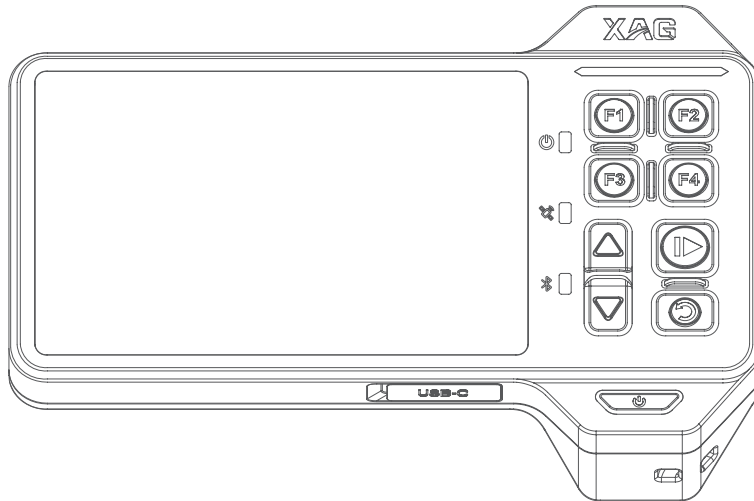


XAG WCP1 Wireless Control Panel

User Manual

Version 1.1 EN



To User

Dear user, thank you for choosing XAG's product.

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

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Add: XSpace, No.115, Gaopu Road, Guangzhou, Guangdong Province, China

Technical Support Team: support@xa.com

Contents

Safety Guidelines	1	App Screen	8
Introduction	2	Operation	12
List of Items	2	Operation Adjustment	13
Main Components	3	End Operation	14
Before Use	4	Specifications	14
Charge	4	Disclaimer	15
Install Control Panel	5	Warning	16
Diagram	6		
How to Use	7		
Power On/Off	7		
Pair with APC2	7		
Firmware Update	7		

Safety Guidelines

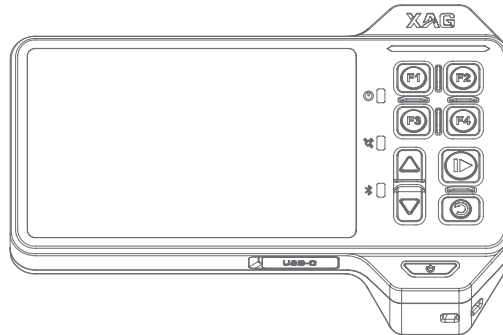
- The operator should hold a driver's license for operating agricultural machinery and strictly observe local laws and regulations on driving farm vehicles.
- It is mandatory to complete the operator training before using this product. Unauthorized operation is not allowed until training is completed.
- Make sure the farm vehicle is well-functioning and free of co-frequency interference before use.
- Check and make sure the APC2 is in RTK status before use, or it will be inoperable.
- While planning a route, it is important to consider the distance between the vehicle and the field boundary, as well as the forest zone. Set a safe distance from the field boundary.
- Make sure the antennas are not obstructed by anything while using the APC2, or it may not work properly.
- If the RTK signal is weak, regain control of the vehicle immediately.
- The driver should not leave the seat or get in or out of the vehicle while the autopilot is engaged.
- While autopilot is engaged, the driver should look ahead to identify obstacles and potential hazards. Be prepared to regain control of the vehicle as it approaches the destination. If the vehicle deviates from the planned route, immediately apply the brakes and stop the operation.
- Before engaging autopilot in towing operations, it is recommended to start with manual driving to save resources and ensure safe operations.
- While planning the route with AB line mode in practice, please mark points based on the field shape to maximize land use.
- Never drive while drowsy, drunk or in a poor mental state so as to prevent accidents.
- Get acquainted with the driving environment, which should be free of obstacles, crowds, and hazardous conditions.
- Keep the device away from heat to avoid damage to the electronic device and other components.

Introduction

The XAG WCP1 Wireless Control Panel (hereinafter referred to as the "control panel") serves as the controller of the XAG APC2 AutoPilot Console. Together with the APC2, it delivers app-free control of the vehicle, reducing driver fatigue and enabling driving assistance.

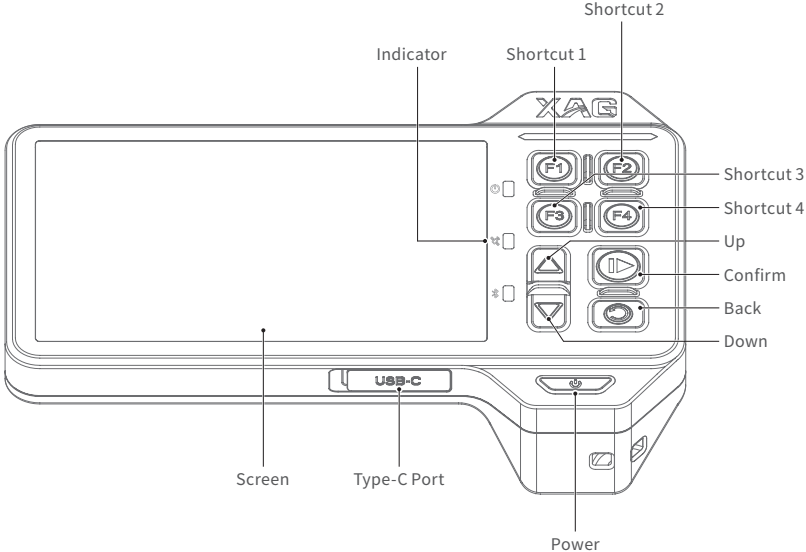
List of Items

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



Control Panel
x 1

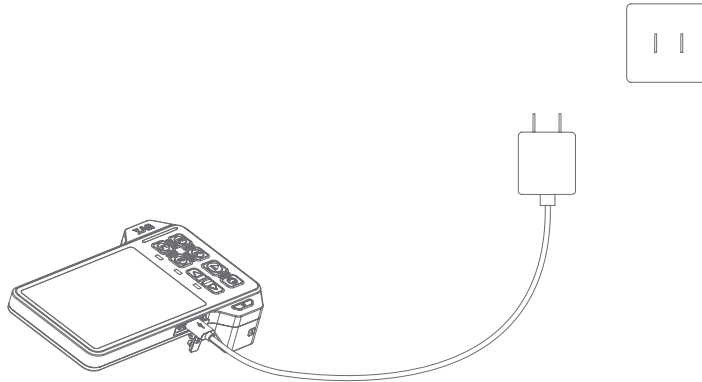
Main Components



Before Use

Charge

Plug the Type-C end into the charging port on the control panel and the USB end into the charger to charge the device. A solid green light indicates that charging is complete.



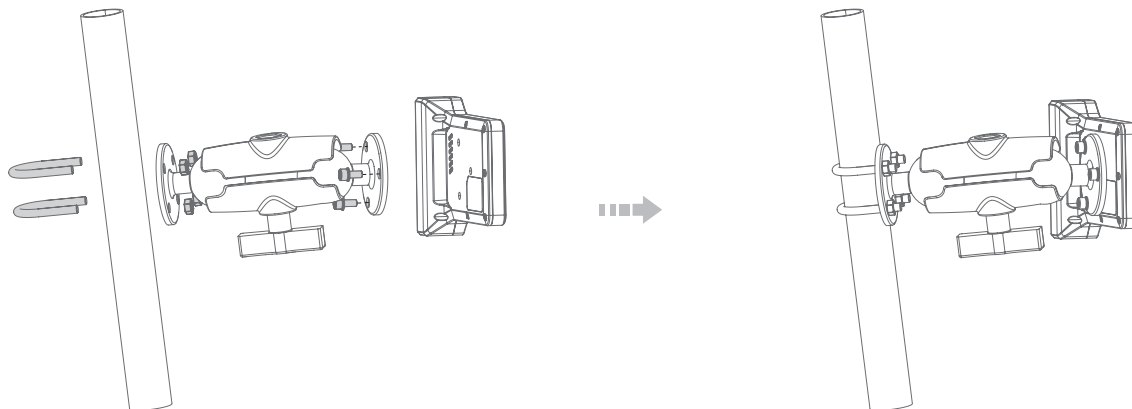
Note

 Charging cable and power adapter are not included in the list of items, users need to buy them by themselves.

Install Control Panel

Steps:

Attach the control panel bracket ^[1] to the vehicle's spindle with U-bolts and nuts, then secure the control panel with M5*12 screws.

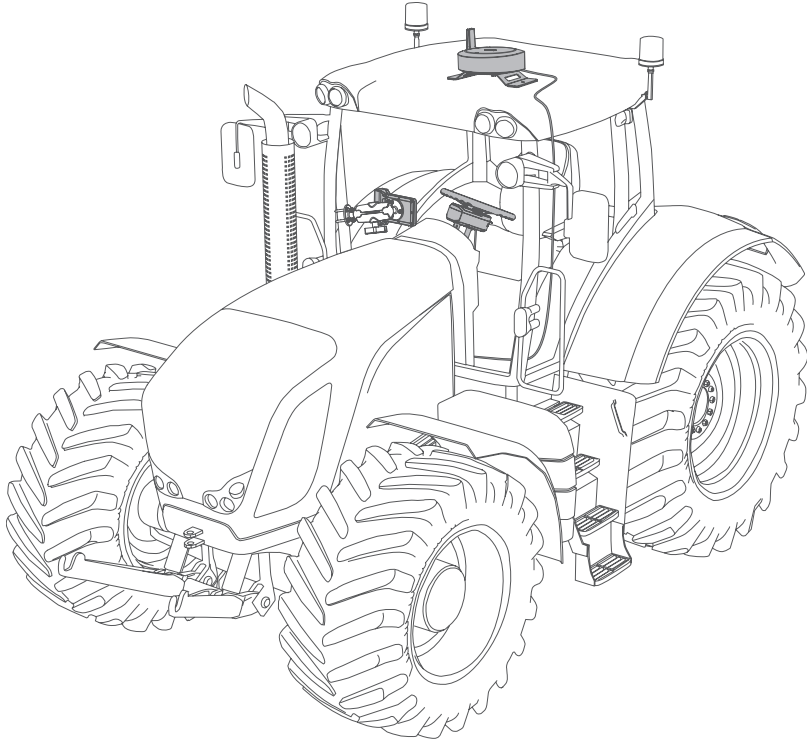


Note

 The bracket that works with the control panel needs to be bought separately.

[1]: The list of items does not come with the bracket. The one shown in the user manual is for reference only. Please refer to the actual item when installing.

Diagram



How to Use

Power On/Off

Power On: Press and hold the power button for 2 seconds, then release it. All indicators will blink simultaneously, and the screen will light up, indicating successful power-on. Once the blinking stops and the power indicator remains solid, it signifies that the initialization is complete and the control panel is ready for use.

Power Off: Press and hold the power button for 2 seconds, then release it. All indicators and the screen will go off, indicating successful power-off.

Pair with APC2

When using the control panel for the first time, you need to pair and connect with the APC2 manually.

1. Turn on the APC2 after powering on the control panel.
2. Select "Start Pairing" in the home screen of the control panel.
3. Push the steering wheel lever as shown on the screen to put the console into pairing mode.
4. The control panel automatically searches for nearby consoles that are ready to pair. Select your device from the search results and wait for the pairing process to complete.
5. After successful pairing, the control panel displays the home screen.

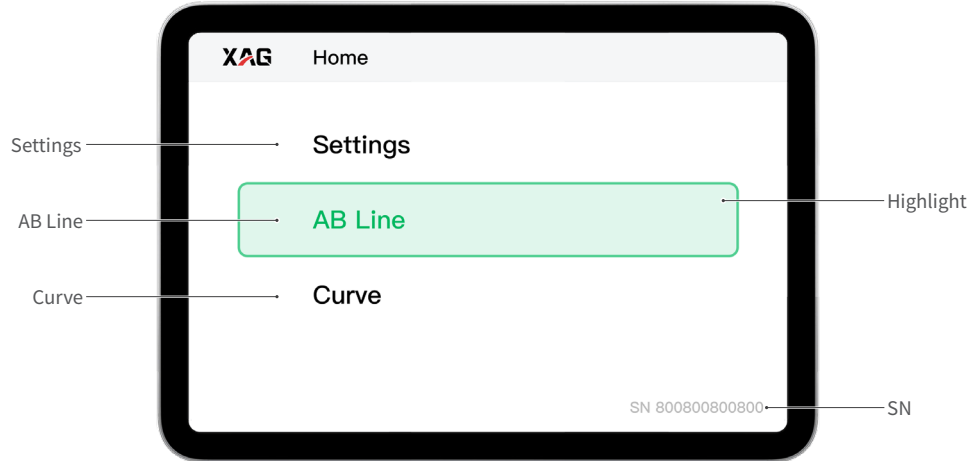
Firmware Update

It is necessary to check if a firmware update is available before using the device. If the firmware is not up to date, please install the latest version.

1. From the control panel home screen, select "Settings" - "Firmware Update" to check for a firmware update.
2. If an update is available, select "Confirm Update". After the download is complete, restart the control panel and the update will be installed automatically. Upon startup, check again if the firmware is up to date. If not, please repeat the update steps.

App Screen

Home Screen (Main Screen)



Settings: Select and go to the Settings screen.

AB Line: Select to start AB Line Operation.

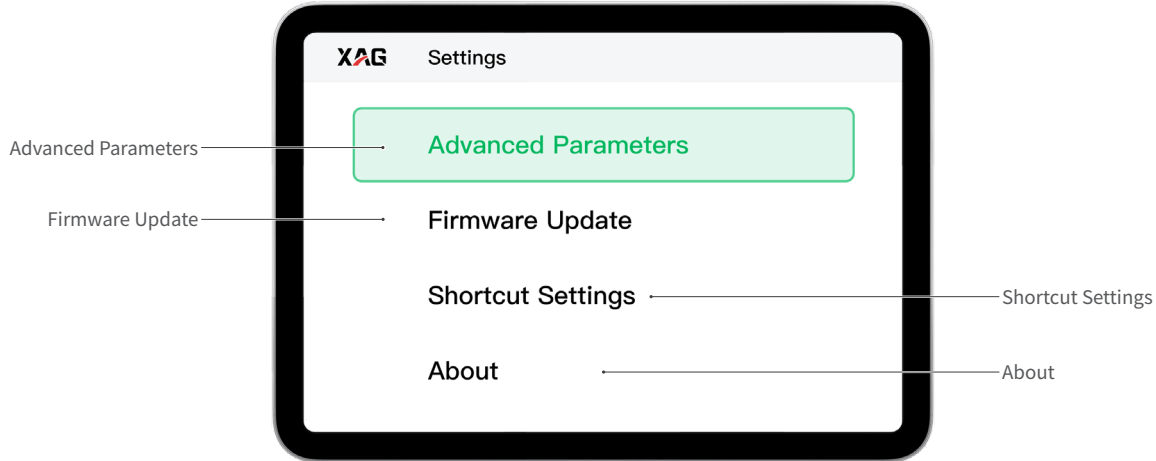
Curve: Select to start Curve Operation.

Highlight: Currently selected option.

SN: The SN of the connected console.

Operation Settings Screen

On the "Home Screen", select "Settings" to go to Operation Settings screen.



Advanced Parameters: Select to set transmission ratio, corner delay factor, transmission factor, and other parameters

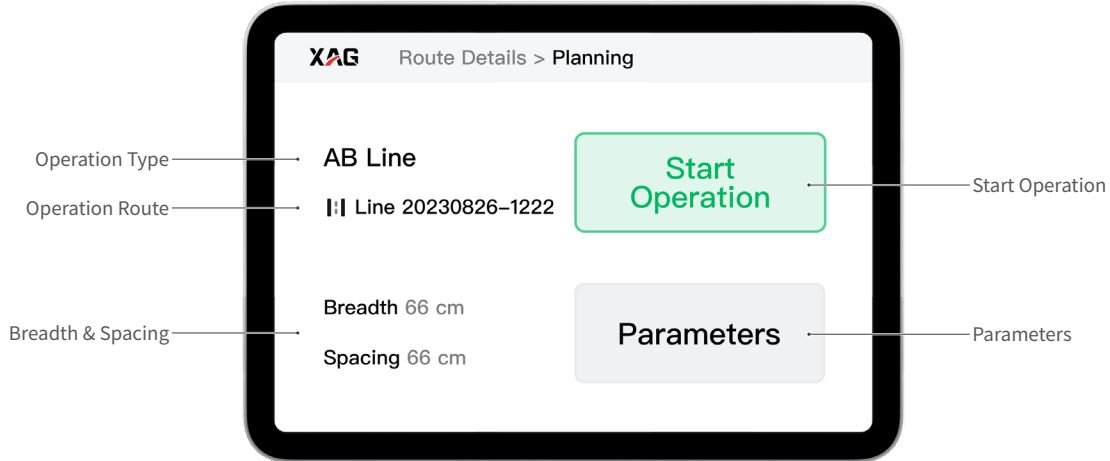
Firmware Update: Select to check new firmware and update

Shortcut Settings: Select to preset shortcut functions for F1~F4 such as spacing calibration, translating route, turning left, turning right, etc.

About: Select to view battery level, SN of the control panel, SN of the bound console, and local Bluetooth address

Operation Planning Screen

On the "Home Screen", select operation type, complete route planning, and go to Operation Planning screen.



Operation Type: Current operation type

Operation Route: Current operation route

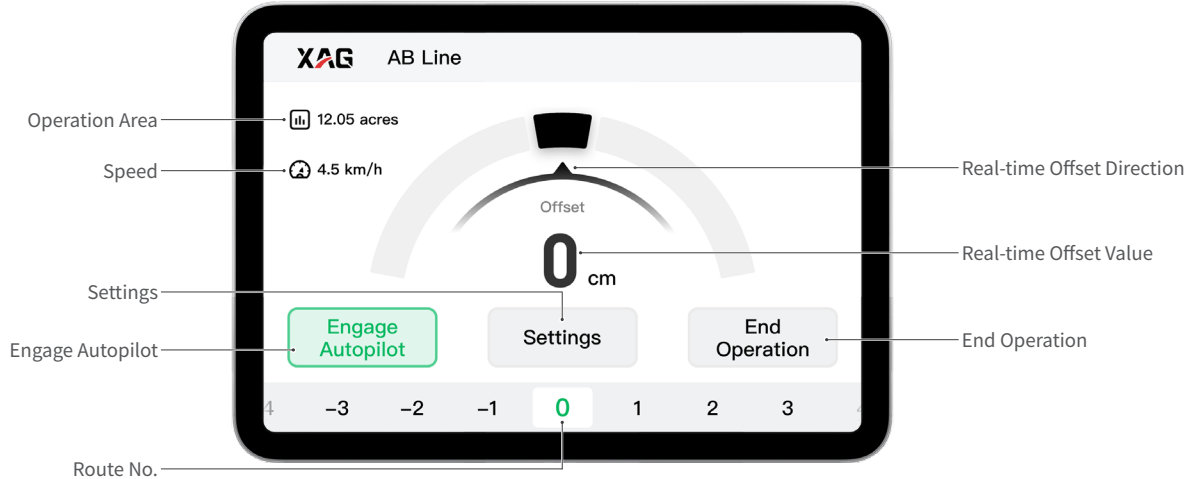
Breadth & Spacing: Current breadth and spacing

Start Operation: Select to start operation

Parameters: Select to set implement's parameters

Manual Operation Screen

During operation, select "Disengage" on the control panel to go to Manual Operation screen.



Operation Area: Current operation area

Speed: Current vehicle's speed

Settings: Select to go to Operation Settings for "Reset All Routes", "Reset Single Route", "Translate All", "Translate Single Line", etc.

Engage Autopilot: Select to engage autopilot

Route No.: Current route No.




Real-time Offset Direction: Show real-time offset direction, and the arrow indicates left and right

Real-time Offset Value: Show real-time offset value




End Operation: Select to end operation

Operation







AB Line Operation

1. Turn on the control panel and select "AB Line".
2. Select "New AB Line" (or select an operation route in the "Straight Route List"). Drive the vehicle to the starting point of the operation route, and select "Point A" on the control panel to mark point A. Drive the vehicle to the end point of the operation route, and select "Point B" on the control panel to mark point B. After marking "Point A" and "Point B", select "Complete" and then a new AB line is created.
3. On the Operation Planning screen, select "Parameters" to set breadth^[1]and spacing^[2]. Press  and  to adjust the figure, and press  to select the figure.
4. After setting the parameters, go back to the Operation Planning screen, select "Start Operation", and the vehicle will automatically enter the auto-driving mode and enter the route closest to its position.

Curve Operation

1. Turn on the control panel and select "Curve".
2. Record a curve route in the operation area (or select an operation route in the "Curve Route List"). Drive the vehicle to the starting point of operation. Select "Record a Curve" on the control panel, and drive the vehicle forward. APC2 will record a curve based on the route that the vehicle travels. After recording a curve route, select "Save" (select "Cancel Recording" to cancel recording the curve and return to the previous screen) to complete curve route recording.
3. On the Operation Planning screen, select "Parameters" to set breadth, spacing and planning mode. Press  and  to adjust the figure, and press  to select the figure.
4. After setting the parameters, go back to the Operation Planning screen, select "Start Operation", and the vehicle will automatically engage in autopilot and head for the nearest route.

Note

-  Press  and  to switch options; press  to confirm selection; press  to return or cancel.
-  Curve planning includes equidistant planning and equiform duplication. Equidistant planning refers to having an equal spacing between curve routes, while maintaining similar route shapes. Equiform duplication, on the other hand, involves maintaining the same shape between curves, with slight deviations in spacing.

[1]: "Breadth" refers to the actual operation width of the implement. Taking a planter as an example, breadth is the distance between the center points of the leftmost and rightmost seed holes on the implement.

[2]: "Spacing" refers to the distance between two adjacent routes. Taking a planter as an example, spacing is the distance between the center points of closest seed holes in adjacent routes.

Operation Adjustment

Breadth/Spacing

During operation, select "Settings" - "Implement Parameters" on Manual Operation screen to modify "Breadth/Spacing" if needed.

1. Select "Disengage" on the Operation screen and park the vehicle. Then select "Settings" - "Implement Parameters" on the Manual Operation screen.
2. Adjust "Breadth" and "Spacing" by pressing the buttons.

Translate Route

During operation, adjust AB line routes by using the functions related to route translation.



1. Select "Disengage" on the Operation screen and park the vehicle. Then select "Settings" - "Reset All Routes" or "Reset Single Route" on the Manual Operation screen.
2. Select "Reset All Routes" to automatically reset the route to where the implement's center axis is.
3. Select "Reset Single Route" to automatically translate the current route to where the implement's center axis is.
4. Select "Translate All" or "Translate Single Line" to set the distance.

Spacing Calibration

Implement offset may occur upon installation or after long-term use, resulting in inconsistent spacing during autonomous driving. Spacing calibration would be necessary to correct any deviations.

1. Select "Disengage" on the Operation screen and park the vehicle in case of inaccurate spacing when the vehicle is on autopilot, and select "Settings" on manual operation screen.
2. Select "Spacing Calibration" on the Settings screen.
3. On the quick Spacing Calibration screen, select "Left Spacing" or "Right Spacing" based on the vehicle's operation route, adjust the spacing measured, and press "Confirm" to complete the calibration.
4. Select "Engage Autopilot" to resume operation. If inaccurate spacing reoccurs, repeat the steps of "Spacing Calibration" for optimal offset values.

Note

-  It is recommended that spacing calibration be done after the vehicle has traveled straight along the route.
-  The spacing should be the mean of what is measured at three different points.

End Operation

Upon completion of operation, select " End Operation" after the vehicle stops to end operation.

Specifications

Model	M6CPAPC4B
Dimensions	156×103×33 mm
Input Voltage	3.3~4.2 VDC
Input Current	0.3~-1 A
Battery Capacity	5000 mAh
Wireless Frequency Band & EIRP(CE)	2402-2480 MHz for BLE: < 4 dBm
Operating System	XAG1.0
Resolution	320×480
Screen Size	4 inches
Screen Brightness	≥ 700 nit
Communication	Bluetooth
Max. Signal Range (No Interference/Obstruction)	5~10 m
Operating Ambient Temperature	-20°C ~ 60°C
Storage Ambient Temperature	-20°C ~ 60°C (within a month)
Product Executive Standard	Q/JF 038-2023
Compatible with	XAG APC2 AutoPilot Console

Disclaimer

1. Please read this Disclaimer carefully before using this product, as it has much to do with both operational safety and your legitimate rights and interests. You shall be deemed to have read through, acknowledged, understood, agreed to, and accepted all the terms and conditions as well as information stated herein upon the use of this product.
2. Not being a toy and with certain safety risks, this product is NOT suitable for those who are under 18 years old, or those who have not legally acquired agricultural vehicle licenses required by the existing laws and regulations in the area where the product is used. Please keep those who have not legally acquired agricultural vehicle licenses away from this product and be particularly cautious with people and animals present.
3. This product is an optional accessory for the XAG APC2 AutoPilot Console, one of the XAG APC AutoPilot Console series solely for agricultural use. Please carefully read this User Manual before using this product. When turned on as instructed in this User Manual, with all instructions followed, a properly functioning battery, and data indicated normal, this product will provide you with safe and satisfactory autonomous driving service.
4. User pledges to use this product within its field of use for legitimate purposes only and agrees to the terms and conditions herein as well as possible policies and norms formulated by XAG.
5. XAG understands that user may have purchased insurance including but not limited to property insurance and third-party liability insurance for the agricultural machinery owned or used. User shall evaluate, confirm, and verify whether the use of this product on agricultural machinery violates the terms of the aforesaid insurance. XAG assumes no liability for all economic and legal issues resulting from user's violation of the aforementioned.
6. XAG understands that in accordance with laws and regulations, agricultural machinery under warranty enjoys warranty (after-sales) service. User shall evaluate and confirm whether the use of this product on agricultural machinery violates the terms of warranty service set by agricultural machinery manufacturers as well as the terms of warranty (after-sales) service provided by the agricultural machinery manufacturers. XAG assumes no responsibility for the aforesaid user's ineligibility to legitimately enjoy warranty (after-sales) service for agricultural machinery resulting from the use of this product.
7. Issues caused by user's unauthorized modifications to the APC2 or use of the autopilot on agricultural implements or machinery not specified in the User Manual are not covered by the warranty. Any economic or legal liability arising therefrom will be borne by the user.
8. To the maximum extent permitted by law, under no circumstances shall XAG offer any implicit or explicit guarantee for this product, including but not limited to implicit guarantees pertaining to vendibility, fitness for a particular use, or non-infringement.
9. To the maximum extent permitted by law, XAG shall not be liable for any losses caused by user's improper operation. In addition, XAG shall not be liable for any indirect, consequential, punitive, accidental, special, or exemplary damages, including any loss incurred as a result of your purchase, use, or inability to use the product (even if you have been advised of the possibility of such loss).

10. 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, except for the liability or amount to be borne by XAG otherwise stated in the legally binding final verdict or ruling by judiciary accounting for XAG's violation of laws and regulations or obligations.
11. On any account, the purchaser or user shall comply with the laws and regulations of the country and region where the product is used. XAG assumes no liability arising from the violation of laws and regulations by the purchaser or user.
12. As exclusion clauses may be prohibited by laws in some countries, your rights in different countries may vary. This does not imply that the content contained in this Disclaimer is necessarily invalid.
13. To the extent permitted by law, XAG reserves the right for the final interpretation and revision of the terms and conditions stated herein. XAG also has the right to update, modify, or terminate these terms and conditions via its official website, User Manual, online app, etc., without prior notice.

Warning

User is required to read through the User Manual and obtain a legal agricultural vehicle license or operator certificate accredited by XAG (or recognized by existing laws, regulations, and policies). Otherwise, improper operation of the product may cause serious injury to the user or others, or cause damage to the product and property loss. Safety awareness is of great importance during operation. This product is NOT suitable for those who are under 18 or over 60 (included) years old. Do NOT use the parts that are not provided or suggested by XAG. Please install and use the product in strict accordance with XAG's User Manual.

FCC/ISED Compliance Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

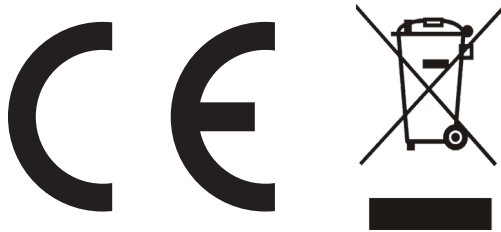
This equipment complies with FCC and Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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

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.

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 20cm 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 [*XAG WCP1 Wireless Control Panel*] 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/service/downloads”

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

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

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

FCC Supplier's Declaration of Conformity

Brand name / model number: M6CPAPC4B

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.

Suppliers Name(FCC): Pegasus Spray LLC

Suppliers Address (FCC): 2235 79th Ave NE, Medina, WA 98039, USA

Suppliers phone number and / or internet contact information: +1 (503) 866-1228

