



Operator's Manual

www.seedmaster.ca/axis

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INTRODUCTION

Thank you for purchasing a new SeedMaster Axis System. This manual will assist you in operating your Axis Tablet efficiently.

If you encounter any problems, contact your dealer for clarification or correction. It is important to us, your dealer, and to you that all SeedMaster products maintain a solid reputation.

We are building our company's reputation not only on a quality product, but also on providing quality advice and fast response to service requirements. Our objective is to keep a high resale value on used units, so the positive image you pass on to your neighbors is as important to you as it is to us in the long term.

WARRANTY

Your SeedMaster Axis Camera System comes with a one-year parts warranty that warrants the system to be free of all defect in material and manufacturing. Within the period of this warranty, SeedMaster Manufacturing will repair or replace any part proving defective in material or manufacturing free of charge. All warranty repairs must be processed by a SeedMaster Dealer.

This warranty does not apply to any costs, repairs or services for the following:

1. Service calls to explain the use of the product.
2. Repairs necessitated by use other than what is designated for the product.
3. Damage resulting from misuse, abuse, accidents, alterations, or improper installation.

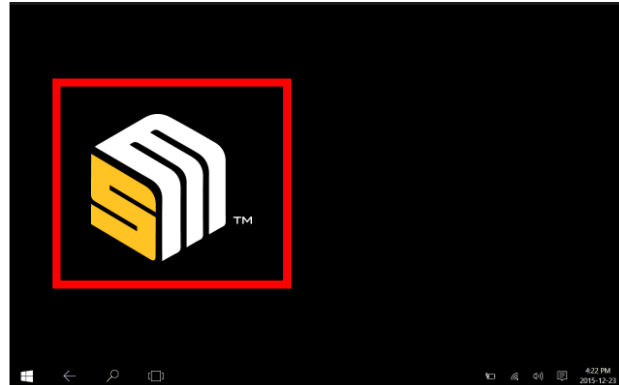
SEEDMASTER AXIS STARTUP

POWERING TABLET & LOADING AXIS

Power the tablet on by pressing and holding the power button for 5 seconds. After the tablet turns on, it will begin to boot into the SeedMaster Axis program. When you see a black page with a "SM" logo on it, your tablet is ready for use.

- Touch the SM Logo to begin.

*NOTE: If the tablet asks for a password to log in, the password for the tablet is **seedmaster**.*



AXIS HOME SCREEN

The Axis Home Screen lays out the Axis Tablet's available apps. The left side of the tablet displays the apps. The tiles can be resized to either a box or a rectangle by touching and holding the tile for 2 seconds. After resizing, the apps might be pushed to page two. To access page two, simply touch on the grey dot on the bottom of the screen or swipe to the left from inside the app tiles.



The app tiles can also be organized. Touch and hold on the app tile for 5 seconds, then drag and drop the tile to its new desired location. It will swap places with the tile that you drop it on.

SIGN IN PAGE

To access the sign in page, touch “Sign in” at the top right-hand corner of the screen.



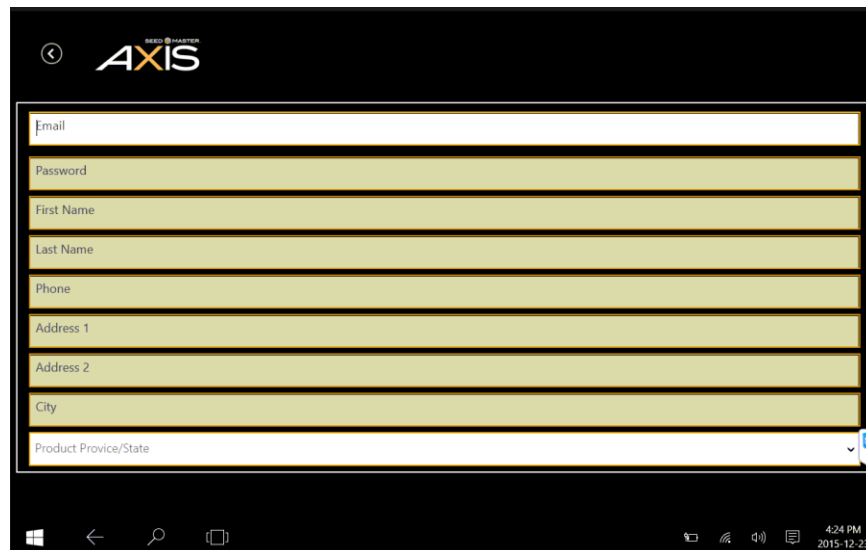
REGISTRATION

To register your Axis tablet for personalization and Cal Weight Note Book, touch the “Register” button.



After touching the Register button, fill out the Registration information completely. Scroll to the bottom of the page and touch the Register button to submit your Axis registration.

NOTE: If you have downloaded the SeedMaster app to your Smart Phone and registered on the native app, you can use that information to sign in. Continue to the “Sign In” section for more information on signing in to your Axis Tablet.



The image shows a registration form for the Axis tablet. The form is titled "AXIS" and includes fields for Email, Password, First Name, Last Name, Phone, Address 1, Address 2, City, and Product Province/State. The form is displayed on a tablet screen with a Windows logo and navigation icons at the bottom.

SIGN IN

To sign into your Axis Tablet, enter your registered Email Address and Password.



The image shows a sign-in form for the Axis tablet. The form has two input fields: Email and Password. Below the fields is a yellow "Sign In" button. The form is displayed on a tablet screen with a Windows logo and navigation icons at the bottom.

Forget Password

If you have forgotten your password, touch on the “Forget Password” button and enter your registered email address into the space provided. After entering your email address, touch the “EMAIL MY PASSWORD” button.



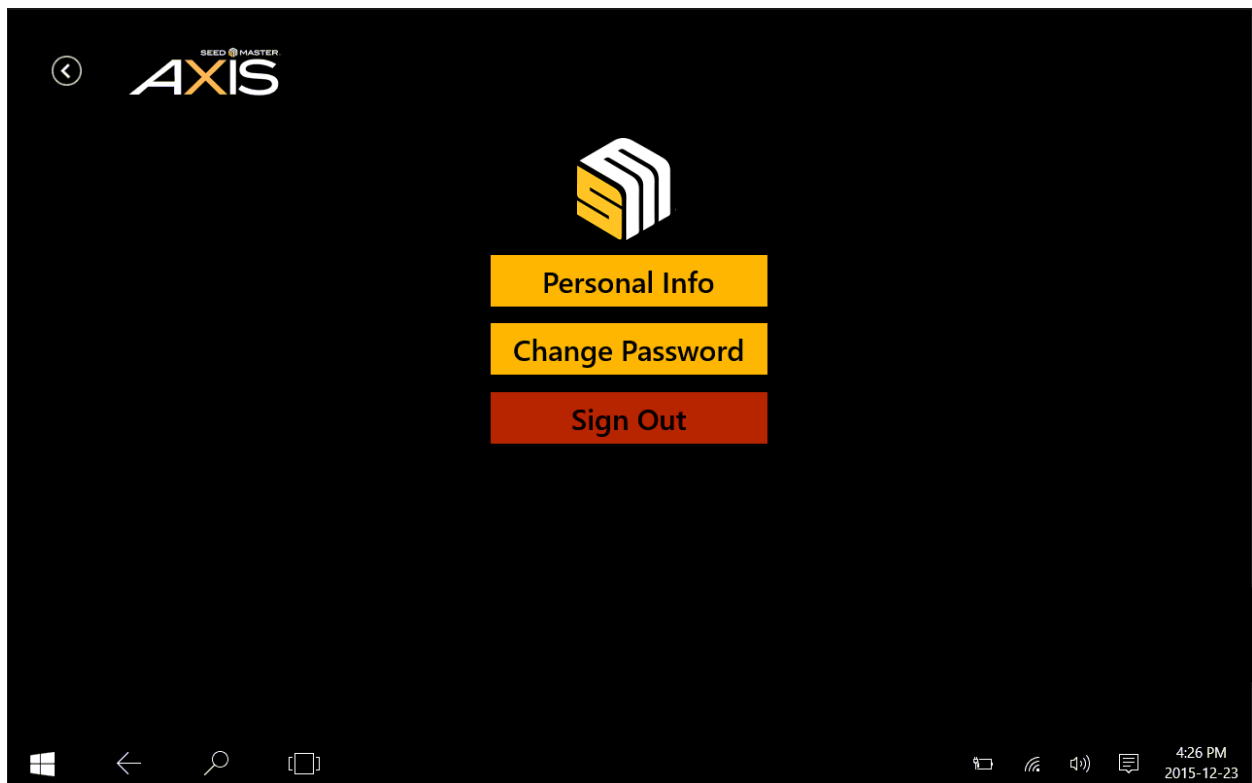
Personalized Icon: Touch on the personalized profile icon to change your profile picture. After touching on the icon, you can browse to a picture located on your Axis Tablet.

NOTE: You can take a picture with the camera app beforehand to use for a profile picture.

Personal Info: Once you have signed in, you can check your personal information by touching on the “Personal Info” button. Your personal info can also be edited by accessing this same page.

Change Password: To change your login password, touch on the change password button and input a new password.

Sign out: To sign out of the Axis, tablet touch the “Sign Out” button



SETTINGS PAGE



Access the settings page by touching on the “SETTINGS” Icon. The settings page allows for quick configurations and connections to different WIFI networks or Bluetooth devices.

WIFI Settings: Touch the WIFI Settings tile to load the WIFI settings page.

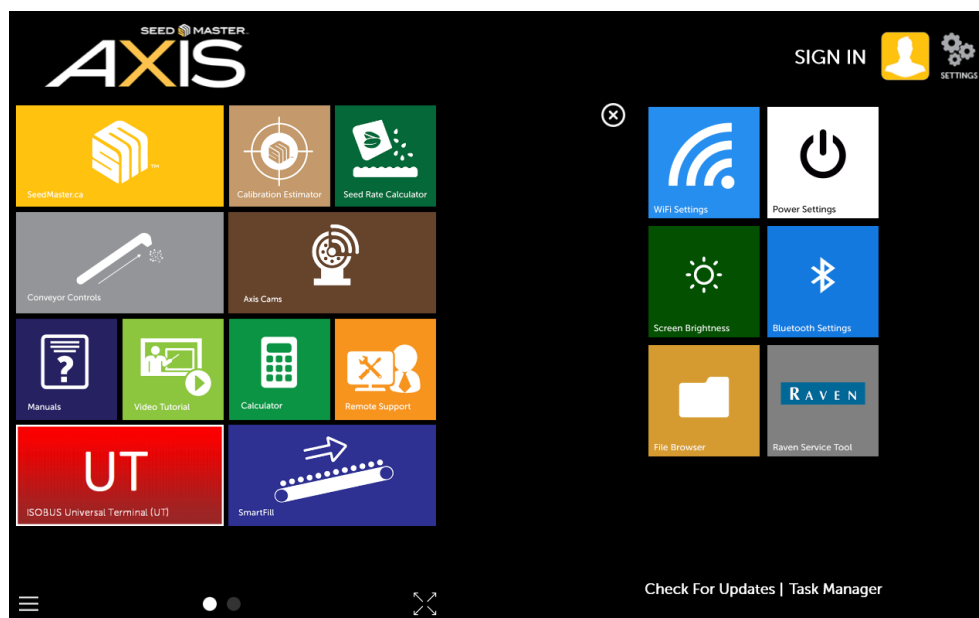
Power Settings: Touch the Power Settings tile to access the power options. You can power down, restart, hibernate, or just simply put the tablet to sleep.

Screen Brightness: Touch the Screen Brightness tile to adjust your screen brightness.

Bluetooth Settings: Touch the Bluetooth Settings tile to load the Bluetooth settings page.

File Browser: Touch the file browser tile to access your traditional “Windows” folders. If you have taken pictures and want easy access to them, you can use file browser. If you have stored other manuals on your tablet, this is a quick and easy way to access them. **NOTE:** *You may need to add your favorite folders for quicker access.*

Raven Service Tool: The Raven Service Tool allows for updating Raven CAN or ISOBUS Nodes or ECU's. The Raven Service Tool CAN Adapter needs to be hooked to the tablet and CAN system before use.



AXIS APPS

SEEDMASTER WEBPAGE APP



Touch the SeedMaster Website tile to load the SeedMaster webpage.

NOTE: An active WIFI connection is required to access this webpage.

SEED RATE CALCULATOR



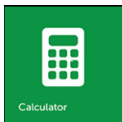
The Seed Rate Calculator will estimate how much seed you need to plant to obtain a desired plant population.

CAL WEIGHT ESTIMATOR



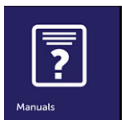
The Cal Weight Estimator is a 4-part app. Page one of the Cal Weight Estimator is the Estimated Cal Weight Calculator. Page two of the app is where you can submit your Cal Weights that were used in the field for future reference. Those submissions end up in the Cal Weight Note page found on page three. On page four, you will find the Corrected Cal Weight Calculator used for double-checking calibrations.

CALCULATOR



A standard calculator to do quick math.

MANUALS



A library of SeedMaster Operator and Parts manuals.

NOTE: An active WIFI connection is required to download any NEW manuals.

VIDEO TUTORIALS



A SeedMaster specific library of how-to-videos for the end user.

NOTE: An active WIFI connection is required to access these videos.

NOTE: All SeedMaster specific apps contain the SeedMaster Logo. The SeedMaster Logo in each app can be used to close the app and return to the AXIS HOME PAGE. Simply touch the SM logo to close.

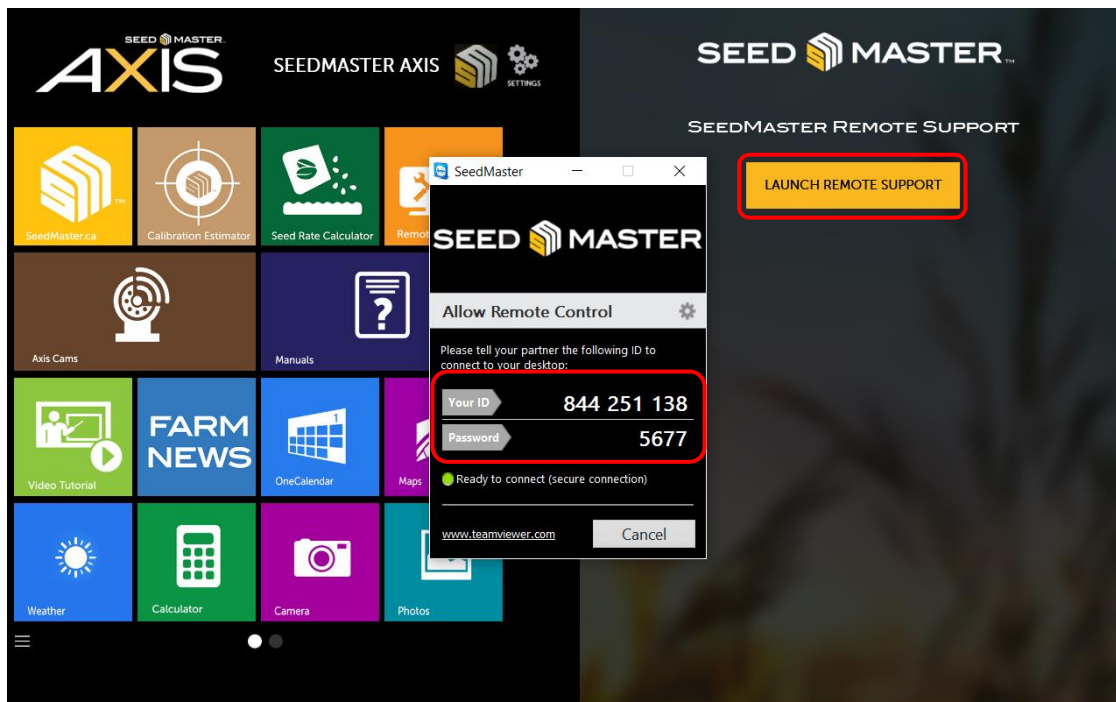


REMOTE SUPPORT APP



The Remote Support App allows for remote assistance to your Axis tablet. To enable remote support, launch the app by touching on the Remote Support tile. Once the app has loaded, touch the "Launch Remote Support" button. After touching the button, the module will begin to load. Please be patient as the module loads. You will get a pop-up screen in approximately 30 – 60 seconds. Select "YES" to finish launching the module. After hitting yes, the Remote Support Module will load in the middle of the screen. It takes a few moments for the connection to establish. Once established, you will see Your ID and Password. You will need to provide this info to the person performing remote support.

NOTE: An active WIFI connection is required for Remote Support.



FARM NEWS APP

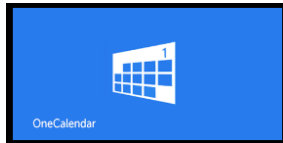


The Farm News App is used to access your favorite agricultural web pages. It hosts a suit of different Web Pages that could quickly be accessed.

NOTE: An active WIFI connection is required to access this webpage.

AXIS TABLET WINDOWS APPS

ONE CALENDAR APP



The One Calendar App is used to stay up to date with SeedMaster events and trade shows. Load the app to see what the next trade show SeedMaster will be attending or what event they will be hosting next.

***NOTE:** An active WIFI connection is required to access the Calendar.*

CAMERA



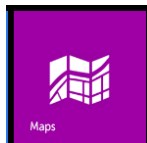
See something you want to capture? Load the camera app and take a quick picture or video.

PHOTOS



To view your pictures, touch the photos app. Support staff can view pictures and videos via Remote Support App.

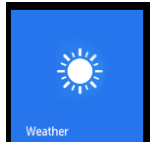
MAPS



See where you are at. Get directions to your next destination.

***NOTE:** An active WIFI connection is required to access the Maps.*

WEATHER



Stay current with the weather and the weather forecast.

***NOTE:** An active WIFI connection is required to access the Weather.*

AXIS CAMERAS

AXIS CAMS APP



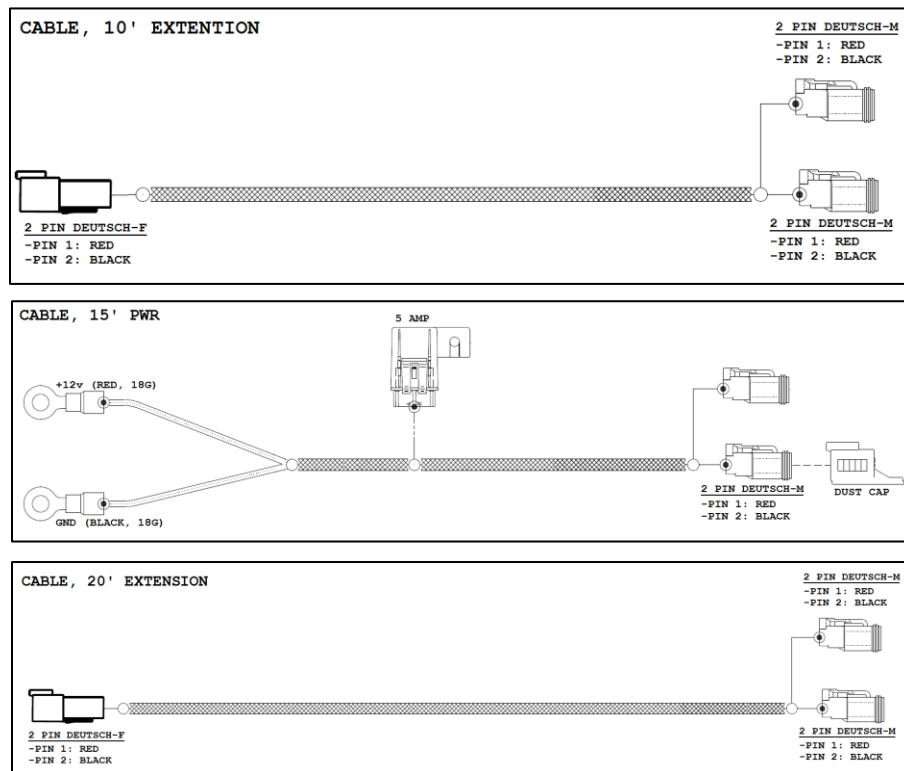
You can connect up to 8 WIFI Cameras to your SeedMaster Axis Tablet. The features include an easy to use user interface, customized view time interval, camera naming, touch to view, and pause to hold on that camera view.

NOTE: An active WIFI connection to the SEEDMASTER AP (Access Point) is required to view the installed cameras.

The Standard Camera Kit comes with 5 Axis Cameras and the necessary components for installation including:

1. 5 x AXIS CAMS (MASTER AXIS CAM and SLAVE AXIS CAMS 2 thru 5)
2. 1 x SEEDMASTER AP (Access Point)
3. 5 x MAG MOUNT AND CAMERA BRACKET
4. 1 x MASTER CAMERA WIFI ANTENNA EXTENSION
5. 1 x 20 FOOT EXTENSION CABLE (SEE IMAGE BELOW)
6. 1 x 15 FOOT POWER CABLE (SEE IMAGE BELOW)
7. 5 x 10 FOOT EXTENSION CABLE (SEE IMAGE BELOW)
8. 1 x AXIS TABLET KIT, Tablet Kit Includes:
 - a. 1 x AXIS TABLET, 1 x AXIS TABLET COVER, 1 x RAM MOUNT, 1 x CAR CHARGER & HOUSE CHARGER, 1 x MICRO USB TO USB 2.0 ADAPTER

CAMERA CABLES



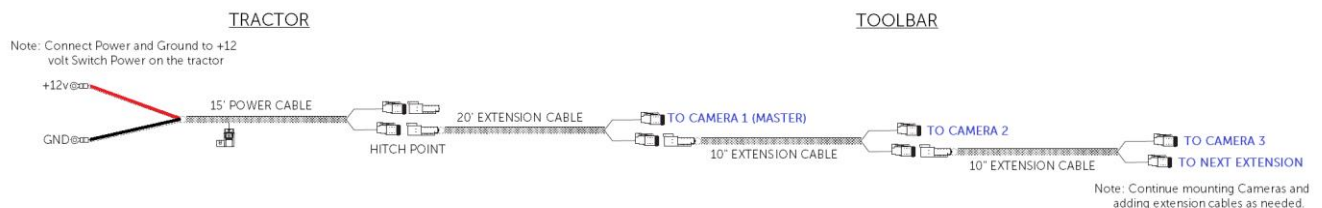
CAMERA INSTALLATION

Axis Cameras are labeled accordingly 1 thru 8. Camera One is the Master Axis Cam. Camera Two is the Slave Axis Cam 2 and so on.

NOTE: When installing the cameras, the Master Axis Cam needs to be mounted so that it is the closest to the CAB of the tractor and in line-of-sight with the SeedMaster AP.

POWERING THE CAMERAS WITH THE POWER CABLE

There are multiple ways to power the camera system. The cameras require a +12-volt power from a 5 to 10-amp power source. A power cable is provided with bare leads if you are pulling power from a switch power source on the tractor. The power cable then should be run to the hitch of the tractor. Then, using either a 10' or 20' extension, you would reach out to your first camera (Master Axis Cam). From there, you will add an extension cable to the last extension cable and keep adding cameras as you work down the line.



Camera Range: The Master Camera connects to the Axis Tablet with a range of 50' depending on interference and obstructions. Then the Slave Cameras connect to the Master Camera with an additional range of 50'.

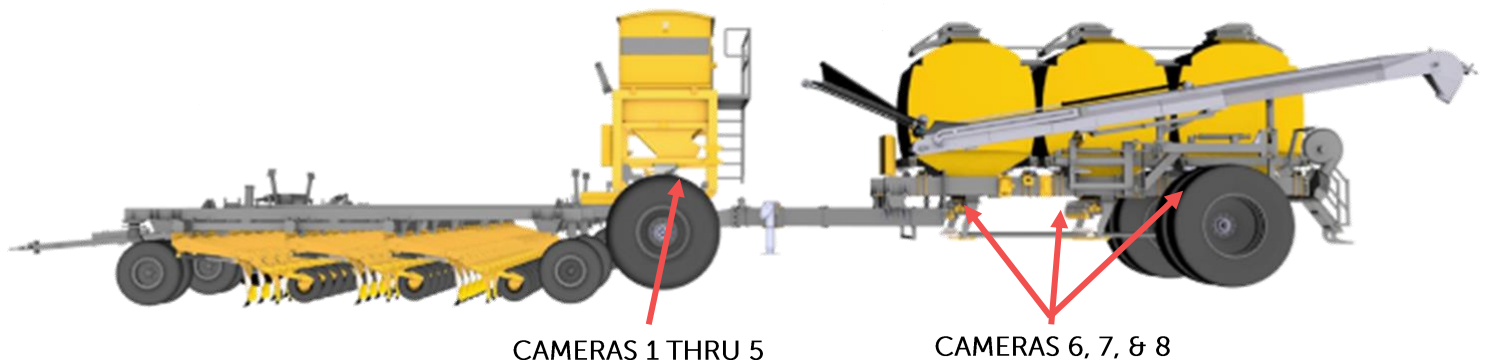
OPTIONAL WIFI ANTENNA EXTENSION

There is an optional extension antenna cable to extend the range of the WIFI signal. This may be needed if the camera is mounted inside a steel tank. Please contact your SeedMaster dealer for more information.

SEEDMASTER MACHINE WITH A VIPER PRO

8 Camera Mounting Example:

If pointing 5 cameras at 5 meters on an OnFrame Tank, start with mounting the Master Camera pointing to Meter 1, then Camera 2 pointing to Meter 2 and so on. Then, mount Camera 6, 7, & 8 on the Nova Tank as desired.



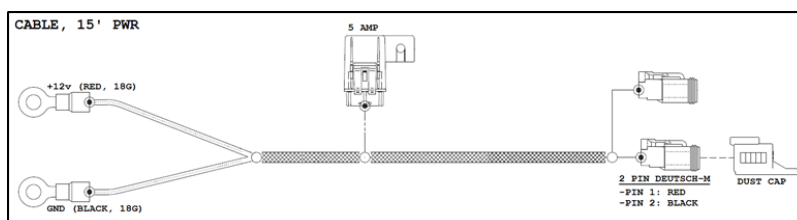
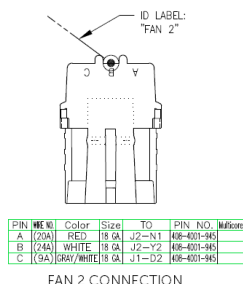
In the example above you will power Camera 1 thru 5 from the Drill Node Cable from the FAN 2 Connection and Camera 6 thru 8 from the Air Cart Node Cable from the Remote Tank Console Connection when your SeedMaster Tank is equipped with a Viper Pro.

Connecting to FAN 2 connection for power on the Drill Node Harness:

The FAN 2 connection consists of three wires: Red, White, and Gray/White.

The **Red wire** in Pin A of the 3-pin weather pack connector is the positive wire or +12v wire. You can splice or connect the Red wire located in Pin 1 in the 2 pin Deutsch from a camera extension or power cable to Pin A/Red Wire of the Fan Connector.

The **White wire** in Pin B of the 3-pin weather pack connector is the negative wire or ground wire. You can splice or connect the Black wire located in Pin 2 in the 2 pin Deutsch from a camera extension or power cable to Pin B/White Wire of the Fan 2 Connector. See full system drawing below for location of the Fan 2 connection.

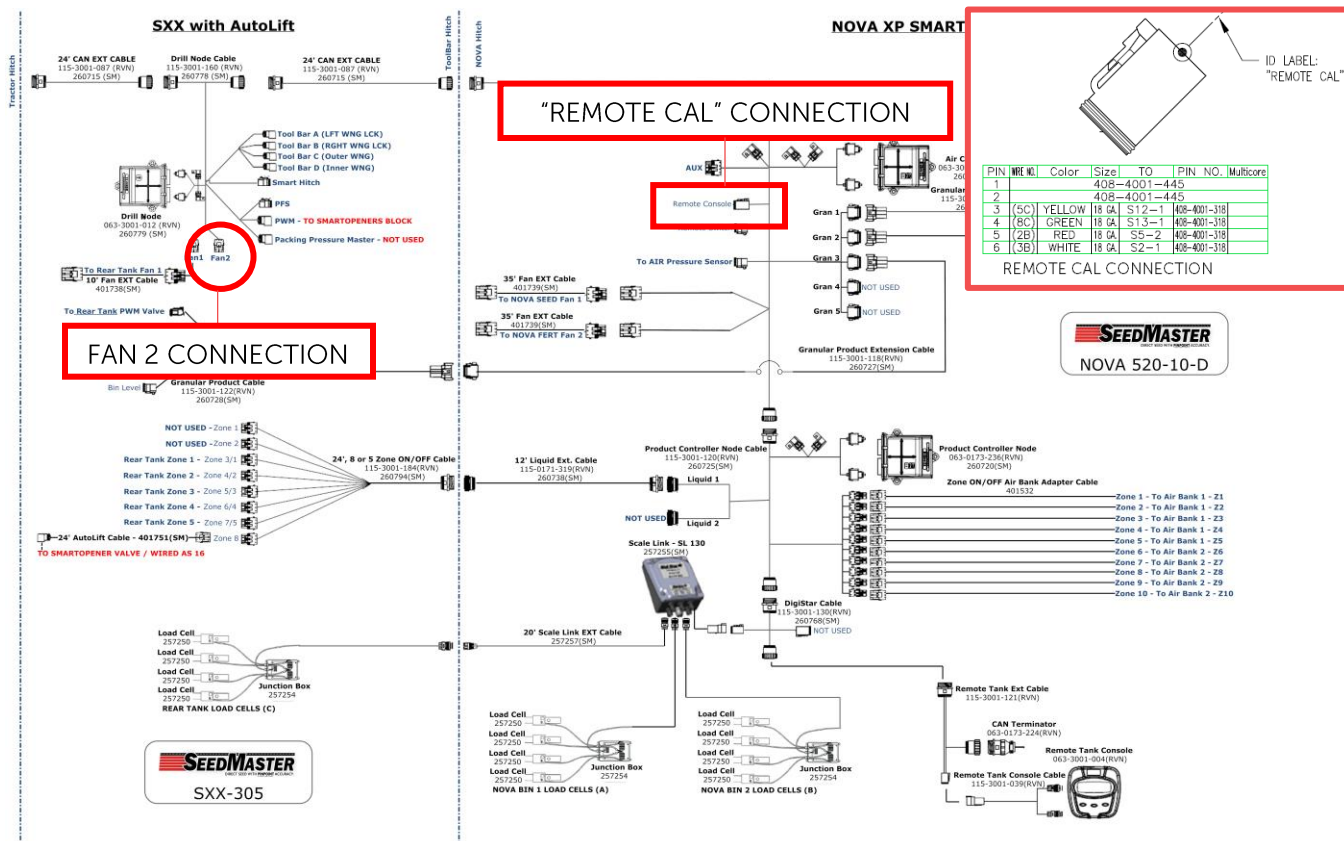


Connecting to Remote Tank Console Connection for power on the Air Cart Harness:

The "Remote Cal" connection consists of four wires: Red, White, Yellow, and Green.

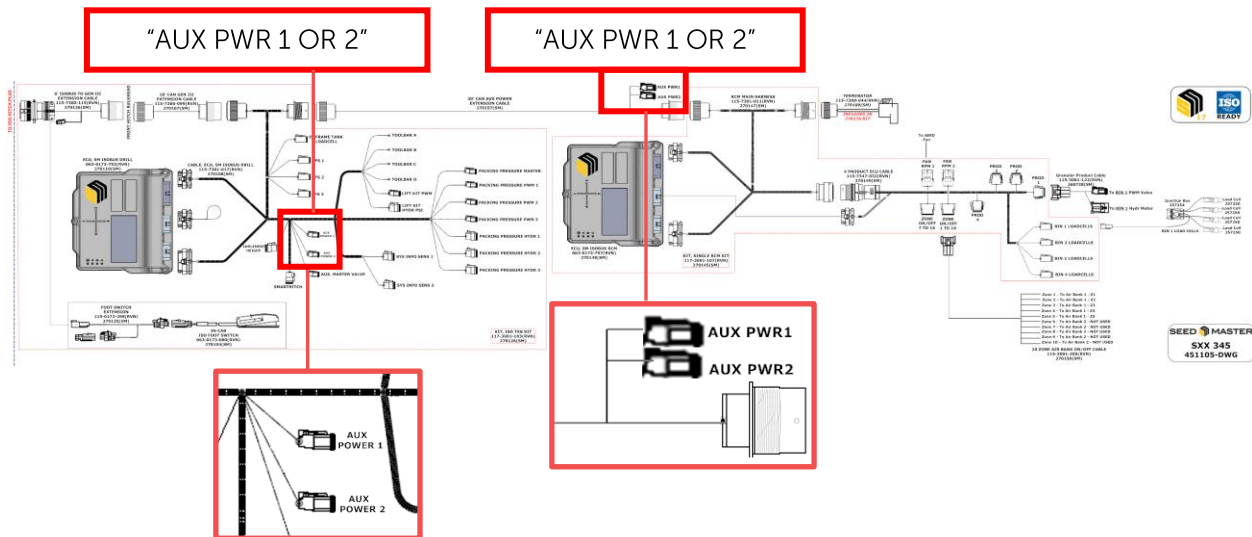
The **Red wire** in Pin 5 of the 6 pin Deutsch connector is the positive wire or +12v wire. You can splice or connect the Red wire located in Pin 1 in the 2 pin Deutsch from a camera extension or power cable to Pin 5/Red Wire of the Remote Cal connection.

The **White wire** in Pin 6 of the 6 pin Deutsch connector is the negative wire or ground wire. You can splice or connect the Black wire located in Pin 2 in the 2 pin Deutsch from a camera extension or power cable to Pin 6/White Wire of the Remote Cal Connector. See full system drawing below for location of the Remote Cal connection.



SEEDMASTER MACHINE WITH A VIPER 4+ / ISOBUS

There are two power points located on SeedMaster Machines equipped with a Viper 4+ or ISOBUS capability. Depending on the camera setup, you can connect to the AUX Power point located on the Drill Node Harness or AUX Power point on the CAN Extension cable located in the panel box. Please see below for the two power points.



NOTE: The Camera Cables will plug directly to the AUX power points.

INSTALLING THE WIRELESS ACCESS POINT (SEEDMASTER AP)

The SEEDMASTER AP access point provides a link in between the Tablet and the Master Camera. It is important to mount the Master Camera's antenna in line of sight of the SEEDMASTER AP. The SEEDMASTER AP will mount on the tractor cab's back mounting bar outside of the tractor. Use the supplied zip ties to mount the SEEDMASTER AP and route the cables accordingly. If mounting the SEEDMASTER AP outside the tractor cab is not an option, it could be mounted behind the seat in the tractor. The most important thing to remember is that the SEEDMASTER AP has a clear view to the Master Camera's antenna. During installation, you can view the signal strength of the SEEDMASTER AP to the Master camera. See the VIEWING SIGNAL STRENGTH topic on page 18.



SEEDMASTER AXIS COMPONENTS CONNECTIVITY DRAWING



SEEDMASTER AP INSTALLED ON TRACTOR CABS BACK MOUNTING BAR

CONNECTING THE TABLET TO THE WIRELESS ACCESS POINT

It is important that the Tablet is connected to the WIRELESS ACCESS POINT (SEEDMASTER AP) for the system to function correctly. Follow the steps below to connect to the SEEDMASTER AP.

1. From the Axis Home Page, touch the Settings Icon.
2. Touch the WIFI Settings Tile. The WI-FI Settings Page will load.
3. Find the WIFI Network Labeled SEEDMASTER AP.
4. Touch on SEEDMASTER AP.
 - a. **NOTE: Put a check mark in Connect Automatically.**
5. Touch Connect.
6. Enter the network security key: 12345678
 - a. **NOTE: Touch inside the area where the cursor is blinking. The key board will pop up. Touch the &123 button on the keyboard (Bottom Left) to get the number pad. Enter 12345678. Touch the X to close the keyboard.**
7. Touch Next to begin connecting. Please wait until the system verifies and connects. Once connected, the SEEDMASTER AP will appear on the top of the list and say No Internet, Secured. You are now connected.
8. Touch the back arrow on the settings page.
9. You are now ready load the Axis Cams app.

AXIS CAM APP OPERATION

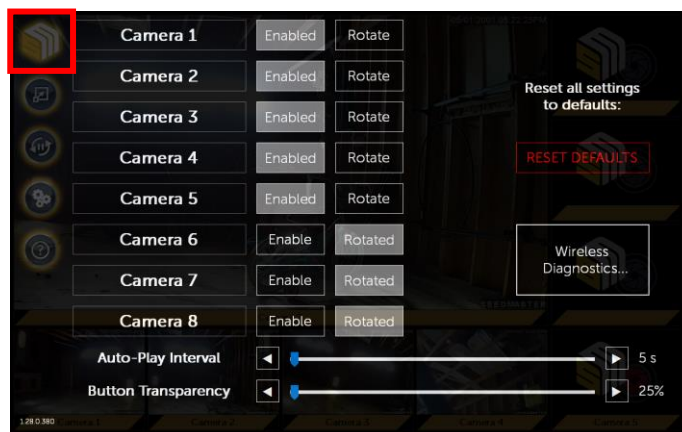
To load the app, simply touch on the AXIS CAMS tile from the home screen. After the app loads, it will look for any installed cameras.

Things to note before loading the app:

1. ALL CAMERAS HAVE POWER
2. THE TABLET'S WIFI CONNECTION IS CONNECTED TO THE MASTER AXIS CAMERA
3. THE MASTER AXIS CAMERA IS LESS THAN 50 FEET AWAY FROM THE SEEDMASTER AP

Follow the steps below to load the Axis Cams App:

1. Touch the Axis Cams Tile on the home page.
2. The app will begin to display any installed Cameras.
 - a. **NOTE: It is important to only enable the cameras that are installed. Touch the settings button to confirm what cameras are enabled. They will be highlighted grey if they are enabled. To disable a camera, touch the "Enabled" button. To enable a camera, touch the "Enable" button.**
3. When finished or to return to the Axis home page, touch the SM logo in the top right-hand corner.



VIEWING SIGNAL STRENGTH

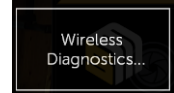
To view the signal strength of all the Cameras to the SEEDMASTER AP, you will need to be connected to the SEEDMASTER AP. Please refer to the previous page before you continue. If you are connected, please follow the procedure below.

1. Touch the Axis Cams Tile on the home page to open the AXIS Cams app.

2. Touch the Settings icon.



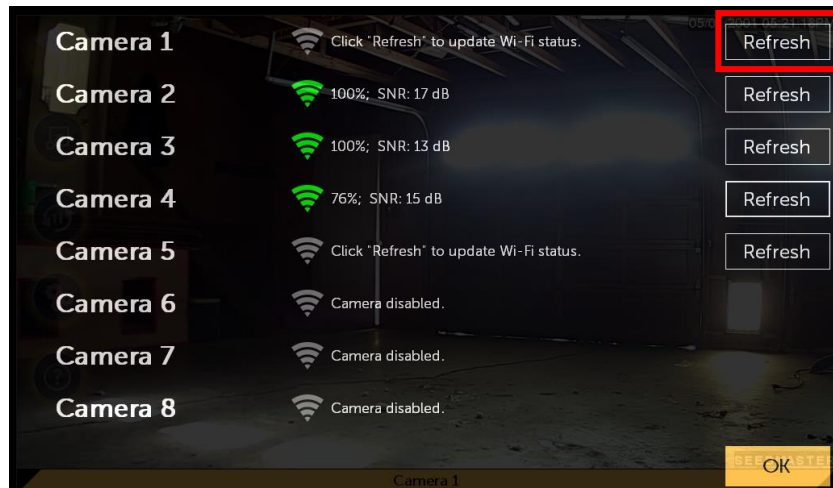
3. Touch the Wireless Diagnostics button.



4. Then Touch the Refresh button for Camera 1. The Wi-Fi signal % will take a few seconds to load.

5. For best performance, a signal strength of 70% or greater is recommended. To improve signal strength, simply reposition the Master Camera External Antenna. Then, touch Refresh on the tablet and it will display the new signal strength. Repeat as necessary.

NOTE: This process can be done with the tablet in hand at the Master Cameras External Antenna. The Master Cameras antenna can be mounted either vertically or horizontally.



6. After positioning the Master Camera's antenna, it is important to check the Wi-Fi signal strength for Cameras 2 thru 8.
7. Starting on Camera 2, touch the refresh button to retrieve the Wi-Fi signal strength. If the signal strength is greater than 60%, continue to the next camera.

NOTE: The system may not be equipped with all 8 cameras. The refresh button only appears for cameras that are enabled. If a camera is enabled and not installed, please disable the camera for optimal performance.

8. If the signal strength is less than 60%, the camera's installed antenna can be repositioned to improve the signal strength. After adjusting the antenna, simply touch the Refresh button to check the signal strength. Repeat as necessary.
9. When finished, touch the Settings button to minimize the settings page.

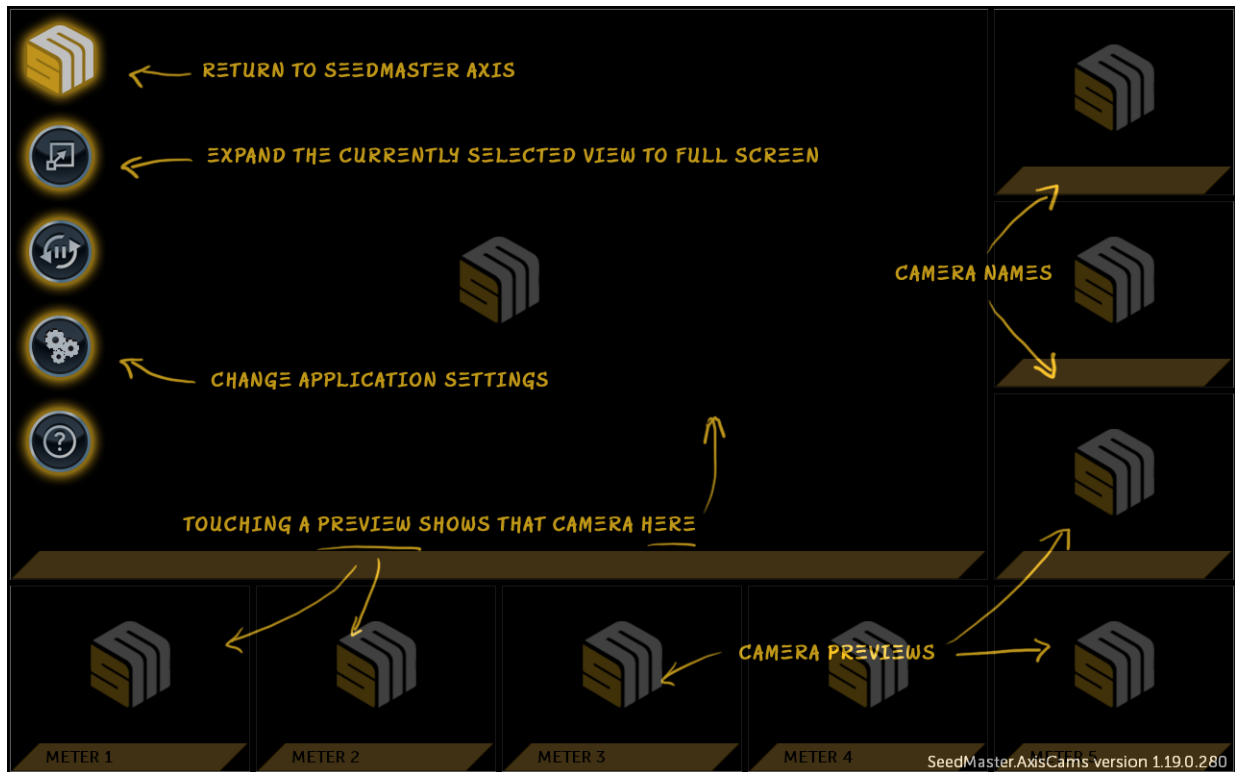
Adjust attached antenna to optimize the signal strength.



NOTE: If 70% signal strength cannot be achieved, an external antenna can be added to the camera. The SeedMaster part number for the 7DB External Antenna is 259959. Please contact your SeedMaster Dealer for more information.

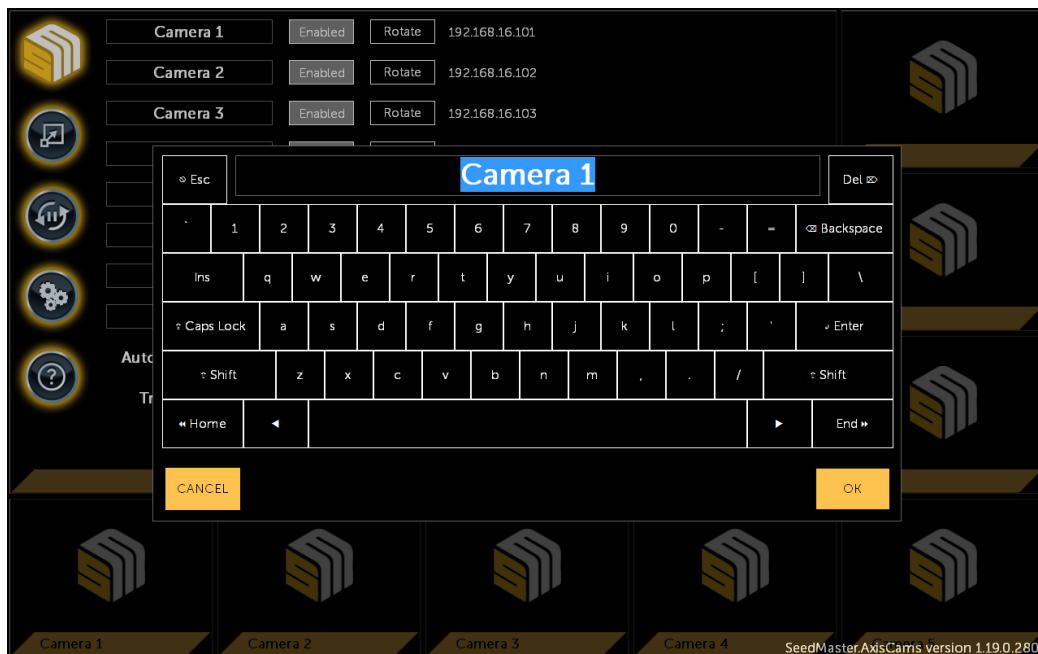
AXIS CAMERAS APP NAVIGATION

The app is designed to be simple and easy to use. The buttons on the right side will allow for different functionality. Touch on the help button (question mark) for the built-in help screen.

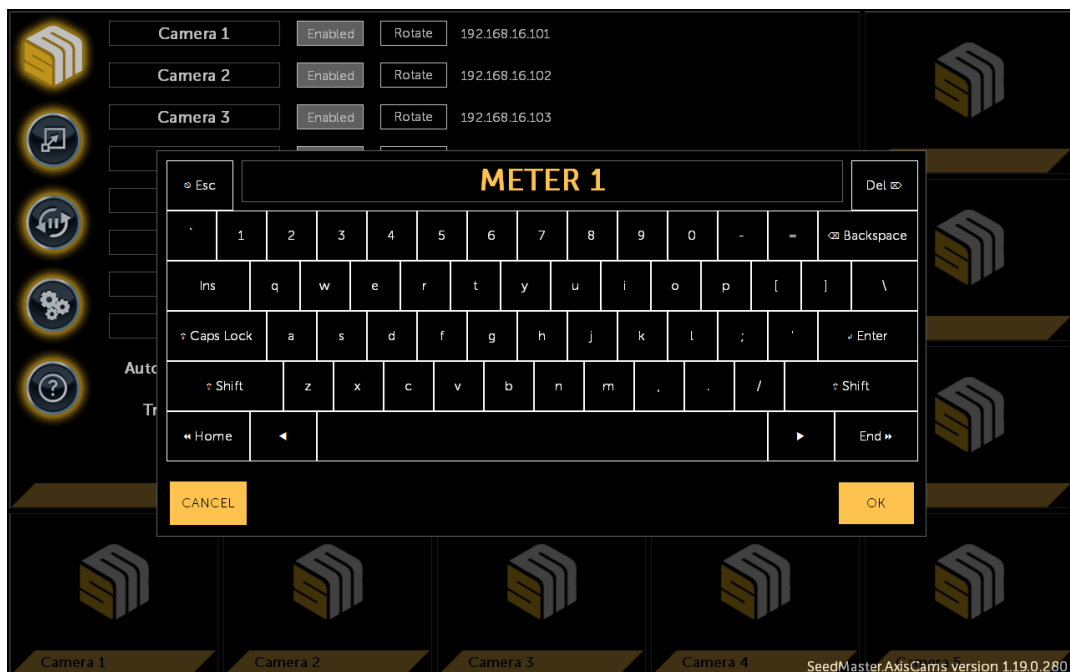


HOW TO RENAME A CAMERA

1. Touch on the settings button.
2. Touch within the name of the camera that you would like to rename ex. Camera 1. A keyboard will pop up and allow you to enter a new name for the camera.



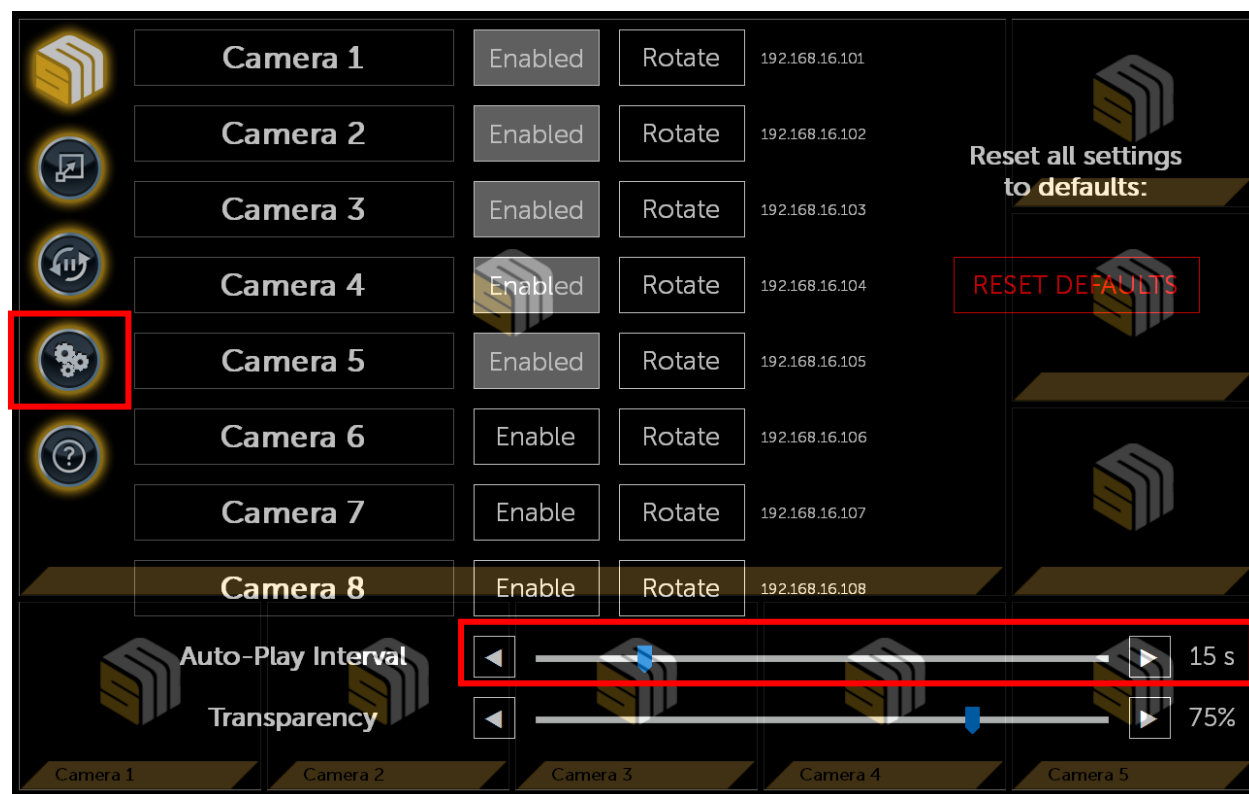
3. Touch "Del" to erase the current text.
4. Enter the new name.
5. Touch "OK" after verifying the new camera name.



6. The camera has been renamed. Repeat if you would like to rename more cameras.
7. When finished, touch the Settings button to minimize the settings page.

AUTO PLAY INTERVAL

The length of time that a camera is displayed on the big viewing window is called “Auto Play Interval”. This can be set from the settings page. Touch on the settings button, then use the slider bar to increase or decrease the time that a camera is displayed in the big viewing window. After setting the desired interval time, touch the settings button again to minimize the settings page.



CAMERA EXAMPLE ON GEN I ULTRAPRO

Screen shot of Camera one on Meter One UltraPro Meter.



Camera mounted pointing at Meter One on a 345BU OnFrame Tank.



AXIS CAMS TROUBLESHOOTING

ISSUE	POSSIBLE CAUSE	SOLUTION
Cameras are not displaying	Cameras are not powered up	Check that the Cameras have power. There will be a green and orange light lit up on the camera cable.
	The Tablet is not connected to the "SEEDMASTER AP"	Check the WIFI Settings to ensure that the tablet is connected to the "SEEDMASTER AP"
	Camera is not enabled	Check that each camera that is installed is enabled. Touch settings button to ensure each installed camera is enabled
Camera Preview areas are not displaying	The connection between the MASTER CAMERA and SLAVE CAMERA has been lost	Reset the App. Touch the SM button in the top right-hand corner to kill the app then touch Axis Cams Tile to start the app.
App crashed	A window has popped up and reads "SeedMaster Axis Cams has stopped working"	Touch either "Cancel" or "Close program" Then reload the App by touching the Axis Cams Tile.

AXIS CAMERA REPLACEMENT PARTS

SM Part Number	Description
300000	Axis 5 Camera Kit
	Axis 8 Camera Kit (300000+300016+300017+300018)
300016	Camera #6 BDL (Includes 10' cable, camera mount and magnet)
300017	Camera #7 BDL (Includes 10' cable, camera mount and magnet)
300018	Camera #8 BDL (Includes 10' cable, camera mount and magnet)
300006	Camera #6 (includes camera only)
300007	Camera #7 (includes camera only)
300008	Camera #8 (includes camera only)
259952	10' Camera cable
259954	15' Camera cable
259953	20' Camera cable
259959	7DB External Antenna

NOTES