

Operation Manual

Model 600BB & 600BBHD ***Moisture Sensor Kit for Large Square Balers*** ***For New Holland BigBaler and Case IH LB 4***



*Equipment and Products
for Quality Hay.™*

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DECLARATION OF INCORPORATION



MANUFACTURER:

Harvest Tec LLC.
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REPRESENTATIVE ESTABLISHED IN COMMUNITY: Profitable Farming Company
Middle Barlington, Roborough
Winkleigh, Devon, EX19 8AG
ENGLAND

The person above certifies and declares that:

VIRTUAL MACHINE: Equipment mounted on a farm press and for the application of inoculants onto forage crops.

MODEL: 600BB & 600BBHD-OPR-20-Imp&Metric

BRAND: Harvest Tec

SERIAL NUMBER:

This application preservatives for hay Harvest Tec system meets the Directive 2006/42/EC of the European Parliament and the Council of 17 May 2006 and other applicable European Directives including Directive 2004/108/EC on the Electromagnetic compatibility.

The application of preservatives for hay Harvest Tec system will be turned on after being installed on a farm press has been declared in conformity with the Machinery Directive.

Person in the community authorized to provide information on the partly completed machinery and making this statement:

Richard Snell, President, Profitable Farming Company
Signed on May 21, 2011: Middle Barlington, Roborough
Winkleigh, Devon, EX19 8AG
ENGLAND

Table of Contents

	<u>Page</u>
Introduction	4
System Requirements	4
Safety	5
Safety Decals	5
Connecting Power and Communications Harness	5
Communicating through the ISOBUS Monitor	6-12
Harvest Tec Icons	12
Operation of the ISOBUS Monitor	13-21
Description of Screens and Menus of the Harvest Tec Monitor	13
Operating Instructions	14
Automatic Mode or Manual Mode	15
Description of Additional Screens and Menus	15-17
Diagnostics	15
Setup Mode	16
Job Records	17
Setting Up Bale Parameters for Initial Use	18
Baling Rate Setup	18
Operating Instructions for Additional Screens	19-21
Diagnostics	19
Job Records	20-21
iPad Integration Control	22
iPad Integration Control Light Signals	22
Bluetooth Receiver Lights	22
Wiring Diagram	23
Pin Outs	24-25
Maintenance	26
Winter Storage	26
Common Questions	26
Troubleshooting	27
Parts Breakdown	28-31
Controls and Harnesses-Dual Channel Processor (DCP)	28
Star Wheel Moisture Sensor & Bale Rate Sensors	29
Optional iPad Mini Mounting Kit	30
Optional iPad Display Kit	31
Notes	32-34
Warranty Statement	35

Introduction

Thank you for purchasing this 600BB or 600BBHD Moisture Sensor Kit. The Moisture Sensor Kit is designed to operator through the baler's ISOBUS system and/or an Apple iPad (not included) using the Hay App. The moisture sensor offers these advantages:

1. Operation coordinated with baler operation
2. Less cab clutter providing better visibility
3. Ease of use with all information on one screen
4. Records kept together
5. The system is ready for future updates

This manual will take you through the steps of installing the moisture sensor. Please read this manual carefully to learn how to install the equipment correctly. Failure to do this can result in personal injury or equipment malfunction. If you are unsure about installing the system after consulting this manual, contact your local authorized dealership for additional assistance or look for the contact information on the back cover of this manual. If you are in need of parts for the system please view the Parts Breakdowns in the back of this manual and contact your local authorized dealer to order the parts.

Right and Left sides are determined by facing in the direction of forward travel.

System Requirements



**The Baler Control Module (BCM)
must have Version 4.2.0.0 or higher.**



***iPad Mini or iPad 3rd Generation (2012) or newer, running the current iOS operating system
or one version previous required for iPad option**

****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 2.7.1 (or higher) to operate with the iPad Integration Module**

In order for the CNH Baler to receive the ThirtyPlus or CropSaver System messages regarding Status, Moisture and preservative, and display this information on the Baler Work Screen, the software in the Baler Control Module (BCM) needs to be updated to version 4.2.0.0 or higher. Dealers can log an ASIST incident and request the BCM software from CNH Technical Support Services if they need the software prior to those release dates.

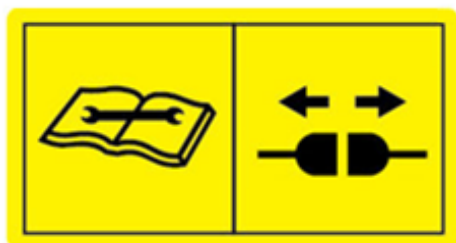
Safety

Carefully read all the safety signs in this manual and on the applicator before use. Keep signs clean and in good working order. Replace missing or damaged safety signs. Replacement signs are available from your local authorized dealer.

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

Carefully read and understand all of the baler safety signs before installing or servicing the baler. Always use the supplied safety equipment on the baler to service the applicator.

Safety Decals



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



Number 4
Read and understand the operator's manual before using
or working around the equipment.
Part no. DCL-8000

Connecting Power and Communication Harnesses

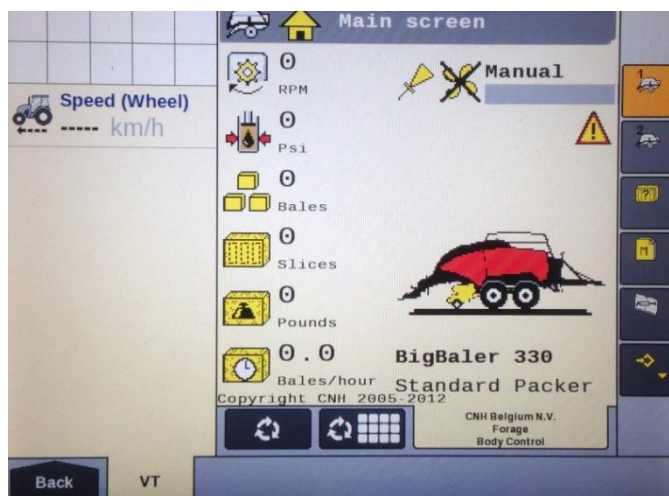
The harnesses (006-6650TM & 006-6650LS) are located at the front of the baler near the hitch and at the back of the tractor near the drawbar. See arrow below. Make sure all connection wires are free between the hitch of the baler and the back of the tractor, especially when tractor is turning away.

WARNING and Safety Precaution: Stop tractor engine and shift to park, set brakes and remove key before leaving the tractor.

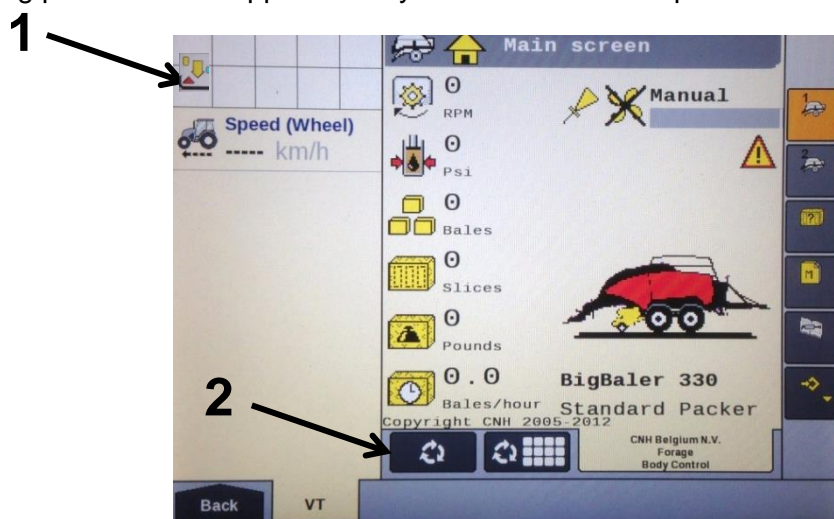


Communicating through the ISOBUS Monitor to Utilize the Moisture Sensor Kit

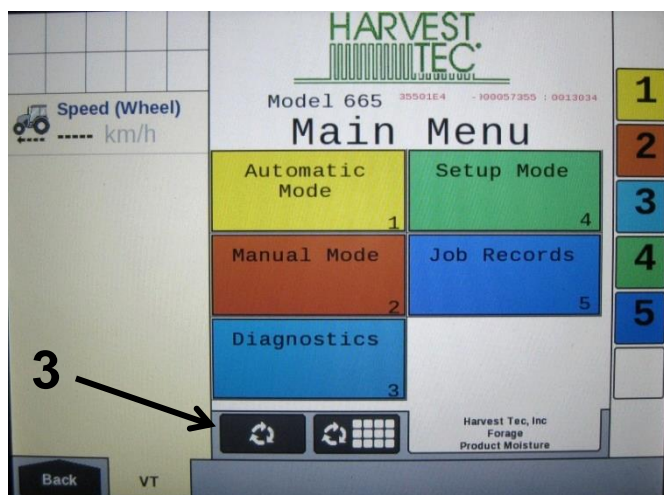
When the 600 Series processor is connected to the baler and powered on the first time it is necessary to load the object pools to the Virtual Terminal (VT).



Icon (1) indicates that the object pools are in the process of loading and saving to the VT. Note that if the language selection of the VT is changed, the corresponding object pool must be reloaded to the VT. The object pool loading process takes approximately two minutes to complete.



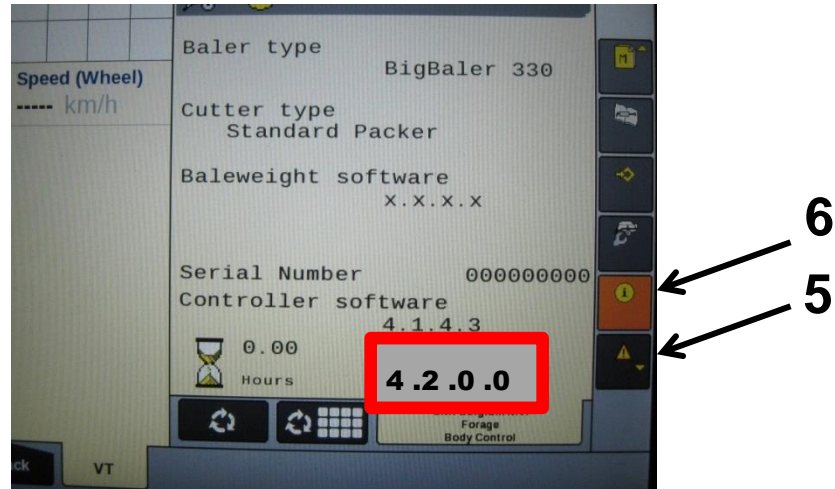
Once the object pools have been loaded and Icon (1) disappears from the upper left corner of the display, press the NEXT IMPLEMENT button (2) and verify that the 600 Series object pools appear on Virtual Terminal.



After verifying that the 600 Series object pool is loaded and the 600 Series System operating screens are displayed on the VT, press the NEXT IMPLEMENT button (3) to return to the baler work screen page.



Press the bottom button of the Menu Bar with the down arrow in corner (4) on the side of the screen to continue down the Menu Bar below the USER SETTING icon.



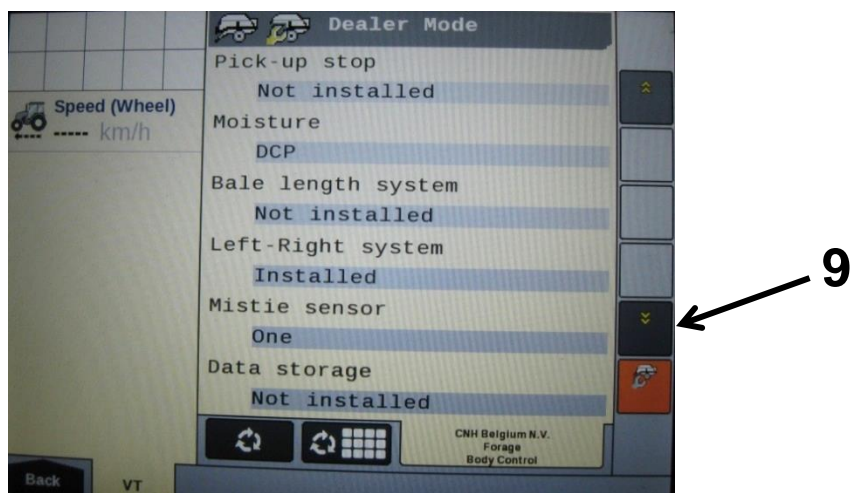
Scroll through the Menu bar until the INFORMATION icon (5) is visible. Press the INFORMATION button so the Information page appears. Verify that the controller software loaded to the baler is version 4.2.0.0 or higher. If not, contact the dealer to update firmware in Baler Control Module (BCM). If the controller software displays version 4.2.0.0 or higher proceed, to configuring the baler for the 600 Series System by pressing the MACHINE SETUP button (6).



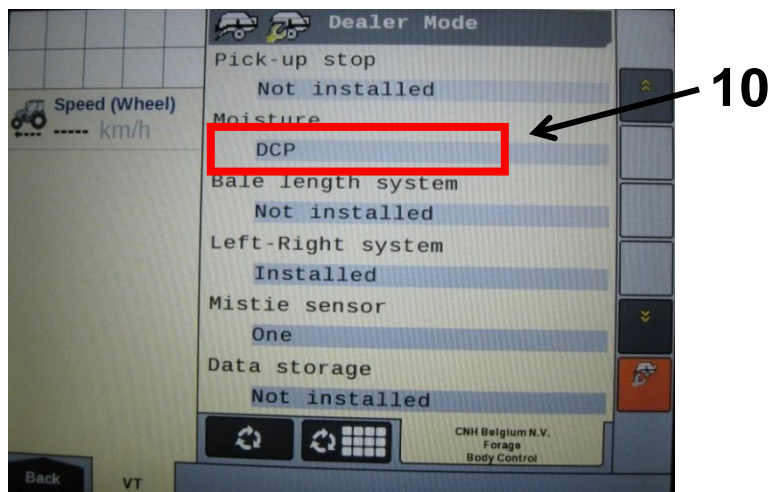
Once the MACHINE SETUP icon has been selected, the Machine Setup page will appear, and the icon will be backlit in orange. Press the MACHINE SETUP icon (7) again to go to the second page of the Machine Setup.



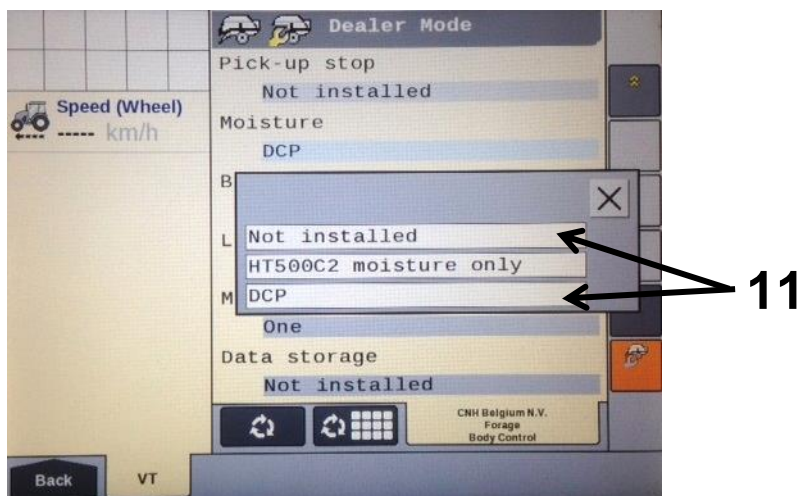
The second page of the Machine setup screens is identified by the three light gray buttons in the Menu Bar. Press and hold second light gray button (8) for 10 seconds or until display switches to displaying Dealer Mode.



Once Dealer Mode has been entered, select the down arrow in the Menu Bar (9) to scroll to the second Dealer Mode Screen where 'Moisture' is a selection.

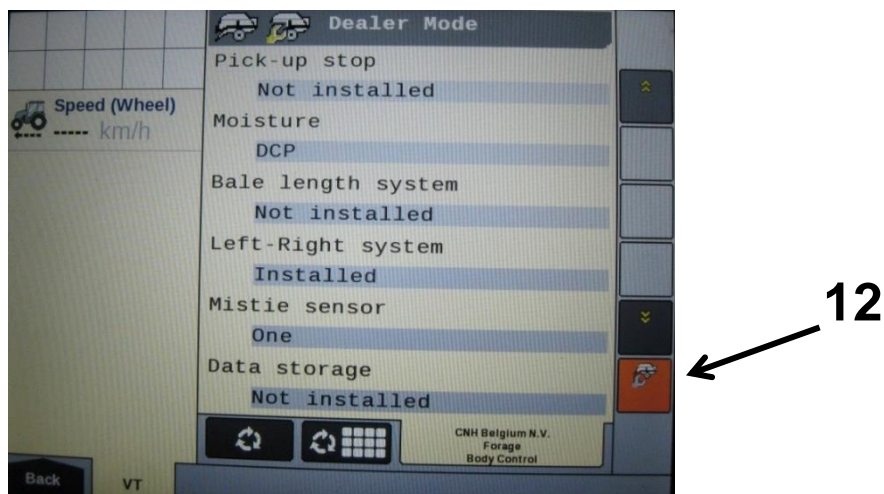


Once you have reached the second Dealer Mode screen, select the area under 'Moisture'(10). Note that the box below 'Moisture' will likely be the default "NOT INSTALLED".

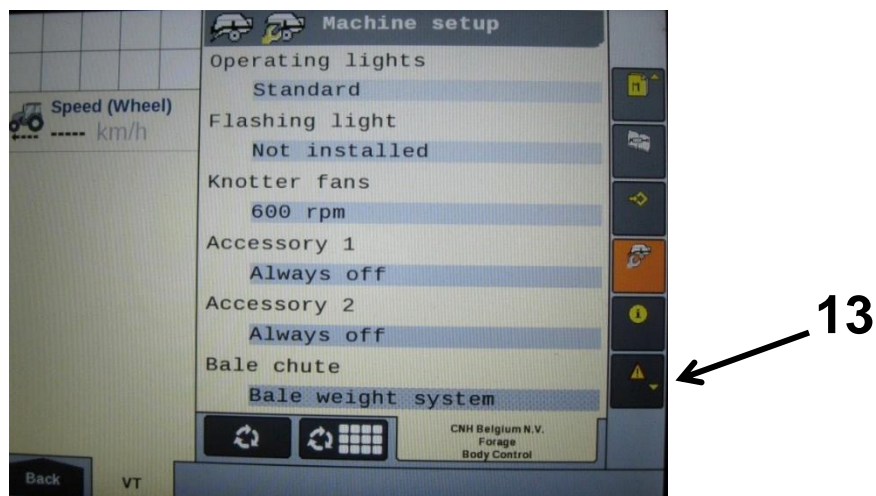


Select the proper configuration setting from the pop up menu (11), based on the configuration of your 600 Series system. This configuration setting allows the baler to properly display the information it is receiving from the 600 Series system on the baler working screen. Select "DCP."

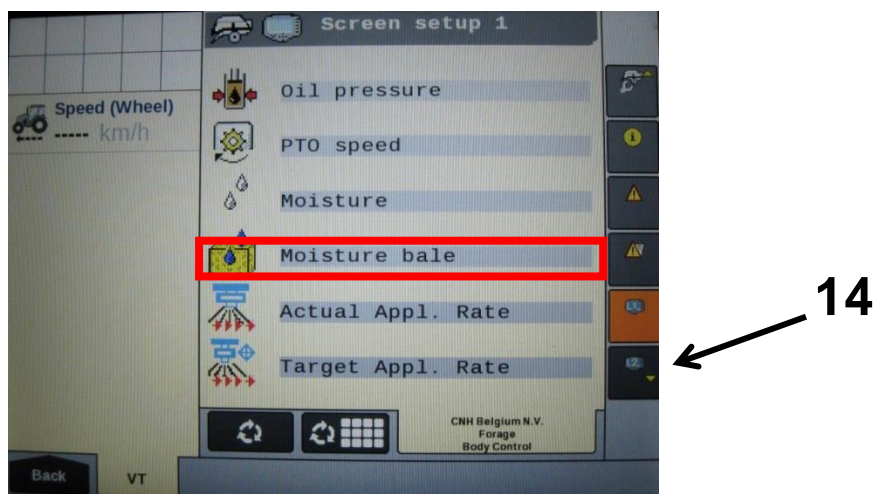
Note that "HT500C2 moisture only" is not ISOBUS compatible and is not an option in North America



Once the configuration has been set press the MACHINE SETUP icon (12) to return to the Machine Setup.



Press the arrow down button at the bottom of the Menu Bar (13) to scroll down thru the Menu Bar until you reach the SCREEN SETUP pages.



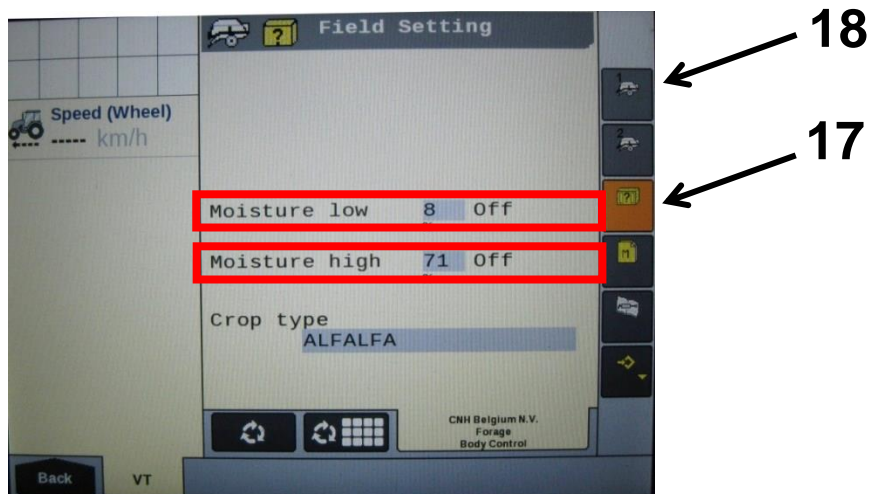
Select the icon for SCREEN SETUP 1 (14) so the Screen Setup 1 screen appears. Select how you would like to have the screen configured to show a combination of baler and 600 Series system information by selecting the boxes. When you select one of the boxes, a popup screen will appear that shows the selections available.



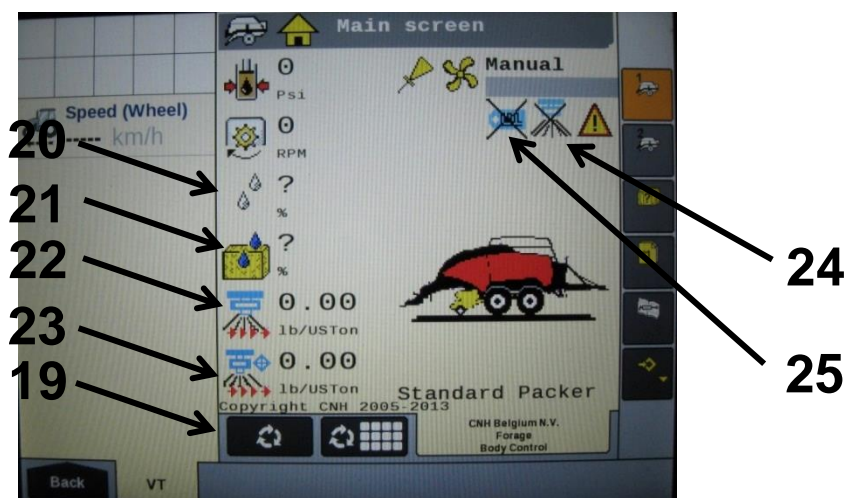
Selections related to the 600 Series system include Moisture and Moisture Bale. These are noted by arrows in the image above and in the next image. Scroll to additional options in the popup window by pressing the down arrow on the side of the popup window (15).



Once the Screen Setup pages have been configured, scroll back up to the top of the Menu Bar by pressing the top button in the Menu Bar with the up arrow (16).



Select the FIELD SETTING icon (17) and adjust the Moisture Alarm Settings in the Field Setting Screen. Note that the low moisture alarm must be set lower than the high moisture alarm. The moisture alarms can be turned off by setting the low setting <9% and the high setting >70%. When the alarms are turned off, they will say OFF next to the values. Select the MAIN SCREEN 1 icon (18) from the Menu Bar.



Verify that your MAIN SCREEN 1 and MAIN SCREEN 2 are configured as you would like them displaying the information you would like visible during operation. During operation, information for the 600 Series System that you have chosen to display will be displayed on the Baler Work Screen. You can cycle back and forth between the Baler Work Screen and the 600 Series System Work Screen by pressing the NEXT IMPLEMENT button (19) during operation.

Harvest Tec Icons signified by arrows 19-25 are listed below. 19, 20, 21, and 24 are visible with the Moisture Only 600BB System. All would be visible with a complete applicator system.

- (19) Next Implement Button
- (20) Moisture Content %
- (21) Last Bale Average Moisture Content %
- (22) Actual Application Rate of Preservative
- (23) Target Application Rate of Preservative
- (24) DCP Status Icon
- (25) Tagger Status Icon

The DCP Status Icon (24) indicates the DCP is connected to the baler. An “X” over the DCP Status Icon indicates the DCP System is:

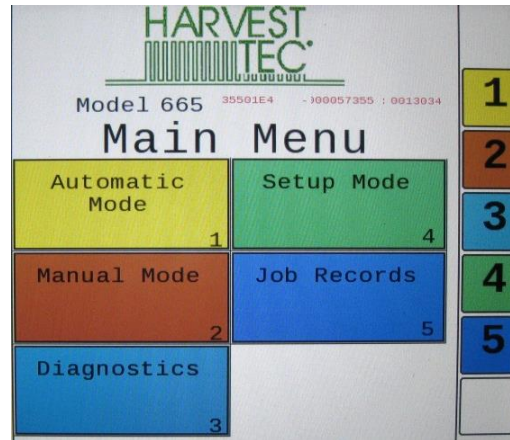
- A) Not in an application mode
- B) Paused through
 - a. Manual Pause
 - b. Hay Indicator Pause
 - c. Baler End Of Row (EOR) Pause (PTO speed < 600 rpm)

When the Tagger Status Icon (25) is visible the DCP System is indicating the Tagger is activated. When the DCP System is not in Application Mode or has been paused there will be an “X” over the Tagger Status Icon.

Operation of the ISOBUS Monitor

Description of Screens and Menus of the ISOBUS Monitor

All Buttons are color coded and labeled. Selections can be made by touching the actual screen choice or by touching the numbers down the right side menu which are color and numerically coded to correlate with the same selection.



Main Menu of the Preservative Applicator Screen

Listed below are the Main Menu Options.

Automatic Mode (1) This operating mode allows the operator to watch the moisture content of crop and keep individual bale records. The following items are displayed in the mode while baling: Moisture, Baling Rate, Last Bale Average Moisture, and Tons Baled.

Manual Mode (2) This operating mode allows the operator to also watch the moisture content of the crop and keep individual records. The following items are displayed in the mode while baling: Moisture, Baling Rate, Last Bale Average Moisture, and Tons Baled.

Diagnostics (3) Allows operator to set the date and time. The installed software versions can also be viewed here.

Setup Mode (4) This mode allows the operator to customize the applicators settings for their baler and baling needs. This mode allows changes to be made to the following areas: Application Rate, Baling Rate, Language, US or Metric units, and turn on/off the optional Hay Indicators.

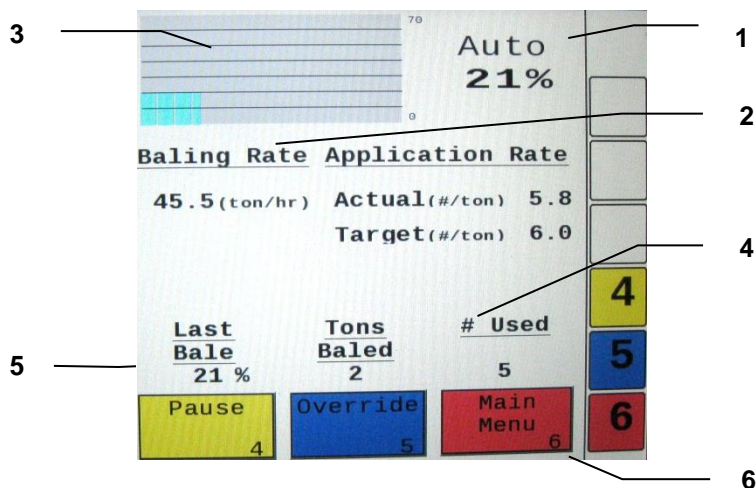
Job Records (5) Keeps track of up to 300 jobs with total product used, average moisture content, highest moisture content, tons baled, date of baling, and total number of bales made. Individual bales are also able to be viewed and the records can also be downloaded to a USB drive in this mode.

Operating Instructions

Automatic Mode will be used in the field to read both hay moisture content sensed by the star wheels and the operator's preset parameters to determine baling rate and tons per hour.

Automatic Mode or Manual Mode

After pushing the **AUTOMATIC MODE** key in the **MAIN MENU** screen, the following screen should appear:



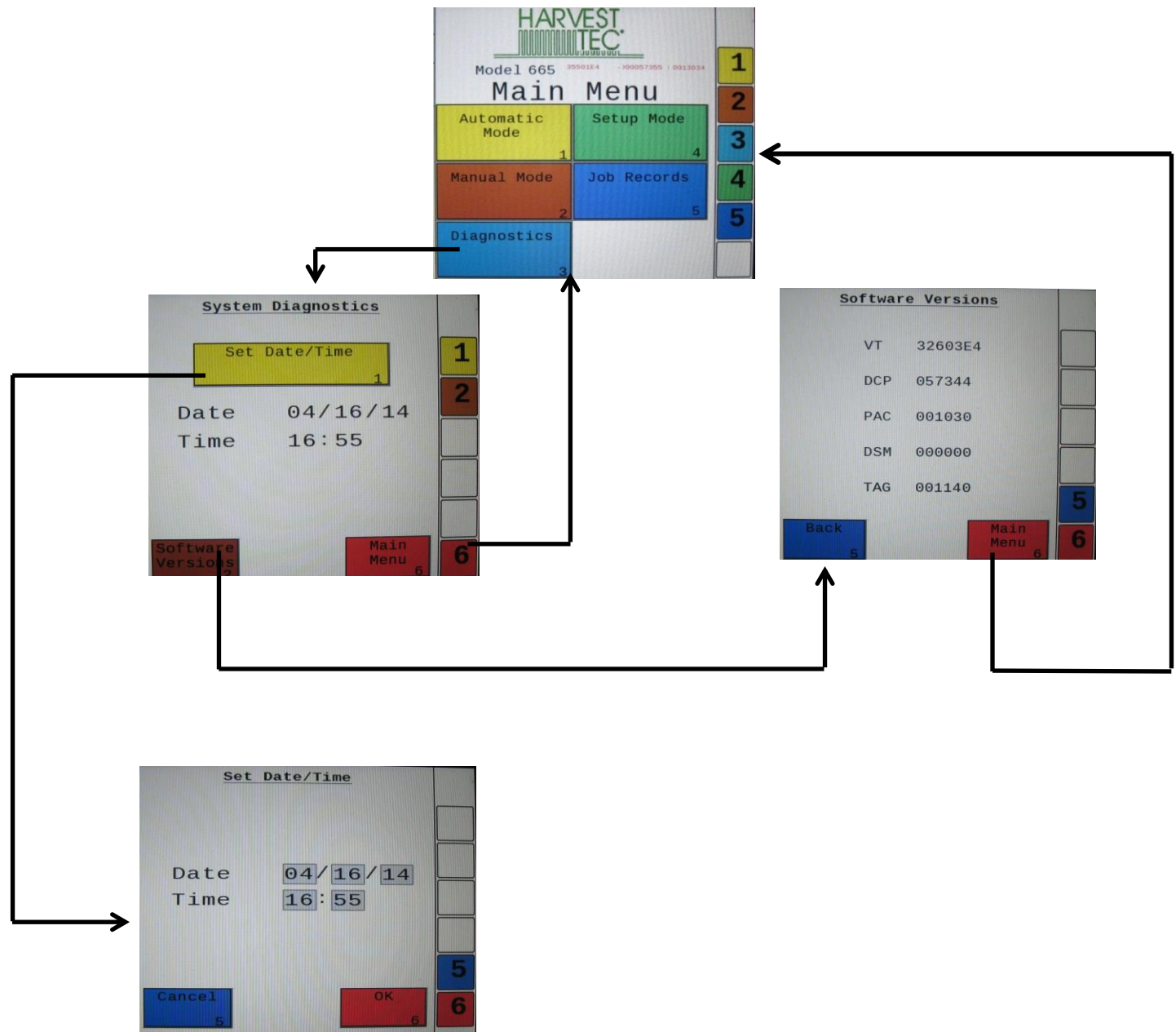
1. The moisture content is shown in the upper right hand corner (1)
2. **Baling Rate and Application Rate** (2) are shown in the middle. The application rate will always be zero. The target rate will show a number when the moisture of the hay exceeds the initial set point of 16%. The Baling Rate is calculated in the **SETUP MODE**.
3. The **Graph** (3) shows the moisture trend from the past 90 seconds in 3 second intervals.
4. The totals on the bottom of the screen show the total **Tons Baled** and **# Used** (4) (pounds of product used) for the current job. These numbers will reset to zero when a new Job Record is started. If operating with Bale Rate Sensors OFF total Tons Baled will be zero.
5. **Last Bale** (5) shows the average moisture content for the last bale.
6. Press the **MAIN MENU** (6) key to return to the opening screen.

The following pages provide additional screen functionality you may choose to use if you add preservative and or the tagging capabilities.

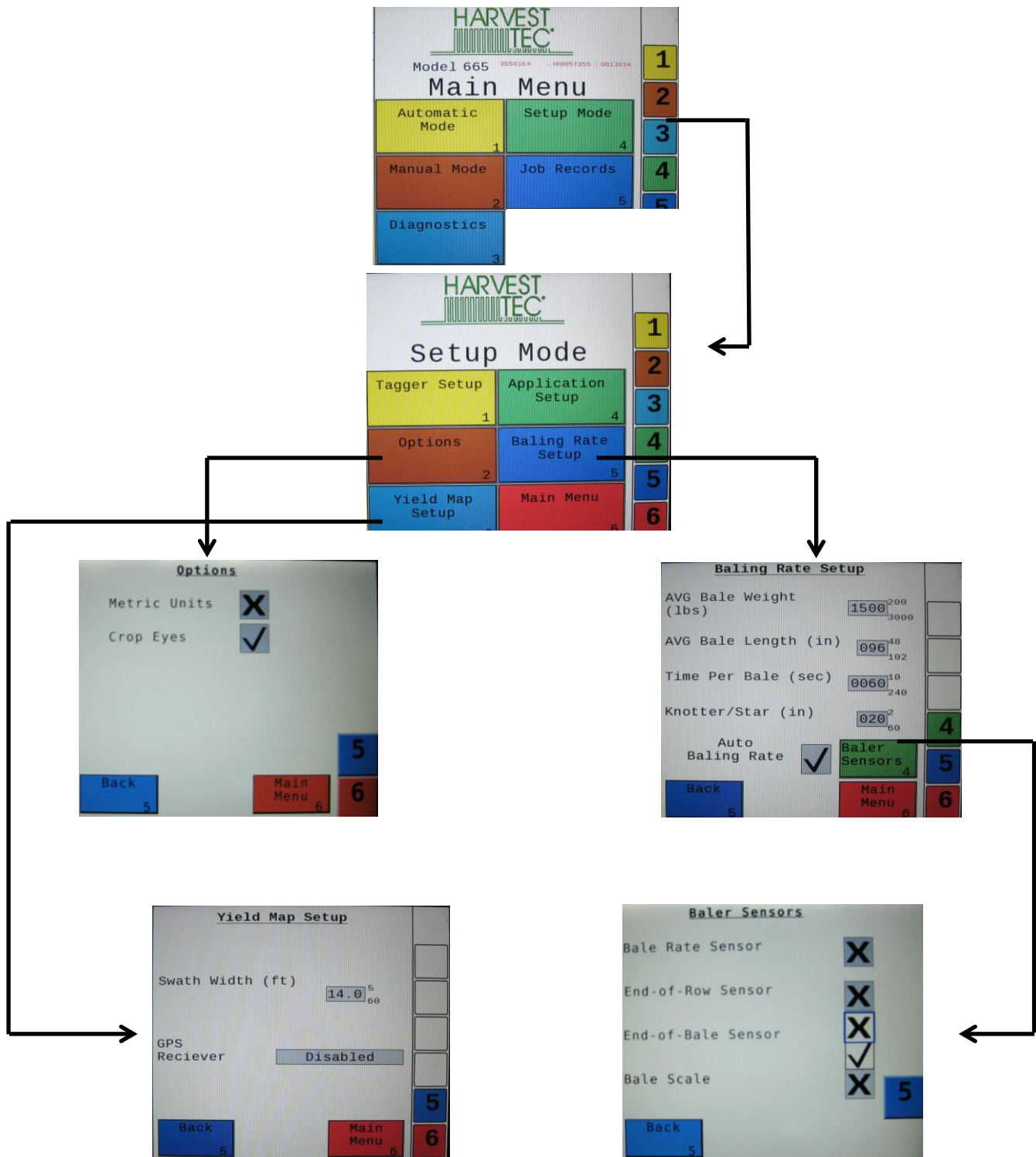
Description of Additional Screens and Menus

Use the below listed screen menus to navigate through all of the operation screens. Navigation through the screens is accomplished by using the touch screen and pressing the appropriate function.

Diagnostics:



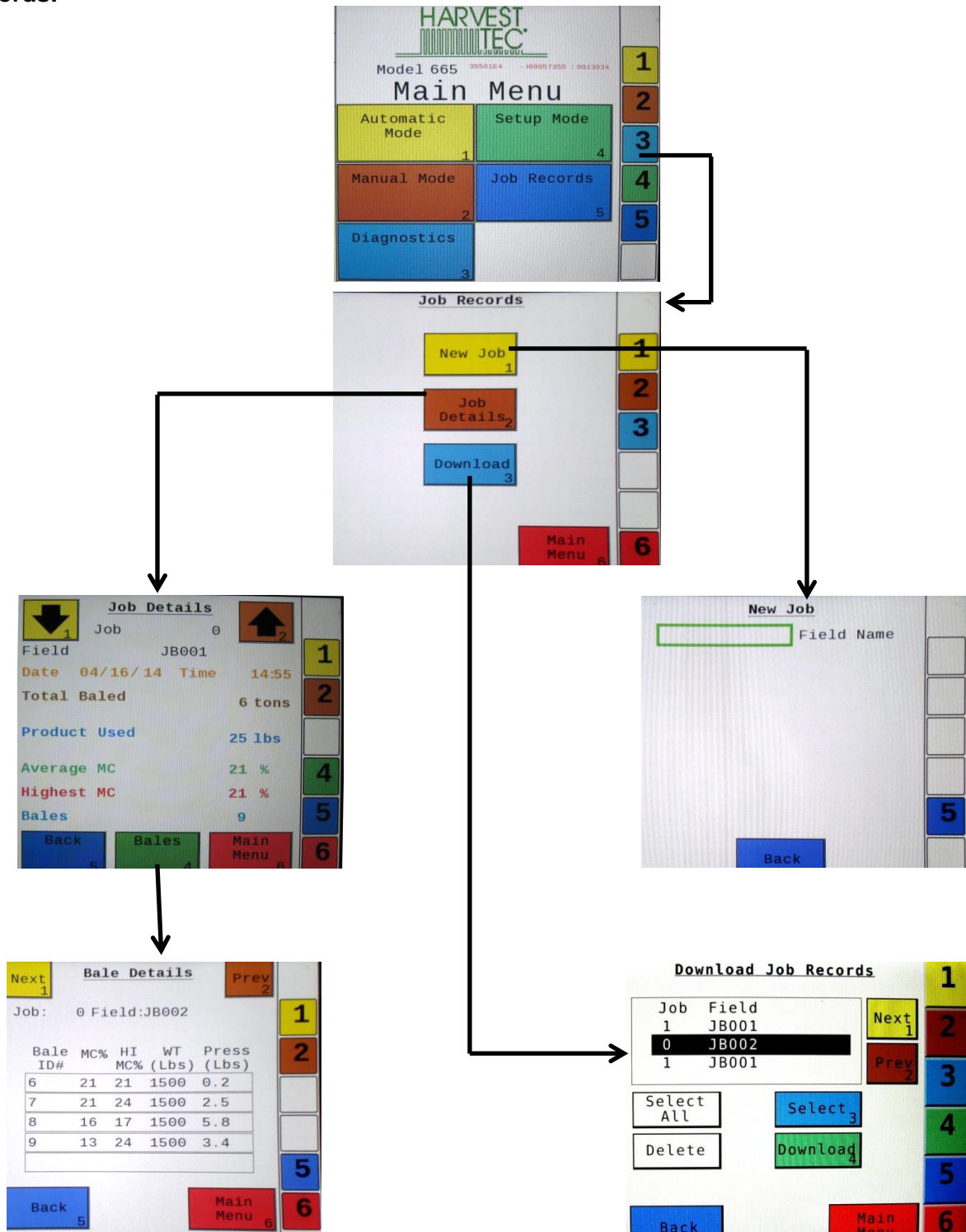
Setup Mode:



*If operating a **600BBHD** system the End-of-Bale Sensor will need to be turned **ON** (check mark).

This will have the moisture system take the EOB signal from the baler sensor through the ISOBUS connection.

Job Records:

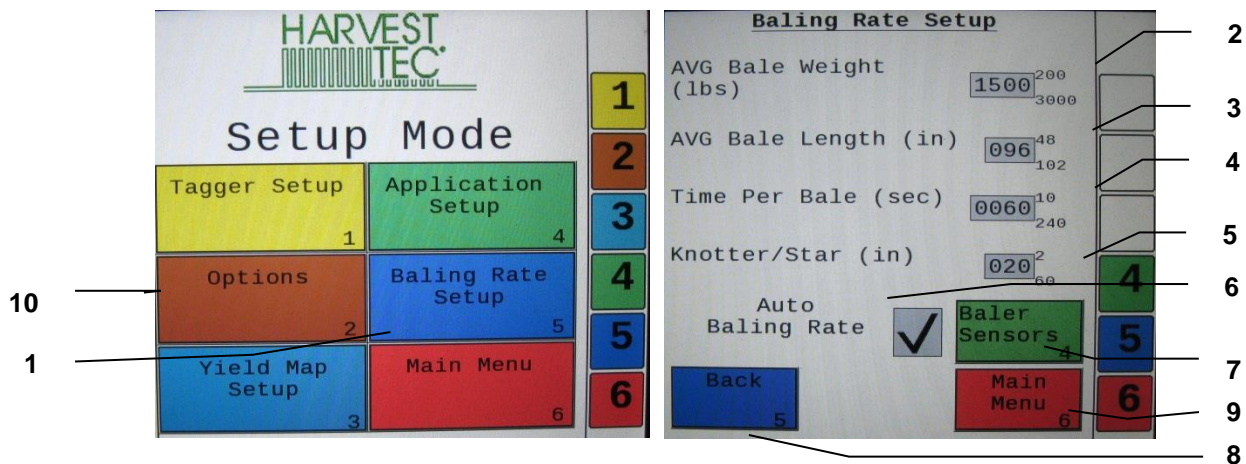


Setting Up Bale Parameters for Initial Use

In the SETUP MODE you will set your initial baling rate.

Baling Rate Setup

After pushing the **SETUP MODE** key in the **MAIN MENU** screen, the top screen should appear:

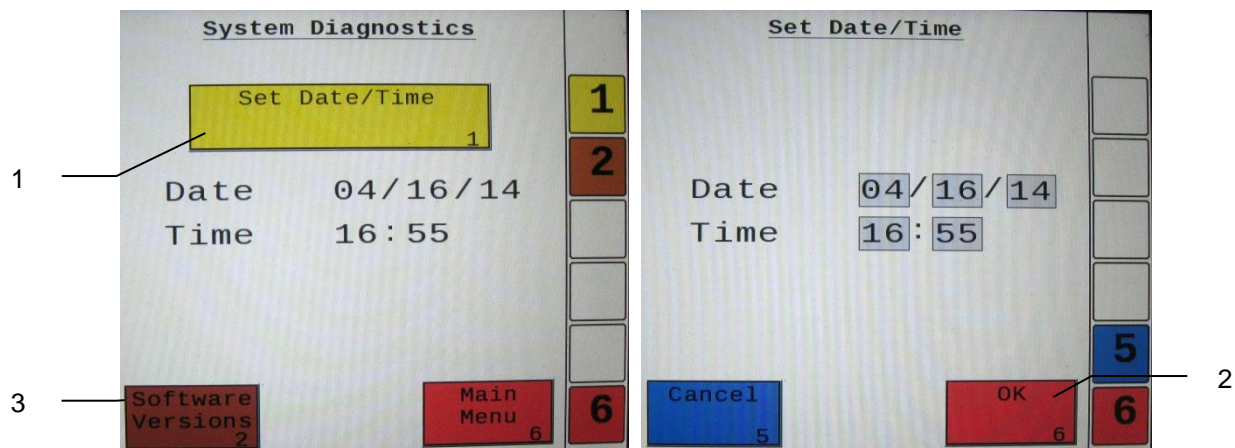


1. On this screen the operator will Select the **BALING RATE SETUP** (1) key.
2. Select the number to the right of **AVG Bale Weight (Lbs)** (2) : to adjust the weight of your bales. The key pad shown will display. Select any number combination in this screen within the min/max limits. The information will remain until it is changed again.
3. Select the number to the right of **AVG Bale Length (In)** (3): to adjust the length of your bales. Select any number combination in this screen within the min/max limits. The information will remain until it is changed again.
4. Select the number to the right of **Time Per Bale (Sec)** (4): to adjust the time it takes to make a bale. Select any number combination in this screen within the min/max limits. The information will remain until it is changed again.
5. Select the number to the right of **Knotter/Star** (5) to adjust the distance between the knotter and star wheel. To determine the distance, measure between the center of the starwheel and the center of the knotter. This is important so the job record correlates to the bale being made.
6. When the **AUTO Bale Rate** (6) sensors are **ON** the applicator will calculate your tons per hour automatically. When the **AUTO Bale Rate** (6) sensors are **OFF** a constant tons per hour (your inputed bale weight and time) will be used. Operating the unit with the AUTO Bale Rate sensors OFF will cause total tons per hour in Job Records to be left blank. Select the underlined word to toggle between ON or OFF. **First Time and Annual Setup is checking with AUTO Bale Rate sensors OFF.**
7. Selecting the **Baler Select** (7) will allow you to use the baler sensors if your baler is equipped with them from the factory. The baler sensors will come OFF as a default. If you choose to use the baler sensors be sure your baler is equipped with that option. For example, if you do not have an electronic bale length kit, turn the sensor to OFF. The baler End of Row sensors are triggered once the PTO speed goes below 600RPM. The End of Bale sensor is triggered by the tie cycle alarm. The Bale Scale sensor is for the baler equipped with a Chute Scale. **Note: Baling on rough terrain or hills can cause the scale to give an inaccurate reading. Turn Bale Scale option OFF in the Bale Rate Screen and use AVG Bale Weight (2) reading as weight of bale.**
 - a. *If operating a **600BBHD** system the End-of-Bale Sensor will need to be turned **ON** (check mark). This will have the moisture system take the EOB signal from the baler sensor through the ISOBUS connection.
8. Next select the **Back** (8) key found on the bottom left hand of the screen to return to the **SETUP MODE** screen, or select the **MAIN MENU** (9) key on the bottom right hand of the screen to return to the opening screen.
9. Select the **OPTIONS** (10) key to adjust the system between metric and standard units. The **Crop Eyes** can also be turned **ON** or **OFF** in the **OPTIONS** screen. Select the ON/OFF next to Crop Eyes to change this setting. **Note:** If you change languages you may need to reset the system from the MAIN MENU screen.

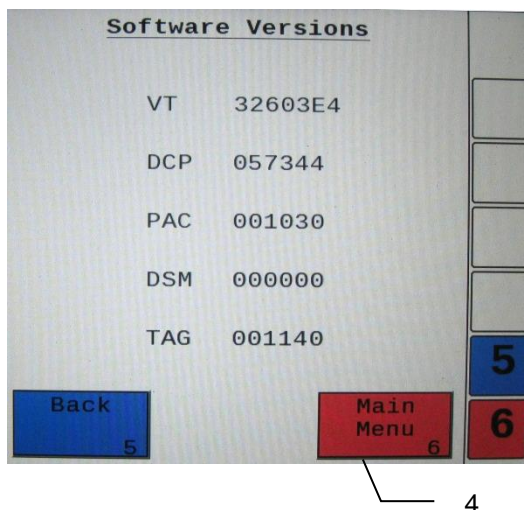
Operating Instructions for Additional Screens

Diagnostics

After pressing the **DIAGNOSTICS** key in the **MAIN MENU** screen, the screen on the left should appear:



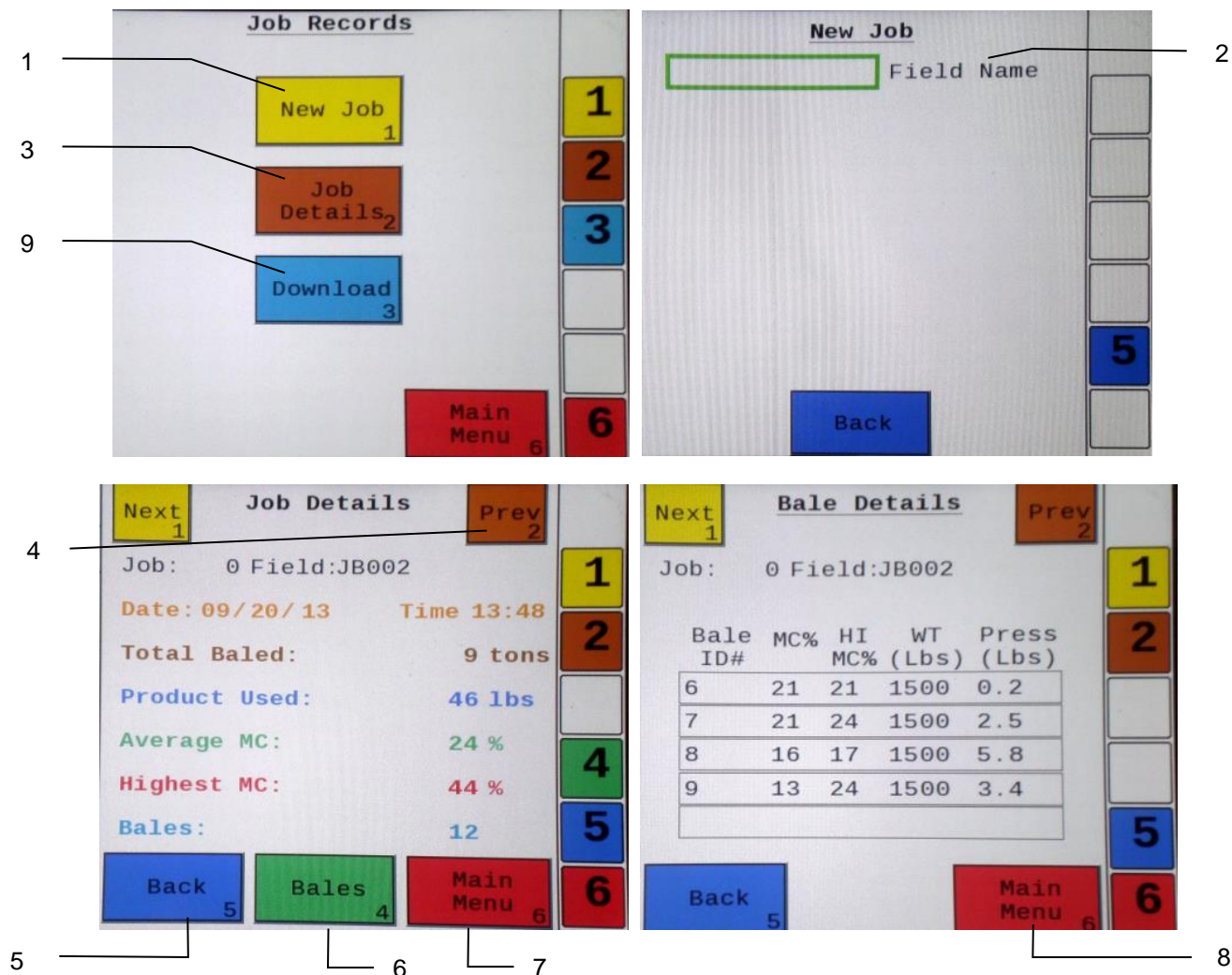
1. To set date and time select the **Set Date/Time** (1) key. In the next screen enter the date (month, day, year format) followed by the time. When done select the **OK** (2) key. NOTE: The clock uses military (or 24 hour) time.
2. Select the **Software Versions** (3) key to check all software versions of modules attached to the Dual Channel Processor (DCP).



3. Press the **MAIN MENU** (4) key to return to the opening screen.

Job Records

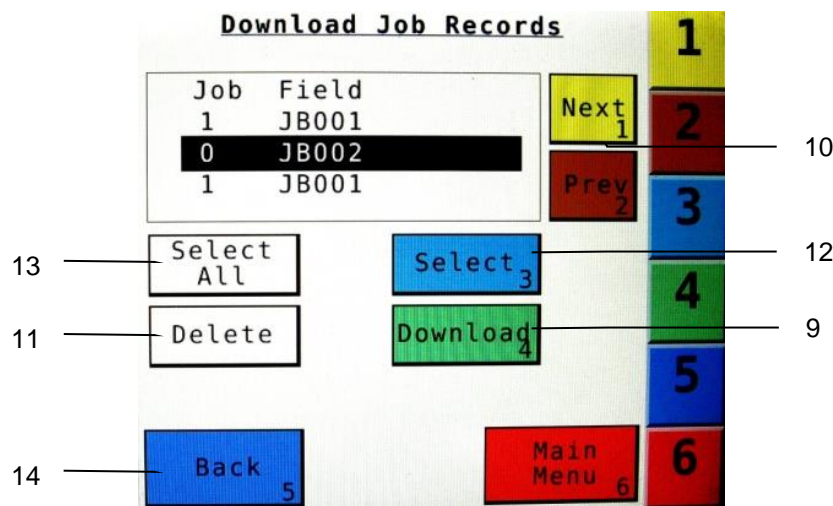
After pushing the **JOB RECORDS** key in the **MAIN MENU** screen, the upper left screen below should appear:



1. Selecting **New Job** (1) will save all the previous bale records and open the **Field Name** (2) screen.
2. Use the key pad in the Field Name screen to enter up to an eight character field name. Use the asterisk key to move on to the next letter or number if they are identical. Use the pound sign (#) as a space between the characters. When you have completed the field name press enter.
3. Pressing **Job Details** (3) will open the Job Details screen. Use the **Next** and **Prev** (4) icons to view the different jobs. Job: 0 will always be your current and open job record. Press **Back** (5) to go to the **Job Records** screen or **Main Menu** (7) for the main screen.
4. Selecting **Bales** (6) at the center bottom of the screen will open a **Bale Details** (7) screen. This screen lets you look at the individual bale records for the first five bales made. Use the **Next** and **Prev** icons to scroll through five bales at a time. Select **Back** (5) to go to the **Job Details** screen or **Main Menu** (8) for the main screen.

Continued on the next page

Continued Job Records



JOB DATA									
FIELD	JOB #	AVG MC	H MC	#USED	BALES	TONS	DATE/TIME		
JB001	1	21	55	16	12	8	16 JAN 09 09 32		
BALE DATA									
FIELD	JOB #	AVG MC	H MC	#BALE	BALE ID	BALE WT	DATE/TIME		
JB001	1	23	39	1.3	1.23E+09	1500	16 JAN 09 08 31		
JB001	1	27	55	0.9	1.23E+09	1500	16 JAN 09 08 33		
JB001	1	20	24	2	1.23E+09	1500	16 JAN 09 08 34		
JB001	1	16	16	0.3	1.23E+09	1500	16 JAN 09 08 35		
JB001	1	21	24	1.6	1.23E+09	1500	16 JAN 09 08 36		
JB001	1	16	24	1.8	1.23E+09	1500	16 JAN 09 08 36		
JB001	1	23	39	1.3	1.23E+09	1500	16 JAN 09 08 37		
JB001	1	27	55	0.9	1.23E+09	1500	16 JAN 09 08 38		
JB001	1	20	24	2	1.23E+09	1500	16 JAN 09 08 40		
JB001	1	16	16	0.3	1.23E+09	1500	16 JAN 09 08 41		
JB001	1	21	24	1.6	1.23E+09	1500	16 JAN 09 08 42		
JB001	1	16	24	1.8	1.23E+09	1500	16 JAN 09 08 43		

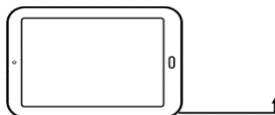
JOB DATA									
FIELD NAME, RYAN1	JOB NUMBER, 00013	AVG MC, 00016	HIGH MC, 00016	PRODUCT USED, 0000000397	TOTAL BALES, 00012	TOTAL TONS, 0000000004	DATE/TIME, 29 DEC 08 12:13		
BALE DATA									
FIELD NAME, RYAN1	JOB NUMBER, 00013	AVG MC/BALE, 00016	HIGH MC/BALE, 00016	PRODUCT USED/BALE, 00013	BALE ID NUMBER, 0847600718	BALE WEIGHT, 01600	DATE/TIME, 29 DEC		
RYAN1	00013	00016	00016	00013	0847600718	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600719	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600720	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600721	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600722	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600723	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600724	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600725	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600726	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600727	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600728	01600	29 DEC		
RYAN1	00013	00016	00016	00013	0847600729	01600	29 DEC		

5. Selecting the **Download** (9) key will open the Download Job Records screen. This screen lets you select jobs to download onto a USB drive. To download job records insert a USB drive into the port on the Dual Channel Processor. Select the job(s) you would like to download using the **Next and Prev** (10) icons to highlight the job(s). Once the desired jobs are selected press the **Download** (9) key. Press the **Download** key again to confirm. When the USB drive light goes off all the jobs selected will be saved. The jobs can then be opened on any computer with Excel or Notepad. To delete jobs highlight, select them and press **Delete** (11) followed by pressing **Delete** again for confirmation. Press **Back** to go to the Job Records screen or **Main Menu** for the main screen.
6. Pressing the **Select** (12) key will select or unselect the highlighted job.
7. Pressing the **Select All** (13) key will select all jobs, except for the current job (0). To unselect press the **Back** (14) key.
8. The job record in Excel will show as on the left above. The Bale ID column will need to be adjusted for proper viewing.
9. The job record in Notepad will show as on the right above. You will need to scroll right to see all the information.

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 2.7.1 (or higher)** to operate with the iPad Integration Module

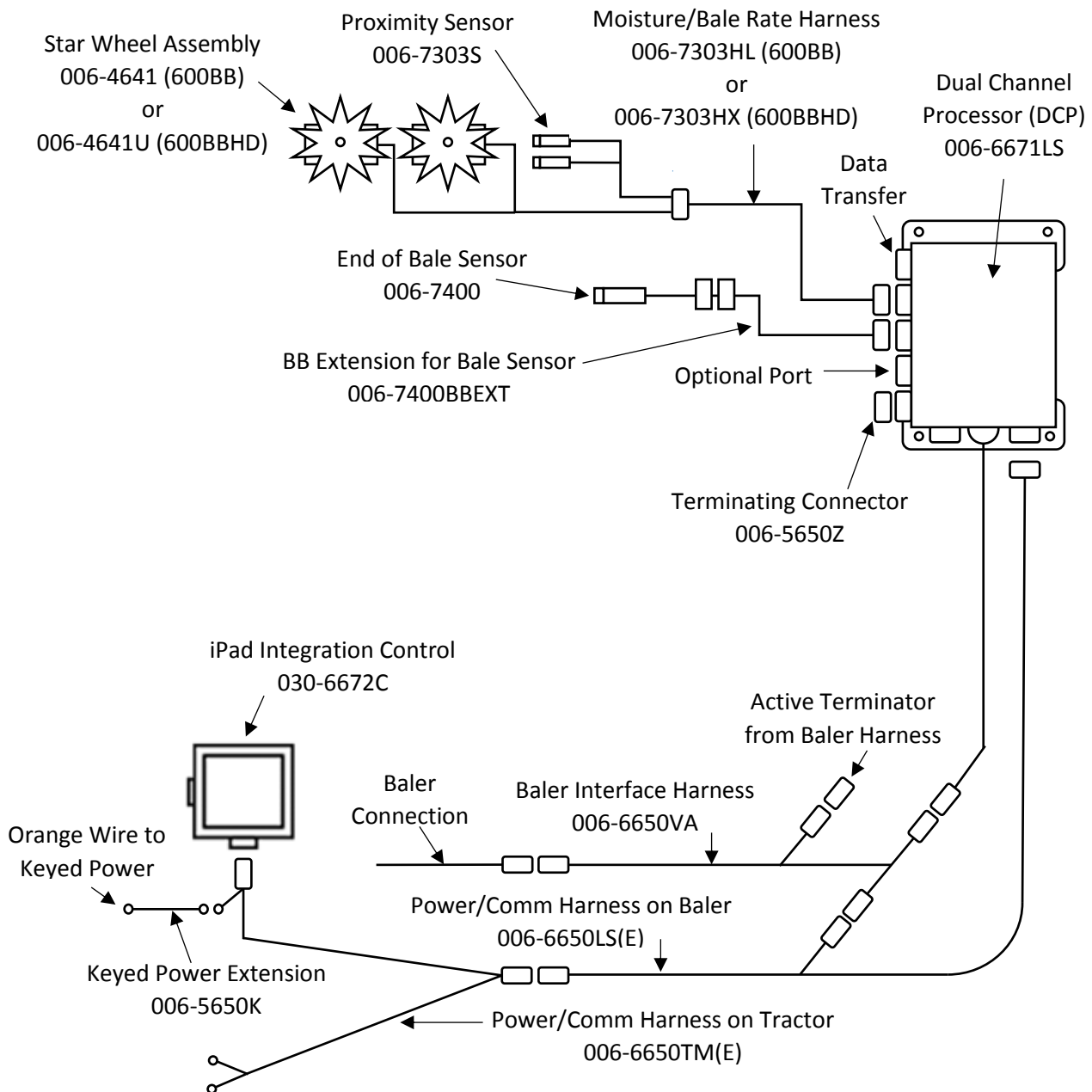
*Made for Apple iPad badge

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.

Wiring Diagram

- The Baler Power/Communication Harness (006-6650LS(E)) will attach to the open port of the Tractor Harness (006-6650TM(E)) and run back to the Dual Channel Processor (006-6671LS(E)).
- Connect the large plug of the Baler Power/Communication Harness (006-6650LS) to the bottom (shorter side) of the DCP. Attach the Baler Interface Harness (006-6650VA) in between the short whip cable hardwired to the DCP and the Power/Communication Harness (006-6650LS(E)).
- Make sure Active Terminator removed from the top of the baler processor is attached to the Baler Interface Harness (006-6650VA).
- Attach moisture and bale rate harness (006-7303HL(E)) and also end of bale harness (006-7400BBEXT) to the DCP (006-6671LS). Model 600BBHD will use harness 006-7303HX.
- Connect Keyed Power Extension harness (006-5650K) to a keyed power source.
- Connect the iPad Integration Control (030-6672C) to the Communication Harness (006-6650TM).
- Note: The Optional Port and the Data Transfer Port are not used in this application.

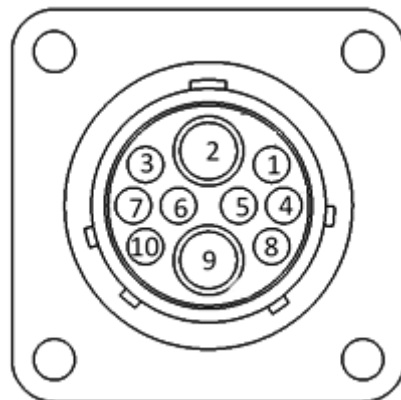


*Note: (E) indication is used for International Dealers

Pin Outs

Power/Comm Harness 006-6650TM(E) 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



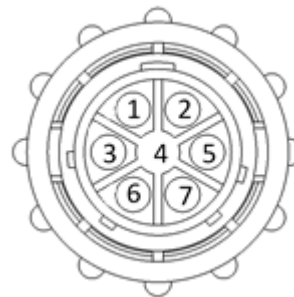
Power/Comm Harness 006-6650LS(E) at Hitch

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 Harness 006-6650TM(E)

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



006-6650VA to DCP Whip

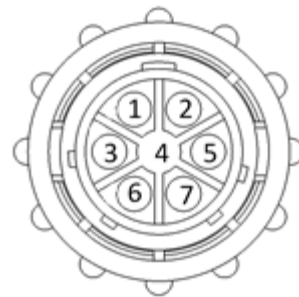
Pin 1	Red	Can Power
Pin 2	Black	Can Ground
Pin 3	Yellow	HT Can Hi
Pin 4	Gray	Shield
Pin 5	Green	HT Can Low
Pin 6	Orange	Can1 Hi
Pin 7	Blue	Can1 Low



Pin Outs (continued)

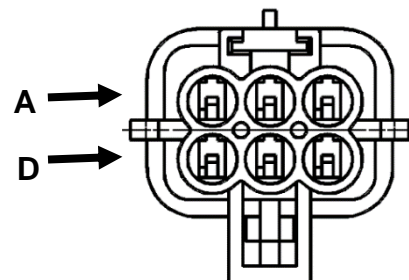
006-6650VA to 006-6650LS(E)

Pin 1	Red	Can Power
Pin 2	Black	Can Ground
Pin 3	Yellow	HT Can Hi
Pin 4	Gray	Shield
Pin 5	Green	HT Can Low
Pin 6	N/A	
Pin 7	N/A	



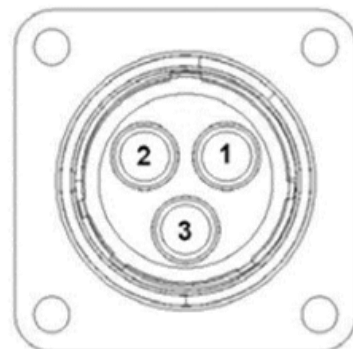
006-6650VA Harness to Baler Plug

Pin A	N/A	
Pin B	Red	TBC Power
Pin C	N/A	
Pin D	Gray	TBC Ground
Pin E	Orange	Can1 Hi
Pin F	Blue	Can1 Low



Main Power Connector on DCP

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



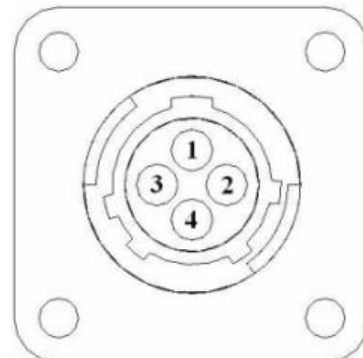
Star Wheel and Bale Rate Sensor Connector on DCP

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	Brown	Sensor Power
Pin 2	Blue	Sensor Ground
Pin 3	N/A	
Pin 4	Black	Signal from Sensor



Maintenance

If you are unsure how to perform any of the maintenance steps have your local authorized dealer perform the tasks.

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

1. Disconnect power from the Dual Channel Processor.
2. Remove display from tractor and store in a warm, dry place.

Common Questions

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

To turn the system ON open the Hay App, then select the active system for the baler you are using. Press the Wake Up tab if the system was put into Standby mode when last used. If not in Standby mode, select Automatic or Manual mode to begin.

To turn the system OFF click the Standby tab on the Main Menu screen. To close the app double click the home button on the iPad and swipe the app that you would like closed, toward the top of the screen until it is no longer visible. See SHUTTING DOWN THE HAY APP for more details.

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

In the Main Menu press the SETUP MODE key. From this screen you can change your application rates and how much product is applied. See SETTING UP FOR INITIAL USE for a detailed explanation of this process.

4. 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. Initially check inside the white star wheel block, to see if the electronic swivel is in the star wheel shaft and that the star wheel shaft is not coming out of the block. Also, check all star wheel wires and connectors to see if there is a continuity of grounding problem.

5. 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.

6. What is the expected battery life of the iPad when baling?

3.5 hours is the expected amount of time the battery when continuously baling. Shut off all other applications, wireless internet, and Wi-Fi signal to reduce the amount of programs iPad is running.

*It is recommended to use an accessory outlet charger when operating (not included with iPad).

7. What is the max distance for connection between the iPad and the Bluetooth Receiver?

The range for the connection will depend on the amount of equipment (tractor, baler, ect.) between the two devices. The max distance will range between 10' – 20'.

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

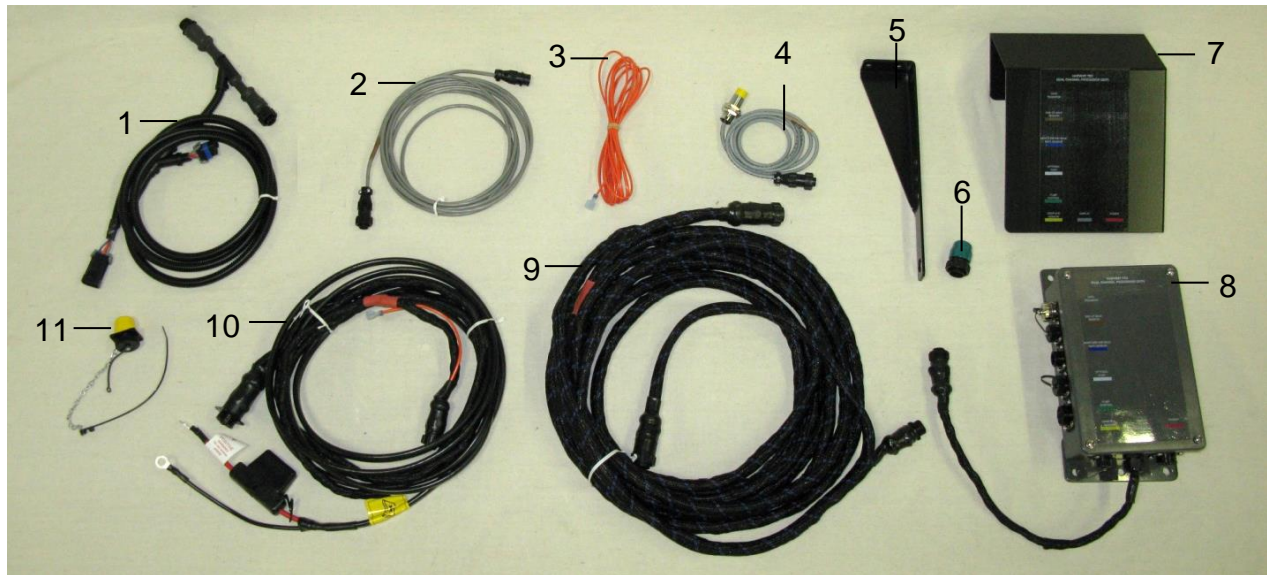
Pre-2020 applicators were equipped Bluetooth receivers (030-6672B) and are now equipped with lights to indicate both power and Hay App connection on the Apple iPad. Red Light – The Bluetooth receiver has power. Green Light – The Bluetooth receiver is connected to the Hay App.

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.) See Diagnostics section of manual.
	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.
	6. Check hay with hand tester to verify.	6. Contact Harvest Tec if conditions persist.
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. See Diagnostics section of manual.
Bale rate displays zero.	1. Bale rate sensors are reversed. 2. Short in cable. 3. Damaged sensor. 4. Sensor too far from starwheel.	1. Switch the sensors next to the star wheel. 2. Replace cable. 3. Replace sensor. 4. 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>	

Parts Breakdown

Controls and Harnesses

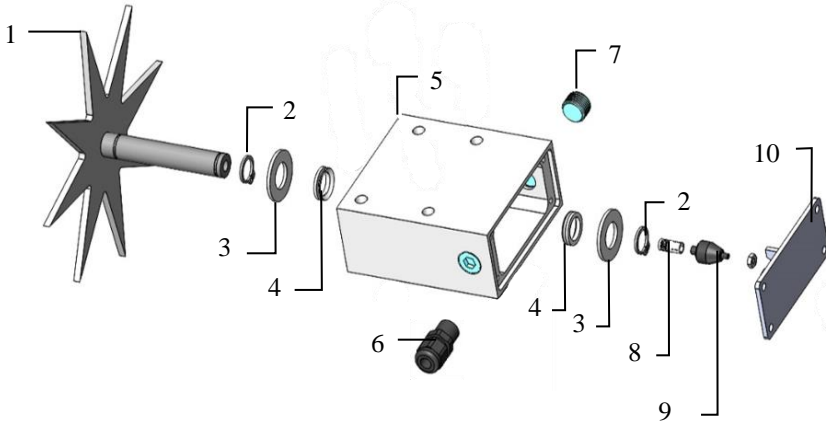


<u>Ref</u>	<u>Description</u>	<u>Part Number</u>	<u>Qty</u>
1	DCP Baler ISO/VT Harness	006-6650VA	1
2	EOB Extension for CNH BB Series	006-7400BBEXT	1
3	Key Switch Wire	006-5650K	1
4	End of Bale Sensor 600 Series	006-7400	1
5	End of Bale Sensor Bracket	001-4648	1
6	Terminating Connector 600 Series w/green cap	006-5650Z	1
7	DCP Shield/Cover	001-5650X	1
8	DCP Main Control LS 600 AUTO	006-6671LS	1
9	DCP Baler Harness 15 FT	006-6650LS(E)	1
10	DCP Tractor Harness	006-6650TM(E)	1
11	Dust Plugs	006-5651PLUGS	1
12	iPad Integration Control	030-6672C	1
NP	USB Cord	006-6672USBC	1
NP	End of Bale Sensor Extension (10')	006-7400EXT	1



*Note: (E) indication is used for International Dealers

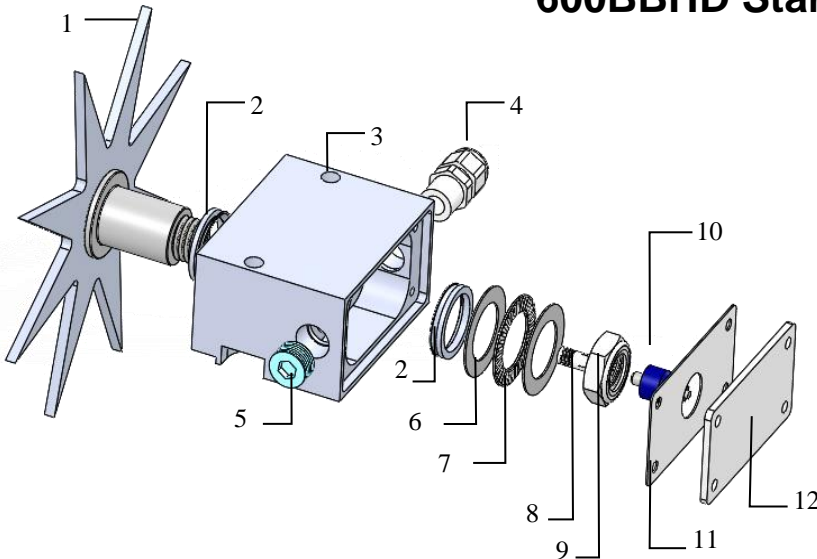
600BB Star Wheels



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

Star wheel Assembly 030-4641
(Ref 1-11)

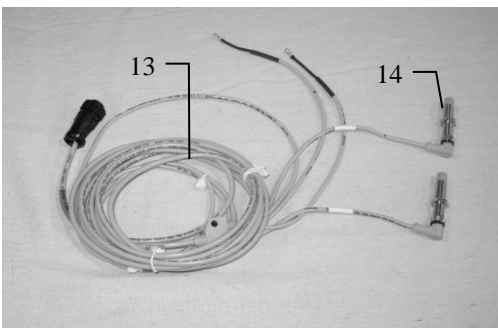
600BBHD Star Wheels



<u>Ref</u>	<u>Description</u>	<u>Part#</u>	<u>Qty</u>
1	Univ Star Wheel	006-4641S	1
2	Dust Seal	006-4641DSL	2
3	Univ Star Block	006-4641Q	1
4	3/8\" NPT Cable Grip	008-0821A	1
5	3/8\" NPT Plug	003-F38	1
6	Thrust Washer	006-4641TA	2
7	Thrust Bearing	006-4641TB	1
8	Swivel Insert	006-4642B	1
9	3/4\" Short Nut	006-4641U	1
10	Rotary Swivel	006-4642A	1
11	Cover Gasket	006-4641RG	1
12	Univ Block Cover	006-4641R	1
NP	Prox Sensor Holder	006-4644SS	1
NP	SW Reinforcement	001-4644BBHD	2

Star Wheel Assembly 030-4641U
(Ref 1-12)

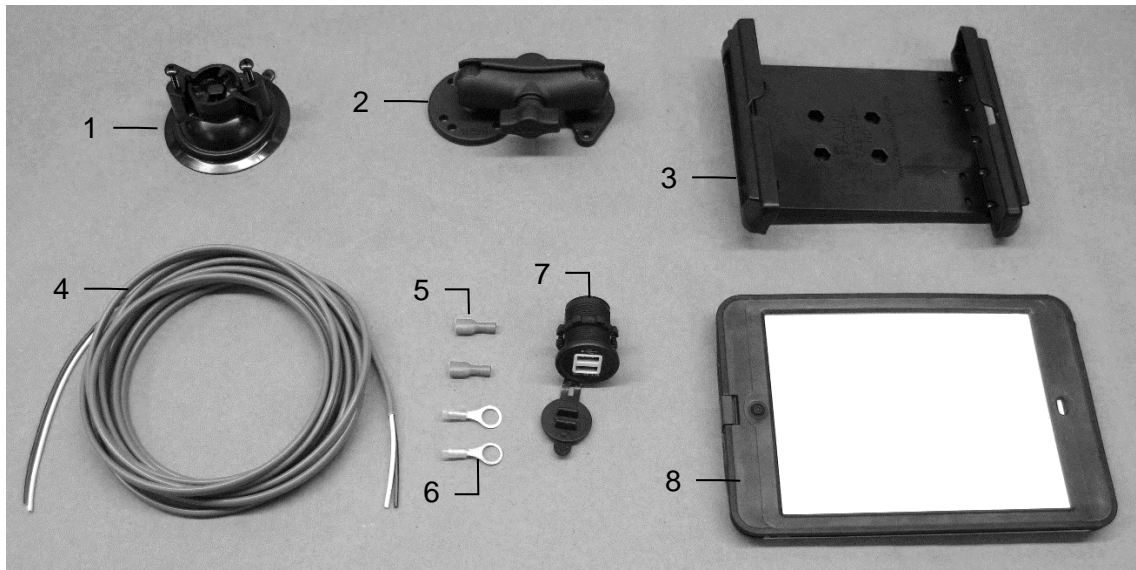
Bale Rate Sensors



<u>Ref</u>	<u>Description</u>	<u>Part Number</u>	<u>Qty</u>
13	Moisture & Bale Rate Harness	006-7303 HL(E)	2
14	Bale Rate Sensor	006-7303S	1
NP	Moisture & Bale Rate Harness (600BBHD)	006-7303HX	1

*Note: (E) indication is used
for International Dealers

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)

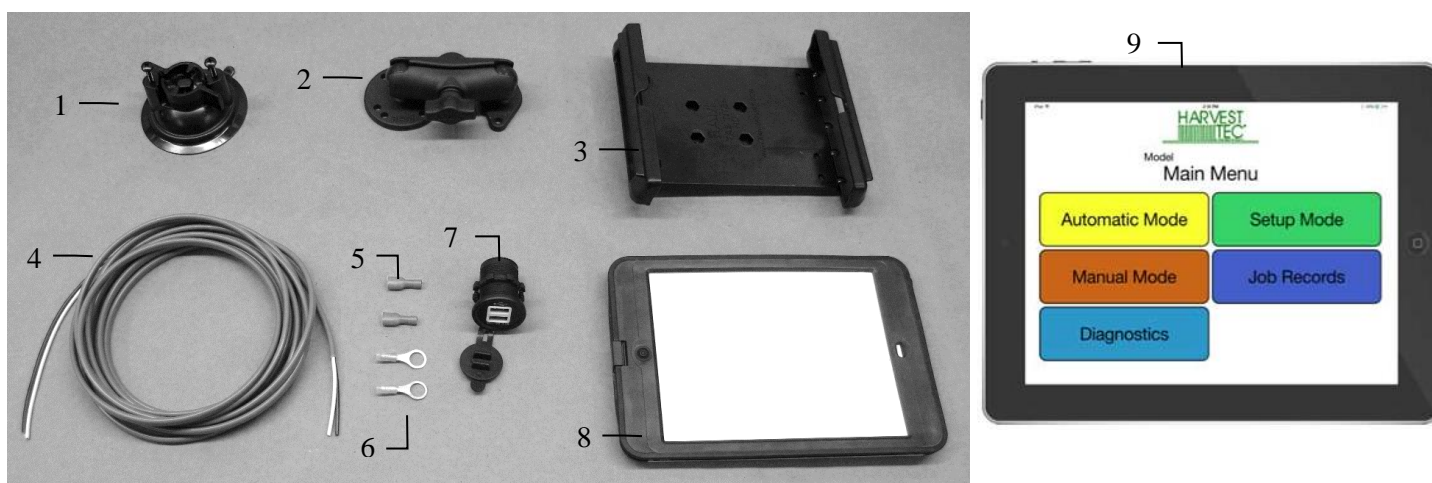
Installation Instructions

- Identify 12V power source for wires to connect.
 - Eye loops included if wiring directly to the battery is desired.
 - Test for key power source if preferred to have power to the USB shut off with the key.
- Once power source is identified, cut wires to desired length.
- Crimp the two supplied quick connectors onto each the white and black wire.
- Remove the round locking plastic nut from USB plug before connecting the wires. Black (+) White (-).
- The wires will then be hooked to the designated terminals on the bottom of the USB plug
- Drill a 1 1/8" hole in the preferred mounting location. Be sure to clean any sharp edges after drilling.
- Feed the wires through the mounting hole.
- 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.
- Connect the wires to the identified power source if easier to do so before tightening the plug into place.
- Tighten plug using either the round plastic nut or mounting plate and two screws, both options supplied.
- 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)



<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	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		Mounting Kit Assembly	030-4670DK	
6	Eye loop connector	Hardware	2			(Includes All Parts)	

Installation Instructions

- Identify 12V power source for wires to connect.
 - Eye loops included if wiring directly to the battery is desired.
 - Test for key power source if preferred to have power to the USB shut off with the key.
- Once power source is identified, cut wires to desired length.
- Crimp the two supplied quick connectors onto the white and black wire.
- Remove the round locking plastic nut from USB plug before connecting the wires. Black (+) White (-).
- The wires will then be hooked to the designated terminals on the bottom of the USB plug
- Drill a 1 1/8" hole in the preferred mounting location. Be sure to clean any sharp edges after drilling.
- Feed the wires through the mounting hole.
- 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.
- Connect the wires to the identified power source if easier to do so before tightening the plug into place.
- Tighten plug using either the round plastic nut or mounting plate and two screws, both options supplied.
- 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.

Notes

Notes

Notes

Harvest Tec LLC. Warranty and Liability Agreement

Harvest Tec, LLC. 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, LLC. 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, LLC.

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, LLC. 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, LLC. 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, LLC. 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, LLC. will not affect our ability to obtain materials or manufacture necessary replacement parts.

Harvest Tec, LLC. 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 6/22

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