Digi-Star ★

EZ III
Technical
Manual

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Manual Updates and Corrections

Efforts have been made to make this document accurate and useful for Digi-Star service centers. Reader input is important and changes to improve this document are important to keep up with product changes and to correct errors.

Please contact your Digi-Star service representative if you wish to suggest changes or make corrections to this document.

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Digi-Star★

EZ III Series Specifications

Accuracy   0.1% with System Accuracy depending on load cells used

Temperature Range: -20 to 140 degrees F

Supply Voltage: 10.2 - 16 VDC

Current without Load Cells   90ma

Current with 8 Load Cells   300ma

Power J901

Pin	Wire Color	Description
1	Red	+12 Volts DC
2	Black	Ground
3	Orange	Remote Alarm Out+ (Optional)
4	Blue	Remote Input (Optional)

Load Cells J902

Pin	Wire Color	Description
1	Red	+ Excitation
2	Green	- Signal
3	White	+ Signal
4	Black	- Excitation & Shield

Remote J903

The Remote connector carries power and data lines out to any EZ Series Remote indicator (RD1000, RD2000 or RD2400).

Pin	Wire Color	Connector Pin	Description
1	Red (Thin)	P2-1	+12V Unregulated
2	Red (Thick)	P2-2	+12V Unregulated
3	White	P2-3	Remote Zero Input
4	Green	P2-4	Remote Data Out
5	Yellow	P2-5	Remote Clock Out
6	Black (Thin)	P2-6	GND
7	Blue	P2-7	Pulsed Output
8	Black (Thick)	P2-8	GND

Serial Ports

The serial port connector has the capability of communicating using up to 2 different RS232 ports and a 20mA Current Loop port. The serial port can be a J904 or a J905 configuration on the EZ series or can use the DB-9 style connectors for the StockWeigh Series. See below for details.

Communications

Data is transmitted and received in the asynchronous ASCII format. This communication format is compatible with most printers, computers, and terminals.

Standard Port Configuration
1 Start Bit
7 Data Bits
1 EVEN Parity Bit
1 Stop Bit

Baud Rate

The Baud rate is either 1200 or 9600. The COM IN setting determines the baud rate unless SCOREM is set to 4, 24, 24 or 44. (See DAN 213)

COM IN	Baud Rate
DOWNLD	1200
EZ CMD	1200
EZ2CMD	9600

"Handshake lines" are not used and XON/XOFF is not supported.

These parameters are not adjustable in the scale. Equipment interfacing to the scale must match this configuration.

NOTE: For more information on data communications refer to manual D3648 (Escape Computer Commands Set)

SERIAL / PRINTER J904

J904 is the functionally the same as the J904 on the EZ II. The J904 is an option on EZ2400, and EZ3400 and an EZ Feed version of the EZ4600.

Pin	Wire Color	Description
1	Violet	20ma Current Loop (+)
2	Orange	Printer Data (Tx)
3	Red	Computer Data (Rx)
4	Brown	Scoreboard Data (Tx)
5	Gray	Computer GND
6	Blue	Printer GND
7	Black	Scoreboard GND
8	Black	20ma Current Loop (-)

Connecting J904 to a Printer

RS-232 out	Pin 2
Printer Ground	Pin 6

Connecting J904 to a Computer

RS-232 In	Pin 3
RS232 Out	Pin 2
Computer Ground	Pin 6

Connecting J904 to a Scoreboard

RS-232 Out	Pin 4
Scoreboard Ground	Pin 7

Connecting J904 to a 20mA current Loop Device

20mA Current Loop(+)	Pin 1
20 mA Current Loop(-)	Pin 8

SERIAL COM1-2 J905

The J905 is offered as an option on the EZ3600 and EZ4600. The J905 is similar to J904 but provides an additional bi-directional port and a +12 VDC supply to be used on future products. Existing printers and printer cables will work with this port.

Pin	Wire Color	Description
1	Violet	20ma Current Loop (+)
2	Orange	Com # 1 Out (Tx)
3	Red	Com # 1 In (Rx)
4	Brown	Com # 2 Out (Tx)
5	Gray	+12 VDC
6	Black	GND
7	Blue	Com # 2 In (Rx)
8	Black	20ma Current Loop (-)

Connecting J905 to a Printer / Scoreboard Com 1

RS-232 out	Pin 2
Printer Ground	Pin 6

Connecting J905 to a Printer / Scoreboard Com 2

RS-232 out	Pin 4
Printer Ground	Pin 6

Connecting J905 to a Computer COM 1

RS-232 In	Pin 3
RS232 Out	Pin 2
Computer Ground	Pin 6

Connecting J905 to a Computer Com 2

RS-232 In	Pin 7
RS232 Out	Pin 4
Computer Ground	Pin 6

Connecting J905 to a 20mA Current Loop Device

20mA Current Loop(+)	Pin 1
20 mA Current Loop(-)	Pin 8

COMPUTER PORT (DB-9)

The Computer port is standard on the StockWeigh4600 EID and StockWeigh 2600 EID models. The computer port is a bi-directional RS232 port that communicates with your PC or outputs data to a printer.

NOTE: The Internal connections column shows which pins are jumped on the connector.

Pin	Desc.	Internal Connections
1	DCD	Connected to DTR & DSR
2	Data 3 Out	
3	Data 3 In	
4	DTR	Connected to DCD & DSR
5	Ground	
6	DSR	Connected to DCD & DTR
7	CTS	Connected to RTS
8	RTS	Connected to CTS
9	Not Used	

EID READER PORT (DB-9)

The EID Reader port is standard on the StockWeigh 4600 EID and StockWeigh 2600 EID models. The EID Reader port connects to an EID reader to input the EID tag data to the scale when weighing animals or items with EID tags.

Pin	Description
1	DCD
2	Data 4 Out
3	Data 4 In
4	DTR
5	Ground
6	DSR
7	CTS
8	RTS
9	Not Used

Electronics / Setup

MAIN BOARD JUMPERS

The EZ 3 has the following jumpers on the Main PC board that need to be properly configured for the indicator features and options.

JP1	In for 32 & 128K NVRAM (DS1744 & DS1746)
JP2	Not Used
JP3	Out when U1 is installed
JP4	In for Remote Input / Out for Rotation Counter
JP5	In for Battery Saving Auto Off Feature
JP6	In for Constant On
JP8	In for 512K & 1Meg NVRAM (DS1747 & BQ4016Y)
X1-X2	Always In (Flash Memory Selector)
X3-X4	Always In (Flash Memory Selector)
X5	Not Used
XD1-XL1	In for Small Display / Out for Large Display
XD2-XL2	In for Small Display / Out for Large Display
XD3-XL3	In for Small Display / Out for Large Display

OPTION BOARD JUMPERS

JP1	Real Time Clock on Option Board	In for RTC on Option Board (Battery Required)
JP2	Rotation Counter	In for Rotation Counter / Out for Remote Input
JP3	Analog Output Select 1	See Schematic
JP4	Analog Output Select 2	See Schematic
JP5	Analog Out Current Loop	In for Current Loop / Out for 0-5V
JP6	Analog Out Voltage	In for 0-5V / Out for Current Loop
JP7	Not Used	Always Out
JP8	Transmit Radio	In for Radio
JP9	Transmit RS232 #2	Out for J904 except w/Radio / In for J905
JP10	Scoreboard Out	In for J904 except w/Radio / Out for J905
JP11	Not Used	Always Out
JP12	Not Used	Always Out
JP13	Receive RS232 #1	Always In
JP14	Receive Radio	In for Radio
JP15	Not Used	Always Out
JP16	Receive RS232 #2	Out for Radio
E6A-E6B	DB9 Connector Jumper	In for StockWeigh / Out for EZ
E7A-E7B	DB9 Connector Jumper	In for StockWeigh / Out for EZ
E8A-E8B	DB9 Connector Jumper	In for StockWeigh / Out for EZ
E35A-E35B	DB9 Connector Jumper	In for StockWeigh / Out for EZ

MAIN BOARD CONNECTION POINTS

E1	+12VDC	E20	+ Signal (From Load Cell)
E2	Ground	E21	- Signal (From Load Cell)
E3	Remote Alarm Out +	E22	- Excitation (Analog Ground)
E4	Rotation Counter Input	E23	Shield (Analog Ground)
E14	Ground	E23	Shield (Analog Ground)
E15	+ Excitation (Analog +8V)	E25	+ 12V Switched
E16	+ Signal (From Load Cell)	E26	+ 12V Switched
E17	- Signal (From Load Cell)	E27	+ 12V Unregulated
E18	- Excitation (Analog Ground)	E28	+ 12V Switched
E19	+ Excitation (Analog +8V)	E31	Ground

Note: Above charts are for revision C Circuit Board other versions may vary. Contact Digi-Star Customer service for complete documentation

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Calibrating the Scale Indicator

Your Digi-Star scale indicator can be mated to many different types of load cells with varying capacity. There can be as few as 1 and as many as 10 load cells on a system. The scale indicator has a "setup" number that determine how the scale displays the weight, and a "calibration" number that matches the load cells to the indicator and determines the weight value displayed on the indicator.

LONG FORM VS SHORT FORM CALIBRATION METHOD

Long form calibration requires you to have some known accurate weights to load onto the scale. If done properly, this is the best way to calibrate your scale accurately.

Short form calibration requires you to know the load ratings on the load cell, the number of load cells and other factors. A calibration number can be calculated and entered directly into the scale.

CAUTION:	**The short form calibration method works with Digi-Star load cells only. The short form calibration method for a non-Digi-Star load cell may get close to the correct calibration number, but this method is not reliable and the scale calibration must be checked using known weights.**

CALIBRATING THE SCALE FOR MAXIMUM ACCURACY (LONG FORM)

Write down the current Setup and Calibration numbers of your EZ indicator. These numbers are displayed during the Self Test. Press [On/Off] to "pause" the Self-Test while setup and calibration numbers are displayed. Press [On/Off] again, to "resume"

Setup Number _____ Calibration Number _____

To accurately calibrate the scale, you will need a large amount of weight that has a known value. For best results you should have at least as much weight as the largest load you plan to weigh.

DETERMINING THE NEW SETUP AND CALIBRATION

1. Zero-Balance the scale so the display reads zero.
2. Put the **Known Weight** on the scale platform and write down the **Weight Display**.

Perform the following equation to find the **Accurate Calibration Number**.

$$\frac{\text{Actual Known Weight} \quad X \quad \text{Existing Calibration Number}}{\text{Displayed Weight}}$$

 Example:

Actual Known Weight	2000lbs
Weight Display	2080lbs.
Existing Cal Number	32500.

$$\frac{2000 \ X \ 32500}{2080} = 31250$$

31250 is the **"Accurate Calibration Number"** The setup number does not change.

ENTER A NEW SETUP AND CALIBRATION NUMBER (SHORT FORM)

The Short Form Setup & Calibration procedure allows you to change the "SETUP" and "CAL" numbers of the indicator.

1. Press and hold [Zero], and then press [On/Off] for 3 seconds to enter the short form calibration.
2. The display will flash "SETUP" and then display the 6-digit setup number with the right digit flashing. To modify the setup number:
3. Press [Gross/Net] several times to increment the digit to it proper value.
4. Press [Tare] to advance the blinking digit to the left.
5. Repeat steps 1 and 2 for each digit as required.
6. Press [On/Off] to enter the new setup number and display the calibration number.
7. Repeat steps 1 and 2 to modify the calibration number.
8. Press [On/Off] to enter the new calibration number and the display will go back to normal.
9. Verify the accuracy of the scale.

Self Test

Initiating the Self Test

After turning the scale on, wait for normal operation to begin then press the ON key. The Self Test tests all settings and performs an internal system check to ensure that the indicator is working and set properly.

Test Sequence

The word TEST flashes:
"SETUP" is displayed.

Display Setup Value:	Short Form Setup Value.
Display Calibration Number:	Short Form Calibration Value.
Display Temperature Calibration Count:	
Display LCD Segments:	The system then cycles through all display segments to help the operator identify any faulty areas.
Display Program ID:	Displays the current version (revision number) of the software.
System Test:	The indicator displays the message "RUNNING SELF TEST - PLEASE WAIT" while performing internal system testing.Self Test cannot be paused or terminated during this ten second test.

Self Test System Errors:

If system errors are discovered during internal diagnostics, the operator will see an error message. For example, "ERROR 1 - PRESS NET/GROSS TO CONTINUE" followed by "*** INDICATOR NEEDS SERVICE *** PRESS NET/GROSS TO CONTINUE".

Sending a command using the Computer Interface causes the system to terminate the error messages and attempt normal system operation.

Pausing the Test:

Press [ON] during the self test to pause the sequence.
Press [ON] again to restart the test.

Terminating the Test:

The self-test terminates and continues normal operation if no errors are detected or if other keys are pressed.

Weighing Errors

OVRCAP (CAPACITY LIMIT)

The display shows the message "OVRCAP" if the weight on the scale system exceeds the capacity limit. The capacity value is entered in SETUP to warn of overloading the scale system.

+RANGE (OVER RANGE)

The display shows the message "+RANGE" if the weight on the scale system exceeds the maximum weight measurable by the scale system. The over range value is always the system's maximum A/D counts multiplied by the scaling factor. The actual weight at which over range occurs depends on the calibration, zero, and display count size.

-RANGE (UNDER RANGE)

The display shows the message "-RANGE" if the weight on the scale system is less than the minimum weight measurable by the scale system. The under range value is always the system's minimum A/D counts multiplied by the scaling factor. The actual weight at which under?range occurs will depend on the calibration, zero, and display count size.

Indicator Function Setup

MENU 1

LANGAG (D.A.N. 101) Language

Select the language from the menu.
ENGLSH.......English
NEDRL ....Dutch
FRANCS.......French
DEUTSH.......German
ITAL..............Italian
PORT............Portuguese
ESPAN ....Spanish
DANSK ....Danish
MAGYAR ......Hungarian
VESTA..........Special Spanish Translation for South America

D RATE (D.A.N. 102) Display Rate

Select the number of times per second to update the weight display. This setting also affects remote indicators. Default = "2".

Select 1, 2, 3, or 4.

Note: *When selecting the Weigh method (General, Slow, or Fast) or when setting the Weigh Method Adjustment Options (see Menu #3 of the Long Form Setup), a change in Display Rate affects how the weight appears on the scale. A selection of '1' update per second helps to stabilize the weight. A selection of '4' updates per second provides more response to weight changes but may cause the weight to appear "jumpy."*

MOTION (D.A.N. 103) Motion

Select On or Off. If set to On, an annunciator flashes under the word Motion on the display to indicate unstable weight.

The MOTION parameter limits operation

if the scale is unstable. It does not correct for the instability. It is up to the operator to correct the unstable environment. The following items are disabled until the weight is stable:
   - Printer output
   - Zero/Balance function
   - Tare function
   - Ingredient Auto-advance

Note: *Motion is temporarily turned on during all system weight calibrations to insure a stable measurement. It is turned off after calibration if Off was selected in Motion setup.*

ZTRACK (D.A.N. 104) Zero Track

Zero-Track is typically used only for animal weighing applications.

If "ON", the scale will adjust for small weight variances of up to 5lbs in the Lock-On weigh method. This allows the scale to compensate for such things as mud or snow accumulation on the scale platform.

W MTHD (D.A.N. 105) Display Rate

Weigh method allows the operator to adjust how much processing or number-crunching the scale processor does to the load cell data before displaying the weight. See Appendix "B" for details. Select weigh method #4 "Lock-On" for animal weighing.

LOCKON (D.A.N. 106) Lock On

Available settings are 1 thru 9. A low value, such as a 1 or 2, allows the system to be more sensitive to animal motion. A high value, such as an 8 or 9, allows the scale to lock on faster. Use the lowest setting that still allows the system to lock on consistently.

TRHOLD (D.A.N. 107) T/R Hold

    ON   Displays GROSS weight if T/R button is held for three (3) seconds.

    OFF   Displays GROSS weight momentatily if T/R button is held for three (3) seconds.

SCALID (D.A.N. 108) Assign Scale ID Number

This feature allows the operator to identify the scale with a (truck or mixer number). After entering the SCALID menu, the scale's default name "NEW EZ" will be displayed on the screen.

Press [CLEAR] several times to clear out the existing number and enter the desired scale identification number or letter on the numeric keypad.

Press [ON] to store the ID number and advance to the next menu item.

LKNHLD (D.A.N. 109) Lock and Hold

This feature continues to hold the Lock-On weight on the display for an animal after it has stepped off the platform. The operator can place the animal on the weighing platform, medicate, remove the animal from the platform and then record the animal's weight after it has stepped off the platform. The display will restart once another animal has stepped onto the platform and exceeds 2.5% of the scale capacity. For example if the scale capacity is set at 4000lbs (StockWeigh 3300), 100lbs is required to reset the display. The indicator will return to normal weighing after 5 minutes if no other animal steps on the weighing platform. The [RECHECK] key can be used to return the indicator to the weighing mode.

AUTOFF (D.A.N. 111) Auto Off

This feature allows the operator to have the indicator automatically shut itself OFF after either 15, 30, 45 or 60 minutes of inactivity. This feature will extend battery life on battery powered portable scales. Prior to the scale shutting off, the message "GOODBYE" will be scrolled across the display for approximately 15 seconds. Pressing a key on the indicator during this time will prevent the unit from turning off and restart the internal shut-off timer.

LSTORE (D.A.N. 112) Lock-On-Store

This feature allows the user to configure how and when weighing data is printed or sent to computer port and stored into memory on the Indicator during animal weighing. Data that is stored into memory is retrieved using "StockWeigh Link" software.Manual mode requires the operator to push [ON/RECORD] to store and/or send the data for each animal. The automatic mode allows the data to be stored and/or sent either by pressing the [ON/RECORD] button, after the scale "Locks-On" or when the animal steps off the platform.

OFF
MANPRT   Manual Print
AUTPRT   Auto Print

See "PRTFMT" Appendix "F" menu to set data format.

MAN WT   Manual Weight
AUTOWT   Automatic Weight
MANEID   Manual EID
AUTEID   Automatic EID
MANCHK   Manual Check
AUTCHK   Automatic Check

See StockWeigh 4600 Operators Manual for details

LSSEND (D.A.N. 113) LSTORE Send Mode

LSSEND is for LSTORE automatic modes and has no effect in manual modes.
- If set to "OFF", data is sent when animal steps off the platform.
- If set to "ON", data is sent as soon as the scale LOCKS-ON and EID is read.
- If set to "ON", press [RECHECK] to recheck the weight and send new data to computer port and/or store in memory if EID requirement is satisfied.

ESTORE (D.A.N. 114) EID Store

If set to "ON" indicator will store data in the following LSTORE modes: MANEID, AUTEID, MANCHK, AUTCHK. Use "StockWeigh Link" software to retrieve data from memory.

Set ESTORE to "OFF" for LSTORE modes that send data to computer port and store data into memory. Setting this to "OFF insures that memory will not be filled up and cause a delay due to a "MEMORY FULL" error message.

1 ZERO (D.A.N. 115) One Touch Zero

ON   Press and hold [Zero] to zero balance the scale.

PWRLOS (D.A.N. 116) Power Loss

ON   Store time and date of power loss and display data when power is restored.

EIDAUT (D.A.N. 117) EID Auto Record

StockWeigh EID Indicators Only

This feature will automatically record a detected EID tag even if the animal does not stand on the scale. If the "EID AUT" parameter is set to "ON", immediately after the EID tag is read the indicator will print and store (ESTORE = ON) the record providing the indicator has not locked onto a weight and the current weight value is less than 2.5% of the indicator's capacity setting. The "LSTORE", "ESTORE" and "LSEND" settings should also be reviewed when using "EIDAUT". The default value for "EIDAUT" is "OFF".

SCROLL (D.A.N. 118) Scroll Rate

This Scroll Rate setting allows the operator to slow down how fast messages scroll across the display when temperatures drop down below 20° F (-7 C). The selection ranges from "0" (fast) to "9" (slowest). The default setting is "4".

MENU 2

TIME F (D.A.N. 201) Time Format

Select AM/PM or 24 HR time format.

TIME (D.A.N. 202) Time

Enter the time. Use the LEFT and RIGHT arrows to select hours/minutes/seconds. Use the UP and DOWN arrows to increment value.

DATE F (D.A.N. 203) Date Format

Select one of the following date formats:

1 =	mm - dd	5 =	dd/mm/yy
2 =	mm/dd/yy	6 =	dd/mm/yyyy
3 =	mm/dd/yyyy	7 =	dd/MM/yy
4 =	dd/mm	8 =	dd/MM/yyyy

Notes: *When printing using TAREAP or APRINT, select one of 8 date formats.*

On StockWeigh EID indicators *this setting does not affect EID formats. The EID print format and EID CSV data format always use format #2 even if another selection is made.*

Date (D.A.N. 204) Date

Enter the Date. Use the LEFT and RIGHT arrows to select month day and year. Use UP and DOWN arrows to increment value.

TAREAP (D.A.N. 211) Tare Auto Print

Set to "ON" to print data when the indicator "TARE" function is used.

1L PRT (D.A.N. 212) 1 Line Print

Set to "ON" formats printer output data on one line.

Set to "OFF" formats printer output data in up to two lines.

SCOREM (D.A.N. 213) Scoreboard Modes

There are 18 scoreboard modes available. Methods one thru six sends numeric display data out the RS232 port periodically while the other methods send a data stream as described below. See section xx-xx for connector pin-out.

0	Disable scoreboard output (use this setting when using serial port).
1	Transmit numeric display data once per second.
2	Transmit numeric display data two times per second.
3	Transmit numeric display data three times per second.
4	Transmit numeric display data at the A-D conversion rate.
5	Transmit numeric display data at the display rate.
6	Transmit numeric display data whenever there is a display weight change.
7	Transmit status data string every second. Status data string includes weight, rotation counter data, date and time.
8	Transmit status data every five seconds. Status data string includes weight, rotation counter data, date and time.
9	Reserved.
10	Transmits comma delimted data which includes the EID Tag Reader information, Gross Weight, display unit, weight tag (GR, M+, etc...), Date & Time. The data string ends with a <CR>,<LF>. This data is sent once every 2 seconds.
11	Transmit a "serial gross weight" value 2 times per second.
12	Transmit a "serial gross weight" value 10 times per second.

NOTES: *When using SCOREM = 1, 2, 3, 4, 5, 6 and 9 be sure to set LSTORE = OFF, TAREAP = OFF and APRINT = OFF to avoid corrupted data when transmitting and printing data.*

When using SCOREM = 7, 8 and 10, print data will not be corrupted by scoreboard data.

When using SCOREM 11, 12, The value is calculated using a s "serial zero/balance point" (ZEROUT D.A.N. 219) and may not match the weight displayed on the scale. The serial gross weight is not affected when the operator performs a normal zero/balance. The serial gross weight value will always be gross and does not change when the operator performs a normal zero/balance or selects the Net or Load/Unload weight to be displayed.

Settings 11 and 12 are not available if a radio is installed in the indicator for communications to a Cab Control or Datalink system.

21	Transmit numeric display data once per second. See note below.
22	Transmit numeric display data two times per second. See note below.
23	Transmit numeric display data three times per second. See note below.
24	Transmit numeric display data at the A-D conversion rate. See note below.
25	Transmit numeric display data at the display rate. See note below.
26	Transmit numeric display data whenever there is a display weight change. See note below.

NOTE: *"SCOREM" selections 21-26 duplicate the standard SCOREM selections 1-6, but send the data out J904-pin 2 or J905-pin 2. Some limitations may exist when using these selections since other devices such as a Computer or Printer may also use this same port.*

APRINT (D.A.N. 214) Auto Print

When set to "ON", pressing keys will automatically print weight values.

COM IN (D.A.N. 215) Computer Input Mode

DOWNLD Data Downloader

EZ CMD Original EZI Commands

EZ2CMD EZ II Commands

PRTFMT (D.A.N. 216) Print Format

Many data output formats are available. See "Appendix F" for details.

MEDIA (D.A.N. 217) Media Type

DDL

DATAKY

SER PC This selection allows both datakey and serial PC to be used for batching data storage on the EZ 3500/V. See Document D3648 for more information about the EZ2 Escape Computer Command Set.

REMOTE (D.A.N. 218) Remote

ON The indicator sends display data to the Cab Control Remote.

OFF The indicator does not send display data.

ZEROUT (D.A.N. 219) Zero Output

Use this selection to Zero / Balance the weight for the Continuous Serial Gross Weight - Scoreboard Mode setting #11 (described above).

C1 DLY(D.A.N. 221) COM 1 Delay

Com 1 Delay chooses the number of seconds the printer will delay before advancing to the next print line. Select one of the following:

OFF	No delay		1	1 Second
.10	1/10 of a second		2	2 Seconds
.25	1/4 of a second		3	3 Seconds
.50	1/2 of a second		4	4 Seconds
.75	3/4 of a second		5	5 seconds

C2 DLY (D.A.N. 222) COM 2 Delay

Com 2 Delay chooses the number of seconds the printer connected to the 2nd serial port will delay before advancing to the next print line. Selections are same as for C1 DLY.

SCL NO (D.A.N. 231) Wireless Scale Number

This number is used to identify this specific indicator to the Cab Control unit and the Datalink software. Up to 24 different numbers can be selected.

RMDISP (D.A.N. 234) Select Remote Display Type

EZ2 For RD1000 or RD2000 Remote Display

EZ3MUX For RD2400 Remote Display

LOW WT (D.A.N. 241) Analog Low Weight

For Units with Analog Output

The "LOW WT "setting allows the user to enter the weight value that equals low output limit (4mA or 0V) for the analog output. The "LOW WT" value must be smaller than the "HIGH WT" value.

HIGHWT (D.A.N. 242) Analog High Weight

The "HIGHWT "setting allows the user to enter the weight value that equals the high output limit (20mA or 5V) for the analog output. The "HIGH WT" value must be larger than the "LOW WT" value.

ANAOUT (D.A.N. 243) Analog Output Option

Analog Output is an optional feature installed on the option board. Jumpers on the option board must match the setting in this menu.

    0-5VDC   Analog Output from 0 to 5 Volts DC.

    4-20MA   Analog Output from 4 to 20mA without error detection

    0-20MA   Analog Output from 0 to 20mA (error indicated with output below 4mA)

Note: *Internal jumpers must also be moved when this selection is changed. Please refer to the Analog Output Manual (D3708) for further details.*

EST WT (D.A.N. 299) Estimate Weight

This feature sets the gross weight to a new value. Use this feature when the scale has been accidentally Zero Balanced or if a scale indicator is replaced and the gross weight on the scale is known.

MENU 3

COUNT (D.A.N. 301) Display Count

Indicator displays count in increments of 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, and 100. If the count is set too small, the readings will be unstable and the indicator will not be accurate. Display count should be equal to greater than 1/4000 of the capacity. This command changes the Setup number. See also D.A.N. 871.

ARANGE (D.A.N. 302) Auto Range

If "ON" the scale increases display count size for weights over 300 and again at 600 lbs/kgs. If set to "OFF" display counts are set and do not vary.For example: 0 to 300 lbs (1 lb Increment), 300 to 600lbs. (2 lbs Increments), 600 and up (5 lbs. Increments).

LB-KG (D.A.N. 303) Display Unit

Select desired weight unit to be displayed. When changing weight unit using the long form, the calibration is adjusted so the scale displays accurately in the new display unit.

CAP (D.A.N. 304) Scale Capacity

Enter MAXIMUM weight measurable on scale. This will change the last 3 digits in the setup number. See also D.A.N. 871.

WMA1-1 (D.A.N. 305)

Choose a value from 2 – 100 (factory setting = 10). This setting is the main "filter" setting for the weigh method. A small filter number such as 2 or 4, causes the scale to respond quickly to weight changes, but may causethe display to appear "jumpy." A large filter number, such as 32 or 64, causes the scale to be more stable, but the scale is "slow" to respond to weight changes.

WMA1-2 (D.A.N. 306)

Choose a value from 0 – 100 (factory setting = 4). When this adjustment is set to a value other than 0, it activates a "Quick Response" feature. This allows the scale to quickly respond to large weight changes.

WMA1-3 (D.A.N. 307)

Set the "Quick Response Weight" for Weigh Method #1 (General). If weight added to the scale is greater than the amount set here, the "Quick Response Average Number" setting of

WM1-A2 is used as the filter number. The default is 10% of the scale's capacity. For example, if this value is set to 3000, the weight must change more than 3000 lbs before Weigh Method #1 will use the "Quick Response Average Number" set in WM1-A2. Once close to the actual weight, Weigh Method #1 uses the filter number set in WM1-A1.

WMA2-1 (D.A.N. 311)

Choose a value from 2 – 100 (factory setting = 30). This adjustment is the "Maximum Average Number" setting for Weigh Method #2 (Slow). This number determines how many of the previous weight samples to average. A small average number such as 2 or 4 causes the scale to respond quickly to weight but may cause the display to appear "jumpy." A large filter number, such as 32 or 64, causes the scale to be more stable, but the scale is "slow" to respond to weight changes.

WMA2-3 (D.A.N. 312)

Choose a value from 0 – 100 (factory setting = 10). This adjustment is the "Quick Response Average Number" setting for Weigh Method #2 (Slow). If adjustment 2 is set to a value other than 0, it activates the "Quick Response" feature. This allows the scale to quickly respond to large weight changes.

WMA2-3 (D.A.N. 313

Adjustment 3 sets the "Quick Response Weight" for Weigh Method #2 (Slow). If weight added to the scale is greater than this amount, the "Quick Response Average Number" setting of WM2-A2 is used as the filter number. The default is 10% of the scale's capacity. For example, if this value is set to 3000, the weight must change more than 3000 lbs before Weigh Method #2 will use the "Quick Response Average Number" set in WM2- A2. Once close to the actual weight, Weigh Method #2 increases the "Quick Response Average Number" on each conversion until the number of averages equals the Maximum Average Number set in WM2-A1.

TC1300 (D.A.N. 321) Mimic Tyrel TC 1300

This feature causes the indicator to weigh differently while batching. The ingredient or pen preset weight display includes all weight changes that have occurred since the last ingredient or pen weight was logged. The Tare key can be used to clear any weight displayed prior to loading or unloading. When set to OFF, the ingredient or pen preset weight displayed only shows the weight-change from when the preset was started. Indicator records preset weights like a Tyrel TCX1300.

MENU 4

P MTHD & P-ALM (D.A.N. 401) Pre-Alarm

TO CHANGE THE PRE-ALARM:
- Enter "401" (P MTHD) and press [Select].
- Press [Select] to change between WEIGHT or PERCNT.
- Press [On] to store the setting. The Pre-Alarm feature is displayed next.
- Press [Clear] to erase the current value, enter the Pre-Alarm value on the keypad.
- Press [On] to store the setting.

This value represents a pre-alarm weight value (lb, kg or percent). This acts as a setting point for activating the pre-alarm.

RM INP (D.A.N. 402) Remote Input

PRESET   The Remote Input on the power cord (and the input from the TR option) will re-enter the last preset value entered.

TARE   The Remote Input performs the TARE function and "zeroes" the display.

MIXCTR   To enable the "Rotation Counter" (optional on 3200 & 3500). This disables "PRESET' and 'TARE" Feature. On the EZ3200, the options are the same. However, if a recipe is loaded, the TARE function causes the Remote Input to advance ingredients. If no recipes are loaded, the Remote Input performs a TARE.

AL OUT (D.A.N. 403) Pre-Alarm

TR   The Alarm Output allows the alarm capabilities of the preset alarm to be controlled by the TR keys. The Front Panel Alarm light and the relay output is ON (+12V) when a TR command has been accepted by the scale.

PRESET   Causes the alarm capabilities to be controlled by the preset alarm.

BUZZER (D.A.N. 404) Alarm Buzzer

ON   Allow buzzer to function normally.

OFF   Disable buzzer.

PRETAR (D.A.N. 405) Pre Tare

The PRETAR feature allows the tare weight of a container to be entered using the numeric keypad.

RELAY (D.A.N. 406) +12VDC Alarm Output

PRESET   Activate with the preset alarm.

SETPNT   Activate when the gross weight exceeds the Gross Set Point Value (SETPNT).

OFF   Normal Operation

TMRCTR (D.A.N. 421) Timer Counter

The Mix Timer feature displays mixer auger revolutions based on input pulses from a revolution-sensing device and an adjustable drive ratio that indicates how many pulses equal one (1) revolution.

DRATIO (D.A.N. 422) Drive Ratio

The Drive Ratio is a number that tells the indicator how many pulses equal 1 mixer revolution. The drive ratio can be any number between 0.01 and 999.99.

SETPNT (D.A.N. 423) +12VDC Alarm Output

For EZ 3400, EZ 3600 and EZ 4600 this feature allows the operator to set a Gross weight in the Long Form that will activate the +12VDC Alarm Output on the power cord. The Set Point weight can range from 0-999999 and uses the Gross weight shown for the Zero Output feature (ZEROUT D.A.N. 219).

SETCHG (D.A.N.424) Set Point Weight Change

For EZ 3400, EZ 3600 and EZ 4600 this setting is used with Gross Set Point. This is the "weight change" required to turn off the +12VDC Alarm Output after it has been activated. This weight must be lower than the weight entered for SETPNT (from 0-999999). Once the weight on the scale is below the Gross Set Point by the "weight change" amount, the +12V Alarm Output will change back to the original output (prior to reaching the gross set point). This setting prevents the +12VDC Alarm Output from repeatedly turning on and off when mixing around the actual SETPNT weight.

SETDEL (D.A.N. 425) Set Point Delay Time

For EZ3400, EZ3600 and EZ4600 models only.

This setting is used with Gross Set Point. This "delay time" must expire before the +12VDC Alarm Output can turn on or off. The selection ranges from 0 to 10 seconds. This setting prevents the +12VDC Alarm Output from repeatedly turning on and off when mixing around the actual SETPNT weight.

SETOUT (D.A.N. 426) Gross Set Point Output

For EZ3400, EZ3600 and EZ4600 models only.

For EZ3400, EZ3600 and EZ4600. Gross Set Point determines when the +12VDC Alarm Output becomes active.

> OVER   The relay will turn on when the weight is equal to or exceeds the Gross Set Point weight.
>
> UNDER   The relay will turn on when the weight is equal to or below the Gross Set Point weight.

E MTHD (D.A.N. 441) Entry Method

TOLER (D.A.N. 442) Tolerance

When the auto advance feature is activated, the indicator automatically prints and advances to the next ingredient or pen once the tolerance and delay time requirements have been met. Tolerance and delay time requirements are explained below.

The Tolerance feature is a "tolerance window" for the preset ingredient or pen during batching. For example, if the tolerance is set to 5% and the preset is 1000 lbs., the "tolerance window" is 50lbs. The scale is in the "tolerance window" when the display is between 50 and -50 lbs.

The auto-advance function activates the Delay Time while the weight is in the tolerance window. The Delay Time allows the operator to slightly "under or over shoot" and ingredient or pen amount and still automatically advance to the next ingredient or pen. The auto-advance Delay Timer resets every time the weight moves out of the tolerance window.

DELAY (D.A.N. 443) Ingredient Advance Delay

If "DELAY" is not set to "MANUAL" the indicator is in the "Auto-Advance" mode. "DELAY" controls the number of seconds to wait before auto-advancing to the next ingredient of a recipe. Delay can be set to MANUAL, 1, 2, 3, 5, 7, 10, 20, 30, or 60.

INGRNM (D.A.N. 444) Ingredient Names

ON   Attach ingredient names to items in the ingredient table.

OFF   Disable ingredient names.

ACCUM (D.A.N. 445) Accumulator

ON   Enables recipe accumulation.

USERID (D.A.N. 446) Force User ID

ON   Operator MUST enter User ID before using the scale.

MSTORE (D.A.N. 447) Media Storage

QSTART   For Datakey use only.

MANUAL   Use for Datakey or DDL.

AUTO   Not recommended for use with the Datakey.

RESIZE (D.A.N. 448) Resize Recipe

ON   Allows the user to change the recipe size by changing the amount to feed or the number of animals for each pen.

INGSIZ (D.A.N. 449) Ingredient Re-Sizing

ON   Changes the batch size based on the weight of the first ingredient loaded.

RECTOT (D.A.N. 451) Recipe Total

ON   Provides 4 methods of correcting the batch size based on previous batch size errors.

SCOOP% (D.A.N. 452) Scoop Percentage

ON   The displays tells the operator how much to fill the loader bucket or how big of a "silage cut" to make. The scoop weight is entered in the ingredient table.

OVERLCK (D.A.N. 453) Tolerance Over Lock

FDZONE (D.A.N. 454) Feed Zone

UNDN (D.A.N. 455) Display Un-done Recipes

RECPEN (D.A.N. 456) Display Recipe Pens

R TEST (D.A.N. 457) Range Testing

For units with Datalink,

The indicator will automatically mark all feedlines sent from DataLink as "Done" to simplify the process of using the indicator to identify the radio communication range of the DataLink system. For normal EZ 3500 recipe operation, "R TEST" must be set to OFF.

AUTPEN (D.A.N. 458) Auto Start

For EZ3600 and EZ4600 models only.

| ON | Indicator will automatically activate the pen list for that feeding once a recipe has been loaded. |

ERASFD (D.A.N. 459) Erase Done Feed-lines

For EZ 3600 and EZ 4600 models only.

| ON | Indicator will automatically erase the "Done" recipes from internal memory after they have been transferred to the Datakey or Datalink. This feature should only be ON when the indicator is being used to mix the recipe and then being unloaded all at once (as in a stationary mixer). |
| OFF | This feature should be OFF if the mixer is also making deliveries. |

MANPEN (D.A.N. 461) Manual Pen Advance feature

For EZ 3400, EZ 3600 and EZ 4600 models only.

| ON | Indicator will automatically advance when loading ingredients, but manually advance when making deliveries to pens. |
| OFF | Manual advance to the next ingredient |

T MTHD / PENTOL (D.A.N. 462) Pen Tolerance

For EZ 3400, EZ 3600 and EZ 4600 models only.

The T MTHD sets the PENTOL in percent (PERCNT) or in a weight value (WEIGHT).

The PENTOL setting determines if the amount delivered to a pen satisfies the amount required in the pens list. If the amount delivered is under this value, the pen will remain on the list of pens to be fed.

| PERCNT | Tolerance value is a percentage of the amount to be delivered to the pen (example 10%).   PENTOL must be between 1 and 99. |
| WEIGHT | Tolerance is a weight value. PENTOL can be any value. |

BATNUM (D.A.N. 464) Batch Number Control

For EZ3600 and EZ4600 models only.

| EZCTRL | The indicator creates the batch number during feeding. The batch number ranges from 300 to 999. |
| PCCTRL | Batch number is determined by PC feeding program. |

DBLKEY (D.A.N. 465) Double Key Press Prevention

| ON | The indicator ignores keys that are accidentally double pressed when advancing to the next ingredient. This includes the Print, Enter, Ingredient-Advance & TR keys. |
| OFF | Normal Operation |

T CALB (D.A.N. 801) Temperature Calibration

SETUP (D.A.N. 871) Setup Number

Setup Number (SETUP)

```
1  4  6  0  4  0
W  G  D  C  C  C
```

The digits in this number represent four

different items. From left to right:

WGDCCC.

W = Weigh Method

G = Gain

D = Display Count Index (0-9)

CCC = Capacity/1000

This value selects the weigh method or signal averaging scheme to be used by the scale system and the Display Unit.

Settings	Unit	Weigh Method
1	lb	General
2	lb	Slow
3	lb	Fast
4	lb	Lock-On
5	kg	General
6	kg	Slow
7	kg	Fast
8	kg	Lock-On

See Appendix B for additional information.

G=Gain Gain. This value selects the amplification to be

used on the loadcell signal. This is application specific

and should only be altered by trained

technicians. This value is NOT accessible in the

Long Form setup.

Display Count

Setting	lbs / kgs
0	<0.2
1	0.2
2	0.5
3	1
4	2
5	5
6	10
7	20
8	50
9	100

These can be selected in the Long Form setup.

CAL (D.A.N. 872) Calibration Number

Option Upgrade Instructions

404845 KIT-REMOTE HARNESS - J903

1	404805	J903 Harness
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
1	404845	Instructions

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. Cut holes for J903 connector in the bottom overlay (see diagram).
3. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
4. Connect harness to P2 on the Main circuit board. Match locking tab (see diagram).
5. Reconnect beeper. Match locking tab (see diagram).
6. Reattach rear cover.

404846 KIT-EZ3 SERIAL PORT - J904

1	404380	Option PCB w/Serial/RTC
1	403683	J904 Harness (Installed)
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404562	Battery-3V Lithium BR23
1	404846	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. Cut holes for J904 connector in the bottom overlay (see diagram).
3. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
4. Place Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram). Attach to the housing with screws.
5. Reconnect beeper. Match locking tab (see diagram).
6. Reattach rear cover.
7. Change indicator settings to set the clock and enable the serial port.

404847 KIT-EZ3 SERIAL PORT - J905

1		Option PCB w/Serial/RTC/DK
1	403683	J904 Harness (Installed)
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404847	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. Cut holes for J905 connector in the bottom overlay (see diagram).
3. Remove screws from Main circuit board and existing Option circuit board.
4. Move circuit boards up slightly to allow the Datakey keyceptacle to clear the housing.
5. Remove the existing Option circuit board.
6. 6Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
7. Place new Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram).
8. Move circuit boards back into position in the housing, lining up the Datakey keyceptacle with the housing. Attach circuit boards to the housing with screws.
9. Reconnect beeper. Match locking tab (see diagram).
10. Reattach rear cover.
11. Change indicator settings to enable the serial port.

404848 KIT-EZ3 WIRELESS STD RANGE - J904

1	404381	Option PCB w/Serial/RTC/Radio
1	403683	J904 Harness (Installed)
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404059	IC-DS1306 RTC,16 PIN DI
1	404060	Crystal-32.7678KHZ,6PF
1	404563	Battery Holder-23MM LIT
1	404562	Battery-3V Lithium BR23
2	404804	SCR-#6x3/4 PHSTS Type B
	145316	24 AWG jumper wire
1	404848	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. If the indicator contains an Option circuit board, remove the screws from the Option circuit board. Remove the Option circuit board from the housing.
3. If needed, remove the existing J904 harness from the bottom of the housing.
4. If needed, cut holes for J904 connector in the bottom overlay (see diagram).
5. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
6. Place Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram). Attach to the housing with screws.
7. Position the radio antenna up from the radio, next to J901 (see diagram).
8. Reconnect beeper. Match locking tab (see diagram).
9. Reattach rear cover.
10. Change indicator settings to set the clock, enable the serial port, and enable the radio and set up the radio channel.

404849 Kɪт-EZ3 Wɪʀᴇʟᴇꜱꜱ STD Rᴀɴɢᴇ - J905

1		Option PCB w/Serial/RTC/Radio
1	403797	J905 Harness (Installed)
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404849	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. Remove screws from Main circuit board and existing Option circuit board.
3. If needed, remove the existing J905 harness from the bottom of the housing.
4. If needed, cut holes for J905 connector in the bottom overlay (see diagram).
5. Move circuit boards up slightly to allow the Datakey keyceptacle to clear the housing.
6. Remove the existing Option circuit board.
7. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
8. Place new Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram).
9. Move circuit boards back into position in the housing, lining up the Datakey keyceptacle with the housing. Attach circuit boards to the housing with screws.
10. Position the radio antenna up from the radio, next to J901 (see diagram).
11. Reconnect beeper. Match locking tab (see diagram).
12. Reattach rear cover.
13. Change indicator settings to enable the serial port, enable the radio and set up the radio channel.

404850 KIT-EZ3 WIRELESS EXT RANGE - J905

1		Option PCB w/Serial/RTC/XR Radio
1	403797	J905 Harness (Installed)
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404850	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. Remove screws from Main circuit board and existing Option circuit board.
3. If needed, remove the existing J905 harness from the bottom of the housing.
4. If needed, cut holes for J905 connector in the bottom overlay (see diagram).
5. Cut hole for radio connector (see diagram).
6. Move circuit boards up slightly to allow the Datakey keyceptacle to clear the housing.
7. Remove the existing Option circuit board.
8. Remove nut from radio connector.
9. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
10. Place new Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram).
11. Move circuit boards back into position in the housing, lining up the Datakey keyceptacle with the housing. Attach circuit boards to the housing with screws.
12. Put nut onto radio connector.
13. Reconnect beeper. Match locking tab (see diagram).
14. Reattach rear cover.
15. Change indicator settings to enable the serial port, enable the radio and set up the radio channel.

ENABLING THE RADIO IN THE INDICATOR SOFTWARE SETTINGS

Press and hold the **[Tare]** key and then press and hold the **[On]** key. Hold both keys until a beep is heard. Release the two keys and then press the following sequence of keys:

[Zero] [Zero] [Net-Gross] [Net-Gross] [Tare] [Tare] [Tare] [Net-Gross] [Zero]

[Zero] [Zero]

[Zero] [Zero] [Zero] [Net-Gross] [Net-Gross] [Net-Gross] [Tare] [Tare] [Tare]

Scroll through the options using the **[On]** key and alter the values using the **[Select]** key.

Press **[On]** until **RA OFF** appears on the display. Press **[Select]** to change the setting to **RADIO**, which will enable the option.

Press **[On]** until **EXIT** appears. Press **[On]** again to exit the keypad test and the indicator will reset.

Once **HELLO** disappears off the screen, enter D.A.N. number **231** and press **[Select]**. **SCL NO** will appear followed by the scale number the scale is set to. Change this number to desired setting using the **[Select]** key (default setting is 1). Press **[On]** to store and exit the setting.

Enter D.A.N. number **215** and then **[Select]**. **COM IN** will appear and then display the current setting. Press **[Select]** until **EZ2CMD** appears on the screen then **[On]** to store and exit the setting.

Enter D.A.N. number **218** and press **[Select]**. **REMOTE** will appear followed by the current setting **OFF**. Press select until **ON** is displayed and then press **[On]** to save the setting and exit.

404851 KIT-EZ3 ANALOG OUT

1		Option PCB w/Analog Out
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404225	Decal Analog
1	404850	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. Cut holes for J904 connector in the bottom overlay (see diagram).
3. Label connector location with decal (see diagram).
4. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
5. Place Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram). Attach to the housing with screws.
6. Reconnect beeper. Match locking tab (see diagram).
7. Reattach rear cover.
8. Change indicator settings to enable and set up the analog output.

ENABLING THE ANALOG OPTION - INDICATOR SOFTWARE SETTINGS

Press and hold the **[Tare]** key and then press and hold the **[On]** key. Hold both keys until a beep is heard. Release the two keys and then press the following sequence of keys:

[Zero] [Zero] [Net-Gross] [Net-Gross] [Tare] [Tare] [Tare] [Net-Gross] [Zero]

[Zero] [Zero]

[Zero] [Zero] [Zero] [Net-Gross] [Net-Gross] [Net-Gross] [Tare] [Tare] [Tare]

Scroll through the options using the **[On]** key and alter the values using the **[Select]** key.

Press **[On]** until **ANAOFF** appears on the display. Push **[Select]** to change the setting to **ANALOG**, which will enable the option.

Press **[On]** until **EXIT** appears. Push **[On]** again to exit the keypad test and the indicator will reset.

Once **HELLO** disappears off the screen, follow the *Analog Output Operators Manual (D3708-US)*.

404852 Kit-EZ3 Analog Out, Serial Port - J904

1		Option PCB w/Serial J904/Analog Out
8	404393	#4-40x3/8" (9.5mm) Screws
2	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404225	Decal Analog
1	404850	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. If the indicator contains an Option circuit board, remove the screws from the Option circuit board. Remove the Option circuit board from the housing.
3. If needed, remove the existing J904 harness from the bottom of the housing.
4. If needed, cut holes for J904 connector in the bottom overlay (see diagram).
5. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
6. Place Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram). Attach to the housing with screws.
7. Reconnect beeper. Match locking tab (see diagram).
8. Reattach rear cover.
9. Change indicator settings to set the clock and enable the serial port.
10. Change indicator settings to enable and set up the analog output.

404853 Kit-EZ3 Analog Out, Serial Port - J905

1		Option PCB w/Serial J905/Analog Out
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404225	Decal Analog
1	404850	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.
2. Cut holes for J905 connector in the bottom overlay (see diagram).
3. Label connector location with decal (see diagram).
4. Remove screws from Main circuit board and existing Option circuit board.
5. Move circuit boards up slightly to allow the Datakey keyceptacle to clear the housing.
6. Remove the existing Option circuit board.
7. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
8. Place new Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram).
9. Move circuit boards back into position in the housing, lining up the Datakey keyceptacle with the housing. Attach circuit boards to the housing with screws.
10. Reconnect beeper. Match locking tab (see diagram).
11. Reattach rear cover.
12. Change indicator settings to enable the serial port.
13. Change indicator settings to enable and set up the analog output.

404854 KIT-EZ3 ANALOG OUT, WIRELESS STD RANGE - J904

1		Option PCB w/Serial J904/Radio/Analog Out
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404225	Decal Analog
1	404850	Instruction Sheet

Instructions:

1. Remove back cover of the indicator. Unplug beeper.

2. If the indicator contains an Option circuit board, remove the screws from the Option circuit board. Remove the Option circuit board from the housing.

3. If needed, remove the existing J904 harness from the bottom of the housing.

4. If needed, cut holes for J904 connector in the bottom overlay (see diagram).

5. Label connector location with decal (see diagram).

6. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).

7. Place Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram). Attach to the housing with screws.

8. Position the radio antenna up from the radio, next to J901 (see diagram).

9. Reconnect beeper. Match locking tab (see diagram).

10. Reattach rear cover.

11. Change indicator settings to set the clock, enable the serial port, and enable the radio and set up the radio channel.

12. Change indicator settings to enable and set up the analog output..

404855 KIT-EZ3 ANALOG OUT, WIRELESS STD RANGE - J905 - DATAKEY

1		Option PCB w/Serial J905/Radio/Analog Out/DK
4	404393	#4-40x3/8" (9.5mm) Screws
1	404078	Plate-Horseshoe
2	404804	#6x3/4" (19mm) Self Tapping Screw
3	404625	#6x3/8" (9.5mm) Self Tapping Screw
1	404225	Decal Analog
1	404850	Instruction Sheet

INSTRUCTIONS:

1. Remove back cover of the indicator. Unplug beeper.
2. If needed, remove the existing J905 harness from the bottom of the housing.
3. If needed, cut holes for J905 connector in the bottom overlay (see diagram).
4. Label connector location with decal (see diagram).
5. Remove screws from Main circuit board and existing Option circuit board.
6. Move circuit boards up slightly to allow the Datakey keyceptacle to clear the housing.
7. Remove the existing Option circuit board.
8. Attach harness to bottom of housing with screws and screw plate. Check that connector is oriented correctly (see diagram).
9. Place new Option circuit board in housing while connecting P1 to J1 on the Main circuit board (see diagram).
10. Move circuit boards back into position in the housing, lining up the Datakey keyceptacle with the housing. Attach circuit boards to the housing with screws.
11. Position the radio antenna up from the radio, next to J901 (see diagram).
12. Reconnect beeper. Match locking tab (see diagram).
13. Reattach rear cover.
14. Change indicator settings to enable the serial port, enable the radio and set up the radio channel.
15. Change indicator settings to enable and set up the analog output.

Keypad Error Codes

The Keypad failure is detected when the system is first turned on. The Messsage "KEYPAD FAILURE" appears followed by and error code.

Locate the error code in the table below to see which key is being held "on".

Code	Key
08	ON
10	Net/Gross
11	Switch 8
12	ID
13	Help
14	6
15	5
16	0
17	Clear
20	Hold
21	Accum
22	RM
23	Print
24	[Not Used]
25	4
26	9
27	Select
30	Load/Unload

Code	Key
31	Recipe
32	Mem +
33	[Not Used]
34	1
35	3
36	8
37	Function
40	Tare
41	Ingredient
42	Switch 9
43	Zero
44	Switch 17
45	2
46	7
47	Timer
53	Rempte Zero
54	INIT
56	Opto 2 signal