



Quick Start

FIELD MANUAL

September, 2020

Nutrien Ag Solutions assembles the components that comprise the AGBRIDGE™ device and sells the device. Components of the device subject to the Part 15 rules of the Federal Communications Commission (FCC) are supplied to Nutrien Ag Solutions by several manufacturers with supporting documentation of compliance with the FCC's rules. See AGBRIDGE™ DRIVE FCC Compliance Information at www.agbridgedata.com. This device complies with Part 15 of the FCC's 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.

12 Easy Steps to get Started

- | | |
|---|---------------|
| 01) Get familiar with AGBRIDGE™. | <i>page 4</i> |
| 02) Secure your AGBRIDGE™ account. | 5 |
| 03) Decide on the best way to receive / send data and implement | 6 |
| 04) Install and Setup the AGBRIDGE mobile app—note all critical settings. | 7—13 |
| 05) Configure the mobile app on the rest of the team’s devices. | 14 |
| 06) Did the AGBRIDGE Drive(s) arrive configured? If yes, skip to Step #9. | |
| 07) Determine the best method for configuring the Drive(s) and configure. | 15 |
| 08) Prepare an AGBRIDGE Drive for installation in the field | 22 |
| 09) AGBRIDGE Drive installation: Refer to the installation instructions provided with each Drive | |
| 10) Get familiar with the AGBRIDGE™ special features. | 23—25 |
| 11) Learn the simple steps for transporting data in the mode you chose. | 26—30 |
| 12) Review recommended practices to fully utilize AGBRIDGE™ | 31 |



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System Overview

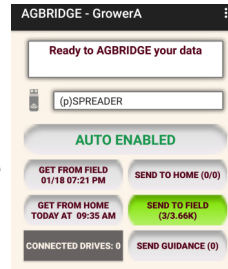


AGBRIDGE Drive

- 12 GB storage capacity
- Stays plugged into display
- Data can only be removed by user's command

AGBRIDGE Mobile App

- Required for Smart Device Mode
- Provides feedback for WiFi Direct Mode
- Can be used to configure an AGBRIDGE Drive
- Provides access to as-applied maps & machine location



Smart Device Mode

- Files are moved to a smart device before transport to the cloud or Drive
- Requires a smart device in the cab
- Data connection in the cab IS NOT required

WiFi Direct Mode

- Files are transported between field and office via any trusted cellular or land-based internet connection
- Does not require a smart device
- Data connection in the cab IS required

Methods for Configuring an AGBRIDGE Drive for operation in the Field

- Connect to the mobile app and use the app to configure some or all aspects of the Drive's configuration
- Connect to the mobile app and allow the app to download the configuration from the AGBRIDGE Cloud Server
- Connect to a trusted WiFi Network and allow the configuration to be downloaded from the AGBRIDGE Cloud Server



Note to Users: Changes or modifications to an AGBRIDGE Drive not expressly approved by AGBRIDGE™ may void the user's authority to operate this equipment.

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Account Setup, Access & Editing

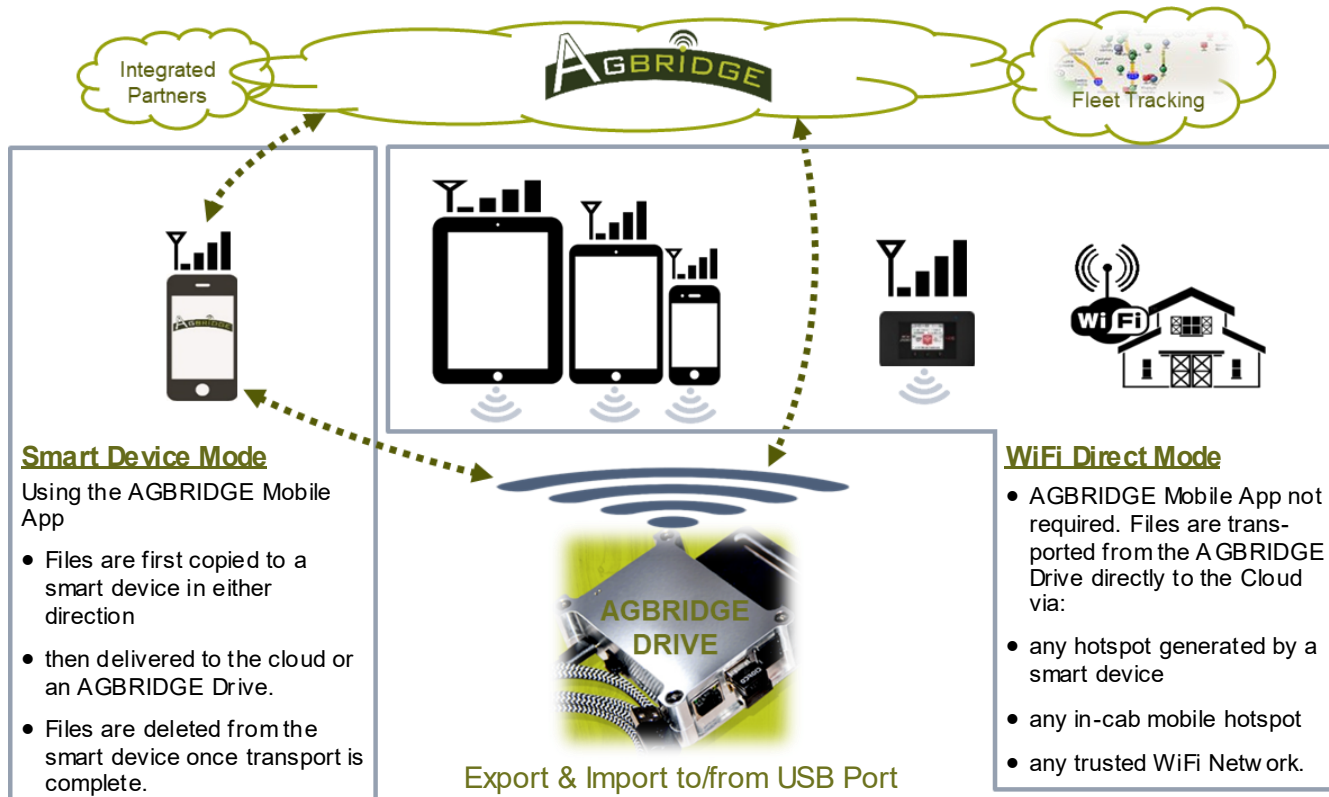
Refer to **Quick Start Manual: Account Setup_Access_Editing** for instructions on the following (*available at www.agbridgedata.com*) :

- ◆ Creating your own secure passwords
- ◆ Editing the account email address
- ◆ Adding and / or Editing Adviser Links
- ◆ Setting up the AGRIDGE ownCloud Sync Client
- ◆ File Management using the AGRIDGE™ web portal
- ◆ Folder Descriptions, Permissions and Notes
- ◆ Tracking and Managing Prescriptions
- ◆ Managing Integrated Partner Connections

Note: *Data will only be transported to Integrated Partners after Connections are established. Data agbridged prior to establishing an integrated partner connection can only be delivered via manual upload.*

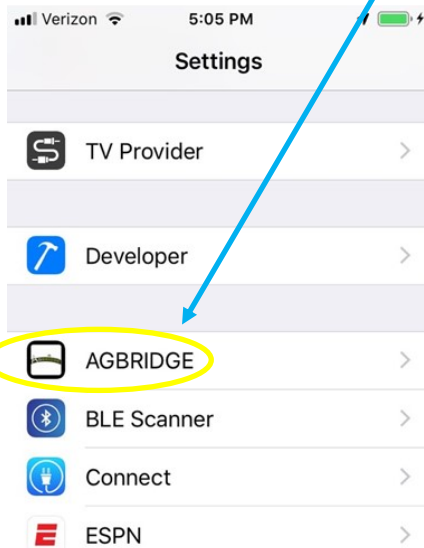


Two Modes: Smart Device & WiFi Direct

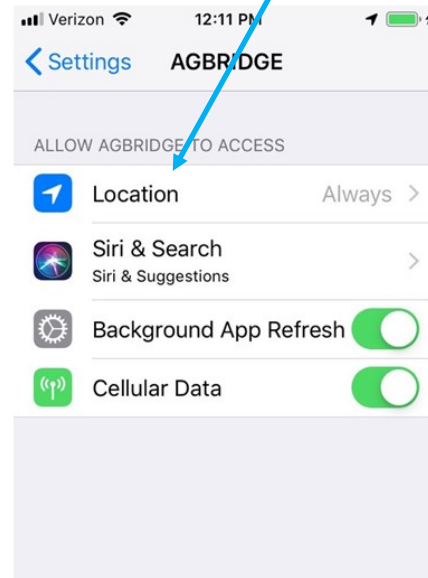


Configure Critical App Settings for iOS Devices

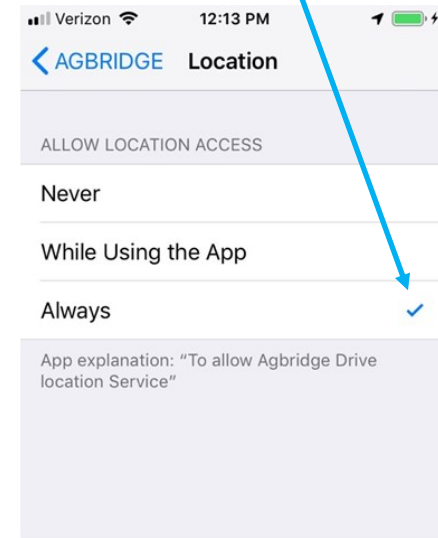
1 Go to "Settings" and select



2 Select Location



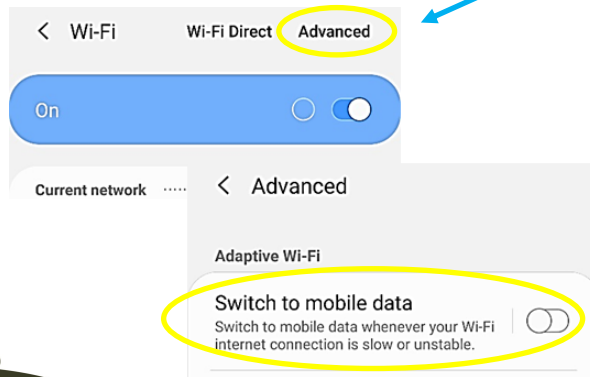
3 Check "Always"



Configure Critical Bluetooth and WiFi settings

Helpful Information:

- AGRIDGE™ uses a Bluetooth connection between the user's mobile device and an AGRIDGE Drive to send commands and protocols
- When operating in Smart Device Mode data files are transported between the user's mobile device and an AGRIDGE Drive via a Wi-Fi network generated by the Drive. The Wi-Fi signal is only broadcast during file transport and therefore is not visible when not in use. Each Drive has its own unique name in the format of Agbridge1, Agbridge2, etc.

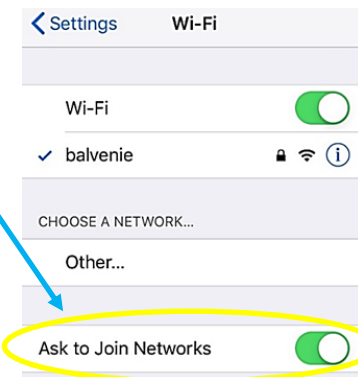


Bluetooth Settings:

- DO NOT conduct a “pair procedure” to connect your mobile device to an AGRIDGE Drive. Your mobile device and the Drive will connect when the Drive is powered on and the mobile app is open, whether in the foreground or background.

Wi-Fi Settings:

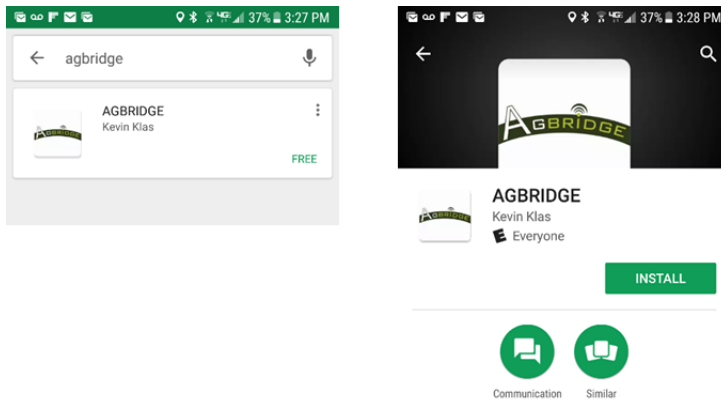
- **Android Devices:** Be sure that “Switch to mobile data” is “off” by going to Wi-Fi settings and then “Advanced”
- **iOS Devices:** Be sure that the “Ask to Join Networks” button is “on” in the Wi-Fi Settings screen.



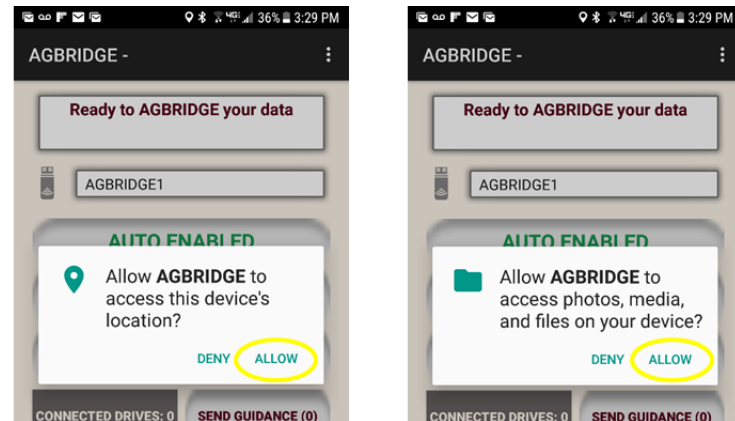
Install the AGRIDGE™ Mobile App

- Download on as many mobile devices as desired (Android or iOS)
- Designate one device as the “master” device to be used for configuring all Drives (*recommended but not restricted*) by entering the Admin Password on the selected device.

1 Download the AGRIDGE™ mobile app



2 Select “ALLOW” for Android installs



- **Note:** If you are using the “data saver” mode on Android 7 or greater devices, you will need to go to phone [settings / data usage / mobile data usage / agbridge](#) and allow **unrestricted data usage**.



Sign in to your account on the mobile app *(Data connection required)*

1 Select

2 Select

3 Enter Account Credentials

Admin Password required to configure AGBRIDGE Drives

Press Save

Confirming Message

Android

iOS

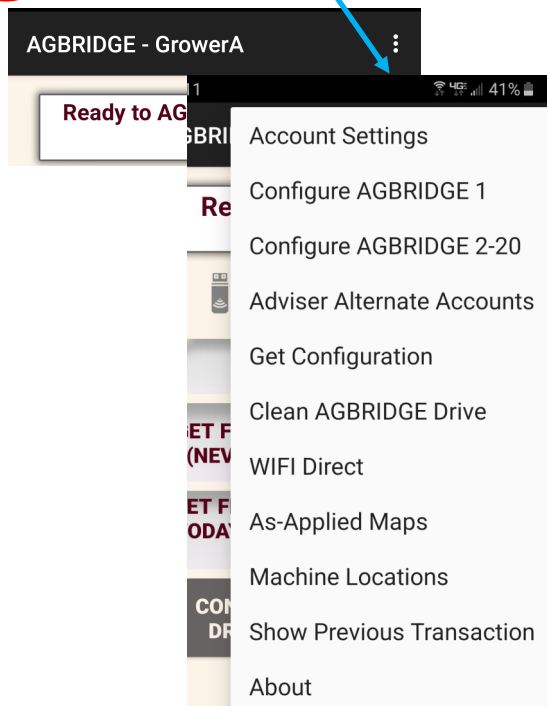
AGBRIDGE

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Navigating the AGRIDGE™ Mobile App

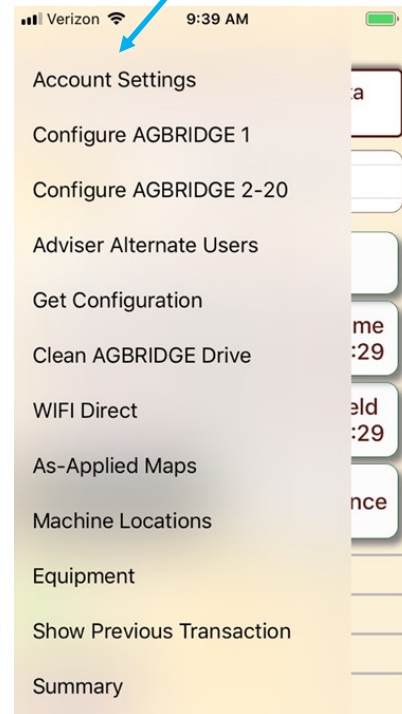
1

Android: Touch to open the Main Menu



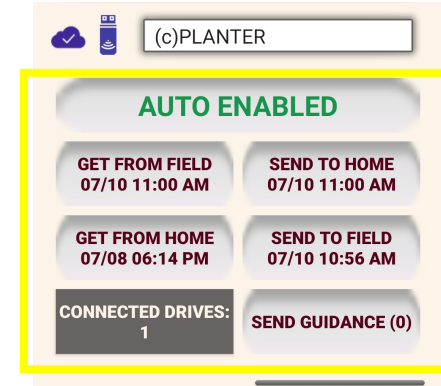
2

iOS: Swipe left to right on the main page to open the main menu



3

COMMAND BUTTONS: Require a "Long Press" to activate



Configure the remaining Account and Device Settings

1

Select How Often To Query the Cloud for Prescriptions:

- 60 Minutes
- 30 Minutes
- 15 Minutes
- 5 Minutes
- Never

SAVE

2

Warn When Upload Size is Greater Than:

- 100 Meg
- 50 Meg
- 10 Meg
- Never

SAVE

Note! 1, 2 & 3 pertain to smart device mode only

5:12 Account Settings

Select Item To Configure

USER NAME: GrowerA

SERVER QUERY: NEVER

UPLOAD SIZE WARNING: NEVER

ALLOWED CELL NETWORKS: ANY

- Auto All
- WIFI Direct Connect Preferred
- Manual Smart Device

DONE

3

Recommend: "4G or better"

USER NAME: GrowerA

Allow Server connection over network

- Any Network
- 4G or better
- 3G or better
- WIFI only

SAVE

4

Refer to next 2 pages for selection criteria

Sets maximum size of data set that can be moved via smart device mode without permission. Recommend: "Never"



Configure “Mode Settings”

Account Settings

Select Item To Configure

USER NAME: GrowerA

SERVER QUERY: NEVER

UPLOAD SIZE WARNING: NEVER

ALLOWED CELL NETWORKS: ANY

Auto All
 WiFi Direct Connect Preferred
 Manual Smart Device

DONE

1

Select the desired Mode Setting. This is a local setting for the Mobile App on a specific smart device. Change this setting as needed.

Auto All – select this setting when preferred method for transporting data is via Smart Device Mode. All data transport is automatic. WiFi transport takes priority over smart device when both are available.

WiFi Direct Connect Preferred – select this setting when preferred method for transporting data is via WiFi Direct Mode. WiFi transport is automatic, while Smart Device Mode is available in manual mode. Long Press GET/SEND/ALL to initiate.

Manual Smart Device – select this setting when preferred method for transporting data is via Manual Smart Device Mode.



Configure the mobile app on the rest of your team's devices

1. Configure all critical App, Bluetooth and WiFi settings on each device. Refer to pages 7 & 8.
2. Download the AGRIDGE™ App to as many devices as desired. Follow the steps on Page 9.
3. Sign in with the account User Name and Password by following the steps on Page 10. It is recommended that the Admin Password only be used with one Master Device.
4. Upon successful login, all Drive configurations will be downloaded to the device.
5. Now configure the remaining settings in the “Account Setting” menu by following the steps on Pages 11—13.
6. Repeat as necessary

Note: A data connection is required for this step!



Configure your AGBRIDGE™ Drives

- Each AGBRIDGE™ Drive is numbered...
AGBRIDGE 1, AGBRIDGE 2, AGBRIDGE 3, etc...
- AGBRIDGE 1 Drives can be configured for use on up to 5 different machines if desired.
- AGBRIDGE Drives can be configured via any of the following methods:
 1. Complete the Drive Configuration Form available on the www.agbridgedata.com website at the time of order
 2. Configure via one of our integrated partner's software platform if available
 3. Configure via the AGBRIDGE web portal www.abridgemobile.com—requires Admin Password
 4. Configure via the AGBRIDGE mobile app—requires Admin Password and a data connection
- Drive configurations are saved on the AGBRIDGE Cloud Server and distributed to all smart devices signed into the account, and to all Drives connected via WiFi Direct.
- An AGBRIDGE Drive has 12 GB of storage



Configure AGRIDGE™ Drives via the AGRIDGE web portal

1 Sign into www.agbridgemobile.com and select “CONFIG” in the upper left-hand corner

2 Select “Configure Drives”

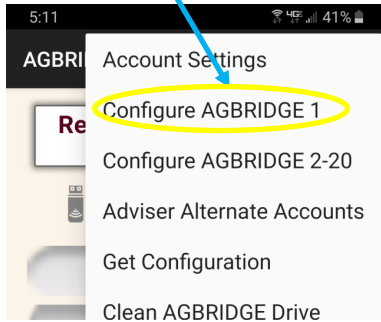
3 Select “Configure WiFi” (for WiFi Direct Mode)

IMPORTANT NOTE: Refer to QUICK START: Account, App & Drive Setup found @ www.agbridgedata.com/manuals for more detailed instructions.



Configure an AGRIDGE 1 in the mobile app *(Data connection required)*

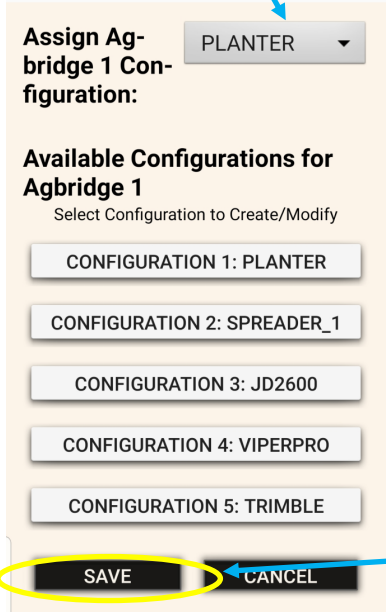
1 Select



Can configure up to 5 different machines to use an AGRIDGE 1 with. Select and proceed to step 3.

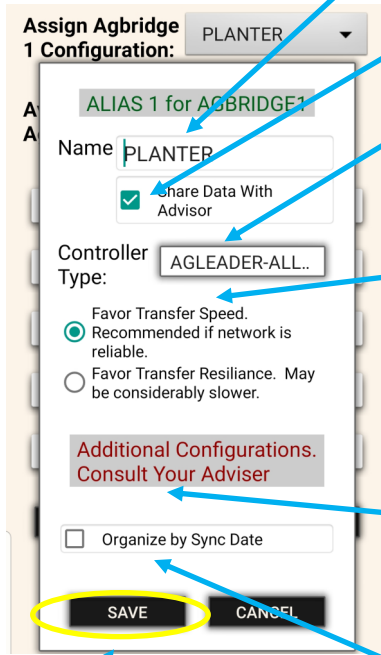
2 Select Alternate Configuration(s) to define

Designates current Drive installation



Press "Save"

3 Configure each machine



Machine Name for each configuration

Share Data? Default ✓

Select Controller type from list (see next pg for selections)

Method of file transfer when in Smart Device Mode. Default is "Favor Speed". Select "Favor Transfer Resilience" when signal is consistently poor.

Default File Structure is same as thumb drive

Consult with Adviser. "Organize by Sync Date" may be best choice for GS2, GS3 and CN1 file sets.



List of Controller Types

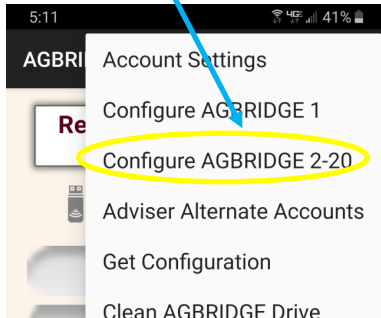
A
t
f
A
A
JOHN DEERE 2600
JOHN DEERE 2630
JD2630 W/SWITCH
JOHN DEERE GS4
PRECISION PLANTING
RAVEN-V4
RAVEN-ALL OTHER
TOPCON
TRIMBLE-ALL
OTHER-FLASH DRIVE



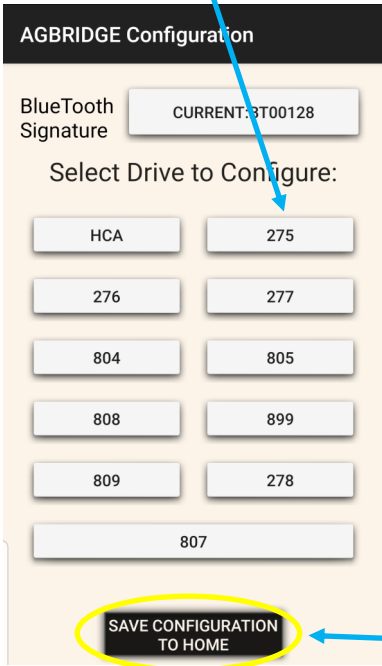
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Configure AGBRIDGE 2 through 10 in the mobile app as needed

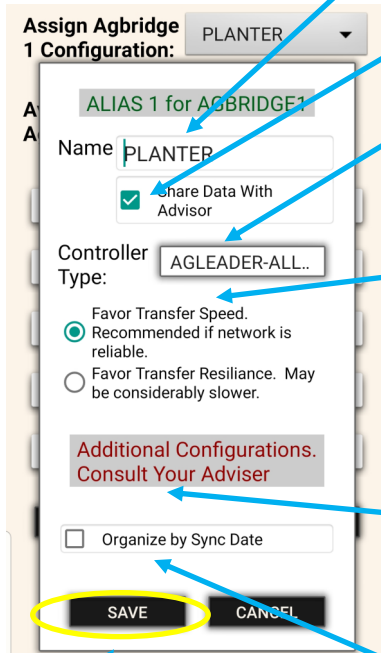
1 Select



2 Select appropriate Drive to configure



3 Configure each machine



Machine Name for each configuration

Share Data? Default ✓

Select Controller type from list (see next pg for selections)

Method of file transfer when in Smart Device Mode. Default is "Favor Speed". Select "Favor Transfer Resilience" when signal is consistently poor.

Default File Structure is same as thumb drive

Consult with Adviser. "Organize by Sync Date" may be best choice for GS2, GS3 and CN1 file sets.

A data connection is required for this step

Press "Save"



Configure Trusted WiFi Networks for WiFi Direct Mode via the App

- 1 **Select**
- 2 **Select**
- 3 **Select “ADD” and enter the SSID and Password and press “SAVE”**
- 4 **Repeat Step 3 for each Trusted WiFi Network to be used by the Account, including all mobile device hotspot credentials. This is a global list.**
- 5 **Press “SAVE to CLOUD”**

Default. Check if Network is password protected

Select if want to limit this Network to downloading prescriptions only. Typically used to limit data usage of a cellular plan

A data connection is required for this step

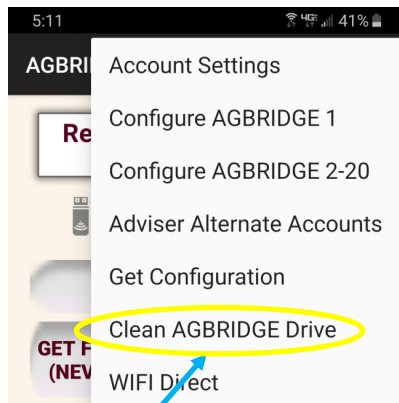


IMPORTANT NOTE:

Delete and modify Networks from this screen. Each Drive must connect with a mobile app that has connected with the AGBRIDGE Server since the last modification(s) whenever Networks are added or modified so that each Drive’s local list is updated; OR the Drive’s local list is also updated each time the Drive connects to the Server via WiFi.

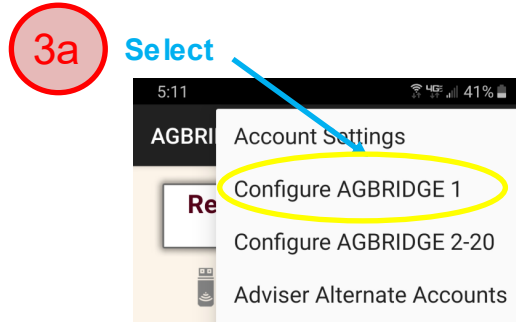
Changing the Configuration Setting for an AGBRIDGE 1 Drive

1 Ensure all Data has been *agbridged* prior to cleaning



2 Select to delete existing Data from the Drive

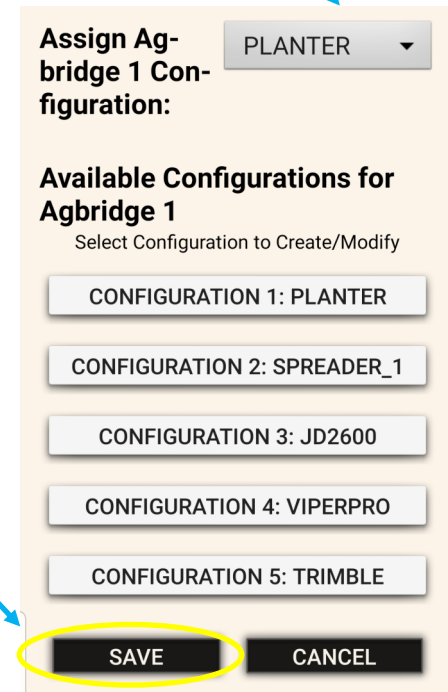
3 The configuration can be changed via the web portal (see pg 12), or proceed to Step 3a. Finish with Step 4.



3c Press "SAVE"

4 Follow the steps on page 22 to update the Drive's configuration for operation in the field

3b Select the configuration to apply to the Drive



Data connection required



Prepare each AGRBRIDGE™ Drive for installation in the field

After each machine is configured in the AGRBRIDGE™ mobile app or through the AGRBRIDGE web portal, either initially or after a **configuration change**, the configuration must be delivered to each AGRBRIDGE Drive following the steps below. These steps can be performed in the field, or by using a smart device power adapter with the USB to barrel cable supplied with each AGRBRIDGE 1 shipment. **Note: Your drive may have been shipped already configured if configuration details were supplied at time of order.**

1 Power the Drive "ON"

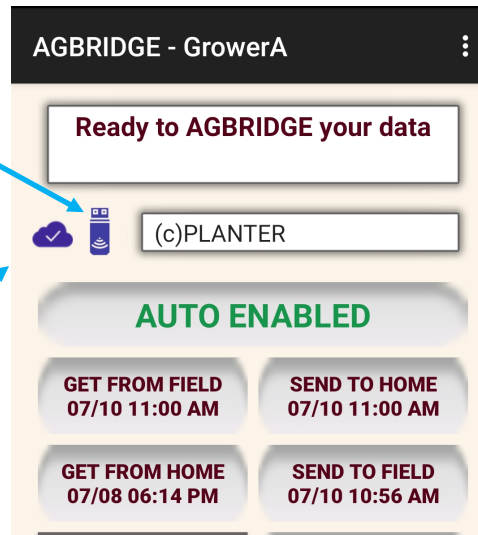
Icon will turn "BLUE" when the app is connected to the Drive.

NOTE: Can take up to 30 seconds to connect depending on device

Drive WiFi Status:

gray—not connected
 blue—connected to internet
 red—connected but no internet
 green—data activity

2 Launch App and connect to the appropriate Drive



OR 3 Connect the Drive to the internet via a trusted WiFi Network

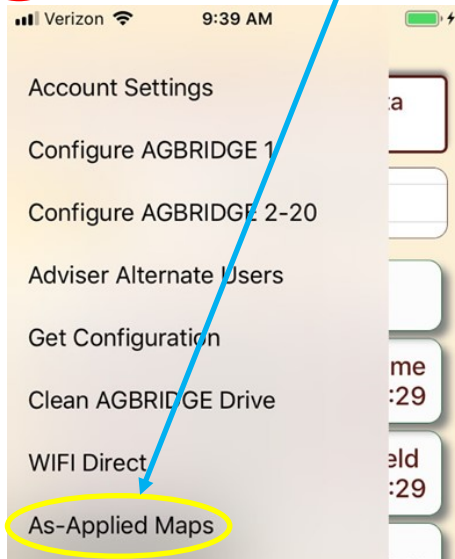
Note: A smart device is not always necessary for this step, but can be useful in providing feedback on connectivity and status.

4 The Drive will be ready to agbridge within approximately one minute

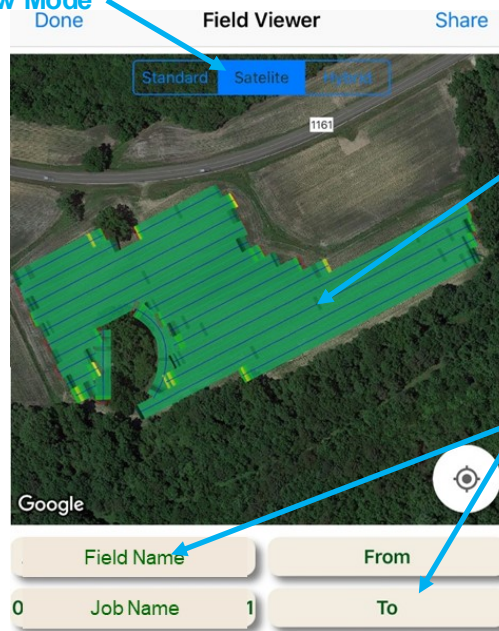


Using the As-applied Map Viewer *(Data connection required)*

1 Select to open Viewer



Select View Mode



Share map via email or text

4 Long press Map for Guidance Lines

2 Select Date Range and/or Field Name

Select Job Name

3

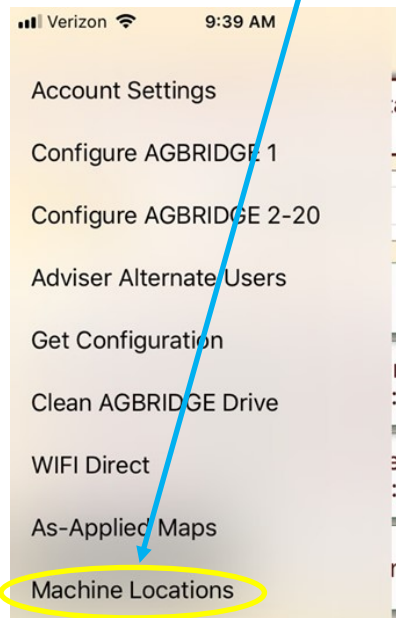
Job summary data

Field: Field Name
 Date: 2014-04-12 Product: DKC68-04
 TOT APP: 0.15M seeds
 Acres: 4.98 AVG: 0.00 seeds /a



Using the Equipment Location Map Viewer *(Data connection required)*

1 Select to open Viewer



Note: A smart device with open mobile app that is connected to an AGRIDGE Drive; or an AGRIDGE GPS antenna working in WiFi Direct Mode **is required** to be in the cab in order to generate location data for a machine

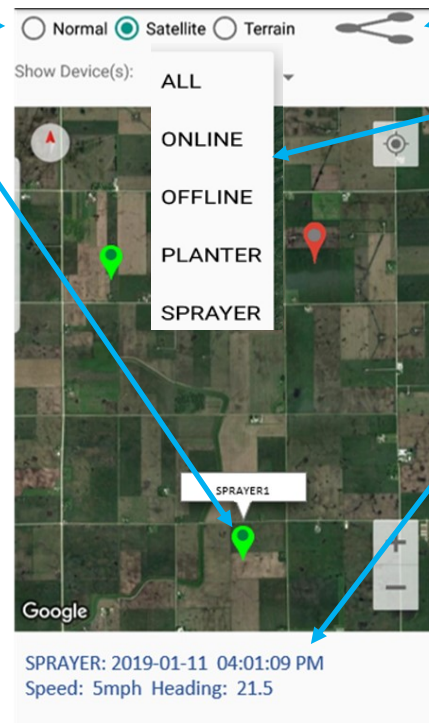
Select View Mode

2

Last known location of machine. Touch to select—Machine will be centered in screen

Green icon means the machine has transmitted within last 30 mins.

Red icon means it has been more than 30 minutes since the machine last transmitted



Share map

3

Dropdown Menu

Provides options for finding equipment and what is displayed on the map

Last known location, speed and heading for machine selected

Note: Moving machines can quickly move out of view of the Viewer. Use the drop down to refresh or zoom out / move the screen by touch

Mobile App Main Page

A **blue icon** indicates Bluetooth connection to a Drive. A **red icon** indicates connection but Drive is busy

Drive WiFi Status: **gray**—not connected; **blue**—connected to internet; **red**—connected but no internet; **green**—data activity

Auto Mode or GET/SEND ALL if in manual mode. Pressing gets all data from the Drive, finds the best network, and sends to cloud & office

Pressing gets all new data files from the Drive and drops in "To Home" Button. (time of last sync)

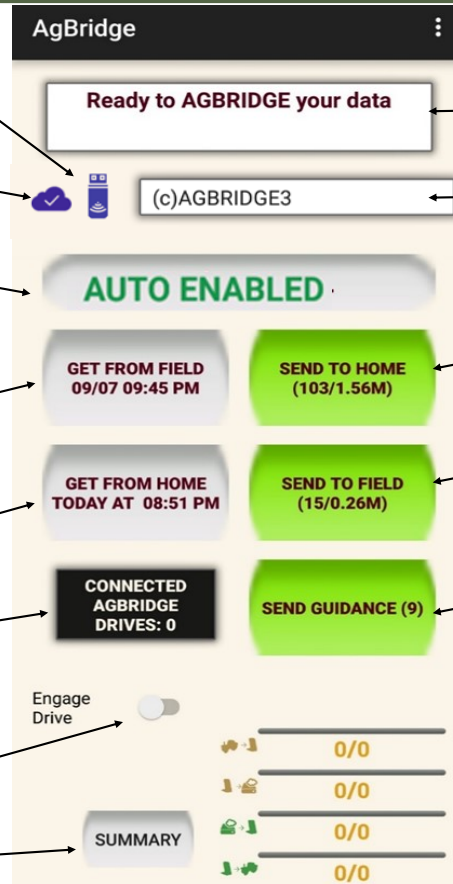
Pressing gets all new prescription, boundary, guidance files from the Cloud and drops in "To Field" or "Guidance" Button. (time of last sync)

Number of Drives currently connected to AGRIBRIDGE™

Use this slide button to engage the Drive prior to exporting data from a JD 2630 Display. Turns **green** when engaged. Only appears for this display.



Drive Version Menu Item w/iOS



Main Menu for account settings & machine config

Status Window

Machine Name drop down box.

(c) – connected (p) – files ready for transport to Drive or to the cloud & office.

Turns **green** when files are ready to be sent to the cloud & office. Press to Send. (# files / total Megabytes)

Turns **green** when prescription, boundary & guidance files are ready to be sent to the Drive. Press to Send. (# files / total Megabytes)

Turns **green** when boundary & guidance files are ready to be sent to the cloud & other machines in the fleet. Press to Send. (# files)

Drive to Mobile App
Mobile App to Cloud
Cloud to Mobile App
Mobile App to Drive

Status Bars showing files completed / files total

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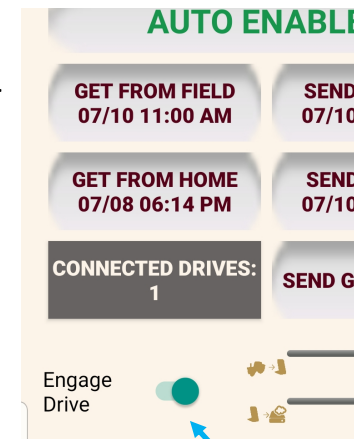
Transporting Files—Important Notes for WiFi Direct & Smart Device

1. **John Deere 2630**—engage the Drive for file maintenance by either using the engage button on the mobile app (Figure 1) or by using the switch on cable ABC100 (Figure 2). Specify controller type accordingly.
2. **Case IH AFS Pro 700**—*WiFi Direct Mode*: files can be transported after cab shutdown or upon cab startup. *Smart Device Mode*: files can only be transported after cab shutdown.
3. **Compact Flash Cards**—WiFi Direct Mode is not available for Drives operating in Flash Mode.
4. **Cab-to-cab transport of Guidance Lines** is not available in WiFi Direct Mode.
4. **What happens to the Data that is Exported**—Data that is exported to an AGBRIDGE Drive will remain on that Drive until it is deleted using the “Clean AGBRIDGE Drive” command in the main menu of the AGBRIDGE™ mobile app.
5. **Individual prescription files and/or folders containing shape files** are placed in the appropriate folder on the Drive for each controller type. In addition, single files are always delivered to a /Agbridge/Prescriptions folder where they are available for controllers that do not specify a folder structure for prescriptions.
6. **Prescriptions that are contained within a defined folder structure** for a specific brand of controller will be placed in the Root Directory of the Drive as structured.
5. **What happens to prescription files**—When prescription files are copied, or accessed from the AGBRIDGE™ Drive to an Ag Controller they remain on the Drive until they are erased using the “Clean AGBRIDGE Drive” command in the main menu of the app. Files that are “moved” from the Drive to a Controller are removed from the Drive permanently. Alternatively, prescription files can be deleted from a Drive using the prescription management tool available on the AGBRIDGE web portal.



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Figure 1



Slide to engage for file maintenance

Figure 2



Transport Files from Field to Office in WiFi Direct Mode



Export Data Files to the USB port
(same as for a thumb drive)



Automatic Transport



As-applied Maps



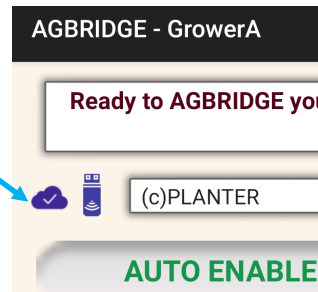
Grower / Adviser



Connection Status available to in-cab user

Drive WiFi Status:

- gray—not connected
- blue—connected to internet
- red—connected but no internet
- green—data activity



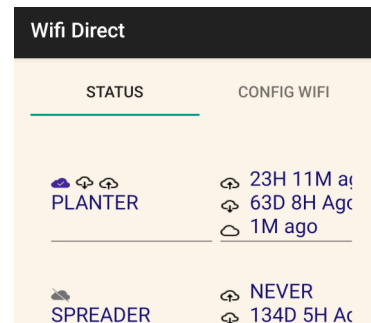
Connection Status available to all users

Drive WiFi Status:

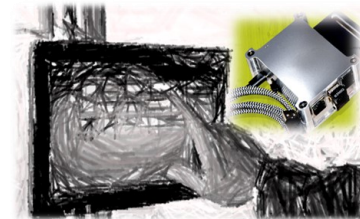
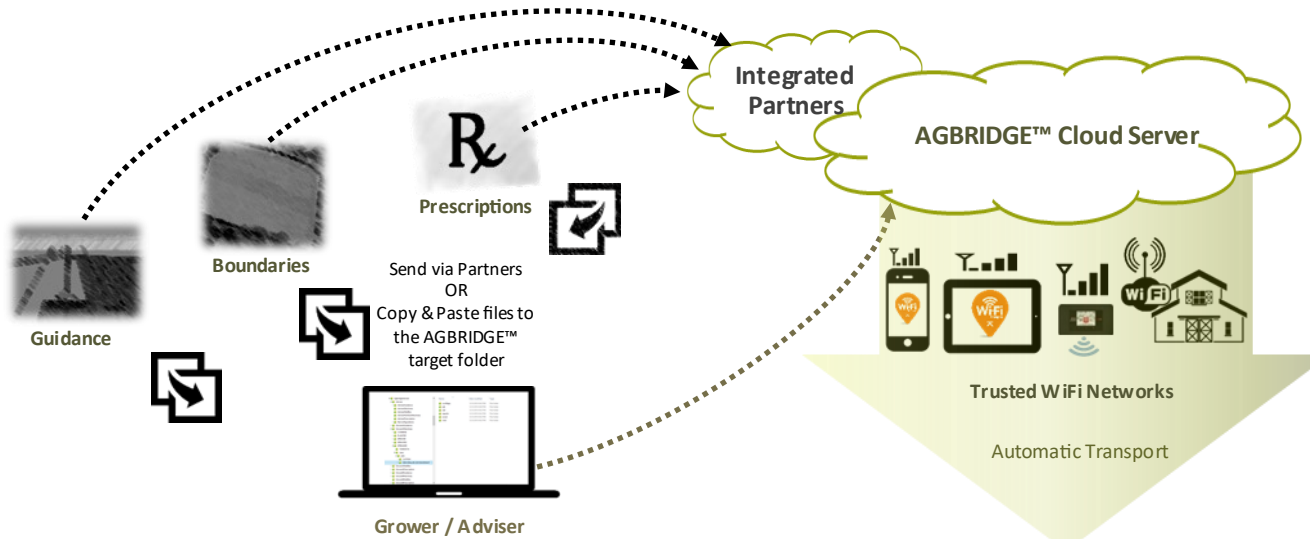
- Gray cloud—not connected
- Blue cloud—connected to internet

Transport Status:

- 🔄 —last time data uploaded
- 📶 —last time data downloaded
- ☁️ —last time connected



Transport Files from Office to Field in WiFi Direct Mode

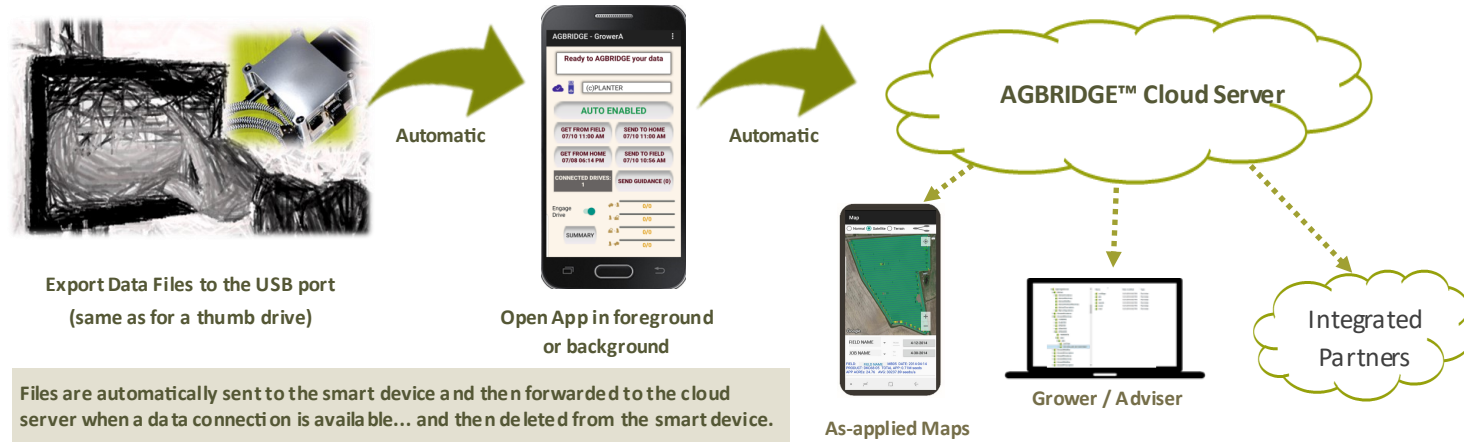


Import Data Files from the USB
port (same as for a thumb drive)



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Transport Files from Field to Office in Smart Device Mode



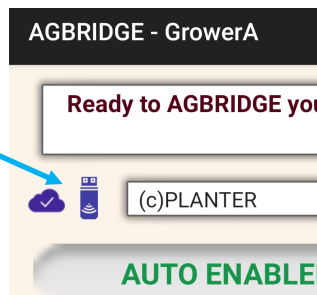
Connection Status available to in-cab user—Main Page

App connection to the Drive:

gray—not connected

blue—connected

red—connected but not available for file transport



Drive to Mobile App

Mobile App to Cloud

Cloud to Mobile App

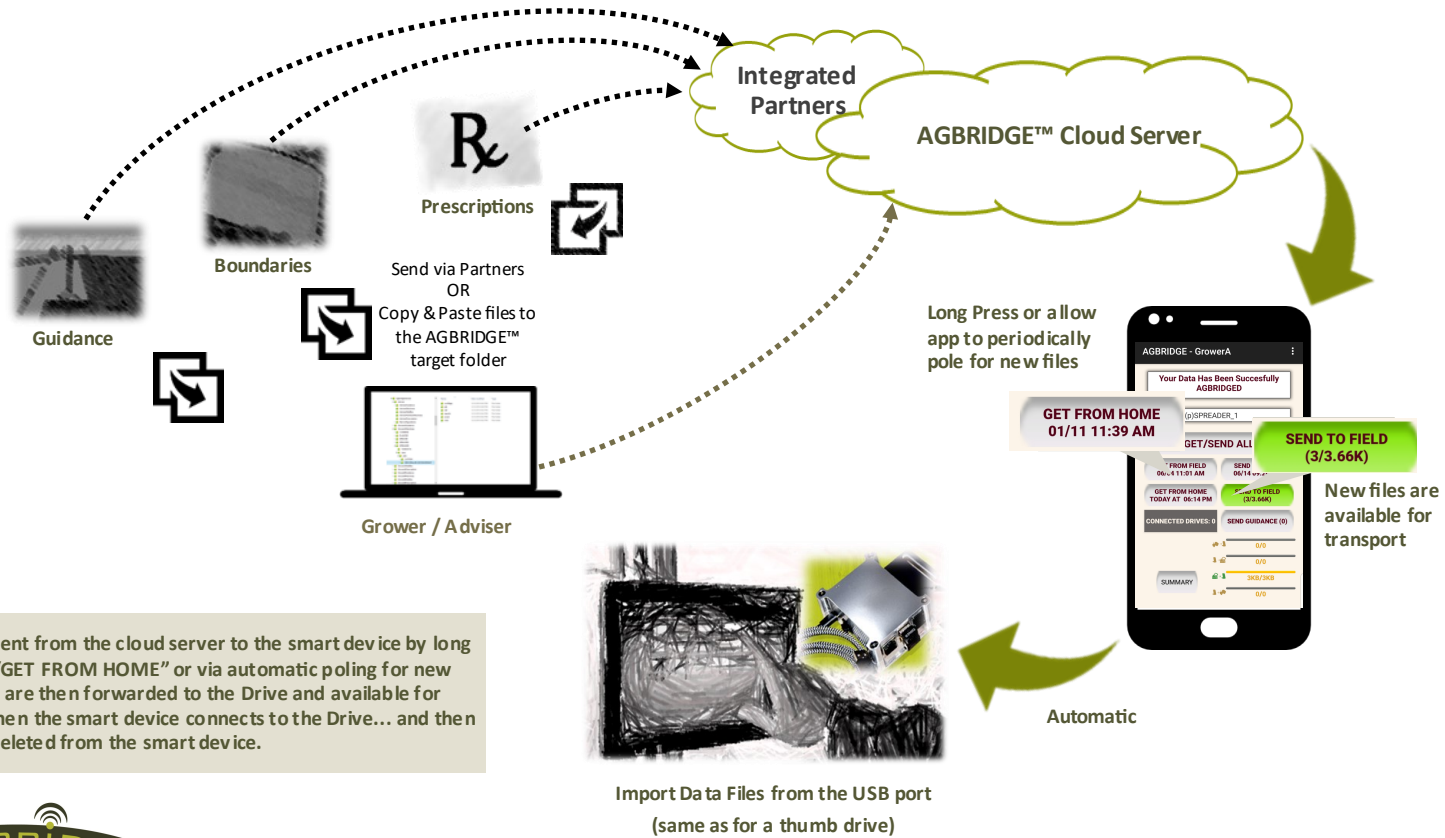
Mobile App to Drive

Status Bars showing files completed / files total



April, 2020

Transport Files from Office to Field in Smart Device Mode



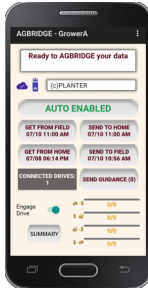
Files are sent from the cloud server to the smart device by long pressing "GET FROM HOME" or via automatic polling for new files. Files are then forwarded to the Drive and available for import when the smart device connects to the Drive... and the files are deleted from the smart device.



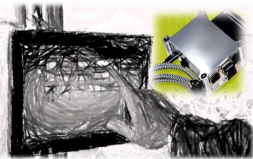
Recommended Practices to fully utilize AGRIDGE™



When data connectivity is good, operating in WiFi Direct Mode with a hot spotted smart device and an open, backgrounded AGRIDGE App provides for seamless 2-way file transfer and continuous updating of the machine's location for all users to see.



When operating in Smart Device Mode, leave the AGRIDGE App open and backgrounded. If prescriptions are expected, set the device to query the server every 5 or 15 mins for new files to download. The open app will provide continuous updating of the unit's location



Frequently exporting completed jobs to the USB port provides access to as-applied maps and a record of completed jobs. Many controllers can be set up to export jobs automatically when completed. Jobs can typically be exported and transported while moving to the next field.

