

Operation Manual

Model 600SS ***Moisture Sensor Kit for Small Square***



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Introduction

Thank you for purchasing a Harvest Tec Model 600SS Moisture Monitor System. This 600SS Moisture Monitoring System has been designed to be operated through an Apple iPad (not included) using the Hay App. As well as the option to plug directly into most tractors that have an ISOBUS Monitor. The 600SS Moisture Monitoring System offers these advantages by operating through an Apple iPad:

1. Large bright, clear, colorful display
2. More durable and can be read in bright sunlight
3. Can be used for multiple other uses than just the applicator display
4. Option to tie-into the tractor ISOBUS system

The 600SS Moisture Monitor kit includes the following parts: Dual Channel Processor (DCP), Moisture Sensors, Harnesses, Bluetooth receiver and Miscellaneous Hardware. For your convenience a parts break down for the 600SS Moisture Monitoring System is included in the back of this manual. If you do have questions please bring this manual into the dealership.

***Made for iPad® (3rd through Pro 2nd generation), running the current iOS operating system or one version previous required for iPad option**

*iPad is a trademark of Apple Inc., registered in the U.S. and other countries.

****600 Series Applicators with serial number before DCP27000 will require the DCP to be sent to Harvest Tec for a required update in order to use the iPad Integration Module (030-6672C).**

*Hay App version must be **at least 2.5.18 (or higher)** to operate with the iPad Integration Module

If choosing to operate the unit through the ISOBUS monitor, part number 006-6670A will need to be ordered through your local equipment dealer.

Safety

Carefully read all the safety signs in this manual and on the applicator before use. Keep signs clean and visible. Replace missing or damaged safety signs. Replacement signs are available from your local authorized dealer. See your installation manual under the replacement parts section for the correct part numbers.

Keep your applicator in proper working condition. Unauthorized modifications to the applicator may impair the function and/or safety of the machine.

Safety Decals



Number 1
Disconnect power before servicing.
Part no. DCL-8003



Number 2
Read and understand the operator's manual
before using or working around the equipment.
Part no. DCL-8000

Operation

Turn On / Off iPad using the Sleep/Wake button

*(Info from Apple User's Guide)

Turn iPad on. Hold down the Sleep/Wake button until Apple logo appears. iPad will take a moment to load.

You can lock iPad and put it to sleep when you're not using it. Locking iPad puts the display to sleep, saves the battery, and prevents anything from happening if you touch the screen.

Sleep/Wake Button

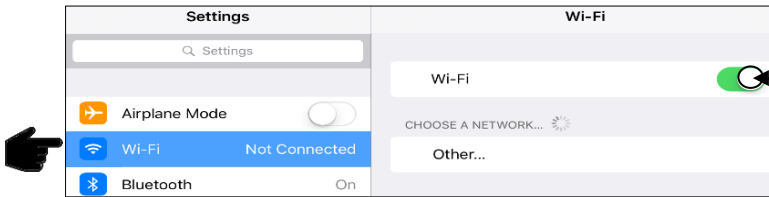


When you are not going to use the iPad for an extended period of time put the unit into sleep mode by pressing the Sleep/Wake button. Press Sleep/Wake button to wake iPad and then unlock iPad by entering passcode.

Turn iPad off. Hold down the Sleep/Wake button for a few seconds until the slider appears onscreen, then drag the slider to the right.

Downloading Harvest Tec App

1. If iPad does not have Wi-Fi turned on, select the Settings tab  then select the Wi-Fi tab (below).



2. Turn Wi-Fi on by sliding button to the right. *Green bar indicates ON

3. Use same process to turn on Bluetooth function

4. Select an available network when detected by the iPad, shown in area above that currently says 'Other.'
5. Select App Store icon (below) and open. *You will need a Wi-Fi connection available to view App Store.



****The Harvest Tec system WILL NOT appear under the Bluetooth tab in the Setting App. Open the Hay App to connect.**

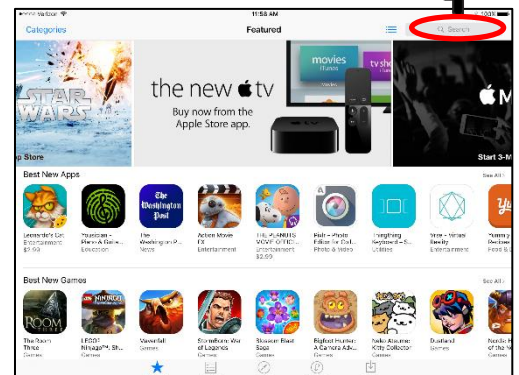


Download the Hay App in the App Store by searching for 'Hay App' in the search bar in the top right corner of screen (right):
*The advertisements displayed on the App Store screen will change.

The app will have the icon as shown:



Hay App

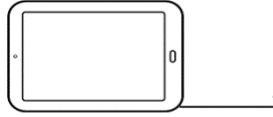


Note: Made for iPad® (3rd through Pro 2nd generation), running the current iOS operating system or one version previous required for iPad option

iPad Integration Control Module

030-6672C

To operate the applicator, connect the iPad cord to the iPad Integration Control in the port indicated by:



iPad Integration Control Light Signals

Green Slow Blink – Power supplied to the applicator system and the unit is going through its startup process. This will take approximately 25-35 seconds.



Green Double Blink – Indicating the iPad module recognizes the iPad but the app is not open or connected.

Green Solid Light – Module is connected to the app and is ready to operate.

*Recommended to use the USB cable included with the applicator kit (006-6672USBC)

Bluetooth Receiver Lights

Pre-2020 applicators equipped with Bluetooth receivers (030-6672B) are now equipped with lights to indicate both power and Hay App connection on the Apple iPad. Clean light regularly

Blinking Lights – System is waiting for the processor to connect, which could take up to 35 seconds.

Red Light – The Bluetooth receiver has power

Green Light – The Bluetooth receiver is connected to the Hay App.



****600 Series Applicators with serial number before DCP27000 will require the DCP to be sent to Harvest Tec for a required update in order to use the iPad Integration Module (030-6672C).**

Hay App version must be **at least 2.5.18 (or higher)** to operate with the iPad Integration Module

*Made for Apple iPad badge

Use of the Made for Apple iPad badge means that an accessory has been designed to connect specifically to the Apple product(s) identified in the badge and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

Please note that the use of this accessory with an Apple product may affect wireless performance.

Shutting Down the Hay App

To shut down the Hay App double click the home button (Figure A). This will show the open apps that are running on your iPad (Figure B).

*Note: By pressing the home button one time to return to the home screen, the Hay App **does not** shut down. The system will however, stop applying preservative after 10 seconds.



Figure A

Slide the app you want to shut down by sliding the app toward the top of the iPad, until the app is no longer visible (Figure C).

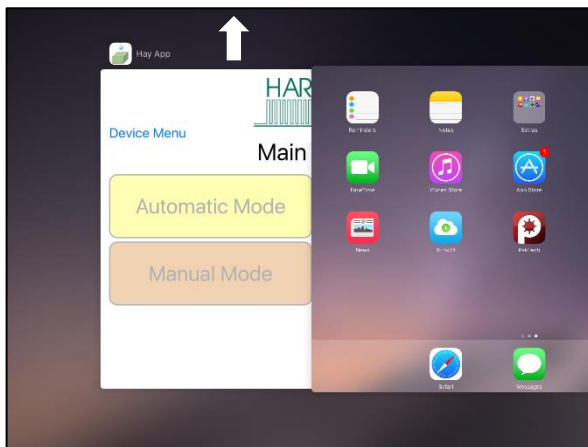


Figure B

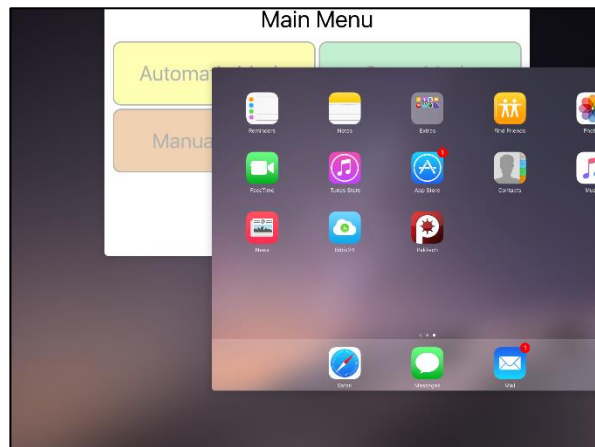


Figure C

Operating the Harvest Tec iPad App

When ready to operate your applicator system, open the Hay App on the iPad by selecting the Hay App icon.

Device Selection

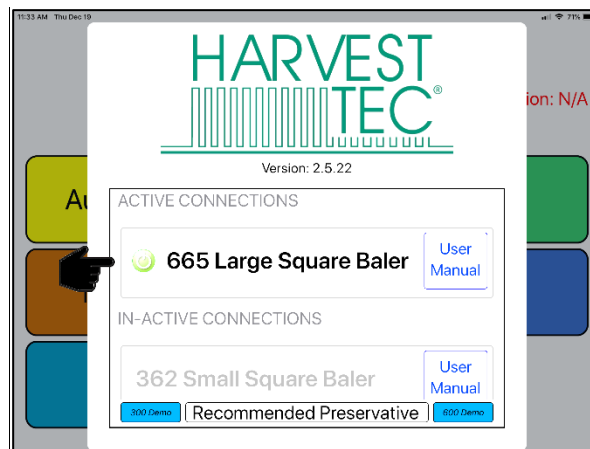
The app will open to the Device Menu screen as shown below.

Pre-2020 applicators which are equipped with the Bluetooth receiver (030-6672B) that are within range (20') of the iPad and have power going to them, will be shown under the Active Connections section (below) after the initial startup of the system (35-45 seconds).

Production year 2020 applicator systems and beyond will include the iPad Integration Module 030-6672C. When plugging in the iPad cord to the module the app will change to the applicator Main Menu for immediate operation. Unplug the cord to return to the Device Menu page.

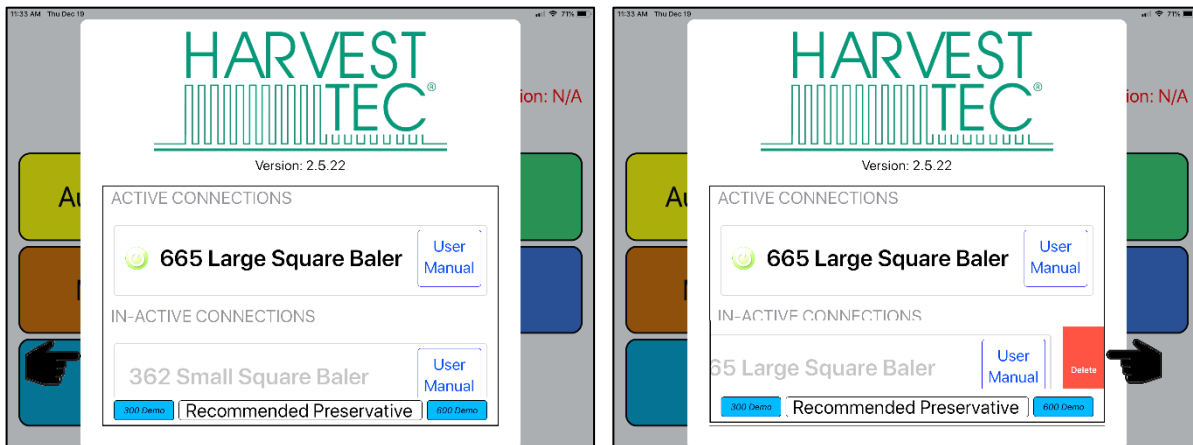
*Hay App version must be **at least 2.5.18 (or higher)** to operate with the iPad Integration Module (030-6672C)

After the iPad connects to the Bluetooth receiver, select the applicator you want to connect with.



The In-Active Connections section will show applicator systems that have been connected in the past, but are not within range of the iPad or do not currently have power going to them (bottom left).

To remove a baler from the In-Active list, slide the bar displaying the baler name to the left, and select the Delete button that will appear (bottom right).



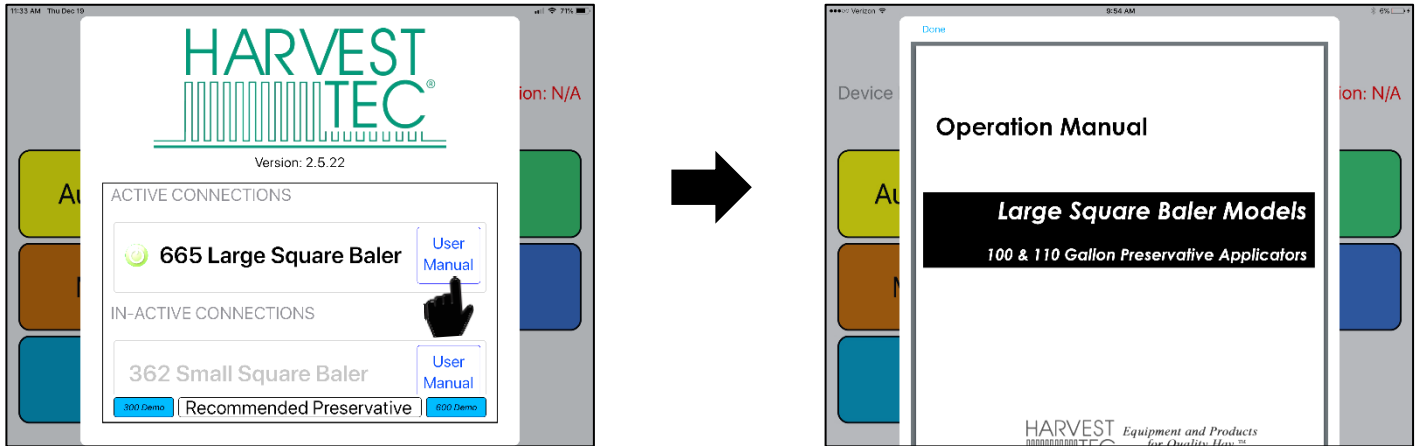
Operating the Harvest Tec iPad App (continued)

Manual Selection

Selecting the Manual button (below) displayed to the right of the baler name will open the operation manual for your baler.

**Use the following information for Large Square Balers.*

**You do not need to be connected to a baler to open the manual after a baler has been connected.*

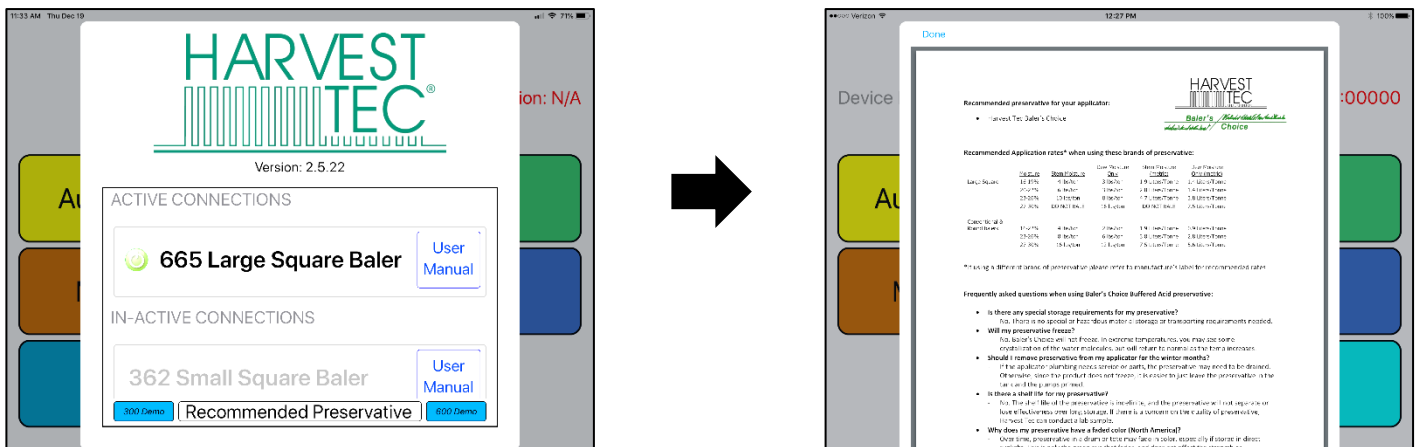


When finished reviewing the manual, press the Done button in the top left corner to return to the Device Menu.

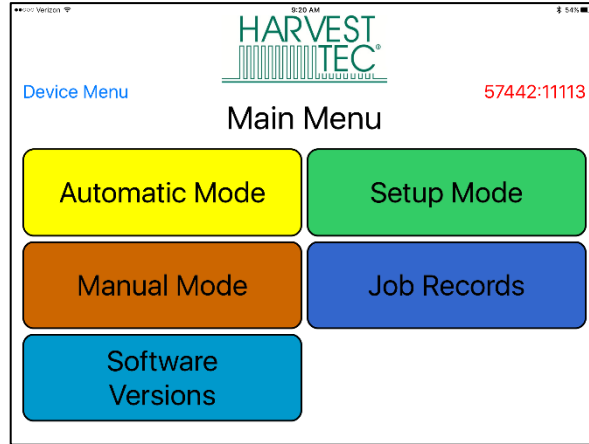
Recommended Preservative

To view recommended preservative information, application rates, and frequently asked preservative questions, select Recommended Preservative (below).

**You do not need to be connected to a baler to open the recommended preservative page.*



Operating the Harvest Tec iPad App (continued)



Tab Descriptions

Automatic Mode: This mode allows you to use all of the applicator features such as adjusting preservative application on the go and counting total pounds of product used.

Manual Mode: Allows operator to manually turn pumps on and off. This mode also has moisture content displayed. Use this mode to prime pumps.

Software Versions: Selecting this tab will display the software currently installed.

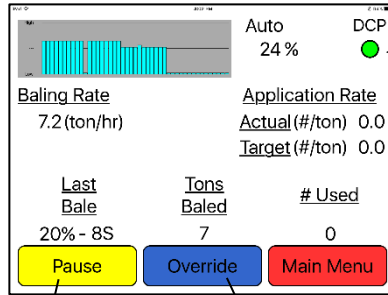
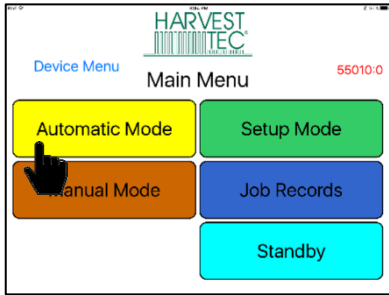
Setup Mode: This mode allows the operator to adjust bale rate, application rate settings and select tip output.

Job Records: Keep track of up to 300 jobs with total product used, average moisture content, tons baled, and baling date.

Screen Menus

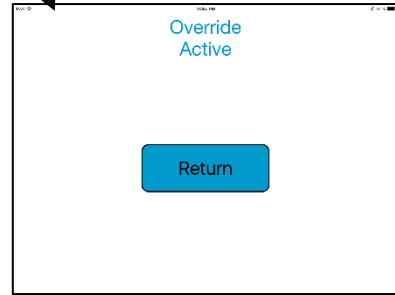
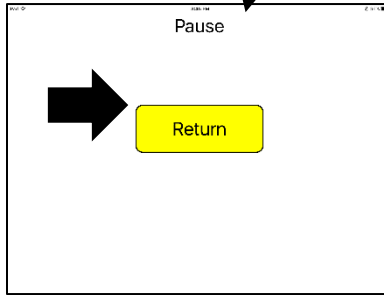
Use the screen shots below to navigate through the operation screens.

Automatic Mode

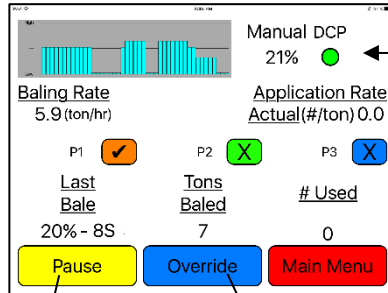
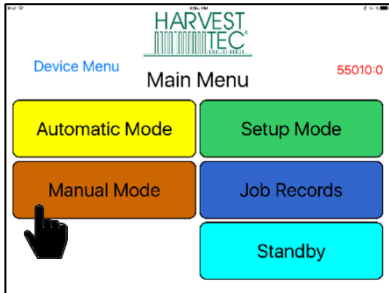


Bluetooth Connection Indicator
 Green -DCP is connected
 Yellow -DCP connecting
 Red -DCP not connected

*Actual, Target, and # Used will read 0 with moisture only system



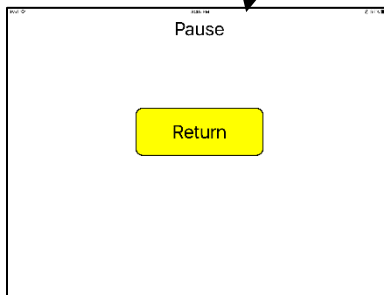
Manual Mode



Bluetooth Connection Indicator
 Green -DCP is connected
 Yellow -DCP connecting
 Red -DCP not connected

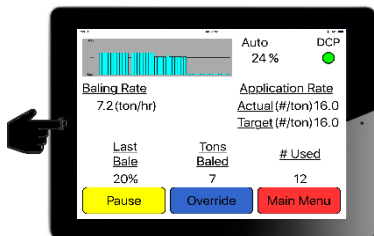
X -Pump is OFF
 ✓ -Pump is ON

*Ensure pumps are shut off with moisture only system



Operation Note:

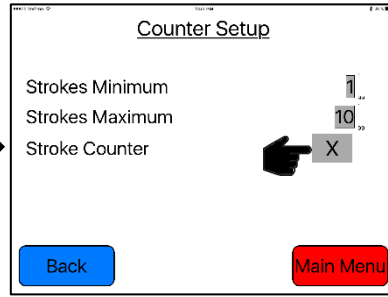
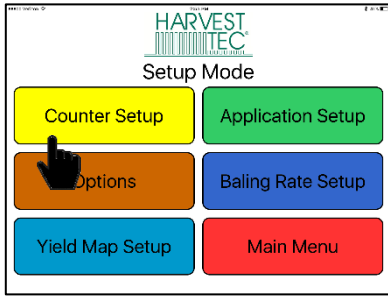
Pressing the Home Button on the iPad **WILL NOT** stop the system from reading moisture for 10 seconds.



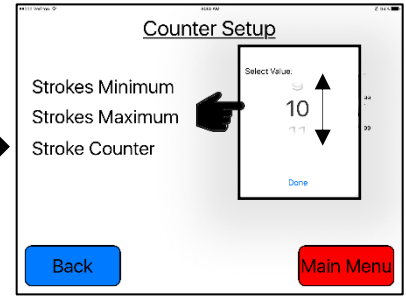
Select **Pause** or **Main Menu** to stop application

*To close app see the Shutting Down Hay App Section

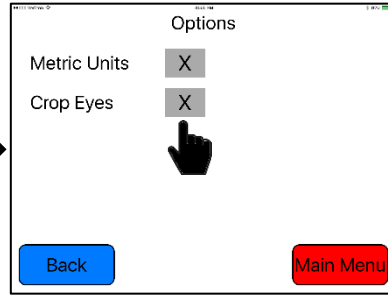
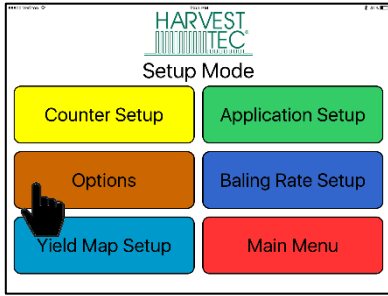
Setup Mode



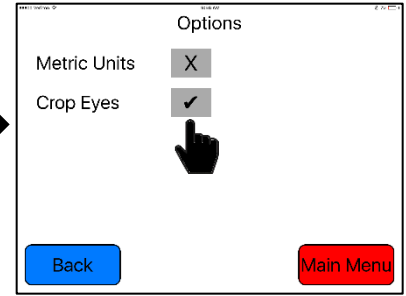
Turn on Stroke Counter by selecting X, Adjust min/max by selecting grey areas



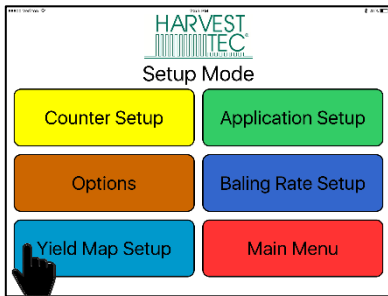
Scroll up or down to correct min/max
 ✓ Indicates Stroke Counter is ON



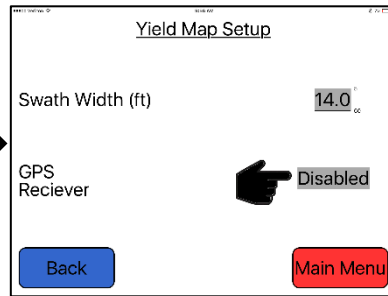
Select X to turn on options shown



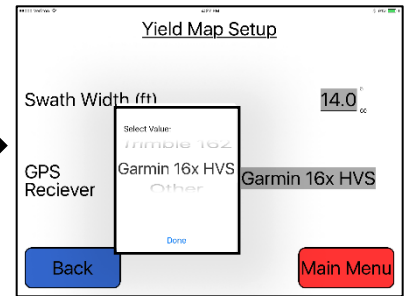
✓ Indicates Crop Eyes are ON



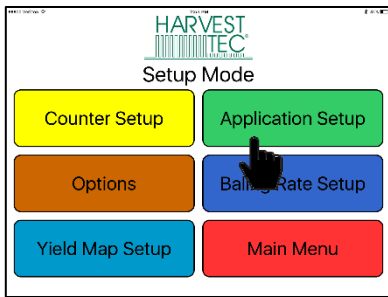
Only used if equipped with GPS



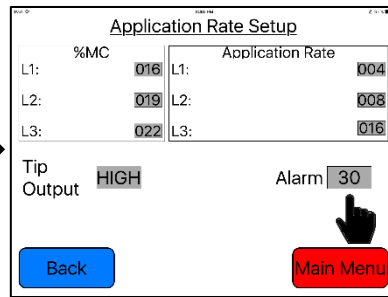
Select grey area to change



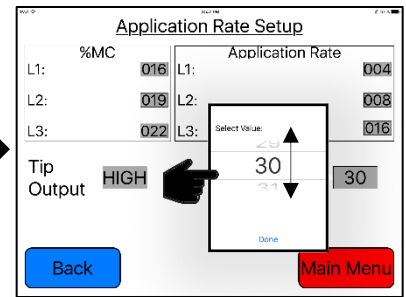
Select appropriate GPS unit



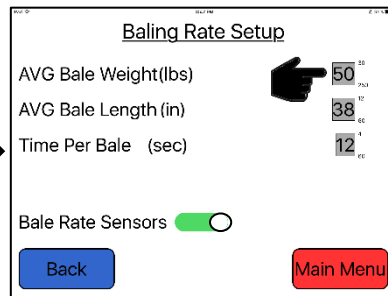
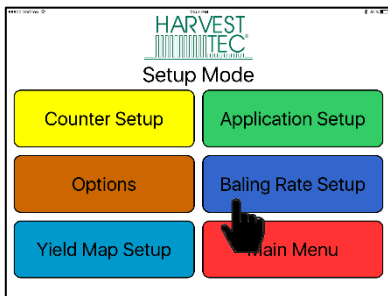
*Not used with moisture only



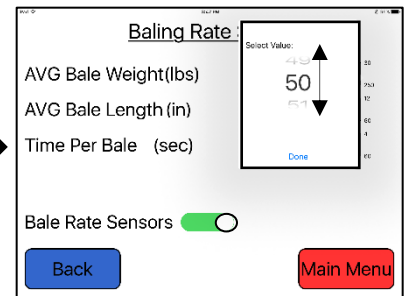
Adjust alarm setting by selecting grey number area



Select desired alarm setting by scrolling up or down

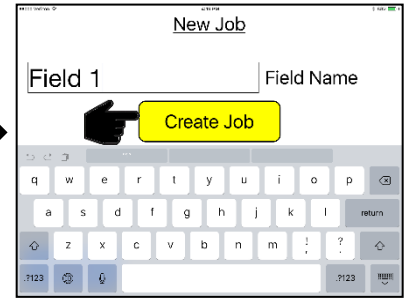
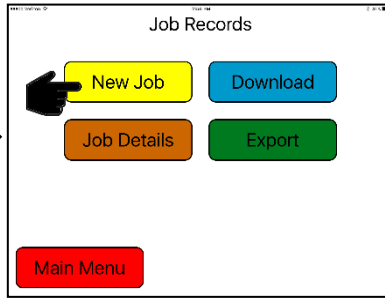
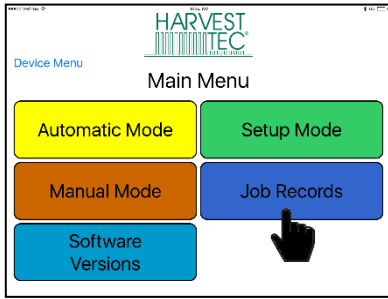


Input correct weight, length, time per bale

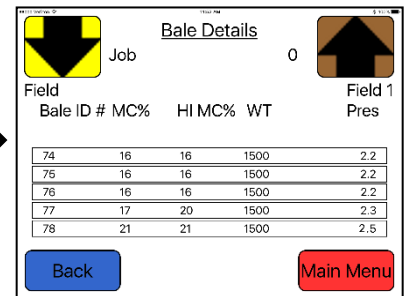
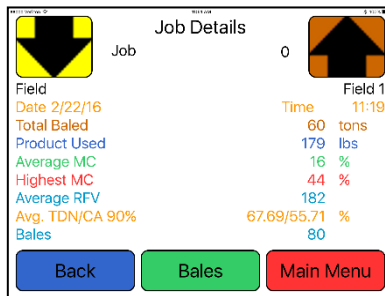
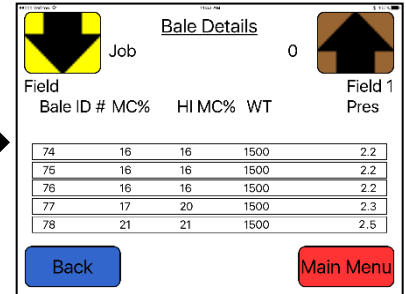
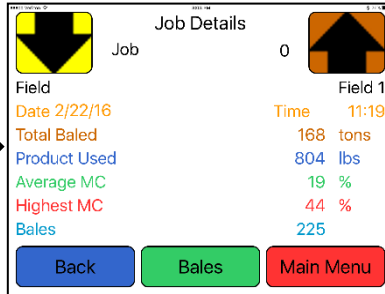
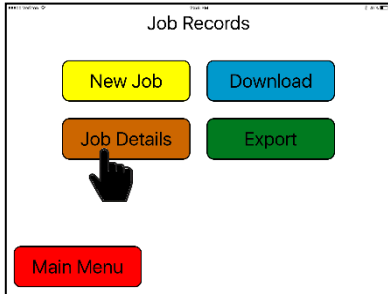


Select correct weight

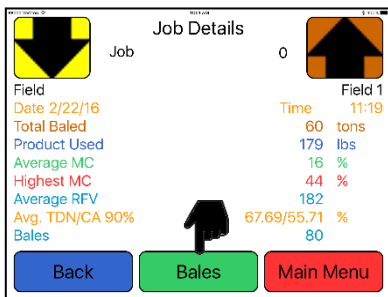
Job Records



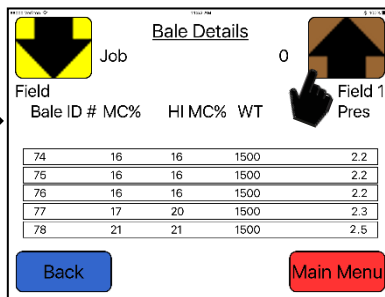
Type desired Field Name, select Create Job



*When RFV Equipped, Average RFV, Ave TDN/CA90% info will be added

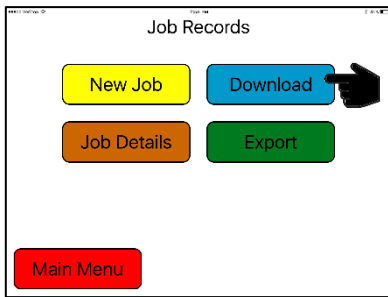


For Bale details select Bale Button

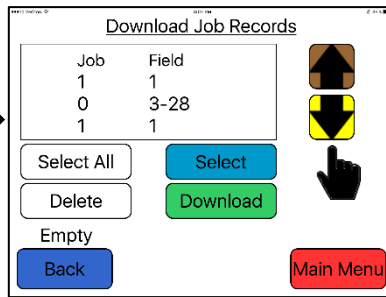


Use arrows to change jobs shown

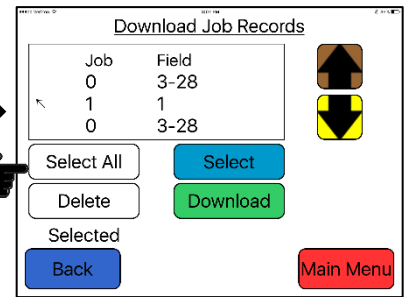
Job Records (continued)



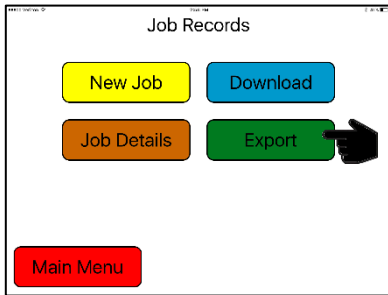
Select Download when wanting to download job records to USB Stick



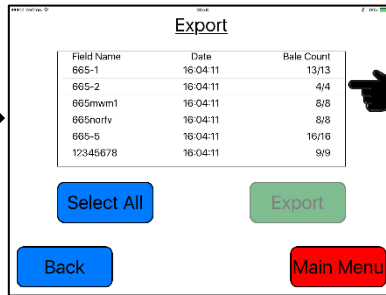
Use arrows to change jobs shown. Indicates selected jobs



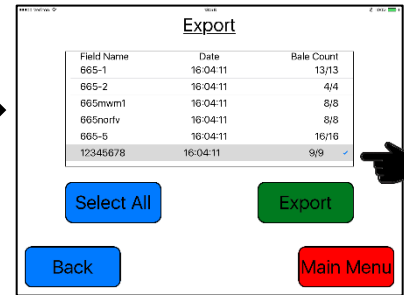
Pressing the Select or Select All tab to choose which job to download or delete.



The Export allows you to send an email a file with selected job records



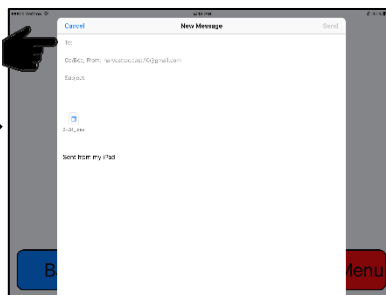
When the Export page is opened the bale info in each job will be retrieved.



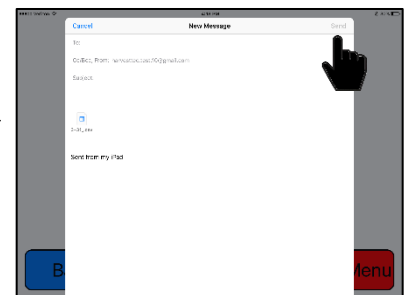
When all bales have been retrieved, Export tab will activate, select a job(s)



If choosing one job to email, select the Mail tab. Multiple jobs can be selected



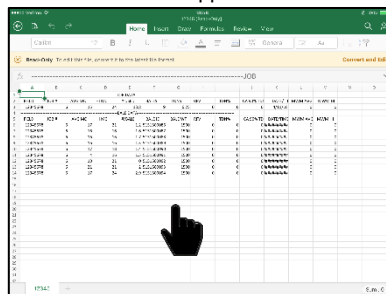
Email will appear w/file attached, enter address *If two or more jobs selected, email will appear



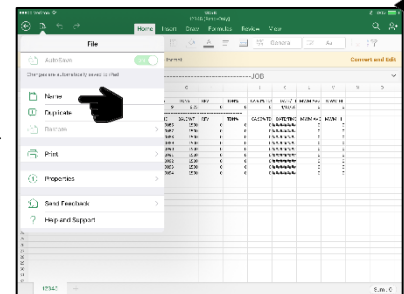
Press the Send button in top right corner, (your iPad notification sound will play)



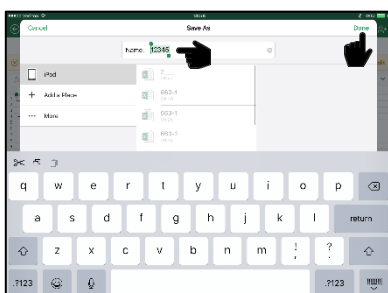
If choosing to view job on iPad, recommended to download Excel app to view job records information



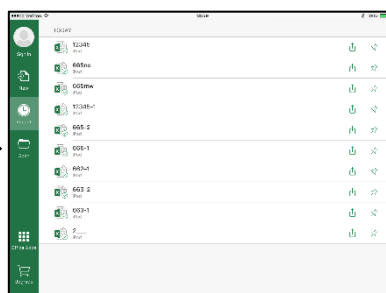
After Excel app is selected, the job record spreadsheet will open *iPad can only view 1 job at a time.



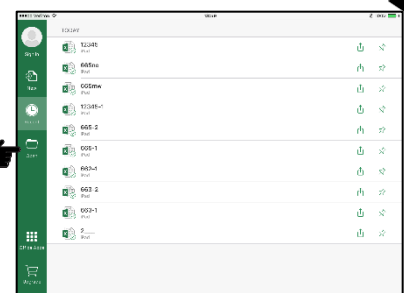
To save the job, select Name from the drop down tab



Enter desired name in center of page and press Save on the top right corner



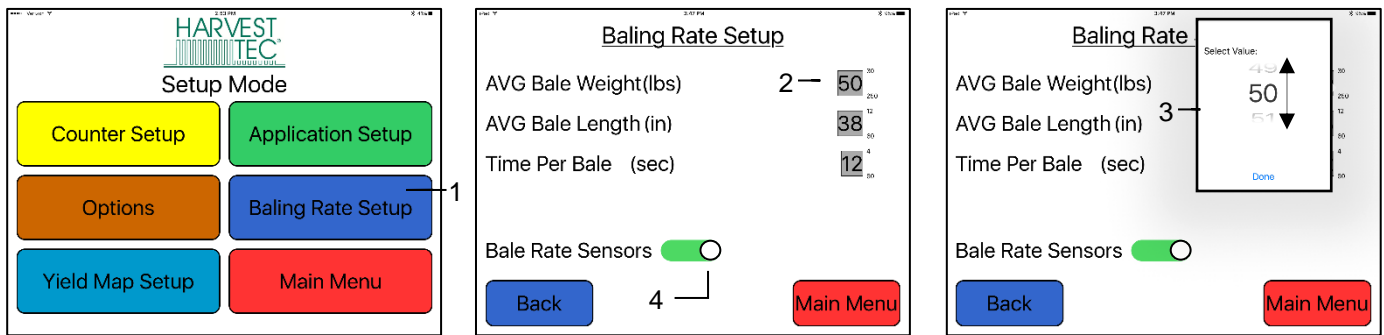
After selecting Save, list of saved files in Excel will appear. Select job to view



You also can view the jobs saved by selecting Open tab in the Excel app

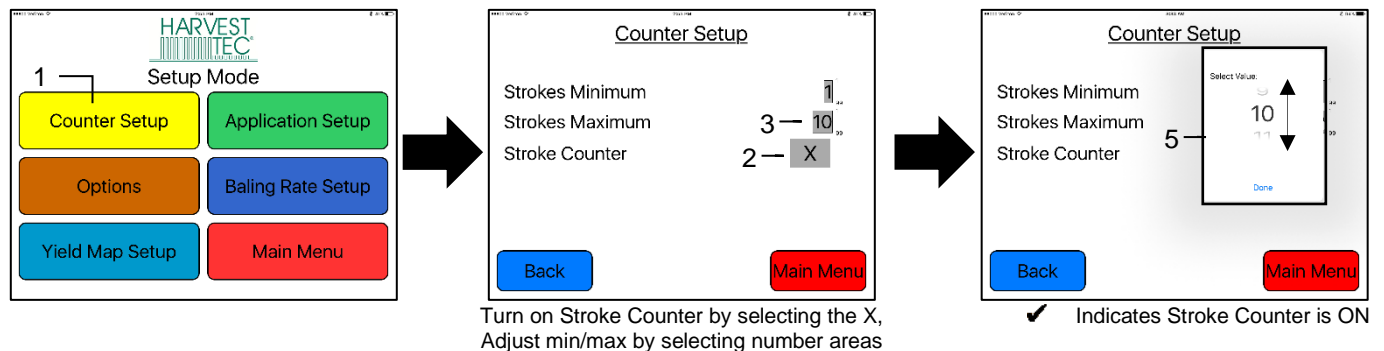
Baling Rate Settings

After pushing the SETUP MODE key in the Main Menu screen, the screen on the left will appear:



1. On the setup mode screen press the BALING RATE key.
 2. Press the grey number value to the right of AVG Bale Weight (Lbs).
 3. To adjust the weight of your bales, the scroll tool shown will display. Scroll through the values to select correct information, press DONE when value has been selected. The information will be saved until updated. Use the same procedure for adjusting bale length and time per bale.
 4. Small square balers are equipped with Bale Rate Sensors which can be turned ON by sliding the bar to the right as shown above. A green bar indicates that the bale rate sensors are on. While a grey bar means the bale rate sensors are off.
- Note: Bale rate sensors are used instead of a fixed time per bale to help determine a real time ton per hour reading.

Stroke Counter Setup



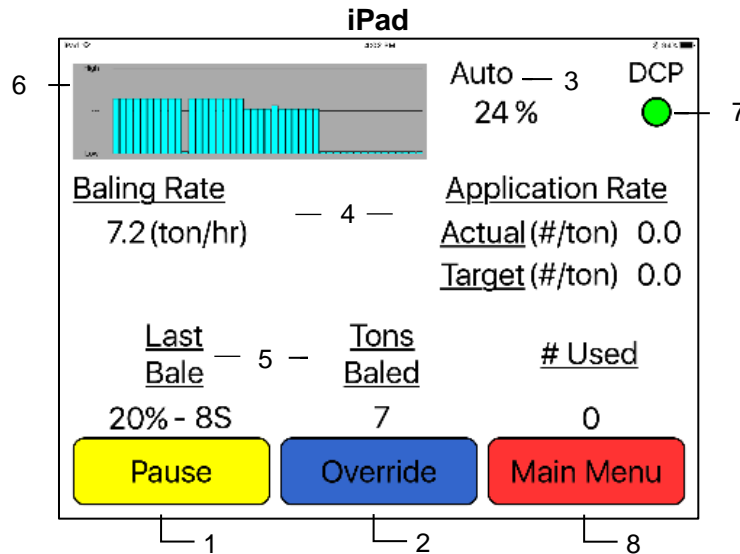
1. On the setup mode screen press the COUNTER SETUP key.
2. Turn on the stroke counter by select the X, which will change to an ✓, indicating the sensor is ON
3. Adjust the stroke maximum and minimum level by selecting the grey area on the right of screen
4. Scroll through the values to select correct setting, press DONE when value has been selected

Operation Instructions

Automatic mode will allow you to view the moisture information, baling rate and stroke counts.

Automatic Mode

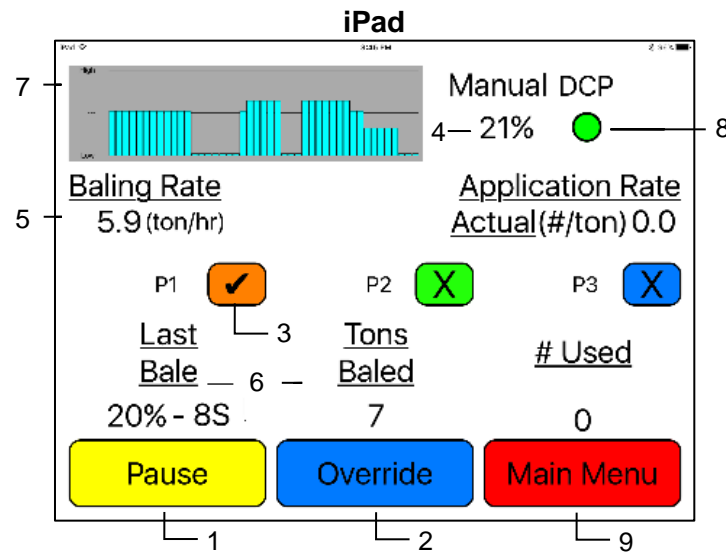
After pushing the AUTOMATIC MODE key in the Main Menu screen, the following screen will appear:



1. To pause the unit while in operation select the Pause key.
2. Push the OVERRIDE key to turn on all three pumps at the same time for full output of the system. This button is not used with a moisture only system.
3. Baling Rate and Application Rate are shown in the middle of the screen. Application rate will read zero with moisture only system.
4. Volume used and strokes per bale are shown at the bottom of the screen will show accumulated pounds of preservative used on the go. There will not be any information shown in the # Used section with a moisture only unit.
5. The graph shows the moisture trend from the past 90 seconds in 3 second intervals.
6. The DCP button shown when using an iPad displays your connection signal with the Bluetooth receiver. Green – DCP is connected, Yellow – DCP is connecting, Red – DCP not connected.
7. Press the MAIN MENU key to return to the opening screen.

Manual Mode

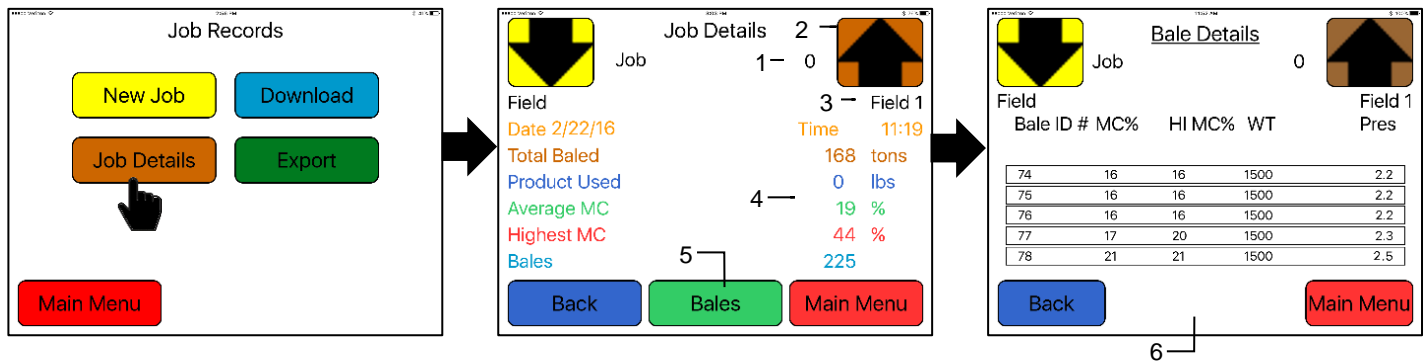
After pushing the MANUAL MODE key in the Main Menu screen, the following screen will appear:



1. To pause the unit during operation select the Pause key.
2. Push the OVERRIDE key to turn on all three pumps at the same time for full output of the system. This function is not used with a moisture only unit.
3. To turn the pump on, select the colored box next to P1 and change the 'X' to a check mark. Ensure all pumps are off with a moisture only unit.
4. The moisture content is shown in the upper right hand corner.
5. Baling rate, stroke counts, and Application rate are shown in the middle of the screen. The Actual reading will read zero with a moisture only unit.
6. Volume used and strokes per bale shown at the bottom of the screen will show accumulated pounds of preservative used on the go. This number will reset at power down, but remains in the job record screen. # Used will read zero with moisture only unit.
7. This graph shows the moisture trend from the last 90 seconds of baling (one reading every 3 seconds).
8. The DCP button shown displays your connection signal with the Bluetooth receiver. Green – DCP is connected, Yellow – DCP is connecting, Red – DCP not connected.
9. Pressing MAIN MENU will return you to the opening screen.

Job Records

After pushing the JOB RECORDS key in the Main Menu screen, the following screen will appear:

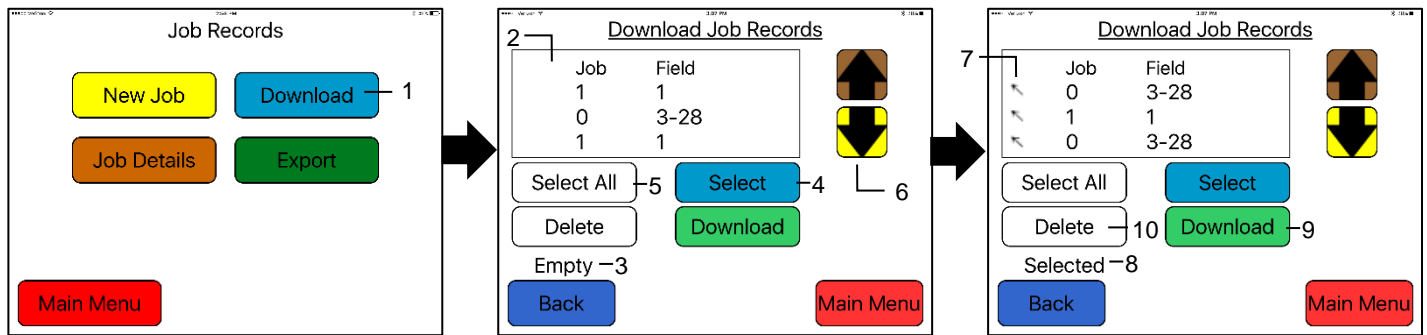


1. The job number will be displayed at the top center. The current job being viewed will always read "Job #: 0". Product used and average moisture content will be reset when the NEW JOB key is pressed. The job records screen will store up to 300 jobs allowing access previous jobs by using the up and down arrows.
2. Scrolling through previous jobs is done by pressing the UP or Down keys.
3. The field name is located under the up arrow.
4. The accumulated information from the field will be displayed in the middle of the screen. **Every time the NEW JOB key is pressed the accumulated pounds on auto and manual modes will be reset to zero.** After 300 jobs have been stored, the next time the NEW JOB key is pressed the system will start over with job one and the old job will be replaced.
5. Selecting the Bales button will open the Bale Details Screen.
6. The Bale Detail screen will display the individual bale information onto each line. Including Bale ID#, MC% (moisture percentage), HI MC% (high moisture percentage), WT (weight of bale) and Pres (prservative used per bale).

NOTE: Initial start-up requires pressing the New Job key in the Job Records screen in order for Volume Used accumulation to be recorded. This only needs to be done once on initial start-up of system and not every time the system is started for operation.

Download Job Records

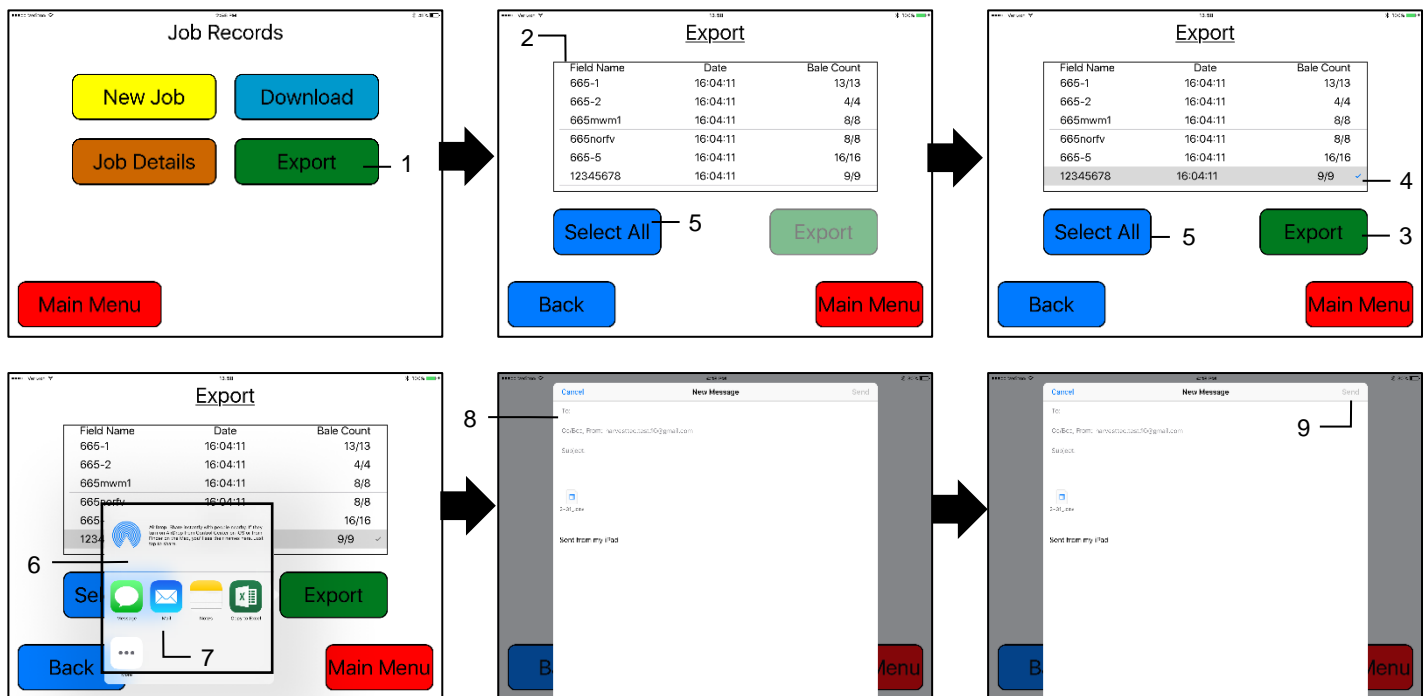
After pushing the JOB RECORDS key in the Main Menu screen, the following screen will appear:



Prior to downloading job records a USB stick will need to be placed into the USB port on the applicator's Dual Channel Processor (DCP). Jobs will not be downloaded if the USB stick is plugged into the monitor.

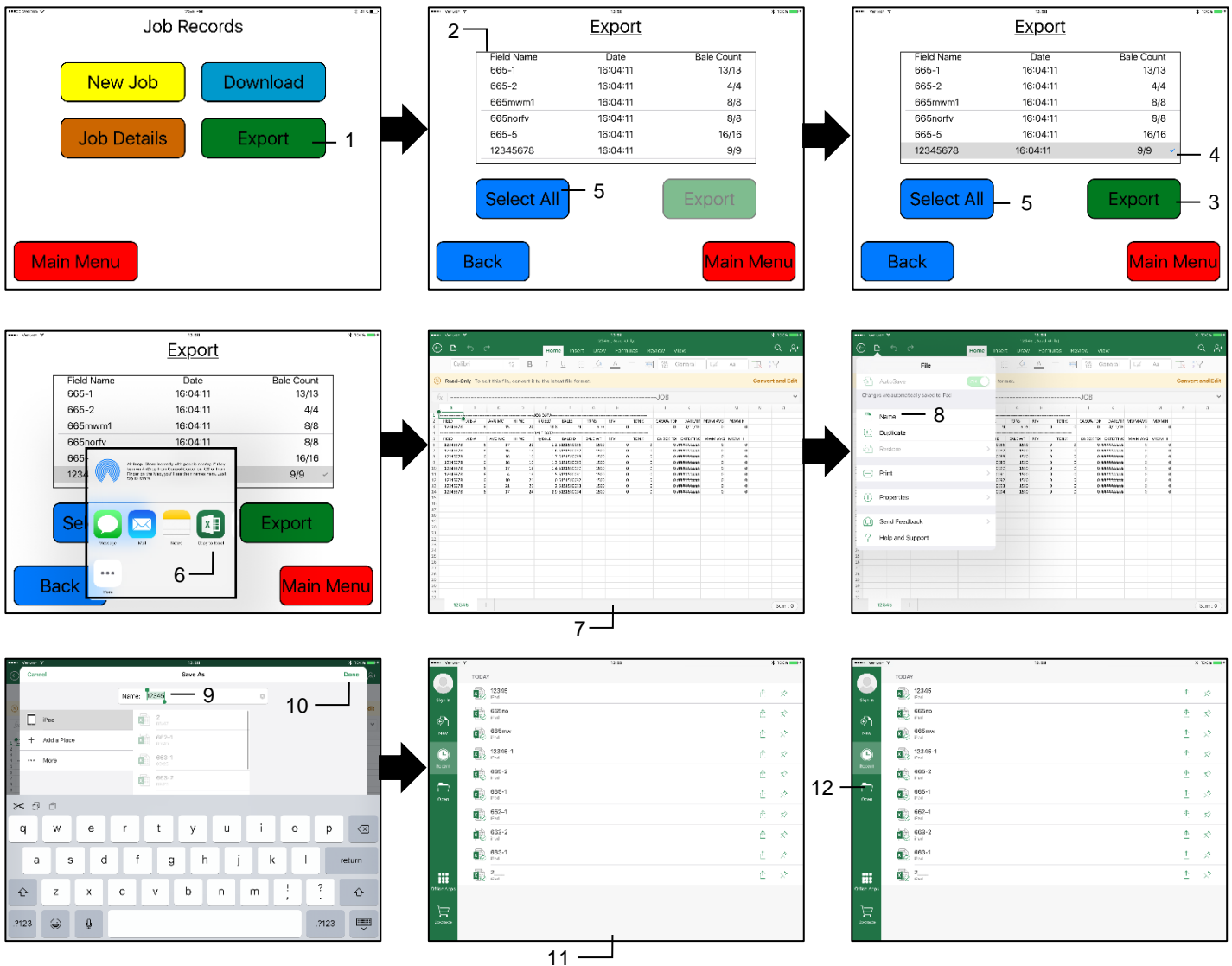
1. To download the Job Records to a USB stick, select the Download button
2. The list of job records you have created, will display in the middle of the screen
3. When no jobs have been selected the status line will read Empty
4. To download individual job(s), tap the desired job(s) to be downloaded, or press the Select button
5. To select all of the jobs stored, press the Select All Button
6. Move through job records by selecting the up or down arrows
7. The indicates selected jobs to be downloaded
8. When chosen jobs have been selected the status line will read Selected
9. Press Download button to download job records to USB Stick. The status line will read Downloading
10. Delete selected jobs by pressing the Delete button

Export Job Records (emailing records)



1. To export the Job Records through an email or save to the iPad select the Export button
2. The list of job records you have created, will display in the middle of the screen and the individual bale information will begin to download automatically. The number of bales will grow until equal to the number of bales available to export for each job record.
 - a. For example: When looking at a job record with 62 bales, the bale count will read 0/62 upon initially opening the page. The number will increase until it reads 62/62.
3. When all bales have been retrieved, the Export tab will become active
4. To export individual job(s), tap the desired job(s) to be exported. The ✓ indicated chosen job(s).
5. To select all of the jobs stored to be export, press the Select All Button
6. After selecting the Export tab, a small screen will appear with the mail app icon.
 - a. If selecting two or more jobs the email will automatically appear (skipping step 7)
7. Select the Mail app to open
8. Enter in the desired email address in the (To:) line of the email that will appear. Press the send button to email the file to the email you have entered.

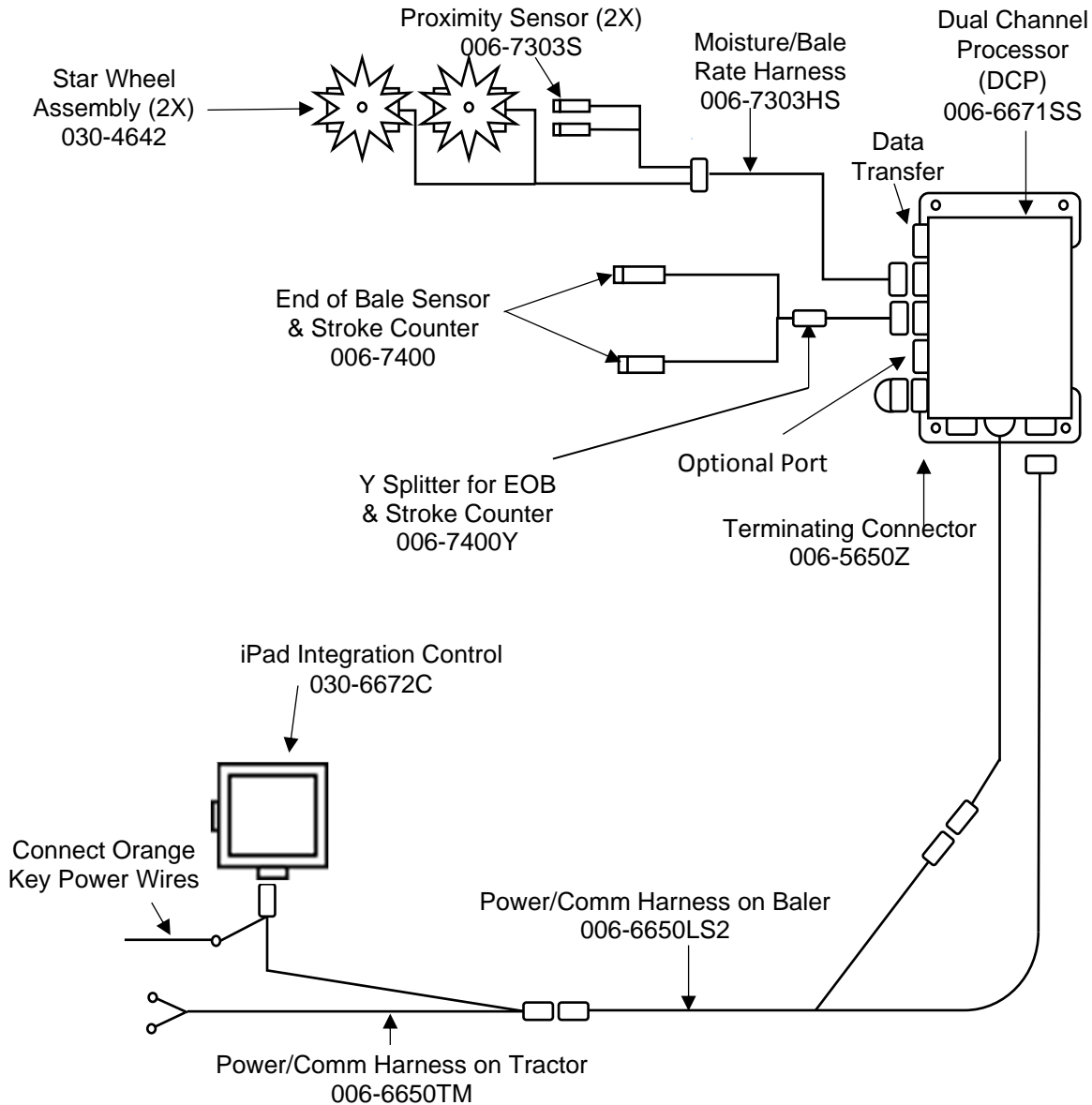
Export Job Records (saving to iPad)



- To export the Job Records through an email or save to the iPad select the Export button
- The list of job records you have created, will display in the middle of the screen and the individual bale information will begin to download automatically. The number of bales will grow until equal to the number of bales available to export for each job record.
 - For example: When looking at a job record with 62 bales, the bale count will read 0/62 upon initially opening the page. The number will increase until it reads 62/62.
- When all bales have been retrieved, the Export tab will become active
- To export individual job(s), tap the desired job(s) to be exported. The ✓ indicated chosen job(s).
- To select all of the jobs stored to be export, press the Select All Button
- After selecting the Export tab, a small screen will appear with the Excel app icon.
 - It is recommended to download the Excel App to properly view the job records
 - Only one job can be selected at a time to view on iPad
- After the Excel app has been selected the job record spreadsheet will open
 - The iPad can only view one job at a time
- To save the job, select Name from the drop down tab
- Enter your desired file name
- Press the save button after entering your file name
- The list of saved files will appear
- You can also view the files by selecting the Open tab, when opening the Excel app

Wiring Diagram

- A. Locate the tractor power/communication harness (006-6650TM).
- B. Connect the red power wire with the 50 amp fuse to the positive side of the battery (12 volt).
 - a. **The power harness must be connected to the battery!** The unit will draw more amps than convenience outlets can handle.
 - b. **This unit will not function on positive ground tractors.**
 - c. **If the unit loses power while operating it will not keep track of accumulated pounds of product used and bale records.**
- C. Connect the black ground wire to frame of tractor or negative side of battery (12 volt).
- D. Connect the iPad Integration Control (030-6672C) to the Communication Harness (006-6650TM).
- E. Connect the key power orange wire to a keyed power source.



Pin Outs

Power/Comm Harness 006-6650TM at Hitch

Pin 1	Red	+12V Power to TSD
Pin 2	Red	+12V Power to DCP
Pin 3	Orange	Keyed Power
Pin 4	Gray	Shield
Pin 5	Green	HT Can Low
Pin 6	Yellow	HT Can Hi
Pin 7	Orange	Can1 Hi
Pin 8	Black	Ground from TSD
Pin 9	Black	Ground from DCP
Pin 10	Blue	Can1 Low



Power/Comm Harness 006-6650LS2 at Hitch

Pin 1	Red	+12V Power to TSD
Pin 2	Red	+12V Power to DCP
Pin 3	Orange	Keyed Power
Pin 4	Gray	Shield
Pin 5	Green	HT Can Low
Pin 6	Yellow	HT Can Hi
Pin 7	Orange	Can1 Hi
Pin 8	Black	Ground from TSD
Pin 9	Black	Ground from DCP
Pin 10	Blue	Can1 Low



iPad Integration Control / BLE at Harness 006-6650TM

Pin 1	Red	+12V Power from DCP
Pin 2	Black	Ground from TSD
Pin 3	Yellow	HT Can Low
Pin 4	Gray	Shield
Pin 5	Green	HT Can Hi
Pin 6	Orange	Can1 Hi
Pin 7	Blue	Can1 Low



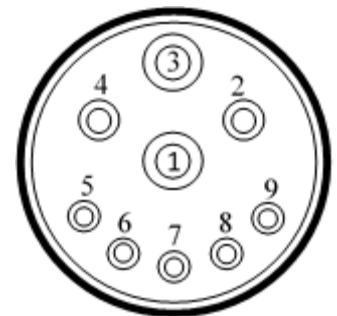
ISOBUS Plug 006-6670A Baler Side

Pin 1	N/A	
Pin 2	N/A	
Pin 3	120 OHM with Pin 5	
Pin 4	N/A	
Pin 5	120 OHM with Pin 3	
Pin 6	Orange	Can1 Hi
Pin 7	Blue	Can1 Low



ISOBUS Plug Tractor Side

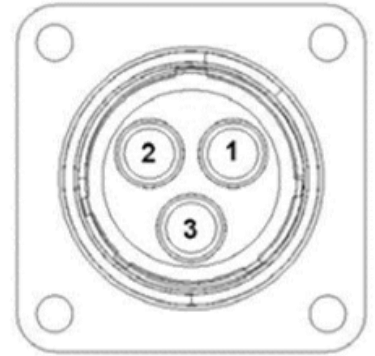
Pin 1	N/A	
Pin 2	N/A	
Pin 3	+12V Keyed Tractor Power	
Pin 4	N/A	
Pin 5	N/A	
Pin 6	N/A	
Pin 7	N/A	
Pin 8	Orange	Can1 Hi
Pin 9	Blue	Can1 Low



Pin Outs (continued)

Main Power Connector on DCP

Pin 1	Red	+12V Power from tractor
Pin 2	Black	Ground from tractor
Pin 3	Orange	Keyed power



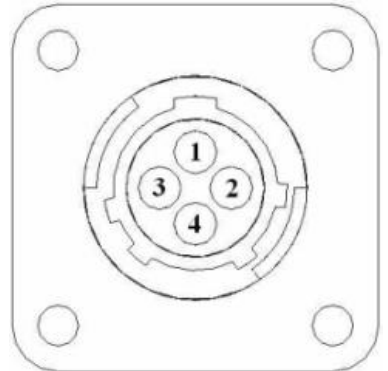
Star Wheel and Bale Rate Sensor connector on DCP

Pin 1	Blue	+12V Power
Pin 2	Orange	Ground
Pin 3	Black	Signal for sensor 1
Pin 4	White	Signal for sensor 2
Pin 5	N/A	
Pin 6	N/A	
Pin 7	N/A	
Pin 8	Violet	Star wheel input 1
Pin 9	Brown	Star wheel input 2



End of Bale sensor on DCP

Pin 1	Red	Sensor Power
Pin 2	Black	Sensor Ground
Pin 3	Orange	Signal From Stroke Counter
Pin 4	Yellow	Signal from Sensor



Common Questions

1. How do I turn the system on/off?

Turn the key in the tractor to the ON position. The ISOBUS Monitor will turn on, and the baler, on 600SS working screen tabs, will be viewable. Turn the system off by turning the tractor key OFF.

2. How to get in the LBS/TON, MC%, and TONS/HR menus?

In the Main Menu press the SETUP MODE key. From this screen you can change your alarm settings and bale rate settings. See SETUP INSTRUCTIONS in the Operations Manual for a detailed explanation of this process.

3. The moisture content displays “LO” or “HI” all the time.

When the moisture content display does not change frequently while baling, there is likely a faulty star wheel connection. One of the first places to check is inside the white star wheel block. Check to see if the electronic swivel is in the star wheel shaft and check to see that the star wheel shaft is not working out of the block. Also, check all star wheel wires and connectors to see if there is a continuity or grounding problem.

4. Should the battery connections be removed before jump starting or charging a battery?

Yes. Anytime the tractor will have voltage going up rapidly the connections should be removed.

5. What is the moisture range of the moisture star wheels?

The star wheel sensors will read moisture levels from 7% up to 32%

6. Can dielectric grease be used when connecting harnesses?

Yes. Using dielectric grease will assist with good harness connections through the system.

7. What do the lights on the 030-6672B indicate?

Pre-2020 applicators were equipped Bluetooth receivers (030-6672B) and are now equipped with lights to indicate both power and Hay App connection on the Apple iPad. Red Light – The Bluetooth receiver has power. Green Light – The Bluetooth receiver is connected to the Hay App.

Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
Moisture reading errors (high or low)	1. Wire disconnected or bad connection between star wheels and DCP	1. Reconnect wire.
	2. Low power supply to DCP	2. Check voltage at box. (Min of 12 volts required.)
	3. Dry hay lower than 8% moisture or wet hay over 75%.	3. System reads 8-70% moisture.
	4. Ground contact with one or both star wheels and baler mounted processor.	4. Reconnect.
	5. Short in wire between star wheels and DCP.	5. Replace wire.
Moisture readings erratic.	1. Test bales with hand tester to verify that DCP has more variation than hand tester.	
	2. Check all wiring connections for corrosion or poor contact.	2. Apply dielectric grease to all connections.
	3. Check power supply at tractor. Voltage should be constant between 12 and 14 volts.	3. Install voltage surge protection on tractors alternator.
Terminal reads under or over power.	1. Verify with multi-meter actual voltage. Voltage range should be between 12-14 volts.	1. Clean connections and make sure applicator is hooked to battery.
Bale rate displays zero.	1. Bale rate sensors are reversed. 2. Short in cable or sensor. 4. Sensor too far from starwheel.	1. Replace cable or sensor 2. Adjust gap between prox sensor and star wheel so it is 1/8-1/4" away.
Bluetooth Receiver lights will not illuminate	1. Bluetooth receiver not connected 2. Harness disconnected 3. Low power	1. Check connections and voltage. Minimum 12.5V needed.
	<p><i>Blinking Lights</i> – System is waiting for the processor to connect, which could take up to 35 seconds.</p> <p><i>Red Light</i> – The Bluetooth receiver has power</p> <p><i>Green Light</i> – When the proper active connection is selected in the Hay App menu, the green light will indicate connection with the iPad.</p>	

Maintenance

Dielectric Grease Connections: Disconnect all harnesses on the applicator, clean the connections, and repack with dielectric grease.

Battery Connections: Follow the batteries safety warnings and clean the battery connections. If the connections cannot be cleaned, replace harness.

Winter Storage

Disconnect power from the Dual channel Processor (DCP).

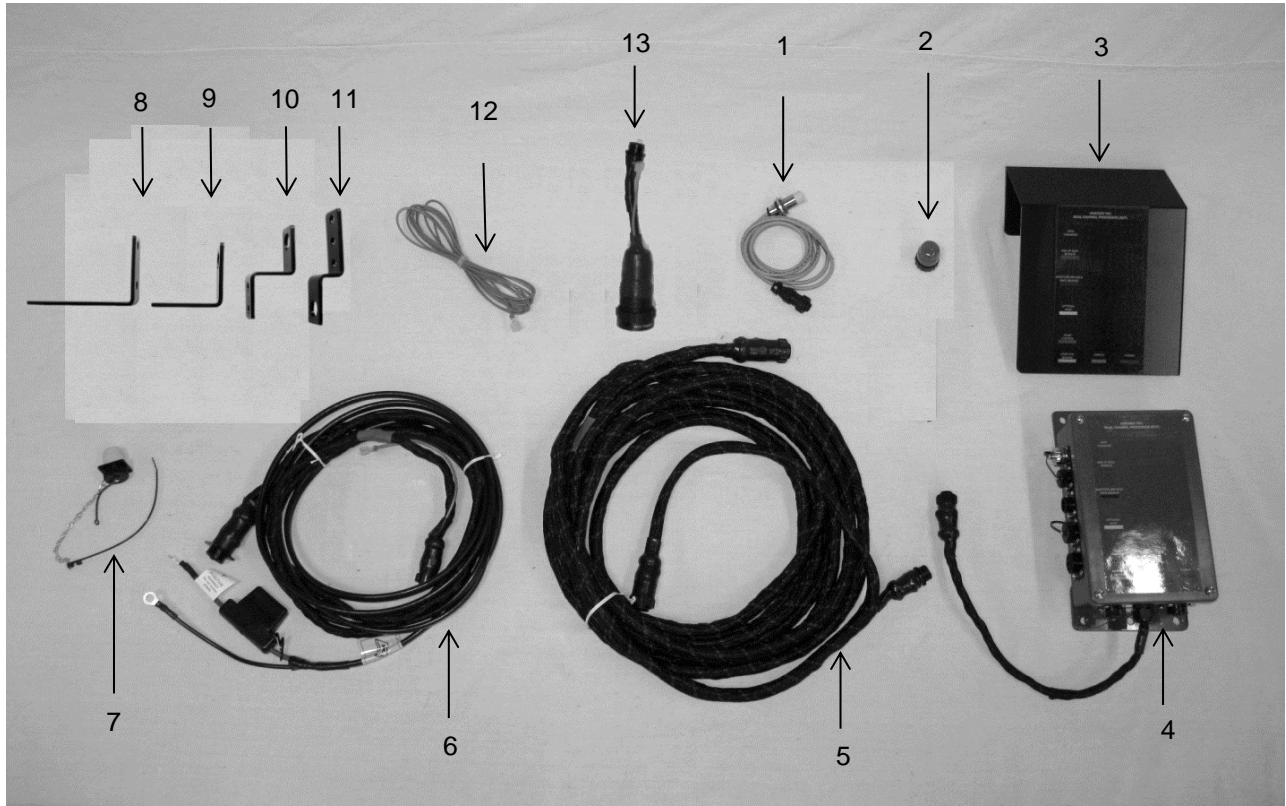
Status Alerts

Two Status Alerts will appear on the Auto and Manual mode screens when the Job Records are approaching, or full of records.

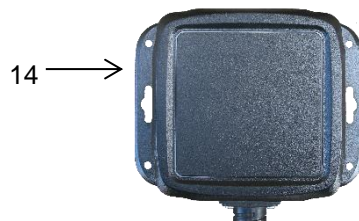
Status Alert "**Bale Records: Less than 1K remaining**". The system is now approaching the maximum amount of records that can be saved. When this code appears, download and delete jobs in the Job Records menu. Follow the instructions in Job Records to accomplish this.

Status Alert "**Bale Records failed – Memory Full**". The system will no longer accept any new data until jobs in the Job Records menu are downloaded and deleted. Follow the instructions in Job Records to accomplish this.

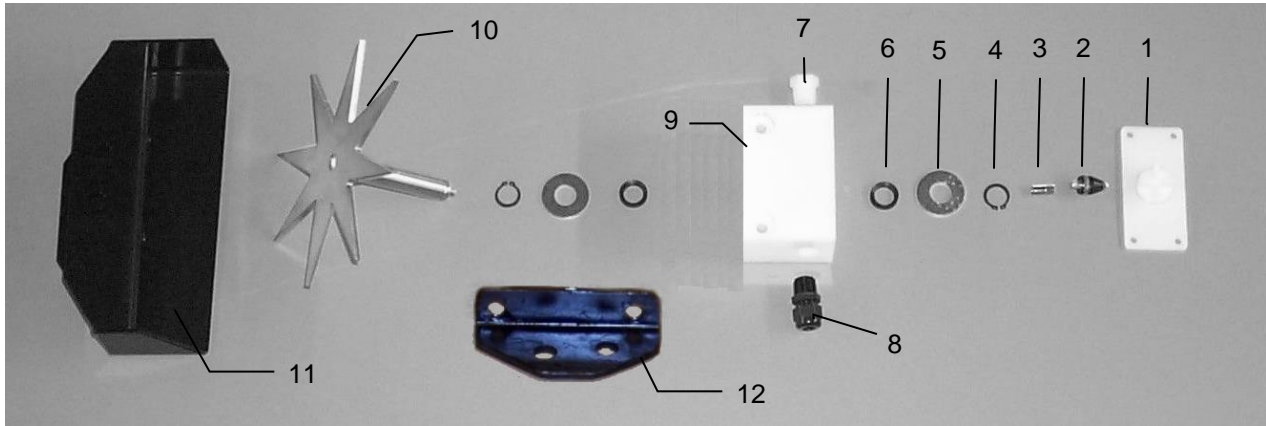
Parts Breakdown for 600SS Series Control and Harnesses



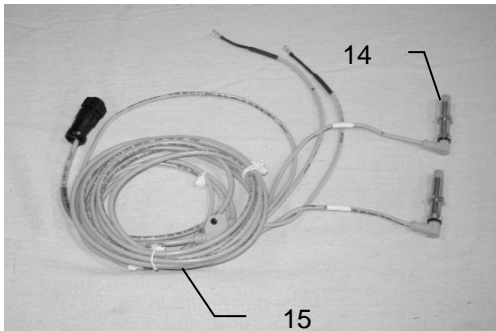
<u>Ref</u>	<u>Description</u>	<u>Part Number</u>	<u>Qty</u>
1	End Of Bale Sensor	006-7400	2
2	Terminating Connector w green cap	006-5650Z	1
3	DCP Shield/Cover	001-5650X	1
4	DCP Main Control LS 600 AUTO	006-6671SS	1
5	DCP Baler Harness 30 FT	006-6650LS2	1
6	DCP Tractor Harness	006-6650TM	1
7	Dust Plugs	006-5651PLUGS	1
8	SC Bracket Inline SSQ	001-4648SI	1
9	SMSQ End of Bale Bracket	001-4648SS	1
10	EOB Bracket Inline SSQ	001-4648SC	1
11	Round Baler End of Bale Bracket	001-4648RB	1
12	Key Switch Wire	006-5650K	1
13	Optional ISOBUS Tractor Plug (not included)	006-6670A	1
14	iPad Integration Control	030-6672C	1
NP	Y Splitter for EOB & Stroke Counter	006-7400Y	1
NP	USB Cable	006-6672USBC	1



Star Wheels and Bale Rate Sensors

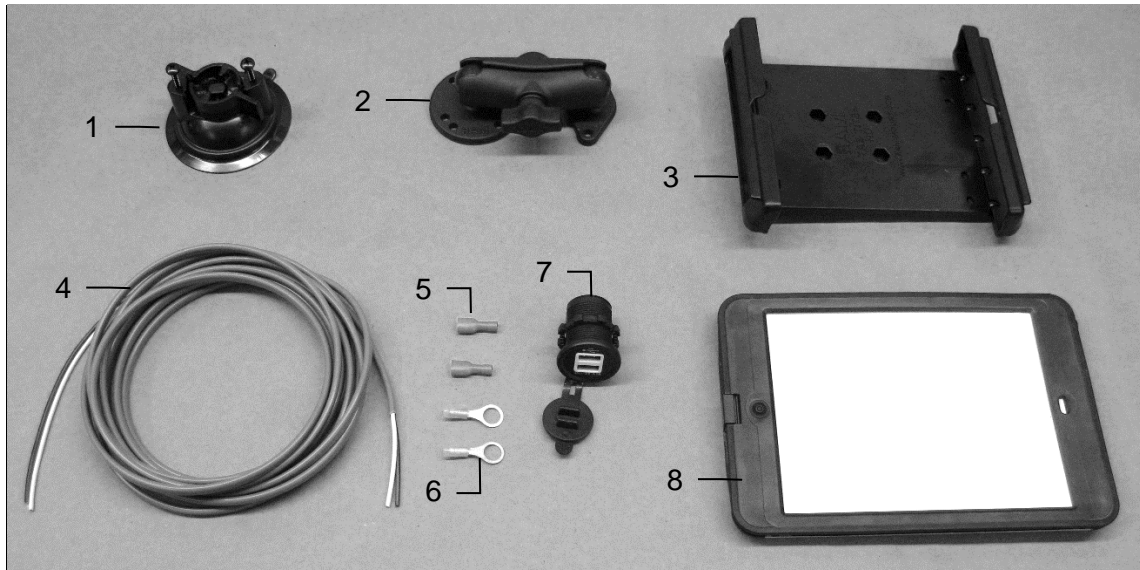


<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>	<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>
1	Block cover	006-4641B	2	9	Star wheel block	006-4641D	2
2	Electronic swivel	006-4642A	2	10	Star wheel sensor	030-4641C	2
3	Swivel insert	w/ Ref # 10	2	11	Twine guard – left	001-4645	1
4	Snap ring (per side)	006-4641K	2		Twine guard – right (prox)	001-4644	1
5	Washer (per side)	w/006-4641K	2	12	Prox Sensor Holder	001-4644SS	1
6	Dust seal (per side)	w/006-4641K	2				
7	Plug fitting	003-F38	2	1-10	Star wheel assembly	030-4642	2
8	Wiring grommet	008-0821A	2				



<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>
14	Bale rate sensor	006-7303S	2
15	Moisture and bale rate harness	006-7303HS	1
	Complete Assembly	006-7202	

Optional iPad Mini Mounting Kit (030-2014MK)



<u>Ref</u>	<u>Description</u>	<u>Part #</u>	<u>Qty</u>
1	Suction cup mount	001-2012SCM	1
2	Ram mount	001-2012H	1
3	iPad Mini® spring load cradle (Mini 4)	001-2012SLC	1
4	16 gauge power wire	006-4723P	1
5	Female spade connector	Hardware	2
6	Eye loop connector	Hardware	2
7	iPad Mini Charger 12V	001-2012P	1
8	iPad Mini 4 case	001-2012C4	1
NP	4 amp fuse	Hardware	1

Mounting Kit Assembly

030-2014MK
(Includes All Parts)

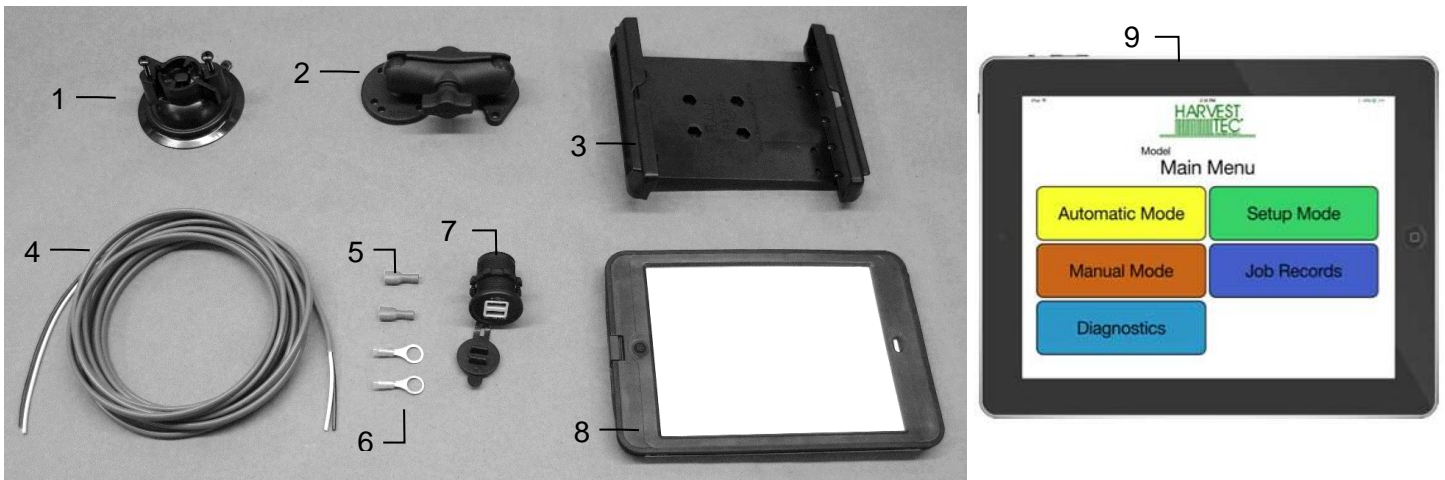
Installation Instructions

1. Identify 12V power source for wires to connect.
 - a. Eye loops included if wiring directly to the battery is desired.
 - b. Test for key power source if preferred to have power to the USB shut off with the key.
2. Once power source is identified, cut wires to desired length.
3. Crimp the two supplied quick connectors onto each the white and black wire.
4. Remove the round locking plastic nut from USB plug before connecting the wires. Black (+) White (-).
5. The wires will then be hooked to the designated terminals on the bottom of the USB plug
6. Drill a 1 1/8" hole in the preferred mounting location. Be sure to clean any sharp edges after drilling.
7. Feed the wires through the mounting hole.
8. If using the round plastic nut to secure plug in place, slide the nut back over the wiring before connecting the wires to powered source.
9. Connect the wires to the identified power source if easier to do so before tightening the plug into place.
10. Tighten plug using either the round plastic nut or mounting plate and two screws, both options supplied.
11. Once connected, hook a USB charging cord into the plug and connect a mobile device/tablet to ensure the plug is operating as you wish (key power working properly if necessary).

NOTE: This plug is not designed to charge two iPads. System damage could occur if this is attempted.
System will charge a mobile phone and iPad simultaneously without problem.

*iPad mini is a trademark of Apple Inc., registered in the U.S. and other countries.

Optional iPad Display Kit (030-4670DK)



Ref	Description	Part #	Qty	Ref	Description	Part #	Qty
1	Suction cup mount	001-2012SCM	1	7	iPad Mini Charger 12V	001-2012P	1
2	Ram mount	001-2012H	1	8	iPad Mini 4 case	001-2012C4	1
3	iPad Mini® spring load cradle (Mini 4)	001-2012SLC	1	9	iPad Mini 4	006-4670IP	1
4	16 gauge power wire	006-4723P	1	NP	4 amp fuse	Hardware	1
5	Female spade connector	Hardware	2				
6	Eye loop connector	Hardware	2		Mounting Kit Assembly	030-4670DK (Includes All Parts)	

Installation Instructions

1. Identify 12V power source for wires to connect.
 - a. Eye loops included if wiring directly to the battery is desired.
 - b. Test for key power source if preferred to have power to the USB shut off with the key.
2. Once power source is identified, cut wires to desired length.
3. Crimp the two supplied quick connectors onto the white and black wire.
4. Remove the round locking plastic nut from USB plug before connecting the wires. Black (+) White (-).
5. The wires will then be hooked to the designated terminals on the bottom of the USB plug
6. Drill a 1 1/8" hole in the preferred mounting location. Be sure to clean any sharp edges after drilling.
7. Feed the wires through the mounting hole.
8. If using the round plastic nut to secure plug in place, slide the nut back over the wiring before connecting the wires to powered source.
9. Connect the wires to the identified power source if easier to do so before tightening the plug into place.
10. Tighten plug using either the round plastic nut or mounting plate and two screws, both options supplied.
11. Once connected, hook a USB charging cord into the plug and connect a mobile device/tablet to ensure the plug is operating as you wish (key power working properly if necessary).

NOTE: This plug is not designed to charge two iPads. System damage could occur if this is attempted. System will charge a mobile phone and iPad simultaneously without problem.

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Harvest Tec Inc. Warranty and Liability Agreement

Harvest Tec, Inc. will repair or replace components that are found to be defective within 12 months from the date of manufacture. Under no circumstances does this warranty cover any components which in the opinion of Harvest Tec, Inc. have been subjected to negligent use, misuse, alteration, accident, or if repairs have been made with parts other than those manufactured and obtainable from Harvest Tec, Inc.

Our obligation under this warranty is limited to repairing or replacing free of charge to the original purchaser any part that in our judgment shows evidence of defective or improper workmanship, provided the part is returned to Harvest Tec, Inc. within 30 days of the failure. If it is determined that a non-Harvest Tec branded hay preservative has been used inside the Harvest Tec applicator system where the failure occurred, then Harvest Tec reserves the right to deny the warranty request at their discretion. Parts must be returned through the selling dealer and distributor, transportation charges prepaid.

This warranty shall not be interpreted to render Harvest Tec, Inc. liable for injury or damages of any kind, direct, consequential, or contingent, to persons or property. Furthermore, this warranty does not extend to loss of crop, losses caused by delays or any expense prospective profits or for any other reason. Harvest Tec, Inc. shall not be liable for any recovery greater in amount than the cost or repair of defects in workmanship.

There are no warranties, either expressed or implied, of merchantability or fitness for particular purpose intended or fitness for any other reason.

This warranty cannot guarantee that existing conditions beyond the control of Harvest Tec, Inc. will not affect our ability to obtain materials or manufacture necessary replacement parts.

Harvest Tec, Inc. reserves the right to make design changes, improve design, or change specifications, at any time without any contingent obligation to purchasers of machines and parts previously sold.

Revised 4/17

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