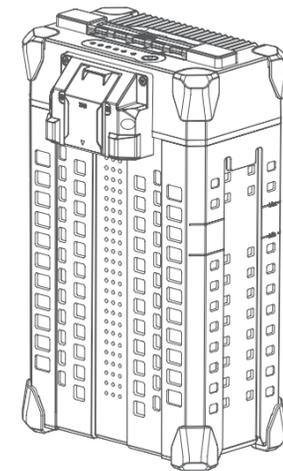


B13960S SMART BATTERY

User Manual

Version 1.0 EN



To Users

Dear user, thank you for choosing XAG products.

For safety purposes and better user experience, it is highly recommended that you read this manual carefully and strictly follow the instructions hereof.



Contact Us

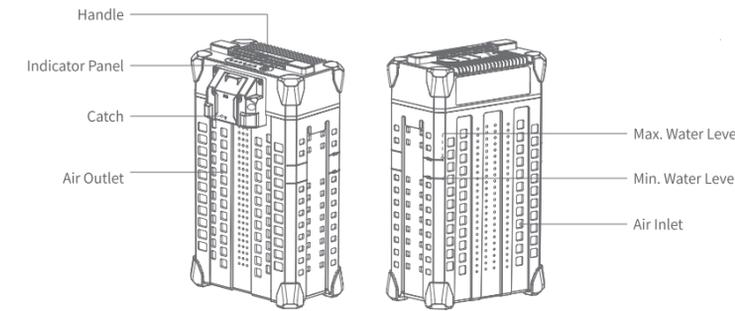
If you have any questions about this document, please contact our Technical Support team via email: info@xa.com

Introduction

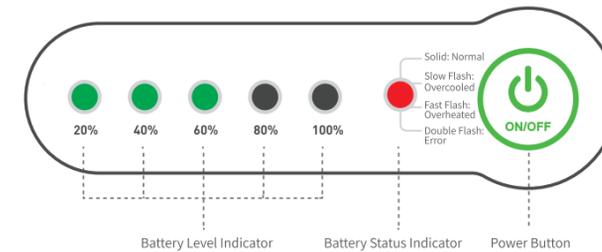
The B13960S Smart Battery is compatible with XAG's P80, P40 and V40 agricultural UAV. With 13 high capacity Lithium polymer cells and a BMS integration module, it features real-time monitoring of status information including voltage, current and temperature, as well as charge protection. Specifically, the battery can give immediate feedback to the load side during use. In case of battery low or failure, the BMS system will send an emergency stop signal initiatively to ensure the electrical safety of the load side.

About B13960S Smart Battery

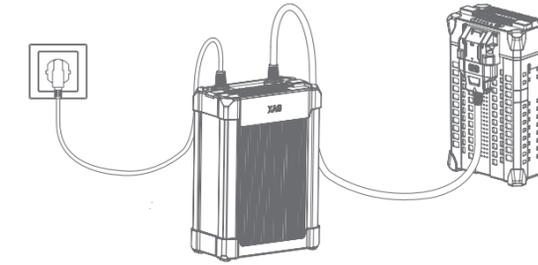
Structure



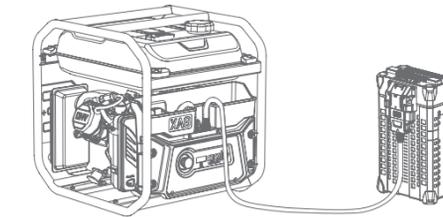
Indicator Panel



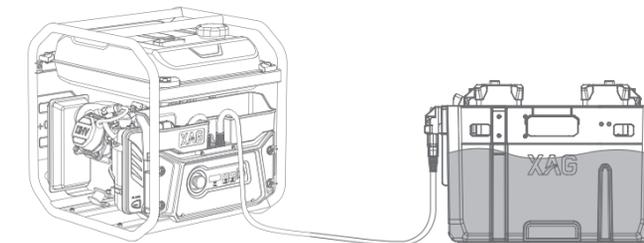
Charge with Intelligent SuperCharger



Charge with Auto SuperCharge Station



Charge with Auto SuperCharge Station and Water-Cooled Charging Tank



Check Battery Status

LED Behaviour	Status	Description
2 Lights Double Flash	Fault Lock	Battery locked for the low battery, please contact tech support to unlock the device.
3 Lights Double Flashing	Remote Lock	Battery locked remotely, please contact tech support to unlock the device.
4 Lights Double Flashing	Anti-dismantling Lock	Failed to verify cell identification, please contact tech support to help check.
2/3 Alternate Flashing Lights	Over current Protection	Protection triggered by overcurrent, please contact tech support to unlock the device.
2/4 Alternate Flashing Lights	Dual-battery Power on Disabled	Dual-battery power on disabled, voltages of both batteries should be roughly equal before use.

LED Behaviour	Status	Description
Red Light Solid	Normal	Normal
Flashing Red Light (rapid)	Overheated	Protection triggered. Charging/Discharging not allowed
Flashing Red Light (slow)	Overcooled	Charging protection triggered for low temperature. Please keep the battery above 10°C
Red Light Double Flashing	Failure	Stop using immediately

Check Battery Level

When the battery is OFF, short press once to check the battery level.

When the battery is ON, the Battery Level Indicators keep solid.

LED Behaviour	Description
1 Light Flashing	0%-10%
1 Light Solid	10%-30%
2 Lights Solid	30%-50%
3 Lights Solid	50%-70%
4 Lights Solid	70%-90%
5 Lights Solid	90%-100%

Power ON / OFF

Long press twice to power ON/OFF - upon connection with the drone or the charger, long-press the power button for at least 1 second until all the battery level indicators flash simultaneously, followed by the other long-press for at least 1 second until the battery beeps and all the status indicators are on/off.

Charging

- The Smart Battery will start charging after inserting the charging plug, and switching on the power supply and the battery.
- An ideal ambient temperature for charging (20°C ~ 35°C) will help maintain the battery life. Charging process halted by the battery management system for a battery temperature of over 55°C will be restored after the temperature drops below 55°C.
- During charging, the indicator(s) corresponding to current battery level will keep solid while the rest will flash in the effect of flowing LED lights. Upon full charge, the buzzer will emit fast beeping sound for 30s, all indicators will flash for 2min and then the battery will power off automatically.

Note

-  Only the outlet with a rated current of 16A compliant with national or industrial quality standards can be used to charge the battery with the Intelligent SuperCharger. Otherwise, user shall be liable for the loss arising therefrom.
 -  For water cooling heat dissipation, the battery should be immersed in clean and noncorrosive water within the temperature range of 5°C - 45°C for no more than 60min. In addition, the water level should be kept between the Min/Max water level marks to achieve the best heat dissipation effect.
 -  NEVER submerge the battery in the water.
- Please take out the battery first before pouring the water from the charging tank.
-  Please see that the plug, charging socket, and battery interface are clean, dry and free from metal or liquid before charging.
 -  Particular attention should be paid to preventing water of the charging tank from splashing onto the Intelligent SuperCharger or the Auto SuperCharge Station while charging, so as to avoid power failure or damages to the Supercharge station and the battery.

Specifications

Model	B13960S
Type	Lithium Polymer Battery
Rated Capacity	20000mAh/962Wh
Rated Output	48.1V/120A
Charging Voltage	56.55V
IP Rating ^[1]	IP65
Operating Temperature	10~45°C
Charging Temperature	10~40°C
Storage Temperature	10~30°C
Battery Weight	Approx. 6.7kg ^[2]
Dimensions	189*139*317mm
Operating Temperature	-20°C to 60°C
Protection Rating	IP54

[1] : The battery is waterproof and splashproof under controlled experiment. However, rather than being permanent effective, the protection may get weaker due to wear and tear.

[2] : Battery weight slightly varies from batch to batch.

Precautions

- NEVER insert/remove the battery when it is ON, or it may cause damage to the interface.
- It is a MUST to check and upgrade to the latest battery firmware and software version preceding operation. Loss caused by failing to do so shall be borne by the user.
- An optimal ambient temperature range for the battery is from 10°C to 45°C . Chances are that fire, even explosions will happen at a temperature over 45°C .
- NEVER connect the cathode and anode with a wire or other metals, as this will cause a short circuit.
- For heat dissipation, the battery should be immersed into pure water instead of corrosive liquids within the maximum and minimum level indicated for NO more than 60min, or else the battery will get damaged for having water leak inside.
- Please always keep the interface clean and clean the liquid or foreign matters off it promptly. Otherwise, it will cause poor contact, contributing to energy loss or failure to charge.
- Please handle the battery with care and do NOT take it apart, pierce the housing or apply pressure to it, including but not limited to behaviours such as sitting/standing on the battery, stacking heavy items on it and the like.
- Please regularly check the components like the battery interface and the plug before use. NEVER clean the charging device with alcohol or other combustible liquids. NEVER use the damaged charging device.
- Please place the battery and charging device on even ground with no combustible materials around while charging. NEVER leave the battery unattended while charging in case of an accident.
- For your safety, keep a minimum of 30cm distance between the battery and the charger, and between two batteries, lest too much heat lead to the charger or battery failure, even causing dreadful consequences like a fire.
- Please make sure the battery is fully charged prior to each operation. NEVER operate at full capacity preceding completion of charging.
- NEVER use batteries provided by manufacturers other than XAG, or to dismantle/replace the battery without permission. If necessary, please contact XAG or the authorized dealer. For the battery incidents, technical faults or other accidents caused by using a battery or accessories provided by non-XAG manufacturers, the user shall be held responsible for all the consequences arising therefrom.
- If one green light flashes at the end of the operation, please charge the battery to 40%~60% before storage. Failing to do so may damage the battery or impact battery life. Fully discharge and recharge the battery every 90 days to maintain battery health.
- The battery should be stored at 10~30°C in a dry place instead of a wet or moist environment.
- Avoid moisture while charging the battery. Warranty does NOT cover any damage caused by problems not attributable to the product quality like damaged battery housing.
- Please STOP using the batter swollen, leaking, deformed or with appearance damage instantly and contact XAG or the dealer without hesitation.
- The liquid inside the battery is highly corrosive. In case of contact with skin or eyes, flush with fresh water and seek medical attention instantly.
- To protect our environment, please properly dispose of the battery as required by the local laws and regulations.

Disclaimer

- Please read this manual carefully before using the product, as it significantly matters to both operational safety and your legitimate rights and interests. You shall be deemed to understand, agree and acknowledge all terms and conditions herein upon using this product.
- Not being a toy, this product is not suitable for those who are under 18 years old. Please keep the children away from this product and be particularly cautious while there are children present.
- DO charge the battery with the charging device provided by XAG. Otherwise, XAG shall not be held legally liable for the failure or damage arising from charging with other devices.
- Please install and use the product under the guidance of the "Instruction Manual / User Manual". NEVER convert or dismantle the product without permission. Otherwise, user shall bear all the loss arising therefrom while XAG is not held legally accountable.
- To the maximum extent permitted by law, XAG shall not be liable for all losses caused by the user's failure to operate under the guidance of the "Instruction Manual / User Manual".
- To the maximum extent permitted by law, under any circumstances, the liability or compensation amount from XAG to you for all damages, losses, and litigation arising therefrom will not exceed the amount that you paid to XAG for purchasing the product.
- On any account, the purchaser or user shall comply with laws and regulations of the country and region where the product is used. XAG assumes no liability arising from the violation of relevant laws and regulations by the purchaser or user.
- As exclusion clauses may be prohibited by laws in some countries, your rights may vary in different countries. This does not imply that the contents contained herein are necessarily invalid.
- To the extent permitted by law, XAG reserves the rights for final explanation and revision of the terms and conditions herein. XAG also has the right to update, modify or terminate these terms and conditions via the official website, the "Instruction Manual / User Manual" , online APP, etc without prior notice.

Warning

User shall read through the "User Manual" and have a thorough understanding before operation. Otherwise, it may cause injury to the user or others, even leading to damage to the product and property loss. Strong safety awareness is indispensable for the operation. Never use parts and components recommended or suggested by manufacturers other than XAG. Please install and use the product by strictly following the guidance from XAG.



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