2XX-USBA

USB-A Option Card
Installation Manual

**For 200 Series Indicators
(205, 210/212G and 225)**

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DISCLAIMER

While every precaution has been taken in the preparation of this manual, the Seller assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from use of the information contained herein. All instructions and diagrams have been checked for accuracy and ease of application; however, success and safety in working with tools depend to a great extent upon the individual accuracy, skill and caution. For this reason, the Seller is not able to guarantee the result of any procedure contained herein. Nor can they assume responsibility for any damage to property or injury to persons occasioned from the procedures. Persons engaging the procedures do so entirely at their own risk.

FCC COMPLIANCE STATEMENT

This equipment generates uses, can radiate radio frequency, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user will be responsible to take whatever measures necessary to correct the interference.

You may find the booklet "How to Identify and Resolve Radio TV Interference Problems" prepared by the Federal Communications Commission helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402, stock No. 001-000-00315-4.

PRECAUTIONS

Before using this indicator, read this manual and pay special attention to all "NOTIFICATION" symbols:

IMPORTANT   ELECTRICAL WARNING   STATIC SENSITVE

TABLE OF CONTENTS

INTRODUCTION

The 2XX-USBA has been designed to offer new connectivity possibilities for the Cardinal Scale's 200 Series (205, 210, 212G and 225) Weight Indicators. The option card resides in the main enclosure of the indicator and has two USB-A ports and one micro SD port. *There is no additional setup for this option card on any of the indicators.*

101 KEYBOARD

USB DRIVE

MICRO SD CARD

All 3 devices may be connected at the same time!

Both USB ports and the micro SD port may be used simultaneously. For instance, a USB drive may be recording transactions while the other USB port is connected to a 101 keyboard at the same time that a micro SD card is storing IDs.
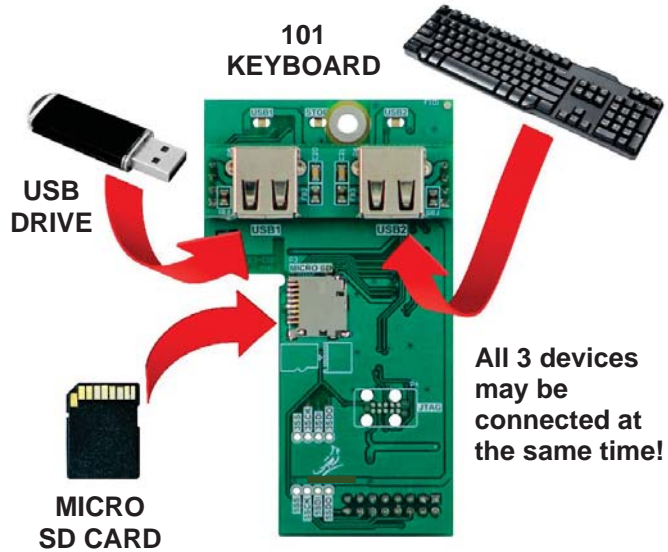
NOTE: The 2xx-USBA option card is **ONLY** supported in Rev 3.0.8 software and above for the 205/210/212G indicators and Rev 2.0.01 software and above for the 225 indicator.

> ⚠ **The USB Drive and Micro SD card MUST be formatted as a FAT device.**

The purpose of this manual is to provide you with a guide through setup and installation of the 2XX-USBA Option card. Please read it thoroughly before attempting to install it in your indicator and keep it handy for future reference.

SPECIFICATIONS

Temperature Range:	14° to 104° F (-10° to +40° C)
Internal Connections:	(1) 16 pin DIL
External Connections:	(2) USB-A ports (1) Micro SD Card port

FEATURES

Indicator Model	205	210	212G	225
101 Keyboard	Supported	Supported	Supported	Supported
Transaction Storage (USB drive only) [1]	Virtually Unlimited	Virtually Unlimited	Virtually Unlimited	Virtually Unlimited
Expanded ID Storage (micro SD or USB drive) [1]		100 IDs	100 IDs	Virtually Unlimited IDs

[1] The 2XX-USBA does not include a micro SD card or portable USB drive. These will need to be purchased separately. A 4GB micro SD card is available from Cardinal Scale (part no. 6600-0820).

INSTALLATION

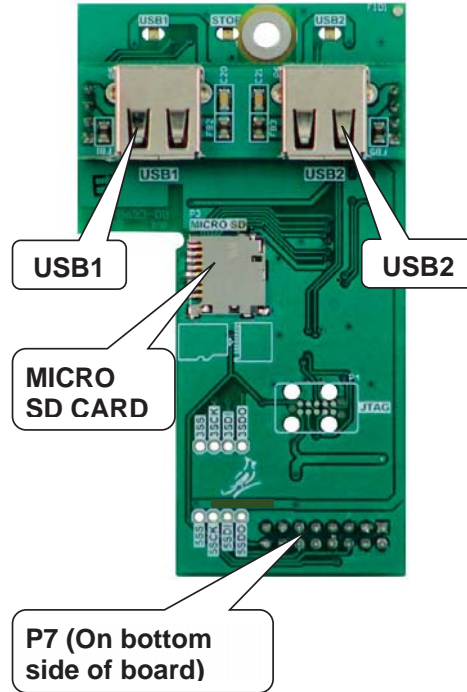## Mounting the 2XX-USBA Option Card

NOTE! Should your indicator come with the 2XX-USBA Option Card already installed, the following section describing mounting it does not apply. Proceed to the OPERATION section.

CAUTION! **This board contains static sensitive components. Improper handling can result in damage to or destruction of the components or board. Such actual and/or consequential damage IS NOT covered under warranty.**

1. Make sure the power to the indicator is OFF. Unplug the AC power cord.

2. Loosen the gland connectors where the AC power cord and any other cables enter the indicator.

3. Remove the rear panel on the 205, 210 and 225 or the front panel on the 212G.

    - On the 205/210, remove the 12 acorn nuts securing the rear panel to the front housing.

    - On the 225, remove the 14 acorn nuts securing the rear panel to the front housing.

    - On the 212G, remove the 12 mounting screws securing the front panel to the rear housing.

4. Separate the rear panel from the front housing on the 205, 210 and 225 or the front panel from the rear housing on the 212G.

5. Lift the panel from the main housing, taking care not to stretch the cable and wires between the panel and main housing. Lay the panel on the workbench next to the indicator.

6. Referring to the illustrations on page 4, locate the threaded stand-off and the OPTION BOARD connector on the indicator main board.

    - 205/210/212G – The threaded stand-off is below P3 and the OPTION BOARD connector is P10.

    - 225 – The threaded stand-off is near P9 and the OPTION BOARD connector is P15.

7. To install the 2XX-USBA card, carefully align the connector P7 (pins on bottom side of 2XX-USBA board) with connector P10 on the 205/210/212G or P15 on the 225 main board and then apply even downward pressure to the end of the 2XX-USBA board (with P7 pins on bottom side).

8. Align the hole in the 2XX-USBA board with the threaded stand-off on the indicator main board and using the lock washer and screw supplied with the 2XX-USBA board, secure the 2XX-USBA to the indicator main board.

9. Make certain no cables or wires are exposed between the main housing and the panel and then place the panel onto the main housing.

10. Secure the panel to the main housing with the acorn nuts (12 on the 205/210, 14 on the 225) or the 12 mounting screws on the 212G removed earlier.

    NOTE: Follow a diagonal pattern when tightening the acorn nuts and mounting screws.

11. If required, install the lead and wire calibration seal.

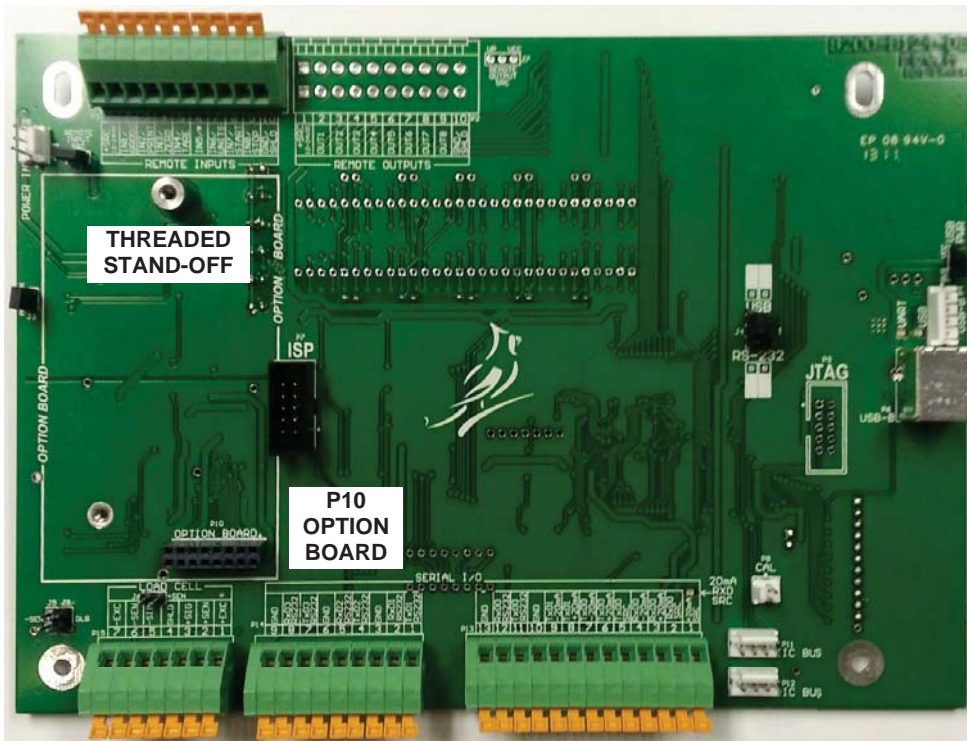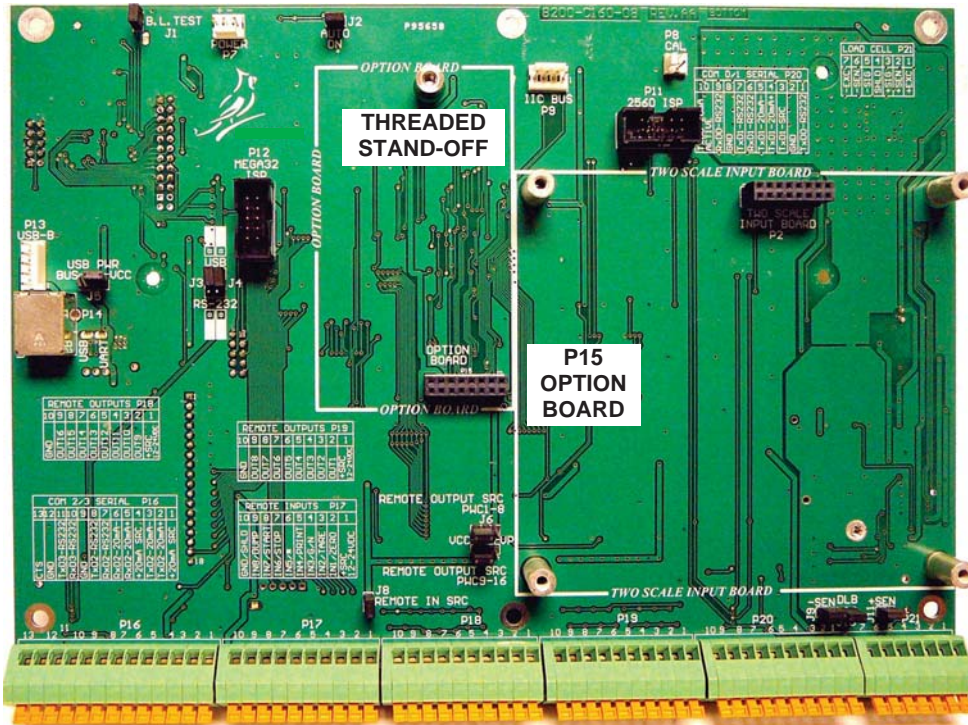# INSTALLATION, CONT.

Mounting the 2XX-USBA Option Card, Cont.
205-210-212G Main PCB

NOTE: 205 Main PCB shown. The 210/212G Main PCB will have connector P2, REMOTE OUTPUTS and J7, REMOTE OUTPUT SRC jumper installed.


225 Main PCB

INSTALLATION, CONT.

USB Cable/Gland Connector Installation on 205, 210 and 225

> **NOTE:** USB Cable/Gland connector (6600-2006) <u>must</u> be ordered separately. 1 or 2 are required, depending on the installation.

1. If the rear panel has been removed, proceed to step 3. Otherwise, remove the acorn nuts securing the rear panel to the front housing.
   - On the 205/210, remove the 12 acorn nuts securing the rear panel to the front housing.
   - On the 225, remove the 14 acorn nuts securing the rear panel to the front housing.
2. Separate the rear panel from the front housing.
3. To install the USB cable/gland assembly in the rear panel, remove the gland connector nut from the gland connector.
4. Insert the threaded part of the USB cable/gland connector fully through the hole in the rear panel. **NOTE:** The USB cable/gland connector is keyed (has a flat side) and will only install when aligned with the flat part of the hole in the rear panel.
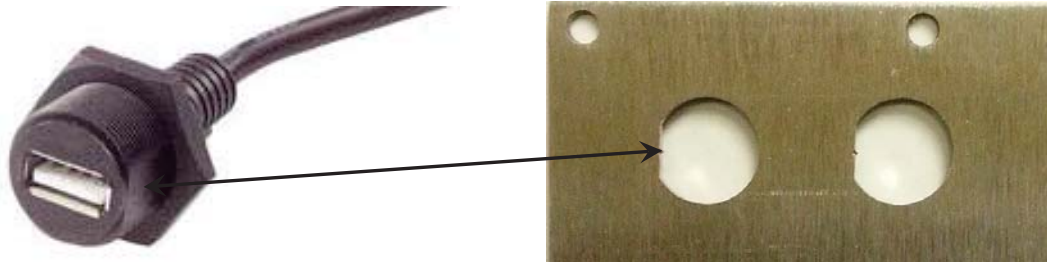
NOTE: ALIGN FLAT SIDE OF CABLE/GLAND CONNECTOR WITH FLAT PART OF HOLE IN REAR PANEL

5. Secure the gland connector to the rear panel with the gland connector nut.
6. Repeat Steps 3 through 5 for the second USB/gland connector.
7. Plug-in the USB cables into the USB1 and USB2 ports on the 2XX-USBA option card.
8. Make certain no cables or wires are exposed between the front housing and rear panel and then place the rear panel onto the front housing.
9. Secure with the acorn nuts (12 on the 205/210, 14 on the 220 and 225) removed earlier.

   NOTE: Follow a diagonal pattern when tightening the acorn nuts.

10. If required, install the lead and wire calibration seal.

> ⚠ **IMPORTANT! If an USB extension cable is used, it must have a "ferrite bead" or "ferrite choke" installed on it.**

OPERATION

205
USB Keyboard

The keyboard keys are mapped to the 205 as follows:

F1	=	ZERO
F2	=	TARE
F3	=	NET
F4	=	UNITS
F5	=	PRINT
✳	=	✳
ENTER	=	ENTER

NOTE: All other keys on the USB keyboard will be ignored.

Thumb Drive

If the thumb drive is installed, then whenever a ticket is printed a transaction record will be written to the root:\205\std\trans.csv file. The format of the record is as follows:

<indicator#>,<Gross wt>,<Tare wt>,<Net wt>,<G Accum>,<N Accum>,<Unit><CRLF>

Where:

indicator#	=	2-digit value (00-99) set during setup
Gross wt	=	Gross weight
Tare wt	=	Tare weight
Net wt	=	Net weight
G Accum	=	Accumulated Gross weight
N Accum	=	Accumulated Net weight
Unit	=	LB, KG, etc.
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

Micro SD Card

- If the card is installed and $USA=no$ in setup, then the Electronic Tally Roll will be enabled.

- Whenever the **<LF>XT<CR>** command string is received on any of the serial communication port, the indicator will respond with the current Displayed weight and a tally number. The weight, tally number and status are written to the micro SD card along with a CRC-16 checksum. The status indicates if the weight is Gross or Net, and if the weight is in the base units or the converted units of the indicator.

- To recall the weight for a specific tally number, press the ✳ key twice, enter the number and press **ENTER**. The stored weight will be displayed and the annunciators to the right of the weight display will flash. Pressing any key will return to displaying the current weight.

OPERATION, CONT.

210/212G

USB Keyboard

The keyboard keys are mapped to the 210/212G as follows:

F1	=	ZERO	F9	=	PRESET
F2	=	TARE	F10	=	HOLD (212G only)
F3	=	NET	✳	=	✳
F4	=	UNITS	ENTER	=	ENTER
F5	=	PRINT	0 thru 9	=	0 thru 9
F6	=	TAREWT	A thru Z	=	A thru Z
F7	=	Fn	a thru z	=	A thru Z
F8	=	TIME			

NOTE: All other keys on the USB keyboard will be ignored.

Thumb Drive

If the thumb drive is installed, then whenever a ticket is printed a transaction record will be written. The format of the record is as follows:

NOTE: The data will only be placed in the transaction file if they are printed.

Mode Operation: 0 (Normal), 2 (DFC), 3 (PWC), 4 (Check Weigh)

FILENAME: root:\210\STD\trans.csv (Normal, PWC and Check Weigh)
root:\210\DFC\trans.csv (DFC)

<indicator#>,<CNC>,<Date>,<Time>,<ID>,<Gross wt>,<Tare wt>,<Net wt>,<G Accum>, <N Accum>,<Unit>,<Count>,<Piece wt><CRLF>

Where:

indicator#	=	2-digit value (00-99) set during setup
CNC	=	Consecutive Number (blank filled if not enabled)
Date	=	MM/DD/YYYY or DD/MM/YYYY if USA=no
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
ID	=	ID up to six characters
Gross wt	=	Gross weight
Tare wt	=	Tare weight
Net wt	=	Net weight
G Accum	=	Accumulated Gross weight
N Accum	=	Accumulated Net weight
Unit	=	LB, KG, etc.
Count	=	Piece count if in counting mode
Piece wt	=	Piece weight if in counting mode
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

NOTE: In addition, when the mode of operation is DFC, the number of stored IDs will be increased from 25 to 100. All of these IDs will be stored on the Thumb Drive in the root:\210\DFC\IDS.DAT file if a micro SD card is not installed.

OPERATION, CONT.

210/212G, Cont.

Mode Operation: 1 (ID Storage)

FILENAME: root:\210\IDS\trans.csv

<indicator#>,<CNC>,<Date>,<Time>,<ID>,<Gross wt>,<Tare wt>,<Net wt>, <Unit><CRLF>

Where:

indicator#	=	2-digit value (00-99) set during setup
CNC	=	Consecutive Number (blank filled if not enabled)
Date	=	MM/DD/YYYY or DD/MM/YYYY if *USA=no*
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
ID	=	ID up to six characters
Gross wt	=	Gross weight
Tare wt	=	Tare weight
Net wt	=	Net weight
Unit	=	LB, KG, etc.
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

NOTE: In addition, the number of Permanent IDs has been increased from 25 to 100. All of these IDs will be stored on the Thumb Drive in the root:\210\IDS\IDS.DAT file if a micro SD card is not installed. However, you are limited to the 25 In Process IDs stored in the indicators memory.

Mode Operation: 5 (Axle Weigher)

FILENAME: root:\210\AXL\trans.csv

<indicator#>,<Date>,<Time>,<ID>,<Total wt>,<Unit>,<Axle 1 wt>,,,,<Axle 9 wt><CRLF>

Where:

indicator#	=	2-digit value (00-99) set during setup
Date	=	MM/DD/YYYY or DD/MM/YYYY if *USA=no*
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
ID	=	ID up to six characters
Total wt	=	Total weight of all axles
Axle 1 – 9 wt	=	Individual axle weights
Unit	=	LB, KG, etc.
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

OPERATION, CONT.

210/212G, Cont.

Mode Operation: 6 (Livestock Weigher)

FILENAME: root:\210\LIV\trans.csv

<indicator#>,<CNC>,<Date>,<Time>,<ID>,<Gross wt>,<G Accum>,<Unit>,<Count>, <Avg wt><CRLF>

Where:

indicator#	=	2-digit value (00-99) set during setup
CNC	=	Consecutive Number (blank filled if not enabled)
Date	=	MM/DD/YYYY or DD/MM/YYYY if *USA=no*
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
ID	=	ID up to six characters
Gross wt	=	Gross weight
G Accum	=	Accumulated Gross weight for multiple drafts
Unit	=	LB, KG, etc.
Count	=	Head Count
Avg wt		Average weight
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

NOTE: To delete the last transaction record, press the ✱ **Fn** keys and then answer **YES** to the *dELtrn* prompt.

Micro SD Card

- If the card is installed and *USA=no* in setup, then the Electronic Tally Roll will be enabled.

- Whenever the **<LF>XT<CR>** command string is received on any of the serial communication port, the indicator will respond with the current Displayed weight and a tally number. The weight, tally number and status are written to the micro SD card along with a CRC-16 checksum. The status indicates if the weight is Gross or Net, and if the weight is in the base units or the converted units of the indicator.

- To recall the weight for a specific tally number, press the ✱ key twice, enter the number and press **ENTER**. The stored weight will be displayed and the annunciators to the right of the weight display will flash. Pressing any key will return to displaying the current weight.

- If the Thumb Drive is not installed, then the expanded IDS.DAT files for mode of operation ID Storage and DFC will be stored on the micro SD Card.

225

USB Keyboard

The keyboard keys are mapped to the 225 as follows:

F1	=	ZERO
F2	=	TARE
F3	=	NET
F4	=	UNITS
F5	=	PRINT
F6	=	SHIFT-TARE
F7	=	ACCUM
F8	=	TIME
F9	=	Soft_Key 1
F10	=	Soft_Key 2
F11	=	Soft_Key 3
F12	=	Soft_Key 4
∗	=	∗
ENTER	=	ENTER
0 thru 9	=	0 thru 9
A thru Z	=	A thru Z
a thru z	=	A thru Z
Backspace	=	←—
+	=	+
−	=	−
Up Arrow	=	Navigation Up
Right Arrow	=	Navigation Right
Down Arrow	=	Navigation Down
Left Arrow	=	Navigation Left
Page Up	=	Contrast Up
Page Down	=	Contrast Down
Shift-F1	=	Shift-ZERO
Shift-F2	=	Shift-TARE
Shift-F3	=	Shift-NET
Shift-F4	=	Shift-UNITS
Shift-F5	=	Shift-PRINT
Shift-F6	=	Shift-TARE
Shift-F7	=	Shift-ACCUM
Shift-F8	=	Shift-TIME
Shift-F9	=	Shift-Soft_Key 1
Shift-F10	=	Shift-Soft_Key 2
Shift-F11	=	Shift-Soft_Key 3
Shift-F12	=	Shift-Soft_Key 4
Shift-ENTER	=	SETUP

> **NOTE:** Navigation keys are located to the right of the weight display.

NOTE: All other keys on the USB keyboard will be ignored.

225, Cont.

Thumb Drive

If the thumb drive is installed, then whenever a ticket is printed a transaction record will be written to the drive. The filename and format will depend on the mode of operation setting.

NOTE: The data will only be placed in the transaction file if they are printed.

Mode Operation: 0 (Normal), 2 (DFC), 3 (PWC), 4 (Check Weigh)

FILENAME: root:\225\STD\trans.csv

<indicator#>,<CNC>,<Date>,<Time>,<ID>,<Gross wt>,<Tare wt>,<Net wt>,<G Accum>, <N Accum>,<Unit>,<Count>,<Piece wt>,Scale 1 Gross>,<Scale 2 Gross>, <Scale 3 Gross><CRLF>

Where:

indicator#	=	2-digit value (00-99) set during setup
CNC	=	Consecutive Number (blank filled if not enabled)
Date	=	MM/DD/YYYY or DD/MM/YYYY if *USA=no*
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
ID	=	ID up to twelve characters
Gross wt	=	Gross weight
Tare wt	=	Tare weight
Net wt	=	Net weight
G Accum	=	Accumulated Gross weight
N Accum	=	Accumulated Net weight
Unit	=	LB, KG, etc.
Count	=	Piece count if in counting mode
Piece wt	=	Piece weight if in counting mode
Scale 1 Gross	=	Scale 1 Gross if multi-scale with total configuration
Scale 2 Gross	=	Scale 2 Gross if multi-scale with total configuration
Scale 3 Gross	=	Scale 3 Gross if multi-scale with total configuration
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

OPERATION, CONT.

225, Cont.

Mode Operation: 1 (ID Storage)

FILENAME: root:\225\IDS\trans.csv

**<indicator#>,<CNC>,<Date>,<Time>,<Hdr 1>,<ID 1>,<Ref 1>,<Hdr 2>,<ID 2>,
<Ref 2>,<Hdr 3>,<ID 3>,<Ref 3><Gross wt>,<Tare wt>, <Net wt>,<G Accum>,
<N Accum>,<Unit>,<Scale 1 Gross>,<Scale 2 Gross>,<Scale 3 Gross>,<CRLF>**

Where:

indicator#	=	2-digit value (00-99) set during setup
CNC	=	Consecutive Number (blank filled if not enabled)
Date	=	MM/DD/YYYY or DD/MM/YYYY if *USA=no*
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
Hdr 1	=	Prompt for ID 1
ID 1	=	ID 1
Ref 1	=	Reference for ID 1
Hdr 2	=	Prompt for ID 2 – Space fill if not enabled
ID 2	=	ID 2 – Space fill if not enabled
Ref 2	=	Reference for ID 2 – Space fill if not enabled
Hdr 3	=	Prompt for ID 3 – Space fill if not enabled
ID 3	=	ID 3 – Space fill if not enabled
Ref 3	=	Reference for ID 3 – Space fill if not enabled
Gross wt	=	Gross weight (total for multi-scale with total configuration)
Tare wt	=	Tare weight
Net wt	=	Net weight
G Accum	=	Accumulated System Gross weigh
N Accum	=	Accumulated System Net weight
Unit	=	LB, KG, etc.
Scale 1 Gross		Scale 1 Gross if multi-scale with total configuration
Scale 2 Gross		Scale 2 Gross if multi-scale with total configuration
Scale 3 Gross		Scale 3 Gross if multi-scale with total configuration
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

NOTE: In addition, the number of Permanent IDs has been increased from 200 to unlimited. All of these IDs will be stored on the Thumb Drive in the root:\225\IDS\IDS.DAT file if a micro SD card is not installed. However, you are limited to the 200 In Process IDs stored in indicators memory.

OPERATION, CONT.

225, Cont.

Mode Operation: 5 (Batcher)

FILENAME: root:\225\BTR\trans.csv

\<indicator#\>,\<Date\>,\<Time\>,\<Batch Cycle\>,\<Batch wt\>,\<Unit\>,\<Ingredient 1\>, \<Ingredient 1 BIN\>,\<Ingredient 1 wt\>,,,,\>,\<Ingredient 16\>,\<Ingredient 16 BIN\>, \<Ingredient 16 wt\>\<CRLF\>

Where:

indicator#	=	2-digit value (00-99) set during setup
Date	=	MM/DD/YYYY or DD/MM/YYYY if *USA=no*
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
Batch Cycle		Batch Cycle count
Batch wt		Total Batch weight
Unit	=	LB, KG, etc.
Ingredient 1-16	=	Ingredient number
Ingredient 1-16 Bin	=	Ingredient Bin number
Ingredient 1-16 wt	=	Ingredient Weight
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

225, Cont.

Mode Operation: 6 (Package Weigher)

FILENAME: root:\225\PKG\trans.csv

<indicator#>,<CNC>,<Date>,<Time>,<Hdr 1>,<ID 1>,<Ref 1>,<Hdr 2>,<ID 2>, <Ref 2>,<Hdr 3>,<ID 3>,<Ref 3><Gross wt>,<Tare wt>, <Net wt>,<G Accum>, <N Accum>,<Unit>,<CRLF>

Where:

indicator#	=	2-digit value (00-99) set during setup
CNC	=	Consecutive Number (blank filled if not enabled)
Date	=	MM/DD/YYYY or DD/MM/YYYY if $USA=no$
Time	=	MM:HH (24-hour) MM:HH A/PM (12-hour)
Hdr 1	=	Prompt for ID 1
ID 1	=	ID 1
Ref 1	=	Reference for ID 1
Hdr 2	=	Prompt for ID 2 – Space fill if not enabled
ID 2	=	ID 2 – Space fill if not enabled
Ref 2	=	Reference for ID 2 – Space fill if not enabled
Hdr 3	=	Prompt for ID 3 – Space fill if not enabled
ID 3	=	ID 3 – Space fill if not enabled
Ref 3	=	Reference for ID 3 – Space fill if not enabled
Gross wt	=	Gross weight
Tare wt	=	Tare weight
Net wt	=	Net weight
G Accum	=	Accumulated System Gross weigh
N Accum	=	Accumulated System Net weight
Unit	=	LB, KG, etc.
,	=	variable separator
CRLF	=	ASCII Carriage Return – LineFeed (terminates the record)

NOTE: In addition, the number of Permanent IDs has been increased from 200 to unlimited. All of these IDs will be stored on the Thumb Drive in the root:\225\PKG\IDS.DAT file if a micro SD card is not installed. However, you are limited to the 200 In Process IDs stored in indicators memory.

OPERATION, CONT.

225, Cont.

Micro SD Card

- If `USA=NO` in setup and one of the serial communication ports is configured as `TYPE=TALLEY`, then the Electronic Tally Roll will be enabled. If the micro SD Card is installed, then tally records will be stored on the micro SD Card, if not then the tally records are stored in the indicators internal memory.

- Whenever the **<LF>XT<CR>** command string is received on any of the serial communication port, the indicator will respond with the current Displayed weight and a tally number. The weight, tally number and status are written to the micro SD card along with a CRC-16 checksum. The status indicates if the weight is Gross or Net, and if the weight is in the base units or the converted units of the indicator.

- To recall the weight for a specific tally number, press the **ESC** key and then the **ZERO** key, enter the number at the `FIND ETR=` prompt and press **ENTER**. The stored weight will be displayed on the line above the soft keys for approximately 3 seconds.

- If the Thumb Drive is not installed, then the expanded ID files for mode of operation ID Storage will be stored on the micro SD Card.

TROUBLESHOOTING

Status LED's

The 2XX-USBA has 3 LED's to indicate run time status and errors to the user.
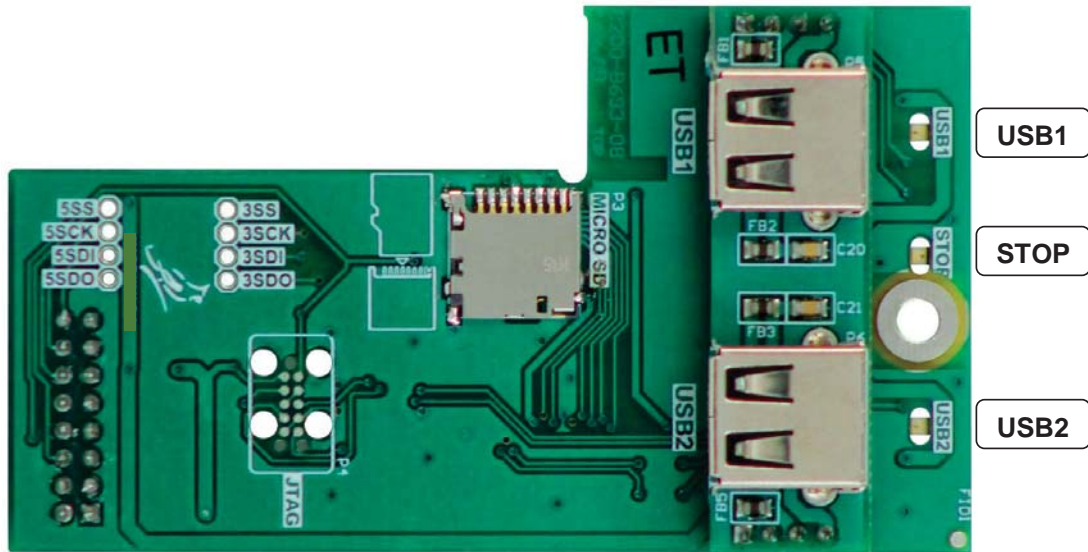
USB1
This LED will illuminate to indicate the USB1 port is active. If the LED is not illuminated, the port has failed. Note that the LED will be on *regardless* of a device being plugged into the USB1port.

USB2
This LED will illuminate to indicate the USB2 port is active. If the LED is not illuminated, the port has failed. Note that the LED will be on *regardless* of a device being plugged into the USB2port.

STOP
This LED will illuminate when the hub function of the 2XX-USBA option card has failed.

APPENDIX A

Installing New Rear Panel and USB Cable/Gland Connector on 205, 210 and 225

> **NOTE:** USB Cable/Gland connector (6600-2006) <u>must</u> be ordered separately. 1 or 2 are required, depending on the installation.

1. Remove the acorn nuts securing the rear panel to the front housing.

   - On the 205/210, remove the 12 acorn nuts securing the rear panel to the front housing.

   - On the 225, remove the 14 acorn nuts securing the rear panel to the front housing.

2. Separate the rear panel from the front housing.

3. Disconnect the AC input wiring from the terminal block and remove it from the gland connector.

4. Unplug the power supply from the main PCB and then remove the power supply, filter and AC input wiring terminal block from the rear panel.

5. Disconnect the load cell wiring from the terminal block on the main PCB and remove it from the gland connector.
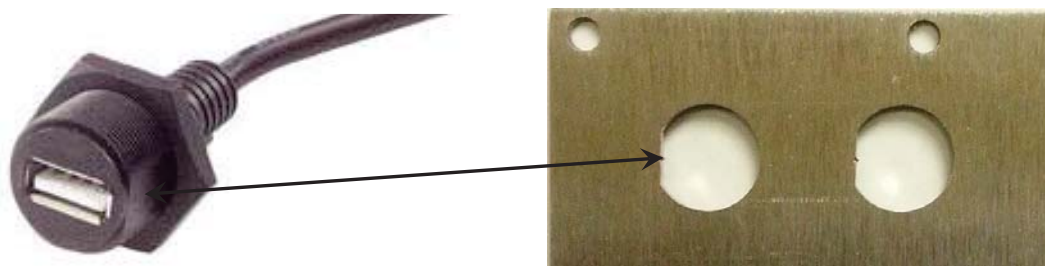
NOTE: ALIGN FLAT SIDE OF CABLE/GLAND CONNECTOR WITH FLAT PART OF HOLE IN REAR PANEL

6. Disconnect any serial and I/O wiring from the terminal blocks on the main PCB and remove them from the gland connectors.

7. Remove all gland connectors from the old rear panel.

8. To install the USB cable/gland assembly in the new rear panel, remove the gland connector nut from gland connector.

9. Insert the threaded part of the USB cable/gland connector fully through the hole in the new rear panel. **NOTE:** The USB cable/gland connector is keyed (has a flat side) and will only install when aligned with the flat part of the hole in the rear panel.

10. Secure gland connector to the rear panel with the gland connector nut.

11. Repeat Steps 8 through 10 for the second USB/gland connector.

12. Install the gland connectors removed in Step 7 on the new rear panel. **NOTE:** Refer to the 205, 210 or 225 weight indicator manual for details on gland connector locations.

13. Install the power supply, filter and AC input wiring terminal removed in Step 4 on the new rear panel.

14. Plug the power supply cable into the main PCB.

15. Insert the AC input wiring, load cell wiring and any serial and I/O wiring through the appropriate gland connectors and connect to the appropriate terminal blocks.

   NOTE: Refer to the 205, 210 or 225 weight indicator manual for details on connecting the load cell, serial and I/O wiring.

APPENDIX A, CONT.

16. Plug-in the USB cables into the USB1 and USB2 ports on the 2XX-USBA option card.

17. Make certain no cables or wires are exposed between the front housing and rear panel and then place the rear panel onto the front housing.

18. Secure with the acorn nuts (12 on the 205/210, 14 on the 220 and 225) removed earlier. Follow a diagonal pattern when tightening the acorn nuts.

19. If required, install the lead and wire calibration seal.

> **IMPORTANT! If an USB extension cable is used, it must have a "ferrite bead" or "ferrite choke" installed on it.**

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