



STORMBEE

Quick Reference Handbook



Think 3D

30/09/2018

STORMBEE QRH – ***Think 3D BVBA***

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Version Control

Author	Date	Version	Comments/ Adaptations
Jon Verbeke	26/04/2018	1.0	First draft
Jon Verbeke	30/09/2018	1.1	Update to S20

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1 Before departure to flight area

DOCUMENTS	
WEATHER INFO, FORECAST & KP-INDEX	DOWNLOAD
NOTAMS	DOWNLOAD
VFR MAP AND AIRSPACE CLASSIFICATION	CHECK
PASSPORT(S) PILOT AND CREW	CHECK
DRONE PILOT LICENSE	VALID
DRONE PILOT MEDICAL CERTIFICATE	VALID
DRONE PILOT LOG	CHECK
STORMBEE FLIGHT LOG	CHECK
STORMBEE MAINTENANCE LOG	CHECK
STORMBEE REGISTRATION DOCUMENT	CHECK
STORMBEE CERTIFICATION DOCUMENT	CHECK
STORMBEE INSURANCE DOCUMENT	VALID
MISSION PERMIT DOCUMENT	CHECK
MISSION RISK ANALYSIS DOCUMENT	CHECK
STORMBEE USER MANUAL & QRH	CHECK
COMPANY OPERATIONAL MANUAL	CHECK
PRIVACY LAWS AND PERMISSION OWNER TERRAIN	CHECK
MISSION PREPARATION DOCUMENT, BRIEFING & HEALTH PILOTS AND CREW	CHECK

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EQUIPMENT	
BATTERIES STORMBEE	FULLY CHARGED
BATTERY LIGHTBRIDGE 2	FULLY CHARGED
BATTERY TABLET	FULLY CHARGED
BATTERY MOBILE PHONE/RADIO	FULLY CHARGED
BATTERY LAPTOP	FULLY CHARGED
CHARGER TABLET, MOBILE PHONE/RADIO	CHECK
LASER RANGE FINDER BINOCULAR	CHECK
LIPO BATTERY CHARGER AND ACCESSORIES	IF APPLICABLE
EXTRA BATTERIES	IF APPLICABLE
POWER STATION	IF APPLICABLE
FIRST AID KIT	CHECK
FIRE EXTINGUISHER	CHECK
LIST OF EMERGENCY PHONE NUMBERS	CHECK
STORMBEE INTEGRITY AND HEALTH	CHECK
FARO SCANNER INTEGRITY AND HEALTH	CHECK
APPROPRIATE CLOTHING AND PROTECTION	CHECK
HIGH VISIBILITY MARKERS T/O AREA	CHECK
HIGH VISIBILITY JACKETS PILOT AND CREW	CHECK
SMALL SET OF TOOLS	CHECK
HEX KEY SCANNER MOUNT BOLTS	CHECK

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STORMBEE EXTERNAL INSPECTION	
STORMBEE STRUCTURAL INTEGRITY	CONDITION
STORMBEE CLEAN	CHECK
PROPELLERS	FEEL CONDITION
PROPELLERS	TIGHTENED
MOTORS	ROTATING FREELY
MOTOR ROTATING CASING	SECURE
MOTOR NON-ROTATING BASE	SECURE
MOTOR MOUNT	SECURE
MOTOR ARM CARBON TUBES	SECURE
MOTOR ARM HINGES	CHECK FOR CRACKS
DJI AND GNSS GPS MODULE(S)	SECURE
DJI GPS MODULE(S) ARROW DIRECTION	CHECK
ANTENNAS ON LANDING GEAR	SECURE
ANTENNAS ON LANDING GEAR DIRECTION	CHECK
CANOPY	CONDITION
BATTERY VELCRO STRAP	CONDITION
BATTERY VELCRO STRAP	SECURE
BATTERY CONNECTORS TOP PLATE	CONDITION
COOLING FANS	CONDITION
SCREWS	PRESENT AND SECURE
LANDING GEAR CARBON TUBES	CONDITION

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LANDING GEAR HINGES	CHECK FOR CRACKS
LANDING GEAR MOUNTS	CONDITION
LANDING GEAR PLASTIC COVERS	CONDITION
LANDING GEAR ATTACHED FIRMLY	CHECK
WIRES DISCOLOURATION AND SMELL	CONDITION
STORMBEE BATTERIES	CONDITION
STORMBEE BATTERIES VOLTAGE LEVEL	CHECK
DJI LED AND GNSS LED	CONDITION
STORMBEE MASS AND CG LOCATION	CHECK
LIGHTBRIDGE 2	CONDITION
LIGHTBRIDGE 2 STICKS AND SWITCHES	MOVING FREELY
LIGHTBRIDGE 2 VOLTAGE LEVEL	CHECK
TABLET	CONDITION
TABLET VOLTAGE LEVEL	CHECK
USB CABLE TABLET TO LIGHTBRIDGE 2	CONDITION
LASER RANGE FINDER BINOCULAR	CONDITION
CANOPY	SECURE

2 Mission preparation on-site

BEFORE TAKE-OFF CHECKLIST	
WEATHER AND WIND	CHECK
STORMBEE	UNPACK
LIGHTBRIDGE 2 AND TABLET	UNPACK
LANDING GEAR	UNFOLD
LANDING GEAR SAFETY PINS	FULLY EXTENDED
STORMBEE PROPULSION ARMS	UNFOLD
PROPULSION ARMS SAFETY PIN	FULLY EXTENDED
STORMBEE EXTERNAL INSPECTION	PERFORM
FARO SCANNER HELICAL BRACKETS	MOUNT
FARO SCANNER MIRROR FOAM PROTECTION	REMOVE
FARO SCANNER HELICAL STORMBEE MODE	SET
FARO SCANNER PROJECT NAME AND NR.	SET
FARO SCANNER BATTERY	REMOVE
FARO SCANNER BOLTS (4) ON STORMBEE	SECURE
STORMBEE BATTERIES (2)	SECURE
TABLET ON LIGHTBRIDGE 2	SECURE
TABLET LIGHTBRIDGE 2 USB CABLE	CONNECT
STORMBEE CANOPY	SECURE
TAKE-OFF/LANDING ZONE	SET
PILOT ZONE (5M FOM TO/LND ZONE)	SET

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ENVIRONMENT	NO RELEVANT OBSTACLES
PILOT AND CREW HIGH VISIBILITY JACKETS	CHECK
CREW AND BYSTANDERS	BRIEFING
WEATHER	CHECK
STORMBEE TO T/O ZONE	MOVE
DJI GS PRO APP	LAUNCH
LASER RANGE FINDER BINOCULAR	CHECK HEIGHT OBSTACLES
PROGRAM MISSION WAYPOINTS	CHECK
DJI LIGHTBRIDGE 2	POWER ON
STORMBEE BATTERIES	CONNECT
APP RC CONNECTION	OK
DJI LIGHTBRIDGE 2 LED	SOLID GREEN
APP STORMBEE LOCATION	CHECK
STORMBEE FPV CAMERA VIEW	CHECK
STORMBEE DJI A3 LED MODULE	BLINKING GREEN
APP MISSION STATUS ELEMENTS	OK
APP PILOT MODE	CHECK
GNNS AVIONICS POWER BUTTON	PRESS
GNSS LED MODULE	BLINKING GREEN
FARO SCANNER	POWER ON
FARO SCANNER START SCAN AND WAIT 10s	CHECK

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FARO SCANNER LED	BLINKING RED
GNSS-SCANNER SYNC BUTTON	PRESS

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3 Flight

TAKE-OFF CHECKLIST	
DJI LIGHTBRIDGE FLIGHT MODE	P-GPS
CONTACT ATC	IF APPLICABLE
FINAL CHECK STATUS DJI LED AND APP MISSION STATUS ELEMENTS	PERFORM
CONTROL STICKS (MANUAL TAKE-OFF)	BOTTOM INSIDE
ALL MOTORS SPINNING	CHECK
DJI APP HOME LOCATION	CHECK
MOTOR AND PROPELLER SOUNDS	UNIFORM
STORMBEE VIBRATIONS	NOT PRESENT
WIND	CHECK
MANUAL TAKE-OFF TO 2M ABOVE TERRAIN	CHECK
RESPONSE STORMBEE CONTROL INPUTS	CHECK
RTH ALTITUDE	SET
APP MISSION STATUS ELEMENTS	OK
GNSS LED MODULE	SOLID GREEN
AUTOMATED MISSION	START

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FLIGHT CHECKLIST	
<u>Check the voltage level of STORMBEE's flight batteries every 30 seconds!</u> Continuously switch your attention between STORMBEE, battery level, FPV camera view and small mission window.	
STORMBEE WITHIN VLOS PILOT OR CREW AT ALL TIMES	CHECK
LEFT-HAND INDEX FINGER ON THE FLIGHT MODE SWITCH AT ALL TIMES	CHECK
FINGERS ON THE CONTROL STICKS AT ALL TIMES	CHECK
STORMBEE BATTERY LEVEL	CHECK
PILOT POSITION WITH RESPECT TO OBSTACLES AND STORMBEE	ADJUST

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APPROACH AND LANDING CHECKLIST	
DJI LIGHTBRIDGE FLIGHT MODE	P-GPS
APPROACH AREA	CLEAR
LANDING ZONE	FREE
APPROACH LOW SPEED AND >3M HEIGHT	CHECK
MOVE TO PILOT ZONE (5M FROM LND ZONE)	PERFORM
HOVER ABOVE LANDING ZONE	CHECK
SLOWLY DESCEND AND LAND	CHECK
ONCE ON GROUND THROTTLE	FULLY DOWN
CONTACT ATC	IF APPLICABLE

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4 Post-flight

AFTER LANDING CHECKLIST	
MOTOR TEMPERATURES	SIMILAR
FARO SCANNER LED	BLINKING RED
GNSS-SCANNER SYNC BUTTON	PRESS
FARO SCANNER	STOP SCAN
FARO SCANNER MIRROR	STOPPED
FARO SCANNER	SAVE SCAN
FARO SCANNER SCAN DATA	CHECK SIZE
FARO SCANNER	SHUT DOWN
GNSS AVIONICS POWER BUTTON	PRESS
STORMBEE CANOPY	REMOVE
STORMBEE BATTERIES	DISCONNECT
LIGHTBRIDGE 2	POWER OFF
DJI APP	CLOSE
FARO SCANNER MIRROR FOAM PROTECTION	MOUNT
PILOT LOG AND MISSION DOCUMENTATION	COMPLETE
STORMBEE FLIGHT LOG	COMPLETE
STORMBEE MAINTENANCE LOG	COMPLETE
DATA SCANNER AND GNSS	RETRIEVE
FARO SCANNER BATTERY	INSERT
STORMBEE EXTERNAL INSPECTION	CHECK

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EQUIPMENT	STORE
MARKERS TAKE-OFF AND LANDING ZONE	REMOVE

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5 Abnormal & Emergency Checklist

FIRE (LAND ASAP)	
FIRE IN FLIGHT	
MAINTAIN CONTROL	CHECK
CREW AND BYSTANDERS	INFORM
LAND AT PRESENT LOCATION IN OPEN AREA	CHECK
MAINTAIN SUFFICIENT DISTANCE	CHECK
ONCE ON GROUND THROTTLE	FULLY DOWN
GCS POWER	OFF
EXTINGUISH FIRE	IF APPLICABLE
REPORT EVENT	PERFORM
FIRE DURING START	
MAINTAIN SUFFICIENT DISTANCE	CHECK
THROTTLE	FULLY DOWN
GCS POWER	OFF
EXTINGUISH FIRE	IF APPLICABLE
REPORT EVENT	PERFORM

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BATTERY	
HIGH TEMPERATURE	
LAND ASAP (AT CURRENT LOCATION)	PERFORM
AFTER RPA EMERGENCY CHECKLIST	PERFORM
LOW VOLTAGE	
MISSION	ABORT
RETURN TO HOME FOR LANDING	PERFORM
CRITICAL VOLTAGE	
MISSION	ABORT
LAND ASAP (AT CURRENT LOCATION)	PERFORM

LOSS OF COMMUNICATIONS/GCS	
TRY TO REGAIN COMMUNICATIONS	PERFORM
CONTACT ATC	IF APPLICABLE
LANDING AREA	CLEAR
REPORT EVENT	PERFORM

EMERGENCY TELEPHONE NUMBERS	
FIRE BRIGADE, POLICE, MEDICAL SERVICES	112
BELGOCONTROL BRIEFING ROOM	+3222537070
BELGIAN AIR ACCIDENT INVESTIGATION UNIT:	+3222774433 OR +32476761865