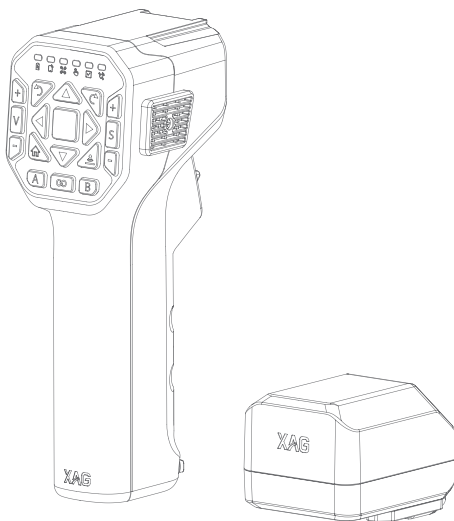


ACS2G Agricultural Control Stick

User Manual

Version 1.1 EN



To Users

Dear user, thank you for choosing XAG products.

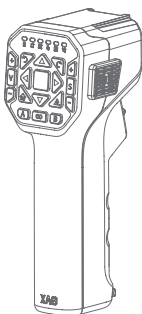
For safety purposes and better user experience, it is highly recommended that you read this manual carefully and strictly follow the instructions hereof.

Contact Us

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

List of Items

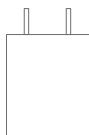
Please check that the following items are all present when unpacking the box. Should there be any item missed, please contact your dealer.



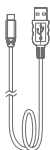
ACS2G ControlStick
×1



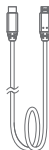
RTK module
×1



Adapter
×1



USB-A To Type-C
Cable
×1



Micro USB To Type-C
Cable
×1



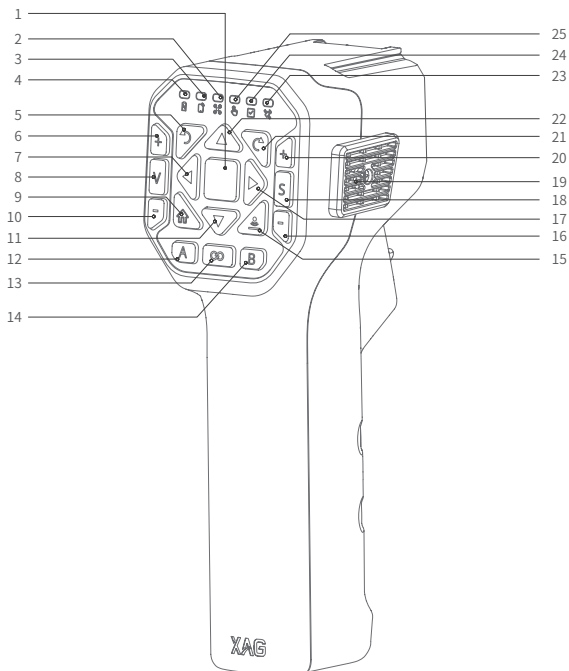
Type-C To Type-C
Cable
×1

Note

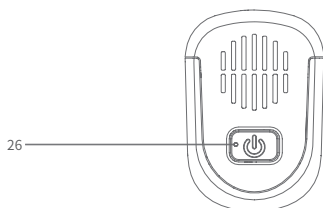
 ACS2G ControlStick is only compatible with P40 Agricultural Drone and V40 Agricultural Drone.

Introduction

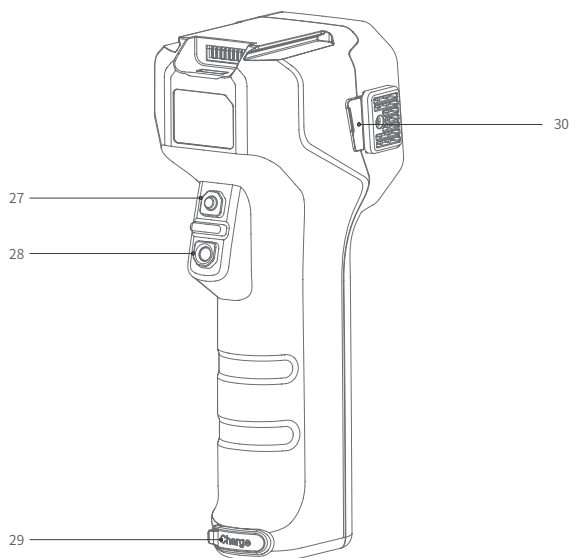
Overview



Front View



Bottom View



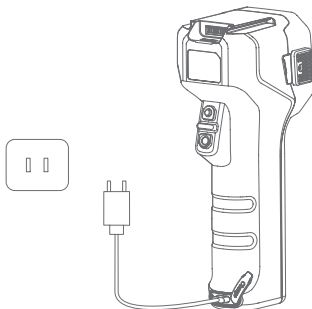
Back View

- | | | |
|-------------------------------|-------------------------------------|-----------------------------|
| 1 Hover | 11 Backward | 21 Turn Right |
| 2 UAV Connection Indicator | 12 A | 22 Frontward |
| 3 Device Connection Indicator | 13 Smart | 23 RTK Status Indicator |
| 4 Power Indicator | 14 B | 24 Task Status Indicator |
| 5 Turn Left | 15 Terrain-Following Mode | 25 Control Status Indicator |
| 6 Speed+ | 16 Decrease Spraying/Spreading Rate | 26 Power Switch |
| 7 Left | 17 Right | 27 Ascend |
| 8 Speed Voice Prompt | 18 Spray/Spread | 28 Descend |
| 9 Return | 19 Heat Dissipation Parts | 29 Charging Port |
| 10 Speed- | 20 Increase Spraying/Spreading Rate | 30 SIM Card Slot |

How to Use

Charge ACS2G

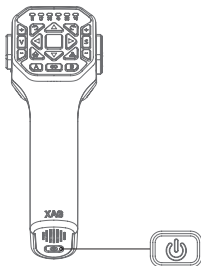
Connect the Type-C connector to the charging port of the ControlStick and the USB connector to the adapter, then connect the adapter to a power outlet. While charging with the fast charging adapter, there is a fast flashing power indicator, accompanied by a voice prompt saying "fast charging". When the ControlStick is fully charged, the power light turns solid green.



Power ON/OFF

While the ControlStick is OFF, long press Power Switch button for at least 2s until 6 indicators flash simultaneously, followed by another long press for at least 2s, along with a voice prompt saying that it is powered on successfully. Then wait for a few seconds until the third indicator, a slowly blinking green light, goes off, which prompts that the initialization is completed and you can use the ControlStick now.

While the ControlStick is ON, long press Power Switch button for at least 2s until 6 indicators flash simultaneously, followed by another long press for at least 2s until all 6 indicators go off, which prompts that it is powered off successfully.

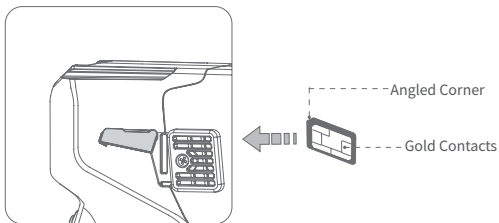


⚠ Warning

- ⚠ DO charge the battery with the charging device provided by XAG, or the user shall be held liable for the failure or damage arising from charging with other devices.
- ⚠ Not being water-resistant, the ControlStick shall never be doused with or immersed in water during operation and charging. The user shall assume responsibility for the failure or damage caused by having water leak inside.
- ⚠ As a device with a single LTE antenna, it applies to the scenarios not requiring a high data rate.

Insert SIM Card

Switch off the ControlStick, pull out the dust plug on the left side, and insert nano-SIM card as shown below.

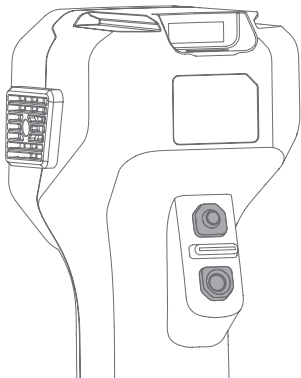


⚠ Warning

- ⚠ ONLY nano-SIM card is allowed. Otherwise, the user shall bear the liability for the damage to the SIM card tray or the product.

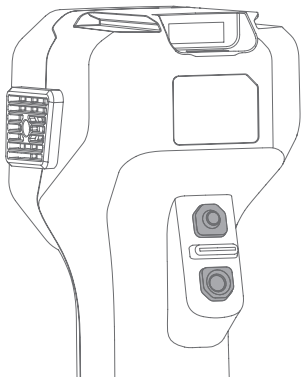
Basic Operations

Takeoff/Landing



- Long press the two height control buttons simultaneously for 3s to have the drone take off and hover at a height of 2.5m.
- While the drone is flying or hovering, short press the "Ascend/Descend" button to have the drone ascend or descend. Long press both buttons to have the drone land on the ground.

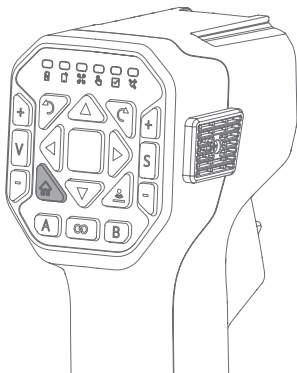
Height Control



- Press and hold the "Ascend" button to have the drone climb up. Release to make it hover.
- Press and hold the "Descend" button" to have the drone descend. Release to make it hover.

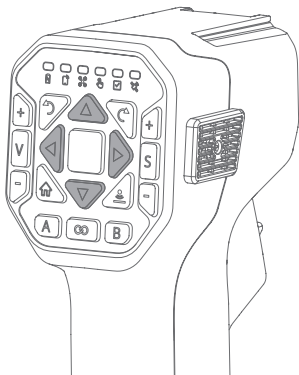
⚠ While pressing and holding the "Descend" button, the drone will descend to a height of around 2m at most.

Return



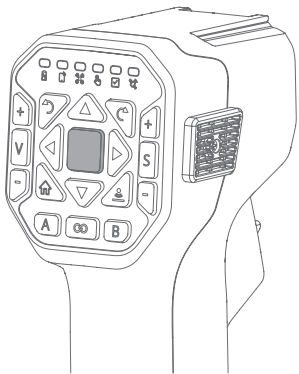
- Long press the "Return" button to return the drone to the home point.

Pitch/Roll



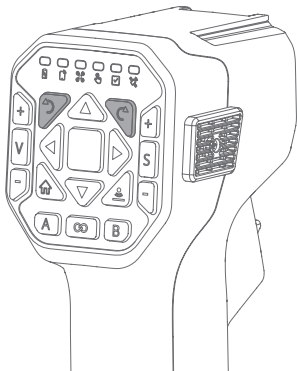
- Short press the "Forward/Backward" button to control the pitch of the drone. Release to make it hover.
- Short press the "Left/Right" button to control the roll of the drone. Release to make it hover.

Hover



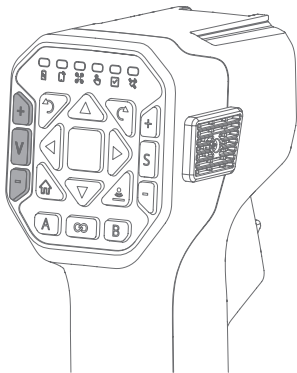
- Short press the "Hover" button to have the drone hover.
- Long press the "Hover" button, along with a voice prompt saying "Autonomous Flight", to disable Control Mode and activate Autonomous Flight Mode.

Yaw



- Short press the "Turn Left" button to swivel the head of the drone to left. Release to make it hover.
- Short press the "Turn Right" button to swivel the head of the drone to right. Release to make it hover.

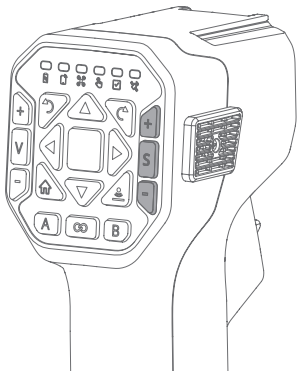
Speed Control



- Short press the "Speed+" button to have the drone fly faster.
- Short press the "Speed-" button to have the drone fly slower.
- Short press the "Speed Voice Prompt" button (V) have it speak the speed.

 The drone flies at the speed range of 0.5~6m/s. Every time you press the "Speed+/Speed-" button, it will accelerate/decelerate by 0.5m/s.

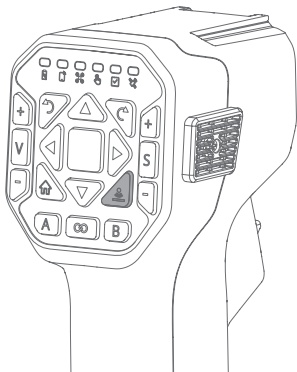
Spraying/Spreading Control



- Short press the "Increase Spraying/Spreading Rate" or the "Decrease Spraying/Spreading Rate" button to increase or decrease spraying/spreading rate.
- Short press the "S" button to enable or disable Spraying/Spreading Mode.

⚠ A hovering drone is unable to spray/spread.

Terrain-Following Mode Button



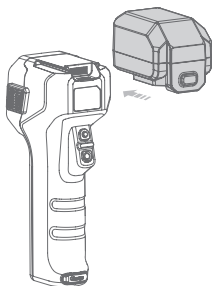
- Press the Terrain-Following Mode Button to broadcast its current status. Press this button twice in a row to switch to GPS Altitude Hold (disable terrain following)/Terrain Following Altitude Hold (enable terrain following).

⚠ Notes

- When the drone is in Autonomous Mode, you may switch to Controller Mode by pressing any control button. If the drone is taken over by the remote control in an autonomous route and enters Controller Mode, you may press and hold the Hover button to get it back to Autonomous Mode where the drone will resume its route.
- When the drone is controlled by the remote control during flight, the flight status indicator on the remote control will go green. In the meantime, the drone will switch to Controller Mode with both the LED light and green light on its tail flashing.

Mapping

When equipped with the differential positioning module (RTK module), the ACS2G ControlStick will be able to assist with mapping.



- Insert the differential positioning module (RTK module) into the top of the ACS2G ControlStick. When "Module inserted" is heard, and after a few seconds "Positioning module connected", the positioning module is now properly inserted.

Description of Remote Control Status Indicator

When the remote control is off, press the power button to view its current battery level.

LED Behaviour		Description
1 Light Solid	●	1%-20%
2 Lights Solid	● ●	21%-35%
3 Lights Solid	● ● ●	36%-50%
4 Lights Solid	● ● ● ●	51%-65%
5 Lights Solid	● ● ● ● ●	66%-80%
6 Lights Solid	● ● ● ● ● ●	81%-100%

Check the power indicator for its current battery level.

Power Indicator 		Status	Description
Solid Green Light		Power ON	51%-100%
Solid Yellow Light			21%-50%
Solid Red Light			1%-20%
Flashing Red Light (rapid)		Quick Charging	1%-20%
Flashing Yellow Light (rapid)			21%-50%
Flashing Green Light (rapid)			51%-99%
Solid Green Light			Full

Flashing Red Light (slow)					Slow Charging	1%-20%
Flashing Yellow Light (slow)						21%-50%
Flashing Green Light (slow)						51%-99%
Solid Green Light						Full

When the remote control is on, check each indicator for the status of the remote control and the drone.

Terminal 		Description
Solid Green Light		Controller network normal
Solid Red Light		Controller network error
Off		Disconnected
Device 		Description
Solid Green Light		Communication normal
Solid Red Light		Communication error
Off		Disconnected

Caution

 When the battery level is below 5%, the remote control will keep playing "Low Battery" and switch itself off after one minute. Please ensure that the drone returns or lands before the remote control is switched off.

Control status 		Description
Solid Green Light		Manual
Off		Automatic
ACS2 RTK 		Description
Flashing Green Light (slow)		Rover mode, positioning
Solid Green Light		Rover mode, RTK ready
Solid Red Light		Rover mode, position error
Solid Yellow Light		Non-rover mode, RTK disabled
Off		Non-rover mode, No RTK connected

Specifications

Model	ACS2G
Dimensions	76mm×60mm×177mm
Operating Frequency	2.400GHz-2.4835GHz
EIRP	2.400GHz-2.4835GHz CE: ≤ 17dBm, FCC: ≤ 26dBm
2G Operating Frequency	CE: GSM 900: 880 – 915 MHz, 925 – 960 MHz; DCS 1800: 1710 – 1785, 1805 – 1880 MHz FCC: GSM850; PCS1900
2G Maximum transmit power	Class 4 (33dBm ±2dB) for EGSM900, Class 1 (30 dBm ±2 dB) for DCS1800
3G Operating Frequency	CE: WCDMA Band I: 1920 – 1980 MHz, 2210 – 2170 MHz; WCDMA Band VIII: 880 – 915 MHz, 925 – 960 MHz FCC: WCDMA B4 ; WCDMA B2 KCC: WCDMA B1
3G Maximum transmit power	Class 3 (24dBm +1/-3dB) for WCDMA bands
4G Operating Frequency	CE: Band1、Band3、Band7、Band8、Band20、Band28、Band38、Band40 FCC: Band2、Band4、Band5、Band7、Band12、Band13、Band25、Band26、Band38、Band41 KCC: Band1、Band3、Band5、Band7、Band8
4G Maximum transmit power	Class 3 (23dBm ±2dB) for LTE-TDD bands
Operating System Supported	Android、IOS
Built-In Battery Capacity	5000mAh/37Wh
Ambient Temperature for Charging	5°C to 45°C
Max. Signal Range (No Interference/Obstruction)	800m
Charging Voltage/Current	5V/2A、9V/1.5A、12V/1.5A
Mesh Network	Support
Voice Prompts	Support
Operating Temperature	-20°C to 60°C

FCC/ISED Compliance Notice

This device complies with Part 15 of the FCC Rules and ISED licence-exempt RSS standard. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Cet appareil est conforme à la section 15 du règlement de la FCC et à la norme RSS sans licence ISED. Son utilisation est soumise aux deux conditions suivantes:

- (1) Cet appareil ne doit pas causer d'interférences nuisibles, et
- (2) Cet appareil doit accepter toutes les interférences reçues, y compris celles susceptibles de provoquer un fonctionnement indésirable.

Tout changement ou modification non expressément approuvé par la partie responsable de la conformité peut annuler le droit de l'utilisateur à utiliser l'équipement.

For FCC statement: The device complies with specifications when the device is Handheld.

Highest reported SAR value:

Limbs SAR: 3.26W/kg

RF Exposure Information

Aircraft complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC/ISED radio frequency exposure limits, human proximity to the antenna shall not be less than 0 cm during normal operation.

For Remote Controller (model: ACS2G), SAR tests are conducted using standard operating positions accepted by the FCC/ISED with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model is available for sale to the public, it must be tested and certified to the FCC/ISED that it does not exceed the exposure limit established by the FCC/ISED. Tests for each product are performed in positions and locations as required by the FCC/ISED. For Handheld operation, this device has been tested and meets the FCC/ISED RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that contains no metal.

For limb operation, Remote Controller (model: ACS2G) has been tested and meets the FCC/ISED RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that contains no metal and that positions the product a minimum of 0 cm from the limb.

Non-compliance with the above restrictions may result in violation of RF exposure guidelines.

Informations sur l'exposition RF

L'aéronef est conforme aux limites d'exposition aux rayonnements FCC/ISED établies pour un environnement non contrôlé. Afin d'éviter tout risque de dépassement des limites d'exposition aux radiofréquences FCC/ISED, la proximité humaine de l'antenne ne doit pas être inférieure à 0 cm en fonctionnement normal.

Pour le contrôleur à distance (modèle ACS2G), les tests SAR sont effectués sur des positions de fonctionnement standard acceptées par la FCC/ISED, le dispositif émettant à son niveau de puissance certifié le plus élevé dans toutes les bandes de fréquences testées, bien que le SAR soit déterminé au niveau de puissance certifié le plus élevé, le niveau de SAR réel de l'appareil en cours d'utilisation peut être bien inférieur à la valeur maximale. Avant qu'un nouveau modèle ne soit disponible à la vente au public, il doit être testé et certifié conforme par la FCC/ISED qu'il n'excède pas la limite d'exposition établie par la FCC/ISED. Les tests de chaque produit sont effectués à requis par la FCC/ISED. En mode portatif, cet appareil a été testé et respecte les directives d'exposition RF de la FCC/ISED lorsqu'il est utilisé avec un accessoire conçu pour ce produit ou avec un accessoire ne contenant pas de métal.

Pour le fonctionnement des membres, la télécommande (modèle ACS2G) a été testée et répond aux directives d'exposition RF de FCC/ISED lorsqu'elle est utilisée avec un accessoire conçu pour ce produit ou avec un accessoire ne contenant pas de métal et positionnant le combiné au minimum de 0 cm du membre.

Le non-respect des restrictions ci-dessus peut entraîner une violation des consignes d'exposition aux RF.

EU Compliance Statement:Guangzhou Xaircraft Technology CO.,LTD.All Rights Reserved.hereby declares that this device is in compliance with the essential requirements and other relevant provisions of the RED Directive. This equipment must be installed and operated in accordance with provide instructions and the antenna used for this transmitter must be installed to provide a separation distance of at least 0 cm from all persons and must not be co-located or operation in conjunction with any other antenna or transmitter.End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.



Warning: Operation of this equipment in a residential environment could cause radio interference.

"Hereby, *[Guangzhou Xaircraft Technology CO.,LTD.]*, declares that this *[ACS2G Agricultural Control Stick]* is in compliance with the essential requirements and other relevant provisions of 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:
www.xa.com/en"

For the countries that adopt the SAR limit of 4.0 W/kg over 10 grams of tissue. The device complies with RF specifications when the device is Handheld.

Highest reported SAR value:

Limbs SAR: 3.215 W/kg

Importer Name(EU): DRONEUA AGRICULTURE EUROPE Sp. Z O.O.

Importer Address (EU) : 21-007 Melgiew, Janowice 144 str., Poland.

Importer phone number and / or internet contact information: (093)4575757

KCC Warning Message

해당무선설비는운용중전파혼신가능성이있

해당무선설비는전파혼신가능성이있으므로인명안전과관련된서비스는할수

FCC Importer's Declaration of Conformity

Brand name / model number: ACS2G

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Importer Name (USA) : HOMELAND SURVEILLANCE AND ELECTRONICS LLC

Importer Address (USA) : 122 LIVE OAKS BLVD.CASSELBERRY, FL 32707

Importer phone number and / or internet contact information: 46-2381710

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

- ☐ Reorient or relocate the receiving antenna.
- ☐ Increase the separation between the equipment and receiver.
- ☐ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ☐ Consult the dealer or an experienced radio/TV technician for help.

Disclaimer

1. 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 acknowledge, understand, agree to and accept all terms and conditions herein upon using this product.
2. Not being a toy, this product is not suitable for those who are under 18 years old. Please keep children away from this product and be particularly cautious with children present.
3. Please install and use this product under the guidance of the "User Manual/Quick Start Guide". NEVER convert or dismantle this product without permission. Otherwise, user shall bear all the loss arising therefrom while XAG is not held legally accountable.
4. To the maximum extent permitted by law, XAG shall not be reliable for all losses caused by the user's failure to operate under the guidance of the "User Manual/ Quick Start Guide".
5. 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.
6. 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.
7. As exclusion clauses may be prohibited by laws in some countries, your rights may vary in different countries. This does not imply that the content contained herein is necessary invalid.
8. 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 its official website, "Instruction Manual/Quick Start Guide", 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.



info@xa.com



@XAGofficial



@XAG_official



YouTube @XAG Official