high-humidity or dusty environment. Incorrect use could cause the CO<sub>2</sub> cartridge to burst, endangering your life. The maximum operating temperature is 40°C and the minimum operating temperature is -5°C.
- 6 The condition of the Kronos parachute and FTS system for Matrice 350/300 should be checked before each flight. Do not use the device if it is damaged. If necessary, contact your dealer.
- 7 The Kronos parachute system and FTS for Matrice 350/300 cannot prevent the drone from malfunctioning.
- 8 Any flight with a drone implies the existence of a risk for equipment and people in the vicinity, with or without the Kronos safety system for Matrice 350/300.

TO BE READ CAREFULLY



# 15 INSTRUCTIONS

to follow

9

The use of a Kronos parachute and FTS system for Matrice 350/300 should in no way increase your risk.

10

The Kronos parachute system for Matrice 350/300 attempts to prevent a malfunctioning UAV from free-falling. However, there are fall situations in which the effectiveness of the Kronos parachute system for Matrice 350/300 may be limited or impeded.

11

The Kronos parachute and FTS system for Matrice 350/300 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 ejection system work only once. You can recharge the system yourself by following the instructions in this manual. It is your responsibility to ensure that the system is covered by warranty.

13

When reloading, 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 the event of accidental firing during this stage or mishandling, the firing pin could be ejected and cause serious injury. Safety glasses must be worn.

14

After the device has been triggered, it is advisable to inspect each component carefully to ensure its integrity. If in doubt, contact your dealer.

15

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

TO BE READ CAREFULLY



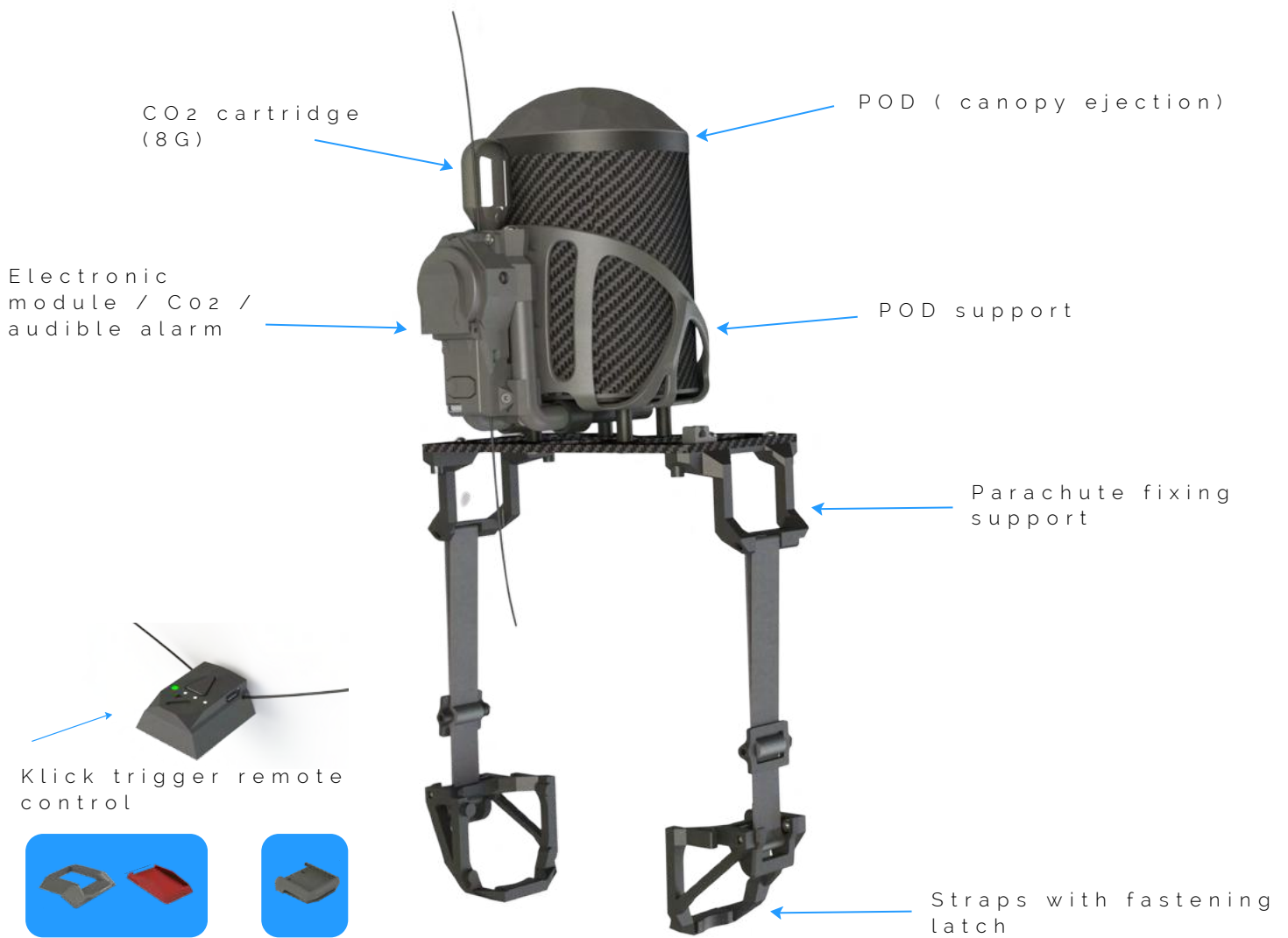


# KRONOS SYSTEMS

PARACHUTE RECOVERY SYSTEM FOR **dji** MATRICE 350 

# COMPONENTS

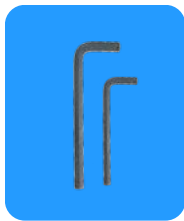
presentation



## ADDITIONAL ACCESSORIES SUPPLIED



micro-USB cable



Allen key 4mm



Reset tool



Threaded reset tool



Parachute attachments x2



USB kit



# KRONOS M350

Image of the system

Kronos M350 parachute  
MOC M2



DJI Matrice 350 drone



# KRONOS M350

Image of the system



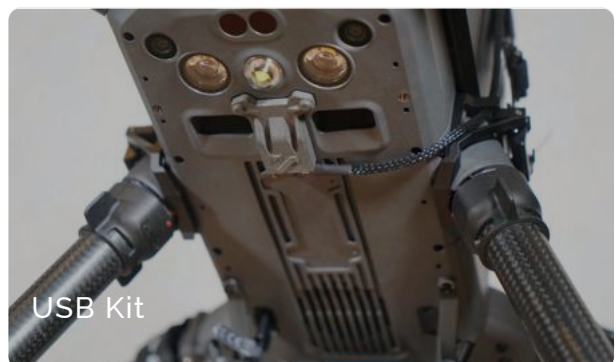
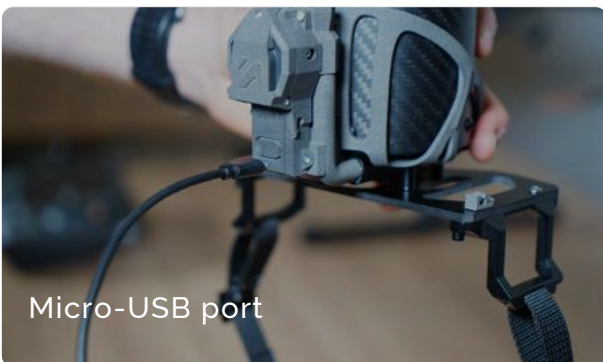
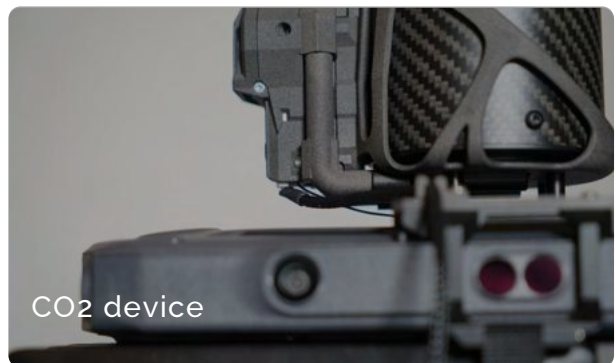
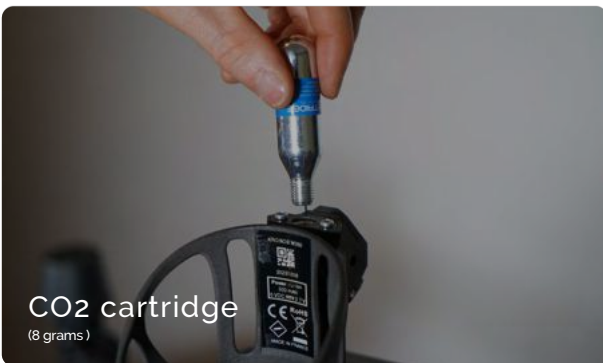
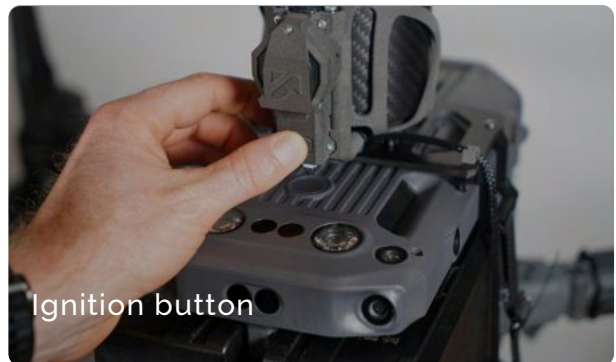
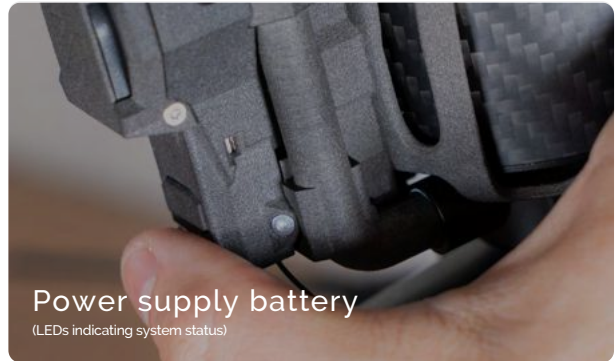
Klick trigger remote control

DJI Remote Control for Matrice 350



# ELEMENTS

of the parachute system





# THE STATES

system

## STARTING



System  
initialisation

## CONNECTION



FTS only  
connected



FTS & parachute  
connected

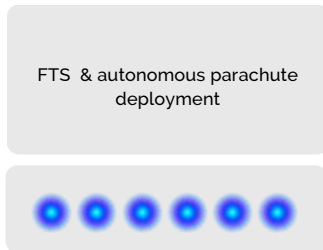


FTS & parachute connected  
with autonomous  
deployment

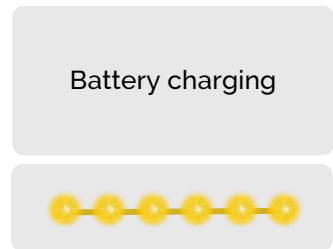
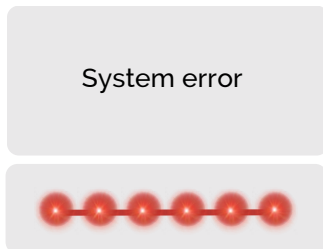
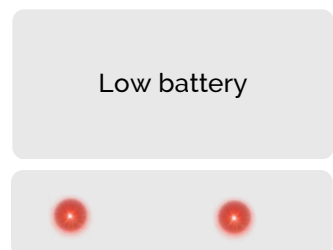
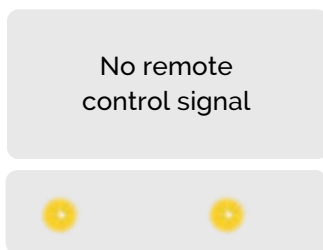
# THE STATES

system

## TRIGGERING



## SYSTEM & BATTERY ALERT





# KRONOS M350

The system in figure



# KRONOS M350

## Technical specifications

TOTAL WEIGHT

450 GRAMMES  
(WITH CARTRIDGE)

EJECTION DEVICE

CO2 CARTRIDGE  
4 GRAMS

MINIMUM HEIGHT  
EFFICIENCY

FROM  
39 METERS

COMMUNICATION  
WIRELESS RADIO

SRD860 WITH  
ENCRYPTED KEY  
(86g MHZ / 100 MW)

RANGE OF THE  
REMOTE CONTROL

3000 METERS

PARACHUTE  
AUTONOMY

5 HOURS

REMOTE CONTROL  
AUTONOMY

30 HOURS

ENERGY GROUND  
IMPACT

< 77 JOULES

OPERATING  
TEMPERATURE

-5°C À 40°C





# KRONOS M350

## Operational limits

MAXIMUM WIND SPEED  
AT GROUND LEVEL

9,34 m/s

MINIMUM FLIGHT  
ALTITUDE (AGL)

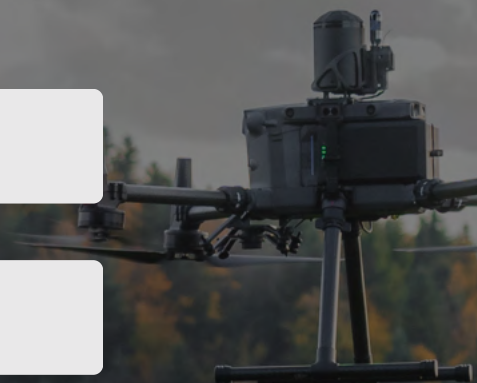
39 m

OPERATING  
TEMPERATURES

TEMPERATURE MINIMALE : -5 °C  
TEMPERATURE MAXIMALE : 40 °C

USABLE IN  
RAINY WEATHER

No



# KRONOS M350

Dimensions and weights

## DRONE



81 x 67 x 43 cm

6 470 to 9 200 g

## PARACHUTE



9 X 12 X 20 cm

450 g

## PARACHUTE + DRONE



81 x 67 x 63 cm

6 920 to 9 200 g



# KRONOS M350

Minimum size of buffer zone for ground-related risks (in metres)



OPERATING VOLUME VERTICAL LIMIT	40	68	GROUND RISK BUFFER ZONE
	50	90	
	60	113	
	70	135	
	80	157	
	90	180	
	100	202	
	110	225	
	120	247	

# INSTALLATION

of the parachute system

The Kronos M350 parachute system can be installed in just a few minutes. To install the parachute, please follow the instructions below in order:

## Instructions

- 1 Unscrew the protective cover from your new POD. Install the POD on its central support.



## Advice

Be sure to keep the POD's protective cover so that you can use it when returning the POD for annual maintenance.



# INSTALLATION

of the parachute system

2

Remove the two arms from the DJI Matrice 350/300 drone. Insert the two parachute attachments supplied in the kit. Then reassemble the two drone arms with the parachute attachments.



# INSTALLATION

of the parachute system

3

Place the fixing support on the top of the DJI Matrice 350/300 drone, as shown below. Let the mounting straps hang down on either side of the drone. Check that the port on the drone is accessible.



4

Attach the two attachment straps to the parachute attachments previously installed on the arms of the DJI Matrice 350/300 drone. It may be necessary to adjust the length of the attachment straps.

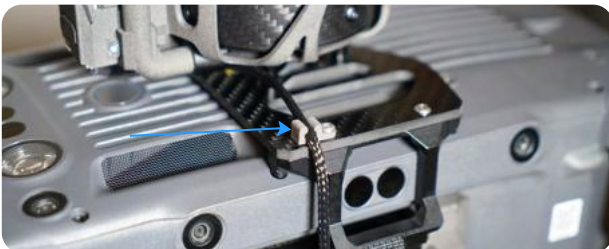


# INSTALLATION


of the parachute system

5

Fit the USB kit to the socket on the underside of the drone. Plug the cable into the socket on the drone. Then pass the cable through the 2 antenna guides on the parachute support and on the parachute attachment. Then plug the cable into the parachute.



6

Your Kronos Matrice 350/300 parachute is now operational. 



# ACTIVATION

of the parachute system

To activate the parachute, follow the instructions below in order:

## Instructions

- 1 Switch on your DJI Matrice 350/300 drone. If you have connected the parachute to the drone using the cord supplied, the parachute and FTS will switch on automatically.



Installation of the FTS on the DJI Matrice 350 drone is described on page 49.

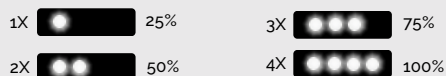
- 2 If you have not connected the parachute to the drone using the cord supplied, switch on the parachute system by pressing the ignition button for 2 seconds.



## The different LED states



System initialisation



Battery level indicator

# ACTIVATION

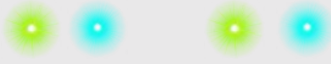
of the parachute system

3

Switch on your Klick remote control. When the parachute system is properly connected, a green & turquoise LED will flash.




## The different LED states



Parachute and FTS connected

4

Your Kronos M350 parachute is active. 



 YOUR PARACHUTE IS  
ACTIVE AND  
OPERATIONAL!



# TRIGGERING

of the parachute system

To activate the Kronos M350 parachute system (with autonomous deployment or manually), observe the following safety instructions:

## Warning

1 Never attempt to activate the parachute on the ground.

2 The Kronos M350 parachute is designed to be activated at a minimum height of 39m from the ground in standard atmospheric conditions.

3 For a fall from a height of 39 m, the impact on the ground is less than 4 joules with the Kronos M350 parachute system, compared with 2747 joules without any device.

This data may vary according to altitude above sea level, relative wind and many other external factors. That's why we recommend a minimum height of 39 m above ground level to trigger the Kronos M350 parachute system and sufficiently limit the impact of your drone on the ground.

# AUTONOMOUS

system deployment

1

Your parachute is now operational and active, but only manual deployment of the parachute is active.

2

Before taking off, you can activate the parachute's autonomous deployment function. To do this, double-click on the parachute start button or on the start button of the Klick remote control. The parachute LED will turn a steady purple.



## Warning

Do not touch the drone or the parachute during the calibration phase, as this may trigger the parachute.

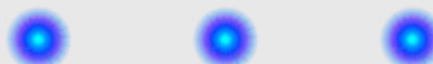
3

If the LED is still flashing yellow, calibration has failed (make sure the drone is still and flat). In this case, repeat step 2. If the LED flashes blue and a beep is heard, the autonomous deployment of the parachute has been activated.

## The different LED states




Calibration before activating autonomous deployment



Autonomous deployment activated

# AUTONOMOUS

system deployment

4 Autonomous deployment of the parachute and active. 

5 When autonomous deployment is activated, no manual action is required to trigger the parachute. Our autonomous deployment technology implemented in our parachutes enables the parachute to be triggered automatically when the drone finds itself in a critical loss-of-control situation.

## The different LED states



Autonomous deployment module activated

## Warning

Do not manipulate the drone and the parachute as this could trigger the parachute.

## Warning

As soon as you land your DJI Matrice 350 drone, remember to deactivate the autonomous deployment by double-clicking on the parachute start button. Otherwise the parachute is always active and could be triggered unexpectedly during transport.

## Advice

As soon as your Klick Pro remote release is connected to the parachute system, the manual deployment of the parachute is active when the autonomous deployment is also activated.



# AUTONOMOUS

system deployment disable

To disable the autonomous deployment of the parachute, follow the instructions below in order:

## Instructions

1

To disable the parachute's autonomous deployment function, double-click the ignition button on the parachute or on the Klick Pro activation remote control. The LED will flash purple twice to confirm deactivation.



2

The LED flashes yellow to indicate that the parachute is powered up, or turquoise to indicate that it is connected to the Klick Pro trigger remote control.

## The different LED states



Disabling autonomous deployment



Parachute on, waiting to be activated



Parachute connected to the trigger remote control

# MANUAL

system deployment

To trigger the parachute manually, observe the following safety instructions:

## Instructions

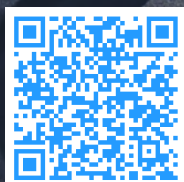
1

Find out how to activate your Kronos M350 parachute system manually using our Klick Pro trigger remote control instruction and user manual.

# KLICK

manual tripping of the FTS

Consult our Klick user manual





# STOP

## & resetting the parachute system

To stop, switch off and reset the parachute, follow the instructions below in order:

### Instructions

1

Switch off your DJI Matrice 350/300 drone. If you have connected the parachute to the drone using the cord supplied, the parachute and the FTS will switch off automatically.



2

If you have not connected the parachute to the drone using the cord supplied, to switch off the parachute immediately, hold down the ignition button for 5 seconds. Then switch off the DJI Matrice 350/300 drone.



# STOP

## & resetting the parachute system

- 3 Switch off your Klick trigger remote control.



### Advice

If you forget to switch off the parachute system manually, it will switch off automatically after 10 minutes. The FTS system automatically switches itself off when the DJI Matrice 350/300 is switched off.

# DISASSEMBLY

the complete parachute system

To disassemble the entire parachute system, follow the instructions below in order:

## Instructions

1

Disconnect the cable connecting the parachute to the drone. Then disconnect the USB kit.





# DISASSEMBLY

the complete parachute system

2

Untie the parachute securing straps.



3

Disengage the drone's parachute system.



# DISASSEMBLY

the complete parachute system

4 Dismantle the two arms of the DJI Matrice 350/300 drone. Remove the two parachute attachments supplied in the kit. Then reassemble the two arms without the attachments.



# CHECKING

of the parachute system battery

To check the battery status of the parachute system, follow the instructions below in order:



## Instructions



1

Press the parachute ignition button quickly. The number of flashes indicates the remaining charge level.



## The different LED states

1X  25%      3X  75%

2X  50%      4X  100%

Battery level indicator



# CHARGING

of the parachute system battery

To charge the parachute battery, follow the instructions below in order:

## Instructions

1

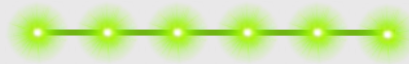
To recharge the parachute battery, simply connect the supplied micro-USB cable to the parachute's micro-USB socket located near the ignition button. Then plug the USB socket into a computer.



## The different LED states



Battery charging



Battery charged

# RESETTING

of the parachute system

In the event of a malfunction or any other bug, follow the instructions below in order:

## Instructions

1

To reset the parachute system, there is a small hole in the back of the parachute. Slide a paper clip or other thin object through the hole, and a short press will reset the entire parachute system.



## Warning

If the malfunction persists, contact Dronavia customer service or your reseller.

# MAINTENANCE

## parachute annual

TO BE READ CAREFULLY

Like all rescue systems (rescue parachutes for paragliders or parachutists, avalanche airbags, etc.) Dronavia parachutes must undergo preventive maintenance to be kept in optimum working order. The only preventive maintenance operation is to replace the POD. It's a quick and easy operation, which means that pilots never have to leave their drone standing idle.

A use-by date is set for each POD. Dronavia disclaims all liability and cancels the warranty if your POD has exceeded this use-by date.



# PROCEDURES

## maintenance requirements

To be kept in optimum working order, each parachute system must undergo preventive or post-trigger maintenance. Here is a summary table of the mandatory maintenance operations:

FREQUENCY	OPERATION	CAN BE MADE BY
Every year	Replacement of the POD <b>or</b> Repackaging of the canopy	Final user <b>or</b> DRONAVIA or any certified partner
Every 5 years	Mandatory manufacturer global maintenance	Manufacturer
After every deployment	Rearming of the parachute system	Final user <b>or</b> DRONAVIA or any certified partner
After every deployment	Inspection of the CO <sub>2</sub> system	Final user <b>or</b> DRONAVIA or any certified partner
After every deployment	CO <sub>2</sub> cartridge replacement	Final user <b>or</b> DRONAVIA or any certified partner
After every deployment	Replacement of the POD <b>or</b> Repackaging of the canopy	Final user <b>or</b> DRONAVIA or any certified partner
After 30 deployments	Mandatory manufacturer global maintenance	Dronavia

### Warning

If you wish to carry out maintenance yourself, Dronavia disengages its responsibility for the system, in addition to cancelling the warranty if you choose to reset the system yourself.

# LISTING

parachute activation failures

If the Kronos M350 parachute system activation fails during flight, record the following:

UAS Concerned with the failed activation	Accumulated Flight Hours at activation failure	Distance between Control Unit and UAS at activation attempt	Location of the operation	Presence of high power emitter in the operational volume

# LISTING

## voluntary and intensive parachute activation

If the Kronos M350 parachute system is activated during flight, record the following:

UAS Concerned with the failed activation	Accumulated Flight Hours at activation failure	Distance between Control Unit and UAS at activation attempt	Location of the operation	Was the activation commanded or un-commanded	Presence of high power emitter in the operational volume

### Warning

If the probability of failure observed in service is greater than  $10^{-2}/FH$  (taking into account the statistical uncertainty), the operator must inform the competent authority.



# USE-BY DATE

for the POD

Each POD has a use-by date to ensure that it remains in optimum working order:

The optimum life of a POD is 1 year. The use-by date is shown on the label on the back of the POD.



## Warnings

If a POD is used after its use-by date, Dronavia accepts no liability for partial or slower activation of the parachute system.

# PROCEDURE

## return of the POD for maintenance

There are several options for exchanging your POD that is past (or close to) its use-by date:

Buy **299€**

1

Buy a POD in advance from your reseller. You'll be able to continue flying during the annual maintenance of your first POD.

Exchange **99€**

2

Return your POD to a reseller and receive a new one at a special price.

### Warning

Please plan in advance how long it will take to contact your reseller (order, delivery time, etc.) so as not to exceed the use-by date and jeopardise your flight missions.

# DISASSEMBLY

of the POD system for maintenance

To remove the POD from the parachute system, follow the instructions below in order:

## Instructions

- 1 Unlock the POD by unscrewing it from its central support. Then remove the POD.





# REARMING

the Kronos parachute system

TO BE READ CAREFULLY

Following a parachute activation, Kronos parachute systems have been thought out and designed to rearm quickly and allow telepilots to continue their missions following an activation.

Changing your POD, replacing your CO<sub>2</sub> cartridge, checking the firing pin tip - all these procedures need to be carried out following an activation. As some procedures are dangerous, we advise you to read this section carefully.

A use-by date is set for each POD. Dronavia disclaims all liability and voids the warranty if your POD has exceeded this use-by date.

# REARMING

of the parachute system

To reset your parachute system, follow the instructions below in order:

## Instructions

1

Switch off your DJI Matrice 350/300 drone. If you have connected the parachute to the drone using the cord supplied, the parachute and the FTS will switch off automatically.



2

If you have not connected the parachute to the drone using the cord supplied, switch off the parachute system by holding down the ignition button for 5 seconds. Then switch off the DJI Matrice 350/300 drone.



# REARMING

of the parachute system

3

Disconnect the supplied cable linking the parachute to the drone. Then disconnect the USB kit.



4

Unscrew the triggered POD from its central support. Then remove the POD.



## Warning

When unscrewing the used POD, be careful of the sharp edges of the carbon tube, which can cause cuts and/or carbon spikes on your hands.

# INSPECTION

of the CO<sub>2</sub> system

- 1 Remove the CO<sub>2</sub> cartridge by unscrewing it.



- 2 Untie the parachute securing straps.





# INSPECTION

of the CO<sub>2</sub> system

3 Disengage the drone's parachute system.



4 Turn the parachute system over to remove the firing pin and spring. Check that the firing pin is in good condition.



## Warning

Check that the tip of the firing pin is not chipped. If the tip is chipped, the firing pin must be replaced. If in doubt, contact your reseller.

# REPLACEMENT

of the CO2 cartridge

## Warning

Before replacing the CO2 cartridge, please read pages 60, 61 & 62.

- 1 Reinsert the spring, then reinsert the firing pin.



- 2 Then insert the reset tool into the hole left by the CO2 cartridge.



- 3 Push the tool in as far as it will go and hold it during step 4. There must be some force against this operation.



# REARMING

of the parachute system

4

Switch on the trigger remote control and the parachute system. Wait for the system to initialise. The force described above should disappear and the LED on the module should flash green and turquoise (if this is not the case, repeat steps 10 and 11 until the force disappears and the LED flashes green and turquoise).



5

Remove the tool, then install a new CO2 cartridge.



# REPLACEMENT

of the POD system

1

Unscrew the triggered POD from its central support. Then remove the POD.



2

Unscrew the protective cover from your new POD. Insert the new POD into its central support, then screw it down until the POD locks into place.







 YOUR PARACHUTE IS  
REARMED!

# PROCEDURE

for returning a used POD

There are several options for returning your used POD:

Buy 299€

- 1 Buy a POD from your dealer. Then carry out maintenance on your used POD.

Exchange 99€

- 2 Return your used POD to a dealer and receive a new POD at a special price.

## Warning

Please plan in advance how long it will take to contact your dealer (order, delivery time, etc.) so as not to exceed the use-by date and jeopardise your flight missions.

# REPLACEMENT

the parachute's CO2 cartridge

TYPE	CARTRIDGE OF CO2
VOLUME	8 CC
TOTAL WEIGHT	30G (+/- 2G)
CAPACITY	8G (+/- 1G)
LID	WELDED
CONTAINER	UNWELDED STEEL
RECYCLING	100% RECYCLABLE
TRANSPORTABILITY	PLANE / TRAIN / BOAT

## Warning

Only cartridges officially sold by Dronavia may be used, as they are subject to specific checks. Dronavia disclaims all responsibility and voids the warranty if any other type of CO2 cartridge is used.



# 12 INSTRUCTIONS

to follow

- 1 Keep the CO<sub>2</sub> cartridge at a temperature below 45°C.
- 2 Do not leave full cartridges in the car when the temperature is too high.
- 3 In the event of prolonged inactivity, store your CO<sub>2</sub> cartridges at normal temperatures between 10 and 20°C. CO<sub>2</sub> cartridges may burst at temperatures above 70°C.
- 4 High temperatures can increase the pressure in the cartridge and this can prevent the device from working, possibly damaging it.
- 5 Avoid hitting the cartridge.
- 6 If corrosion spots appear on the surface of the cartridges, change them immediately.
- 7 Make sure the used cartridge is completely empty before removing it.
- 8 Do not cut or puncture the cartridge.

TO BE READ CAREFULLY



# 12 INSTRUCTIONS

to follow


- 9 Only use certified CO2 cartridges sold by Dronavia.
- 10 Once the gas cartridge has been installed, do not attempt to unscrew or remove it.
- 11 Do not dispose of the cartridge in a fire.
- 12 Keep out of reach of children.

TO BE READ CAREFULLY





# KRONOS SYSTEMS

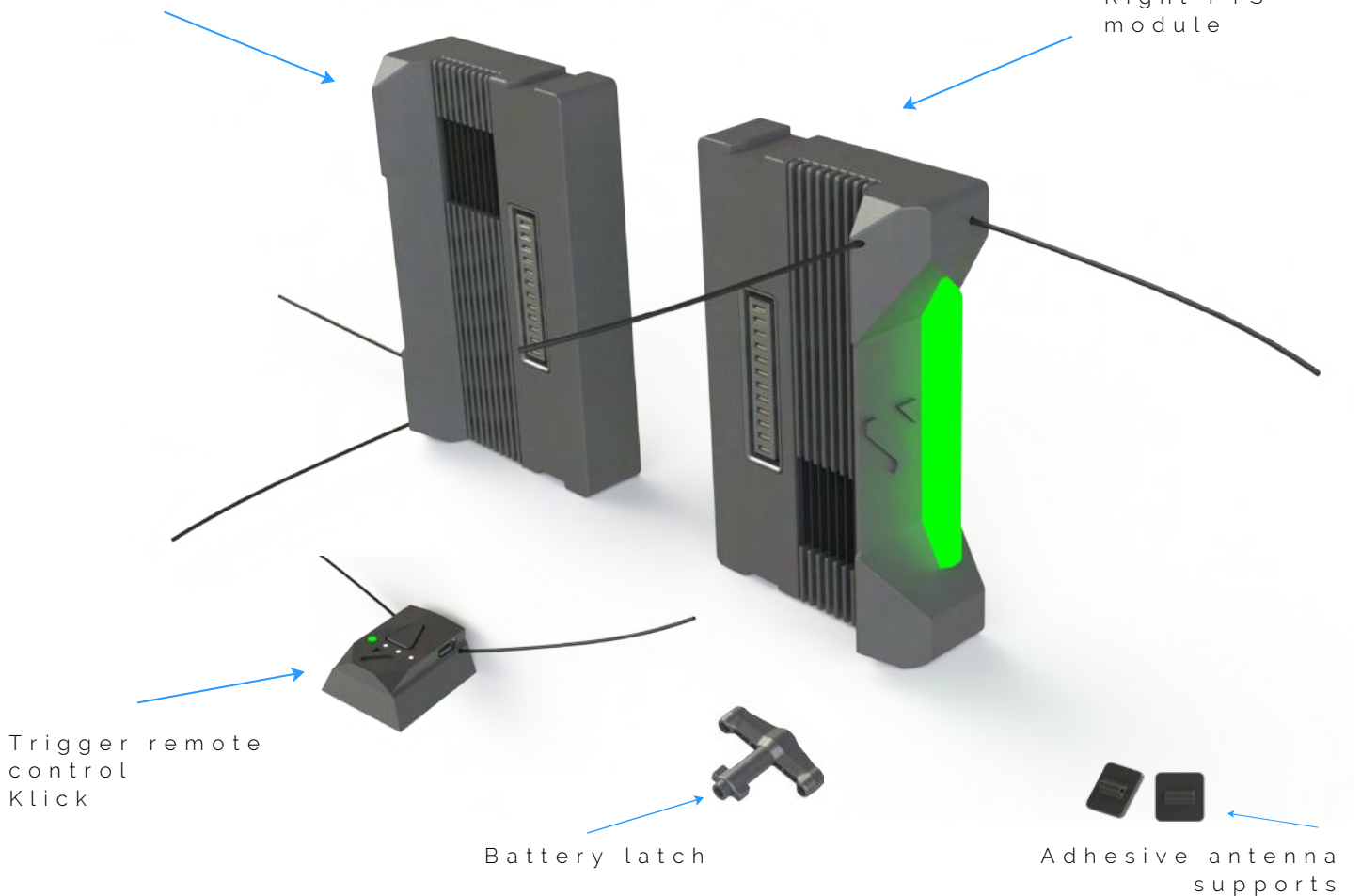
MOC2511 EXTERNAL FTS FOR **dji** MATRICE 350/300 

# COMPONENTS

presentation

Left FTS module

Right FTS module



## ADDITIONAL ACCESSORIES SUPPLIED



Micro-USB cable



Allen Key  
2 mm / 2.5 mm

**Installation  
tutorial**

available on our Youtube channel





# KRONOS M350

Technical specifications

TOTAL WEIGHT

136 GRAMMES

COMMUNICATION  
WIRELESS RADIO

SRD860 WITH  
ENCRYPTED KEY  
(869 MHz / 100 MW)

RANGE OF THE  
REMOTE CONTROL

3000 METERS

AUTONOMY  
REMOTE CONTROL

30 HOURS

OPERATING  
TEMPERATURE

-5°C À 40°C





# INSTALLATION

of the FTS system

The Kronos FTS system for Matrice 350/300 can be installed in just a few minutes. To install the FTS, please follow the instructions below in order:

## Instructions

- 1 Unlock the battery latch. Remove the batteries from the DJI Matrice 350/300.



- 2 Remove the battery latch using the Allen key supplied. When dismantling, take care to retain the 4 washers fitted to the original screw and the 2 springs.





# INSTALLATION

of the FTS system

## Warning

A white washer may be stuck inside the original battery latch. Remember to check that you have all the parts before reassembling the latch supplied by Dronavia.

3

Replace the original latch with the one supplied and reassemble the assembly, checking as below that the 2 springs and 4 washers are correctly repositioned.



4

Place the right-hand FTS by sliding it in from the back in the same way as a battery, with the LED pointing outwards and the flat part facing the battery. Then insert your right-hand battery.





# INSTALLATION

of the FTS system

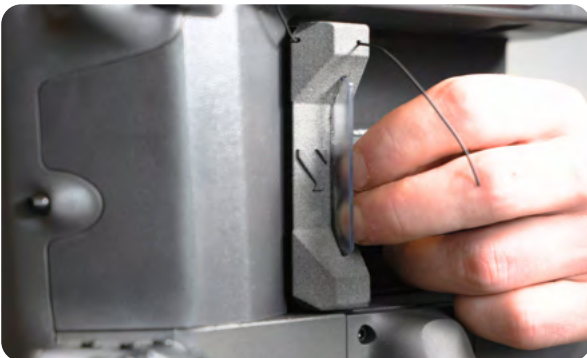
5

Attach the adhesive antenna support, as shown below, to ensure optimum connection between your module and your trigger remote control. Then insert the FTS module's antenna into the bracket.



6

Place the left-hand FTS by sliding it in from the back in the same way as a battery, with the LED pointing outwards and the flat part facing the battery. Then insert your left battery.







# INSTALLATION

of the FTS system

7

Attach the adhesive antenna support, as shown below, to ensure optimum connection between your module and your trigger remote control. Then insert the antenna of the FTS module inside the support. Lock the batteries by turning the latch.



## Warning

This step is essential for the correct operation of the drone and the FTS. The latch must be locked and the batteries must be fully inserted. If the FTS is incorrectly installed, an error message may appear on your DJI remote control.

## Error notifications

DJI RC Plus radio control screen





# INSTALLATION

of the FTS system

8

Your MOC2511 external FTS for Matrice 350/300 is now operational. 



# ACTIVATION

of the FTS system

To activate the FTS, follow the instructions below in order:

## Instructions

- 1 Switch on your DJI Matrice 350/300 drone. The FTS system will switch on automatically.



- 2 Switch on your Klick remote control. When the FTS system is properly connected, a green LED flashes on the remote control and on the FTS module.

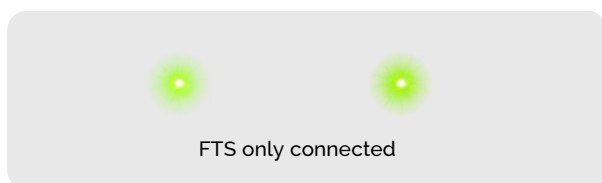
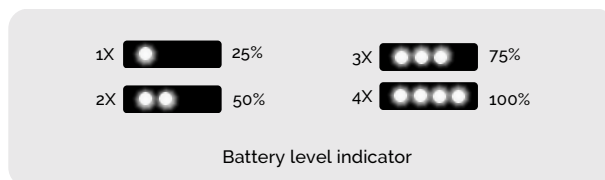




# ACTIVATION

of the FTS system

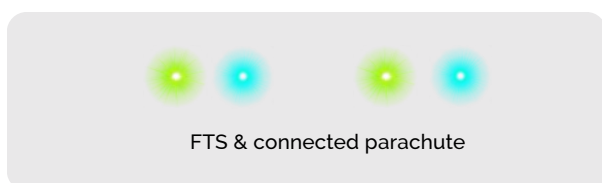
## The different LED states



## OPTIONAL

If your FTS module is connected to a Kronos parachute system for Matrice 350/300 a green and turquoise LED flashes on the Klick trigger remote control and on your parachute module.

## The different LED states



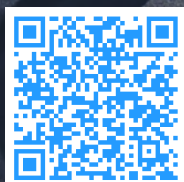


**YOUR FTS IS ACTIVE  
AND OPERATIONAL!**

# KLICK

manual tripping of the FTS

Consult our Klick user manual





# GEOCAGING

automatic triggering of the FTS

Discover our solutions now



INCLUDING THE SCALEFLYT GEOCAGING SOLUTION DEVELOPED BY **THALES**





# PROCEDURE

## FTS system test

Before the flight or before the first flight of the day, you can test the FTS system. Follow the instructions below in order:

### Warning

If your drone is fitted with a parachute, remember to disconnect the cable linking the parachute to the drone before carrying out the test. Otherwise, the parachute will be triggered at the same time as the engine cut-out.

### Instructions

1

Disconnect the cable linking the parachute system to the drone. Switch on your DJI Matrice 350/300 drone. Switch on your Klick trigger remote control.



2

If your drone is fitted with a parachute, check again that it is switched off.



# PROCEDURE

## FTS system test

3

Arm the motors and initiate rotation while keeping the drone on the ground.



4

Stop the rotation of the motors by pressing the release button on the Klick remote control. Check that the motors stop correctly and that the green light on the Klick remote control and on the FTS flashes rapidly.



# STOP

## & resetting FTS system

To stop, switch off and reset the FTS, follow the instructions below in order:

### Instructions

1

Switch off your DJI Matrice 350/300 drone and the FTS system will shut down automatically.



2

Switch off your Klick trigger remote control.





# DISASSEMBLY

of the FTS system

To dismantle the FTS system, follow the instructions below in order:

## Instructions

1

To disassemble the system, simply follow the installation instructions in reverse order. The Klick remote control module can remain installed on the DJI Matrice 350/300 radio control without affecting its operation.

# RESETTING

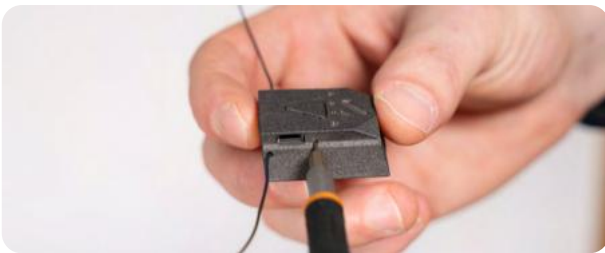
of the FTS system

In the event of a malfunction or any other bug, follow the instructions below in order:

## Instructions

1

To reset the Klick remote control, you'll find a small hole on the left-hand side. Insert a paper clip or other thin object into the hole and press it down briefly.



## Warning

If the malfunction persists, contact Dronavia customer service or your reseller.

# MAINTENANCE

## & guarantees

### STORAGE

Store the MOCM2 & MOC2511 Kronos M350 accessories system for DJI Matrice 350/300 in a dry place, at a temperature between 10°C and 30°C, clean and protected from UV light.

### GUARANTEE

Dronavia takes great care in the design and production of its products. We guarantee our FTS systems for one year from the date of purchase against any defect or design fault that may arise during normal use of the product. Any abusive or incorrect use, or exposure to aggressive factors (high humidity, excessively high temperatures, etc.) that could 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 judgement. Be cautious, get trained in appropriate structures, take out insurance and comply with the requirements defined by the DGAC decrees of 11 April 2012 and 17 December 2015 and the EASA.



Ask our sales team your questions



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. For Europe, we recommend that you consult the EASA website. Remember that you are flying under your own responsibility.

Website of the Ministry of Ecological Transition and Territorial Cohesion



Details of MOC 2511 published by EASA :



The IGN map of restricted areas for drones



Details of the M2 MOC published by EASA :



The French Civil Aviation Authority (DGAC)



European Union Aviation Safety Agency (EASA)



# LINKS to know



Ask our sales team your questions







# CONTACT US



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www.dronavia.com

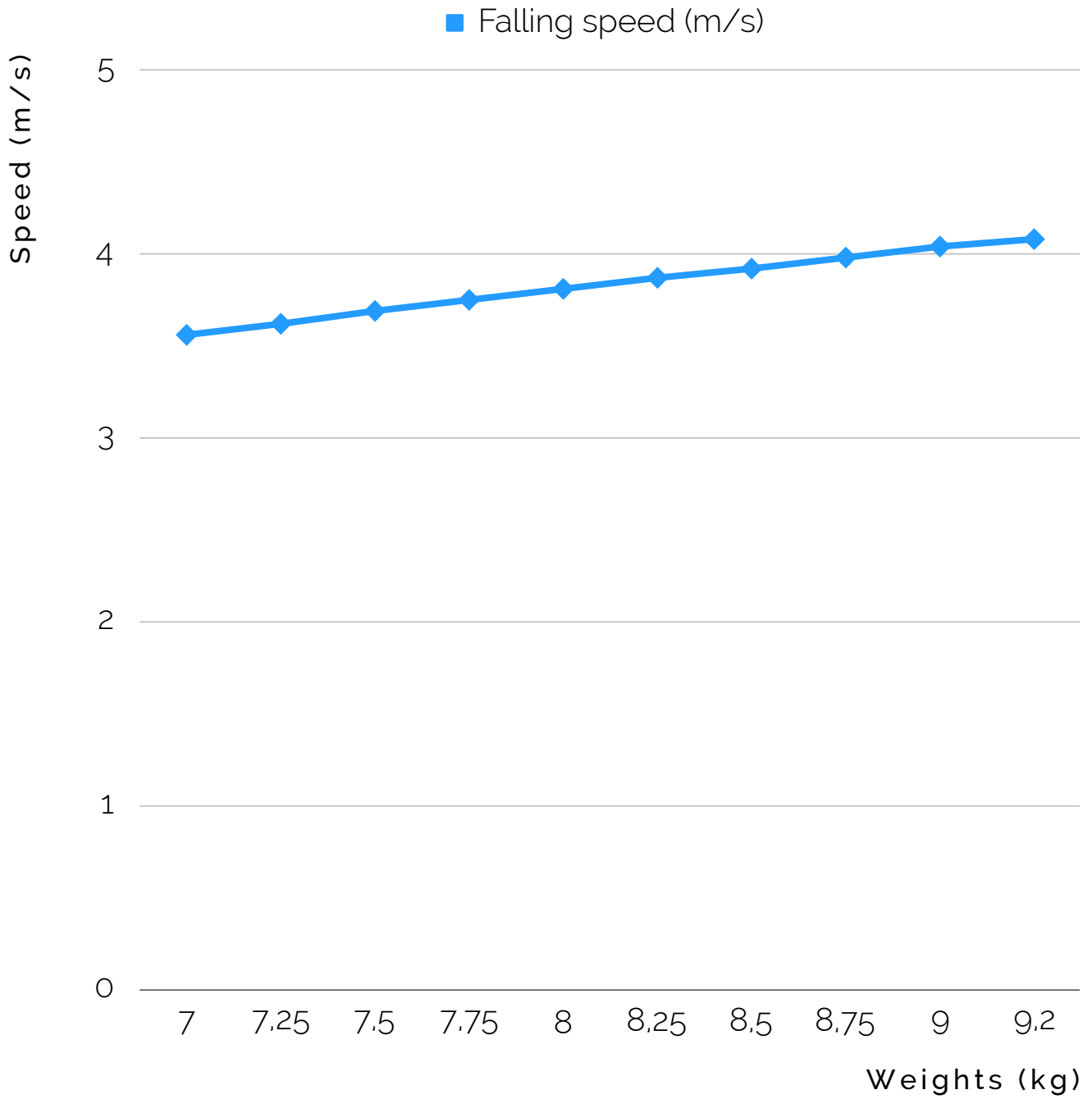


| Dronavia Channel



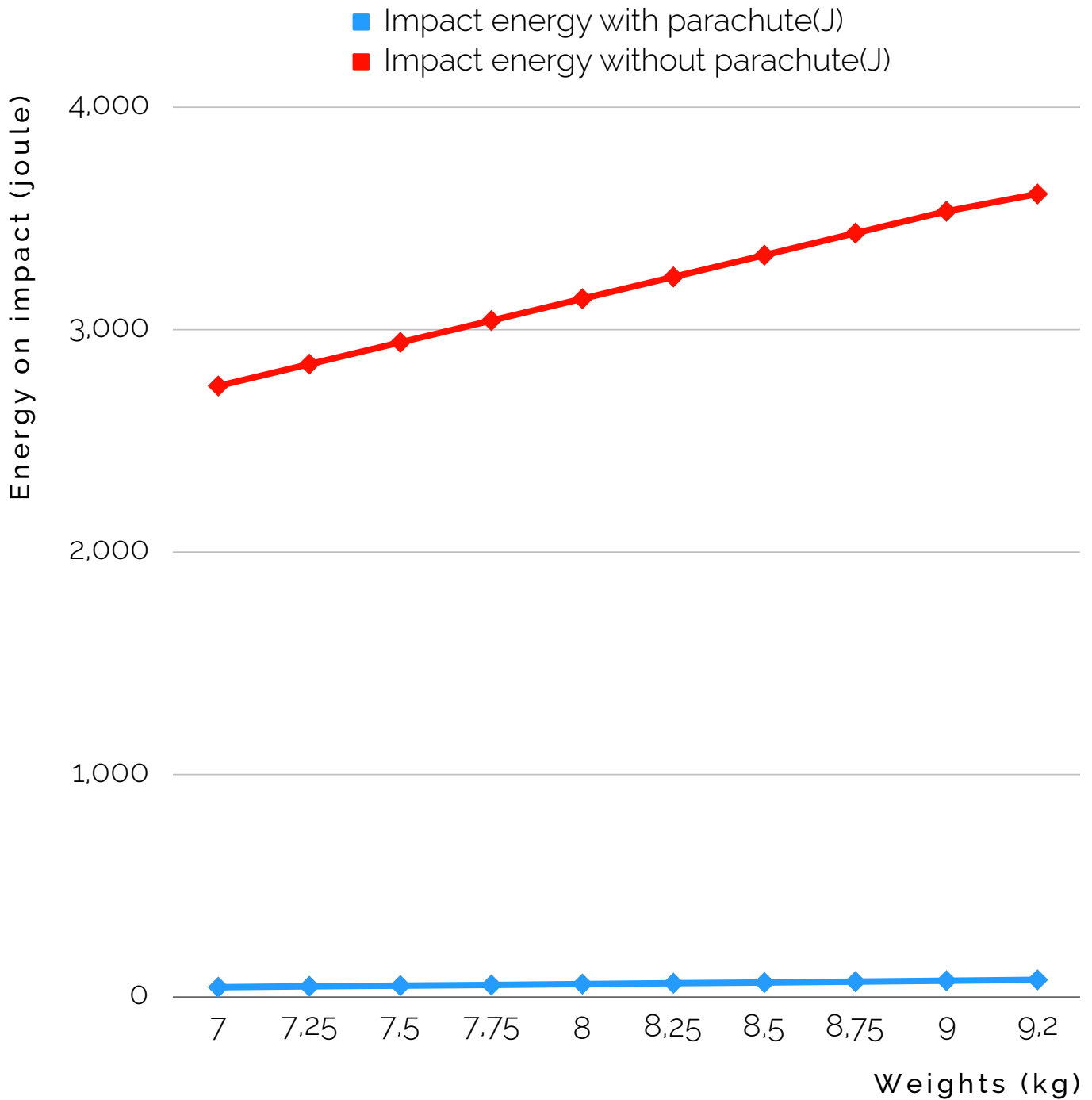
# APPENDICES

Falling speed (m/s) X Weight (kg)



# APPENDICES

Impact energy (joule) X Weight (kg)



# APPENDICES

Minimum extent of buffer zone for ground-related risks (m) X  
Weight (kg) X Trigger height (m)

