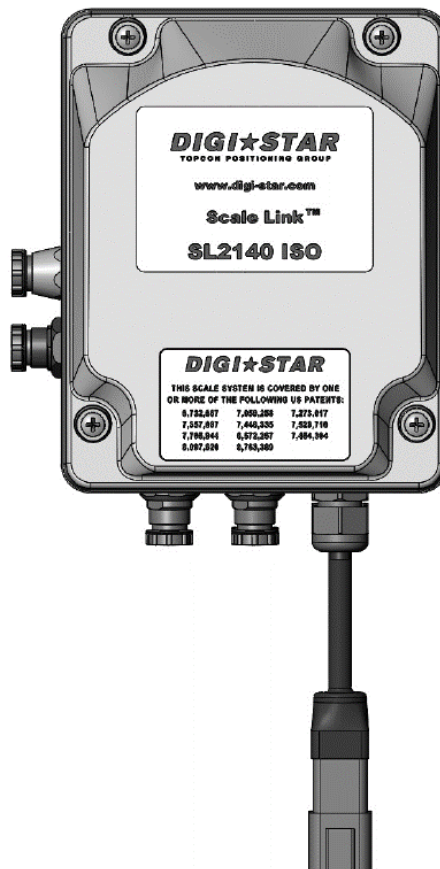




SCALE LINK - SL2

Technical Manual



Fort Atkinson, Wisconsin USA

www.digi-star.com

www.topconpositioning.com/agriculture

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REFERENCE DOCUMENTS

D3648 EZII Escape Computer Command Set
D4000 ISOBUS/ CAN Application Notes
D4020 EZIV Direct Access Numbers
D4021 Software Release Information
D4055 10/60 Series Technical Manual
D4195 SLC2810 Operator Manual
D4196 Scale Link SL2 ISO Operator Manual
D4197 Scale Link 2000 Installation Manual
D4206 Software Update Instructions
Technical Service Bulletins – reference details of software updates

Other documents available at www.digi-star.com

APPLICABLE PRODUCTS

Compact enclosure

SL2110, SL2140

Full size enclosure

SL2210, SL2220

Scale Link Control (SLC) Remote

SLC2810 with J903 or M12 port

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SPECIFICATIONS

Voltage Range:	11V – 36V DC (12V & 24V machinery) with reverse polarity protection *For systems manufactured on or before 31DEC2017 9.0V – 36V DC (12V & 24V machinery) with reverse polarity protection *For systems manufactured on or after 01JAN2018 -Limited to 11-16V with SLC2810 or ISOBUS compliant systems -Gives Low Battery Warning below 11VDC and stops weight display. Recovers and resumes weighing once voltage is at or above 11VDC.
Current @ 13.8VDC:	<0.2A base scale with 4 load cells, up to 5.0A max with active output & all options. Internal self-resetting fuses for PCB protection & SLC remote protection. <0.2A ISOBUS SL2 + 4 load cells, no external options <0.5A ISOBUS SL2 + 16 load cells, no external options ERM modules add <0.1A to system SLC2810 adds <0.1A to system
Load Cell Platforms:	16 Maximum 350 ohm transducers; 1 scale platform x 16 bars, 2 scale platforms x 8 bars each, or 4 scale platforms x 4 bars each
Load Cell Excitation:	Regulated 8.0VDC, 500mA max, current sensing and overcurrent protected
Operating Environment:	-40C to +65C (-40F to 149F); 0 to 95% RH non-condensing *SLC2810 remote display limited to -29C to +60C (-20F to 140F)
Enclosure:	IP65 per IEC529 methods (dust and low pressure water resistant)
Remote Input:	Detects open or closed switch state based on software setting. 0 – 3,000Hz ground pulse detection. *+VIN remote input detection not supported at time of publication.
Output Control/ Alarm:	Active high 3.0A continuous with 5.0A surge at system level voltage. Output state programmable in software.
Serial Port:	RS232 Com1 & Com2; 1200 – 115K baud; 7/8 bits; E/O/N parity; scoreboard/ streaming data; Serial Gross Weight; DS ERM compatible M12 harness or direct wire based on SL2 model
Internal USB port:	USB 2.0 A port; FAT32 format; thumb drive size up to 32G For settings save/ load, software update, and ISOBUS mask update
Scale Link Control:	SPI bus on 8 pin M12 supports proprietary SPI remotes SLC2810 & SLC2400
CAN 1 Port:	Primary CAN port; ISOBUS and Universal Terminal (UT) compatible
CAN 2 Port:	Proprietary CAN port for connection to other devices or sensors
Setup & Calibration:	Use UT or SLC2810 to access and change settings
Fuses:	Main power requires external line fuse. Internal fuses are self-resetting.
Software Features:	Software features are similar to EZIV scales. Refer to D4055 and D4020 for settings changes, functions, print formats, and feature definitions.

EMC DECLARATION OF CONFORMITY

Application of Council Directive(s) 2014/30/EC

Manufacturer's Name: Digi-Star, LLC

Manufacturer's Address: W5527 State Hwy 106
Fort Atkinson, WI 53538

European Representative Name: Digi-Star International

European Representative Address: J.F. Kennedylaan 235
5981 WX Panningen
The Netherlands

Model Name: SL2140, SL2140-ISO, SL2110, SL2110-ISO

Conformance to:

- CFR Title 47 Part 15, sections 107 and 109
- ICES-003
- IEC 61000-6-3
- IEC 61000-6-2

Equipment Type/Environment:

Electronic weighing scale systems; not legal for trade. For agricultural, commercial and industrial use.

Beginning Serial No.: 00001001

Year of Manufacture: 2016

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

Manufacturer


Signature

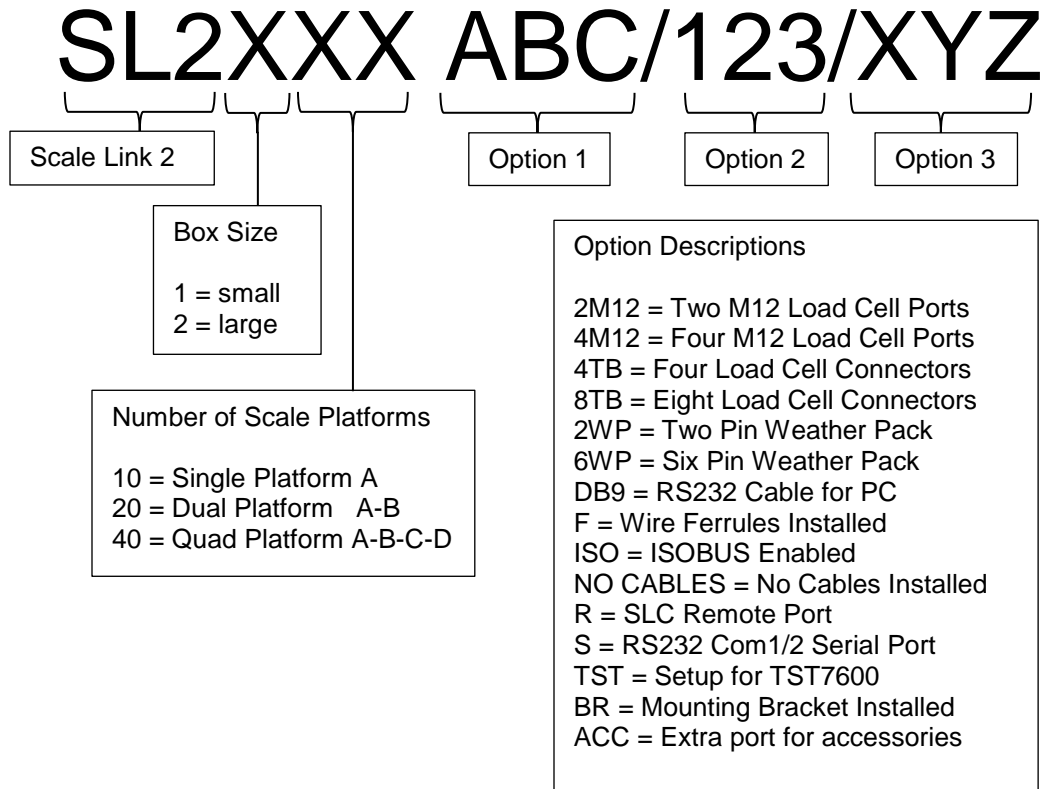
Full Name: Jason Griffith

Position: Director of Engineering – Sensors and ECUs

Place: Fort Atkinson, WI U.S.A.

Date: November 8, 2016

PART NUMBER CONFIGURATION AND OPTIONS



Example 1: 410624 SL2140 ISO 4M12/R/S/ACC

This is a compact enclosure with 4 individual scale platforms. It contains an ISOBUS port with 4 M12 load cell connections, a SLC remote port, a RS232 serial port, and an empty ACC port for IO.

Example 2: 410613 SL2110 ISO/4TB – NO CABLES

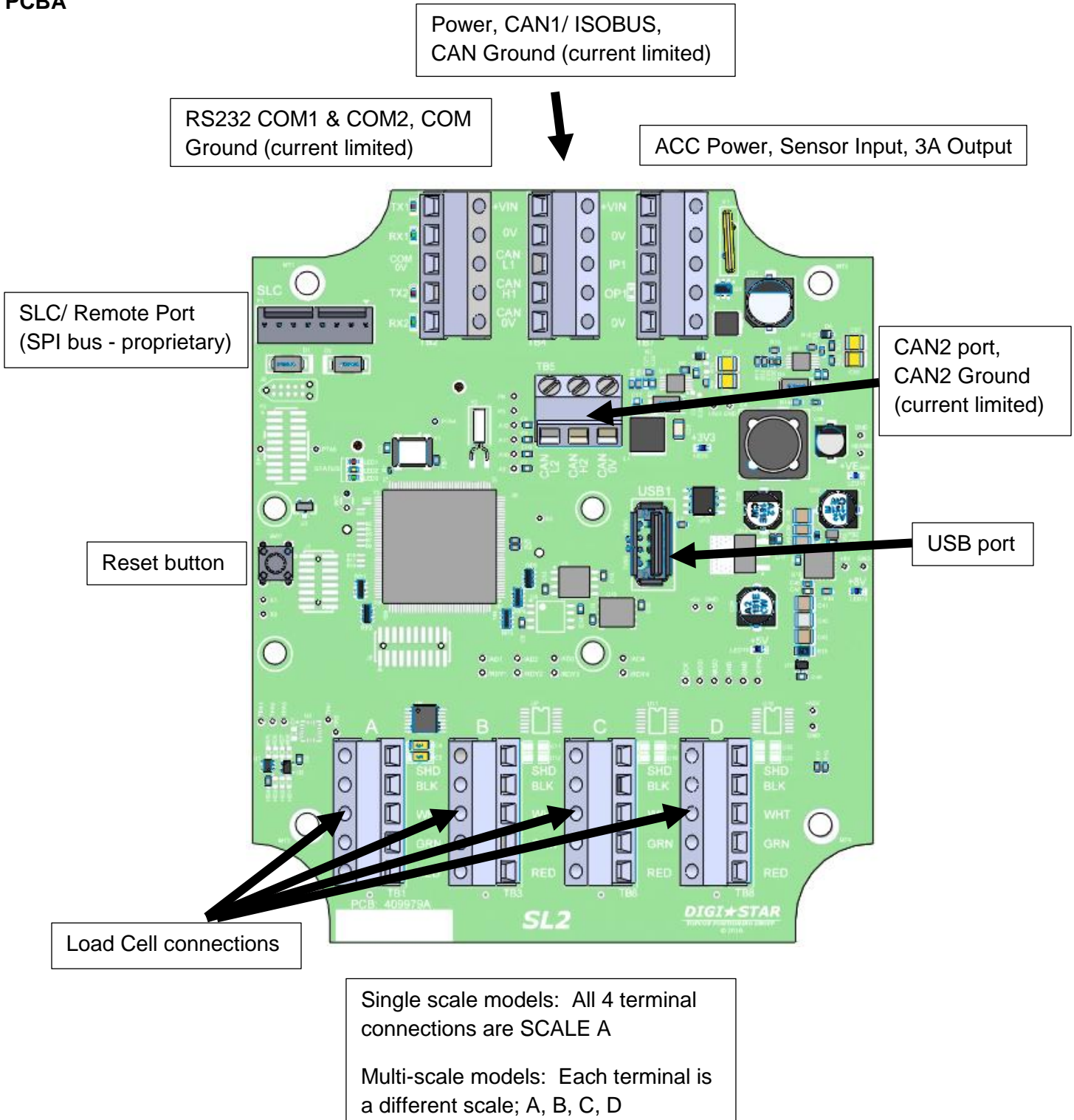
This is a compact enclosure for 1 scale platform, with 4 internal terminal blocks for load cell connections. ISOBUS is enabled and other functions available, but no cables or connectors installed.

Example 3: 410619 SL2220 ISO 8TB/R/S

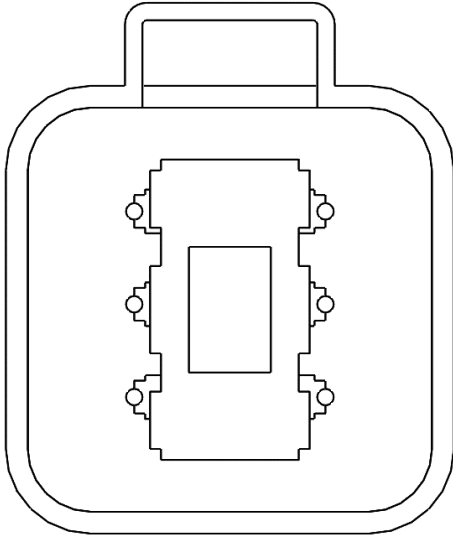
This is a full size enclosure with 2 individual scale platforms, setup for ISOBUS, SLC remote connections, and serial port. It has 2 rows of 4 load cell terminal block connections on an additional terminal block PCB for 8 bars total.

PCB AND WIRING CONNECTIONS

PCBA



Deutsch Connector



6 pin Deutsch Receptacle – Power + CAN1/ ISOBUS

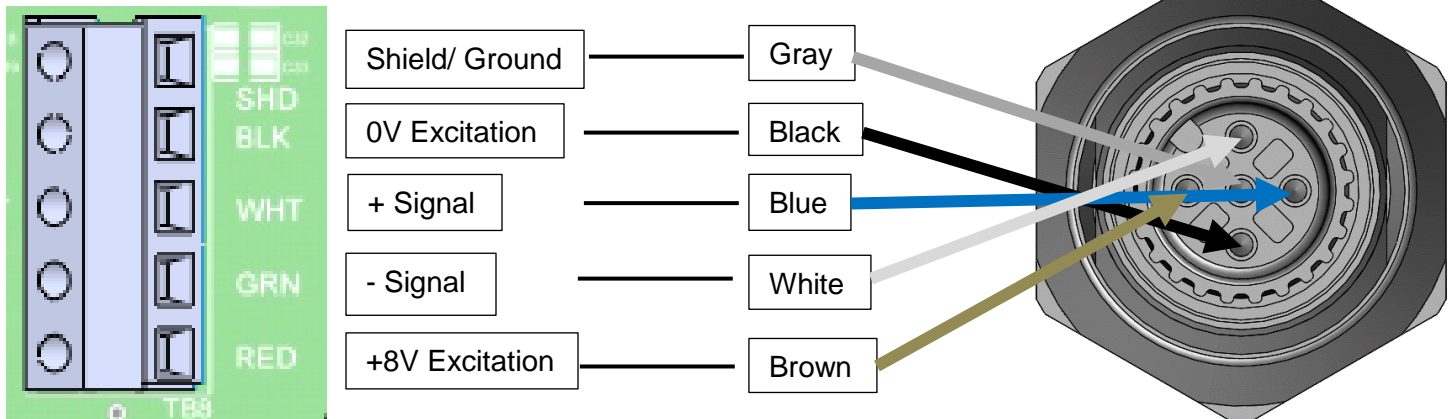
1. +VIN System Input Voltage (Red)
2. CAN1 High (Yellow)
3. 0V System Ground (Black)
4. CAN1 Low (Green)
5. Plug
6. Plug

CAN connection is non-terminated. CANBUS application requires external 120 ohm termination.

ISOBUS application requires external active bus termination per ISOBUS standards.

Load Cell Connection

Load Cell Connections – On Board and M12 EZ Mates

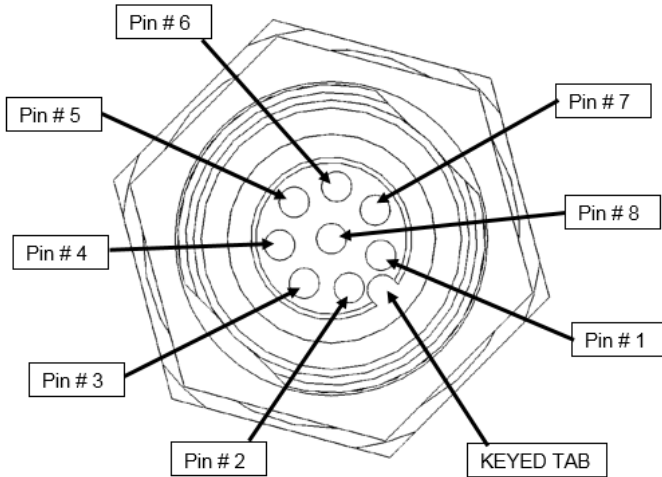


SLC2810 Remote Connection

PIN #	WIRE COLOR	FUNCTION
1	WHITE	+12V
2	BROWN	+12V
3	GREEN	REMOTE ZERO
4	YELLOW	SEG DATA
5	GRAY	CLOCK
6	PINK	KEY DATA
7	RED	GND
8	BLUE	GND

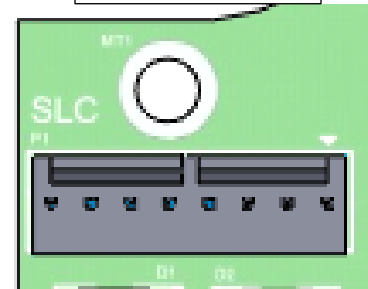
SLC Remote Port – Proprietary SPI Bus

*Note: +V is fused at 750mA on this port



Header Pinout:

8-7-6-5-4-3-2-1

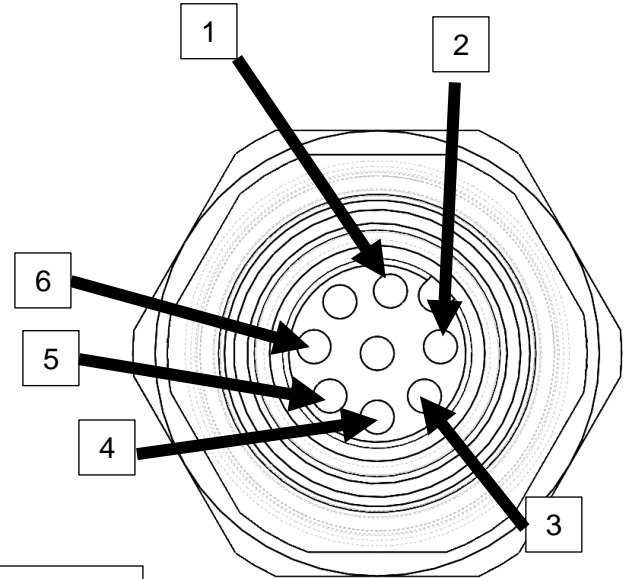
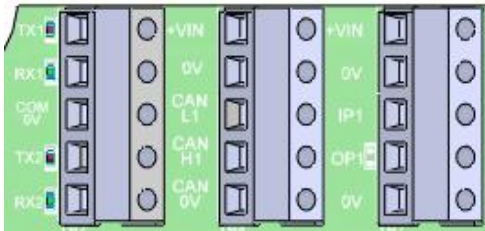


Serial Port/ RS232 Connection

Serial Port – Dual RS232 Ports with System Power

1. Brown +VIN
2. White TX1
3. Blue RX1
4. Black TX2
5. Gray COM 0V (*current limited)
6. Pink RX2

*For higher current loads using +VIN, move Gray wire from COM 0V (current limited) to 0V (not limited).



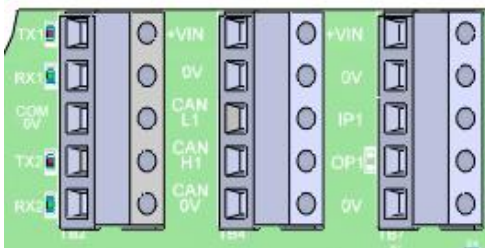
Set baud rate and parity with Menu 2 settings. See 'Basic Serial Settings' at back of manual or D4020 DAN list for settings details.

3 cable options available to fit this M12 port:

1. 410840 M12 to pigtail – wire your own cable
2. 410818 M12 to AMP – COM1 & 2 for ERM/ DS SER port
3. 411015 M12 to DB9 – PC connection with COM1

Input and Output Connections

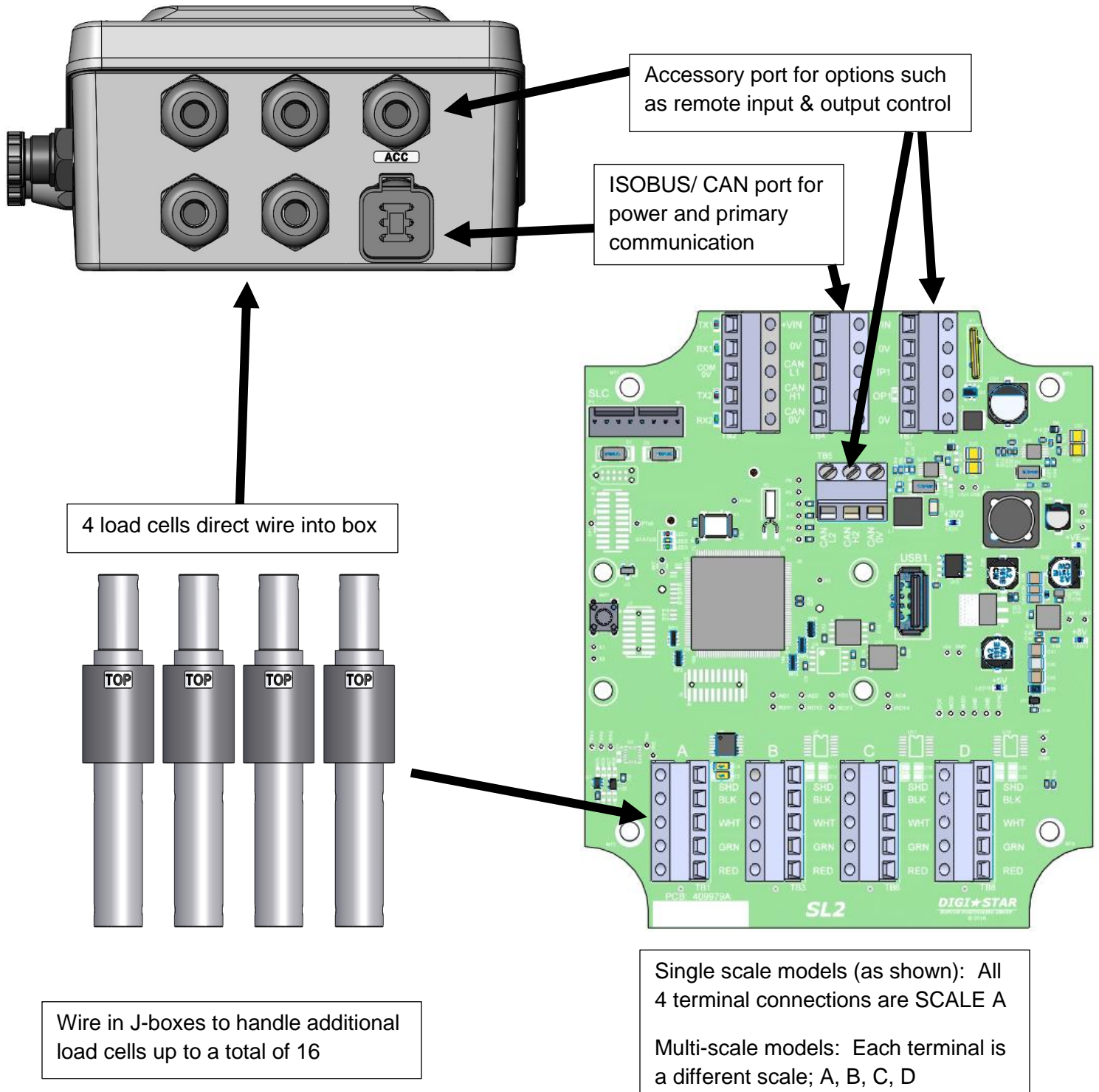
Input/ Output Connections – On Board, accessible through ACC port strain relief

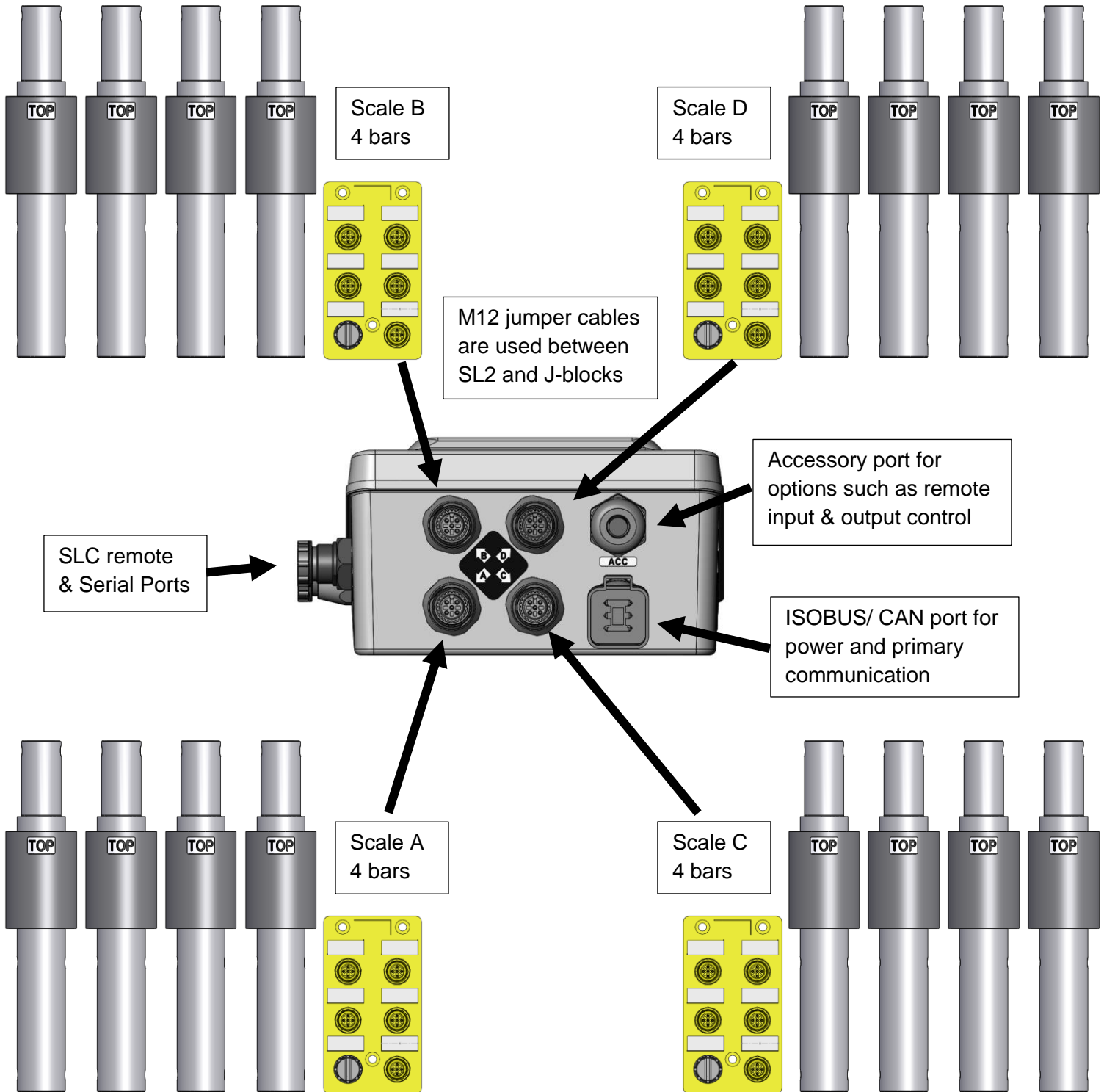


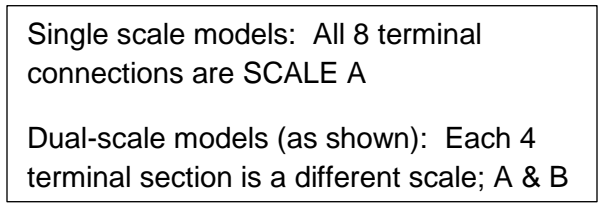
+VIN – System voltage, non-fused
 0V – System ground, non-fused
 IP1 – Remote Input 1; active high, low or pulsed based on settings
 OP1 – Output Control FET; 3A continuous at system voltage
 0V – System ground, non-fused

SYSTEM CONFIGURATIONS

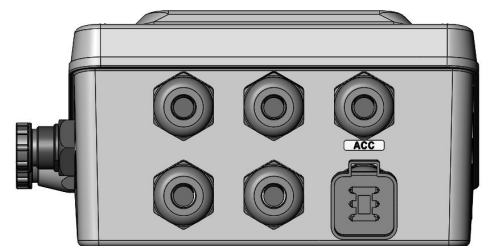
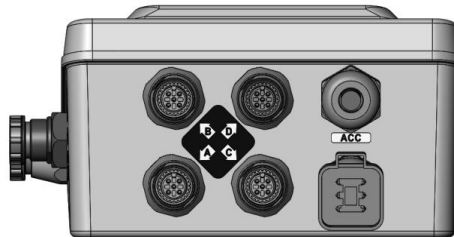
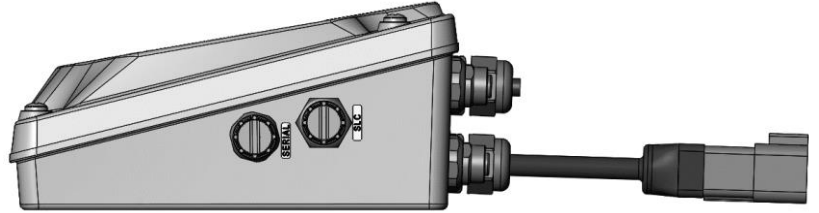
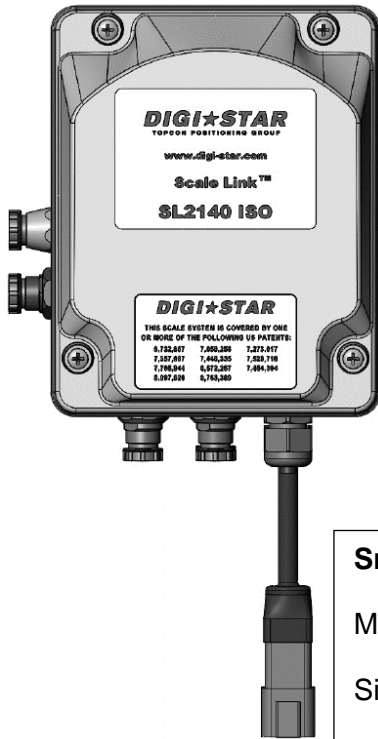
Small box, single 4 Terminal Block scale (410614 SL2110 shown)





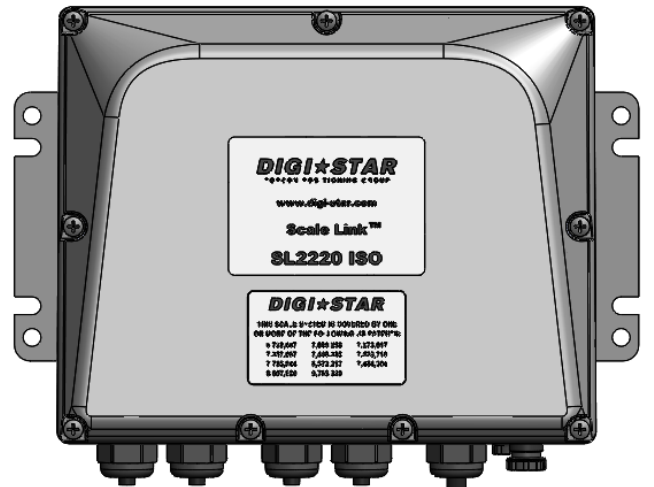


More system configurations and options are available. Complete systems are configured based on similar box designs below. Mounting brackets are available for easier installation. Contact Topcon for more details.



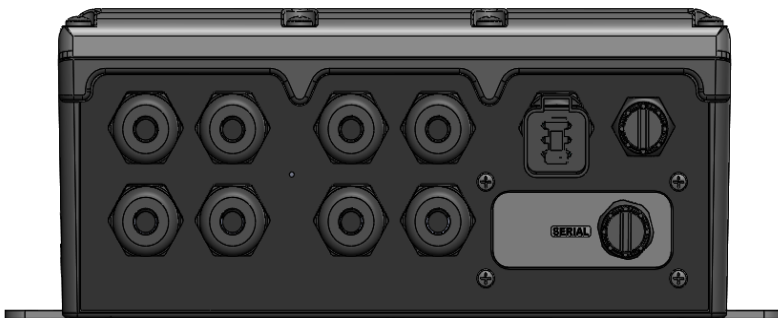
Small Box designs

- M12 or strain reliefs/ direct wire
- Single scale or up to 4 platforms
- Up to 4 load cell connections
- With or without cables and



Large Box designs

- Strain reliefs/ direct wire
- Single scale or Dual scale
- Up to 10 load cell connections



OPERATION REFERENCES

Using SL2 with SLC2810 Remote

Refer to D4195 SLC2810 Operation Manual for detailed operation, and D4020 Direct Access Numbers for the most current DAN codes. Some specific operations and features are described below.

Using SL2 with Universal Terminal (UT)

Refer to D4196 SL2 ISO Operators Manual for detailed UT operation, and D4020 Direct Access Numbers for the most current DAN codes. Some specific operations and features are described below.

*When the SL2 is connected to a UT for the first time, it may take several minutes to load the SL2 mask.

Updating software, storing and loading settings

Refer to D4206 Software Guide for details. Works best with SLC2810, but is possible to do with UT.

*Always save all settings and data first prior to performing any software updates!

While the SL2 is designed to save and restore settings automatically, significant software revision changes may result in lost settings when not stored ahead of time. The SL2 is also designed to return to a functioning default setup in case settings are lost, which allows the system to run on both SLC2810 and ISOBUS mask platforms, without requiring return to a service center.

- Put S19 software file on blank USB (if performing software update). Must be title of 'image.s19'. Add object pool file if the mask is also to be updated.
- Remove SL2 cover, insert USB.
- Save Settings to USB. SVSET in 'Select' menu, USB down arrow on UT, or use DAN 8713.
- Press reset button on SL2 board, software will now load. May take several minutes.
- Unplug SL2 power for 10 seconds, then plug back in. May take up to 2 minutes to come up on UT.
- UT screen and/ or SLC2810 should now be up in weighing mode.
- Remove USB and replace cover.
- If settings did not automatically load, use LD SET in 'Select' menu, USB up arrow on UT, or DAN 8714.

Selecting the active scale (multi-scale models only)

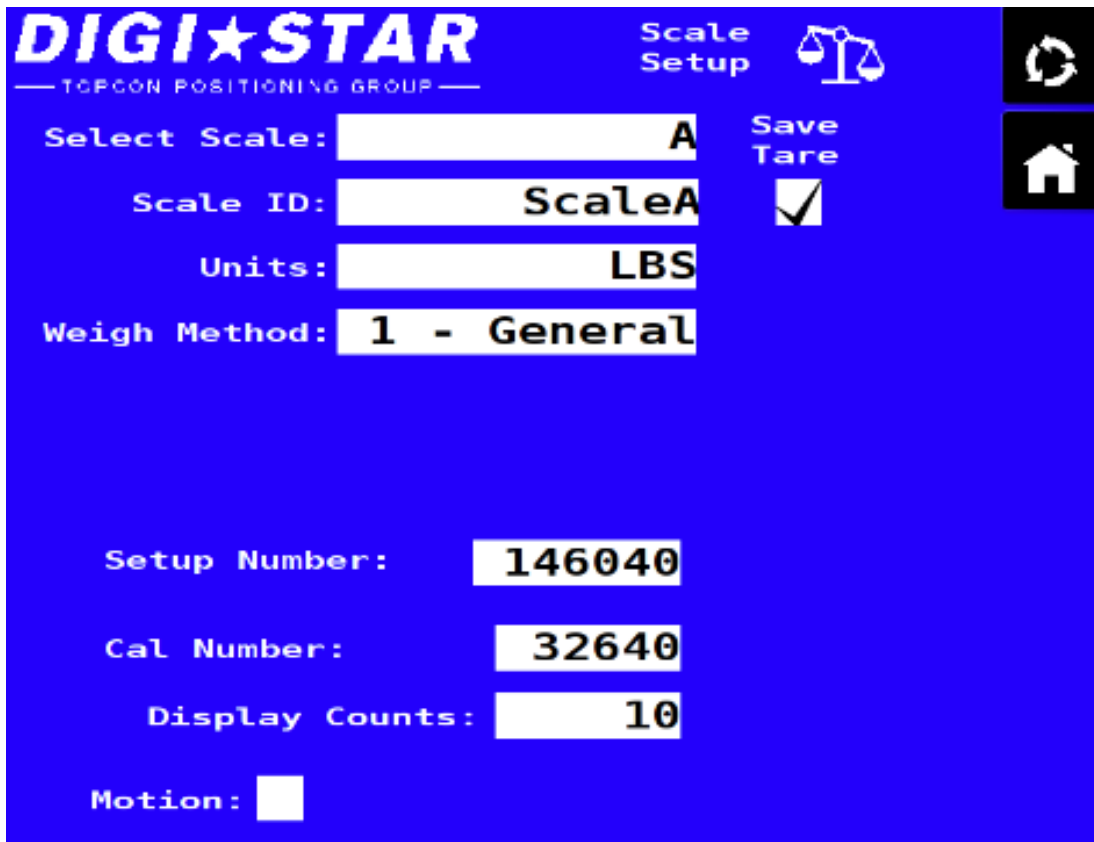
SLC2810: Press 'SELECT' until SCALE is displayed. Press 'FUNCTION' to select available scales.

UT: On the UT screen, touch the scale that you want selected.


Changing Setup & Calibration Numbers


SLC2810: Select the active scale (multi-scale units). Use DAN codes and 'SELECT' key to adjust counts, weigh method, setup, calibration, etc. DAN 8711 and 8712 used for entry of known setup and calibration numbers.

UT: Touch the spinning arrow button above the home key . Touch the 'Select Scale' box and choose the scale to update (multi-scale units). Change Scale ID, Units, Setup Number, Cal Number, or Display Counts as needed.



DIGI★STAR
— TOPCON POSITIONING GROUP —

Scale Setup 

Select Scale: Save Tare 

Scale ID:

Units:

Weigh Method:

Setup Number:

Cal Number:

Display Counts:

Motion: ☐

Keys Used on Scale Link ISO Terminal



--HOME:



--ENTER SETUP SCREENS:



--CLEAR MEMORY:



--CONFIGURE MAIN SCREEN LAYOUT:



--HOLD:



--CANCEL:



--TARE:



--NET/GROSS:



--ZERO:



--PRESET:



--ADD TO MEMORY:



--SAVE TO USB:



--LOAD FROM USB:



--MOVE TO RIGHT:



--MOVE TO LEFT:



--ENTER:



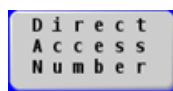
--MOVE UP:



--MOVE DOWN:











--RECALL MEMORY:



--TO ENTER DIRECT
ACCESS NUMBERS:

Scale Link Control Overview



- ①  - Pause
- ②  - Cancel
- ③  - Enter setup screens
- ④  - Temporary zero (Net Mode)
- ⑤  - Toggles between Net and Gross Weights
- ⑥  - Press and hold for 3 seconds to zero balance indicator.
- ⑦  - Enter preset weight
- ⑧  - Add to memory

- ⑨ Summed Weight – Total weight of scale A+B+C+D
- ⑩ Scale A – Gross Weight
- ⑪ Scale B – Gross Weight
- ⑫ Scale C – Gross Weight
- ⑬ Scale D – Gross Weight
- ⑭ Mask Number – Mask version that is applied to screen
- ⑮ Software Version – Displays current software version
- ⑯ Hardware Detected – Displays which hardware is recognized by the SL2

Dead Weight Calibration from ISOBUS Mask

Procedure to calibrate with known weight:



1. Press until "Direct Access Number" are shown at bottom of screen.
2. Press . Then press white box to enter D.A.N.
3. Enter **(D.A.N. 8121)** and press , the SL2 will display WT CAL and prompt to zero the scale. Press and hold the ZERO key to zero the system.
4. Scale will now prompt "ADD WT". Place a known weight on system (ex. 5000 lb. test weight) on the scale platform and press the key. If calibration weight is at least 5% of the scale capacity, the message "CAL" will be displayed.

3. If the scale capacity is not at least 5%, the system will not accept the calibration value and display the message "ADD WT". Add more weight to the scale until the 5% capacity weight has been exceeded.

4. After the 5% capacity weight has been reached, the indicator displays the message "CAL". The weight value estimated to be on the scale at that time is displayed. The weight on the scale is estimated based on the previous calibration value.

5. Correct the weight value by pressing the or key to increment the flashing digit and the or key to select the digit to change.

NOTE: The scale will not accept the weight entered if motion is detected (weight is not stable) and will display the error message "MOTION."


6. When the display reads the correct weight, press the key to automatically determine and store the full-scale calibration value. The message "GOOD" is displayed for a successful calibration.

Dead Weight Calibration from SLC2810 Indicator


Procedure to calibrate with known weight:



1. Enter **(D.A.N. 8121)** using numeric key pad

and press , the SLC2810 will display WT CAL and prompt to zero the scale. Press and hold the ZERO key for 3 seconds to zero the system.

2. Scale will now prompt **"ADD WT"**. Place a known weight on system (ex. 5000 lb. test weight) on the scale platform and


press the  key. If calibration weight is at least 5% of the scale capacity, the message **"CAL"** will be displayed.

3. If the scale capacity is not at least 5%, the system will not accept the calibration value and display the message **"ADD WT"**. Add more weight to the scale until the 5% capacity weight has been exceeded.


4. After the 5% capacity weight has been reached, the indicator displays the message **"CAL"**. The weight value estimated to be on the scale at that time is displayed. The weight on the scale is estimated based on the previous calibration value.

5. Correct the weight value by pressing the  key to increment the flashing digit and the  key to select the digit to change.


*NOTE: The scale will not accept the weight entered if motion is detected (weight is not stable) and will display the error message **"MOTION."***

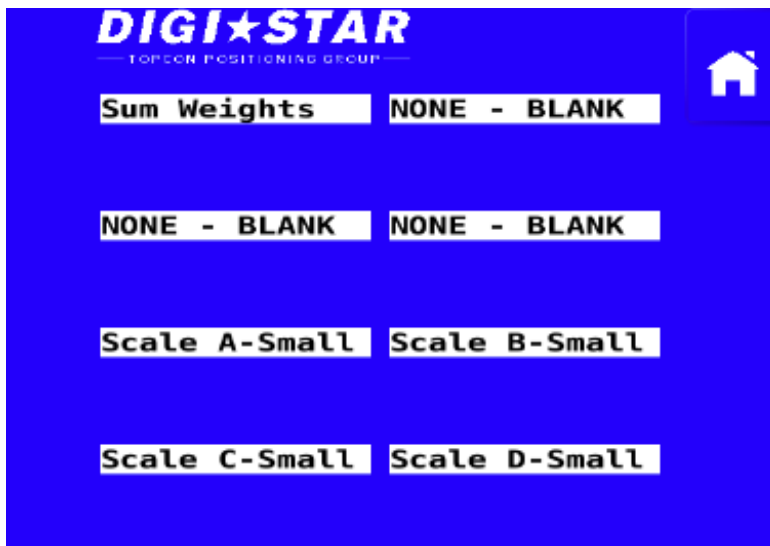
6. When the display reads the correct weight, press the  key to automatically determine and store the full-scale calibration value. The message **"GOOD"** is displayed for a successful calibration.

General ISOBUS/ CAN settings

On UT, touch spinning arrow button 2x . This brings up the 'System Setup' screen. Broadcast Interval, address, and UT number to display on are set here. Refer to D4196 for more details.



The main screen layout can be accessed here too. Touch the scale symbol , which will bring up a screen of 8 configuration boxes for the 4 possible scales. If you are using only 3 scales, this is where you would change your unused scale to 'NONE-BLANK' in the matching configuration window. Many screen configuration options are available here to fit most user needs and most UT screens.




*Legacy mode versus standard mode. Some existing equipment requires use of the original Scale Link DDIs. SL2 is default at standard but can be changed to legacy values. DAN 2704 ON = Standard, OFF = Legacy.

*For non-ISO, CAN only applications, the mask can be deactivated. Once you turn this off, the SL2 will no longer work with a UT. A SLC2810 will then be required to change any functions. DAN 8745.

*For non-ISO, CAN only applications, the CAN message type and CAN interval time can be adjusted for proprietary applications. DAN 2711 & 2712.

*DAN 5111 selects the active CAN port on the SL2.

Entering DAN codes on UT

On UT, press spinning arrow button 2x . This brings up the settings screen. Press the 'Direct Access Number' button (1). In next screen, touch the white box to bring up number keypad, type in DAN code then enter.



Time and Date

- DAN 1201: Sets time format
- DAN 1202: Sets time
- DAN 1203: Sets date format
- DAN 1204: Sets date

Basic Serial Settings (see D4020 for complete list)

- DAN 2101: Set Scoreboard output
- DAN 2201: Sets COM1 baud rate
- DAN 2202: Sets COM1 parity
- DAN 2203: Sets COM1 data bits
- DAN 2204: Sets COM1 delay time prior to serial output
- DAN 2211: Sets COM2 baud rate
- DAN 2212: Sets COM2 parity
- DAN 2213: Sets COM2 data bits
- DAN 2214: Sets COM2 delay time prior to serial output
- DAN 2304: Sets print format
- DAN 5005: Selects COM port for Printer port
- DAN 5006: Selects COM port for Scoreboard
- DAN 5007: Selects COM port for Opstat (TST and other RS232 interface applications)

ERM settings

DAN 2003: Turns on External Radio Module; 900, 2.4, WiFi. ERM must be on COM2 (default).

Remote input IP1 settings

The remote input IP1 on SL2 can be set for ON/OFF detection as well as pulse detection. It can also be used to activate multiple SL2 functions such as hold, tare, or print. DAN 1401 selects between these functions.

DAN 1401 = MIXCTR. This is RPM or pulse mode. Ground level pulses are detected. The input pulses are used by the SL2 based on other software settings such as relay, timer, or counter functions.

DAN 1401 = SWITCH. This is the on/ off mode. SWITCH is detecting ground state. DAN 1402 lets you edit the message to be displayed when switch is active. DAN 1403 sets the state which is to be detected, open or closed.

**+VIN remote input detection is not supported at time of manual publication.*

Output/ FET OP1 settings

The output control OP1 for SL2 has a FET (relay) that drives the output at +VIN up to 3.0A continuous. Output state programmable to PRESET or SETPNT in software.

DAN 4005: Sets relay to PRESET or SETPNT. PRESET is a pulsed alarm output activated once a preset weight value is reached. SETPNT is a programmable alarm state.

DAN 4006: Sets seconds of delay for a PRESET to clear.

DAN 4008: Sets high or low output for alarm state. The inactive/ non-alarm mode is kept in the opposite state until the alarm is activated. Default is +VIN active when alarm is activated (SIG12V).

DAN codes 4101, 4102, 4103, and 4104 are used to dial in the SETPNT operation.

-4101 sets when the output becomes active, over or under the set weight.

-4102 sets the weight change or movement required to deactivate the alarm.

-4103 sets the delay time before the alarm is allowed to turn off.

-4104 sets the weight at which the alarm will activate.

**PRACT and PRNOPA functions not supported at time of manual publication.*

OPTIONS & ACCESSORIES

ERM WiFi 409665 using 410818 adapter cable. Use Cab Control App on your smart phone or tablet.

Cab Control remote display using ERM2.4 or ERM900 and 410818 adapter cable. Cab Control display goes into cab of vehicle, connects wirelessly to SL2 with ERM.

SLC2810 remote using SLC port. Use as Remote Display interface or to change settings without ISOBUS mask.

Other remote displays. The SLC2810 is required as the primary remote. A second SLC2810 may be used, connected to the primary. A RD2500V can also be used when connected to the primary remote. A universal RD4000 is also available in 2018, when connected to the primary remote. Remote current limit total of 0.75A.

ISOBUS implement cable kit 407780. Creates a cable bus for your farm implement to connect Scale Link to your existing tractor ISOBUS port. Harness length 40ft with active termination.

TST for feed mixing/ batching applications. The SL2 can be paired with a TST display in your tractor cab. The SL2 performs weighing operations, while the touch screen controls feed rations in the cab.

Proximity sensors, alarm lights, rotation counters, and other accessories can be used with your SL2. Contact Topcon Technical Support or Engineering for your specific requirements.

PROBLEMS & TROUBLESHOOTING

Weighing issues

- Make sure setup and calibration numbers are correct for all scale platforms.
- If using a UT, use DAN 1997. This will give system statistics like voltages & estimated load cell quantity.
- On EZMate systems, make sure all connectors are fully inserted and tightened.
- On terminal block systems, make sure wire colors are correct and connections are tight.
- Verify no water in connections, SL2 box, or J-boxes. System is not rated for pressure washing.
- Check for bad load cell or damaged load cell cable. This can be isolated by scale platform (multi-scale systems), then by individual bars. Disconnect all but one bar, verify if it weighs correctly, then move on to the next bar. Once the bad bar is found, repair cable or replace bar as needed.

UT/ ISOBUS System

- No SL2 mask on UT
 - Is ISO function turned on in UT? If SL2 is new, may take a few minutes to load.
 - Is ISO plug securely connected to back of tractor?
 - Make sure all SL2 and cable connections are secure.
 - Make sure terminator is installed near SL2/ end of bus cabling.
 - If software was just updated, new UT installed, or new UT/ SL2 combination, make sure you give several minutes for the SL2 to load its mask up to the UT.
 - If software was just updated, make sure your original settings were loaded on the SL2.
 - Make sure there is at least 11 volts on the system. Data will not broadcast on CAN or RS232 below 11 volts system power to prevent data corruption.
 - The SL2 address conflicts with another ISOBUS device address on your line. Change 'Preferred Address' on System Setup screen to a different value.
- SL2 mask on incorrect tractor terminal
 - Set preferred UT number. DAN 2705 or 'Preferred UT Number' on System Setup screen of SL2 ISO mask. Default is 1, so try number 2 to load on other ISO monitor in cab.
 - Your monitor has too much bus traffic, or your ISO/ UT screen has reached its maximum device load. Clearing the object pool cache of the UT may resolve this.
 - The SL2 address conflicts with another ISOBUS device address on your line. Change 'Preferred Address' on System Setup screen to a different value.
- Weight screens overlap, or screen seems mixed up on SL2 mask
 - Change your screen configuration to change what information is displayed. Only display what is needed, especially on small UT screens. On UT, touch spinning arrow button 2x. This brings up the System Setup screen. Touch the scale symbol, which will bring up a screen of 8 configuration boxes for the 4 possible scales. Many screen configuration options are available here to fit most user needs and most UT screens.
 - If you have changed screen layout settings and something still is offset a little, cycle power and allow SL2 mask to reload. Clearing the UT object pool cache may also help.

- No SLC2810 display
 - No power. SL2 powers the SLC2810, so make sure SL2 is getting power.
 - Make sure M12 connector fully inserted and tightened to SL2 box.
 - Verify SLC2810 cable is not cut or crushed.
 - Verify no loose wires inside SLC2810 box.
 - Verify SLC harness inside of SL2 box is seated and no loose wires.
 - Make sure system voltage is 9 to 16VDC. The SLC2810 remote is only designed for 12V nominal systems. Higher voltages may damage this display.
- SLC2810 display segments missing, certain keys not working, etc
 - Possible failing SLC2810 remote. Contact Topcon service.

TST System

- Weight not displaying on TST
 - Low battery condition at SL2. System voltage needs to be above 11 VDC to broadcast weight.
 - Incorrect settings on SL2 (OPSTAT, COM port, etc)
 - Loose, damaged, or defective cable between SL2 and TST
- Other TST issues
 - TST monitor settings or hardware. Refer to TST manuals and troubleshooting.

Other Issues

- Things to check with a volt meter
 - There should be 4 blue lights inside SL2. They represent system power, 8V, 5V, and 3.3V circuits.
 - System power. Make sure there is at least 11 volts from +VIN to 0V. Data will not broadcast on CAN or RS232 below 11 volts system power.
 - Load cell power. Make sure there is about 8 volts from RED to BLK. If voltage is very low or 0, there may be a short somewhere in the load cell wiring.
- Communication issues; no serial or CAN input/ output
 - Wires switched. RS232 RX/ TX swapped; CAN Hi/ Lo swapped.
 - One or more settings is incorrect for the application. You may need a SLC2810 to diagnose and update these settings.
 - There are 3 status lights on board. If red ones are lit or flashing, there is an error of some type. Green, yellow, or no lights generally indicate basic operation.
- OP1 output has a red light turn on when the output is active at +VIN level.

MENU 1.0 – GENERAL SETTINGS (JUMP LIST 1)

LANGAG (D.A.N. 1001) Language

Select the language from the menu.

ENGLISH English

NEDRL Dutch

FRANCS French

DEUTSH German

ITAL Italian

PORT Portuguese

ESPAN Spanish

VESTA Special Spanish Translation for South America

DANSK Danish

MAGYAR ... Hungarian

POLSKI Polish

D RATE (D.A.N. 1002) Display Rate

Select the number of times per second to update the weight display. This setting also affects remote indicators. Default = “3”.

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.”

SCALID (D.A.N. 1003) 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 (or hold ‘clear’ for 2 seconds) 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. (SCALID is used by TMR Tracker and other software programs for identification. SCALID is also ‘FIELD’ key function on several models.)

ZTRACK (D.A.N. 1004) 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. 1005) Weigh Method

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.

1 – General 2 – Slow 3 – Fast 4 – “Lock-on” (animal weighing, available only in Stock Weigh models)

1 ZERO (D.A.N. 1006) One Touch Zero

When enabled, allows the user to press and hold the ZERO key for 3 seconds to balance the scale. Normal balance procedure is a 2-button operation, it is performed by pressing the NET/GROSS key and then the ZERO key within 3 seconds.

AUTOFF (D.A.N. 1007) Auto Off

This feature allows the operator to have the indicator automatically shut itself OFF after 15, 30, 45 or 60 minutes of inactivity. This feature will extend battery life on battery powered portable scales and equipment like seed tenders which use their own power supply or battery. 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. A jumper on the main board is typically required for this function to operate.

LB-KG (D.A.N. 1008) 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.

WT COM (D.A.N. 1009) Weight Compensation

Enables weight compensation functionality.

PREFLT (D.A.N. 1011) Pre-Filtering

Enables pre-filtering before W MTHD is applied

MENU 1.1 – GENERAL SETTINGS (JUMP LIST 11)

SCROLL (D.A.N. 1101) Scroll Delay

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”.

SAVTAR (D.A.N. 1102) Save Tare

Saves the Tare weight into Non-Volatile Memory and is remembered even after the unit has been turned off. This allows the Net weight to be restored once the unit has been turned ON again. This feature is available on single and multiple platform (A/B/C) scale systems

PRETAR (D.A.N. 1103) Pre-Tare

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

PWRLOS (D.A.N. 1104) Power Loss Message

ON = stores time/date of power loss and displays data when power is restored.

MENU 1.2 – TIME & DATE (JUMP LIST 12)

TIME F (D.A.N. 1201) Time Format

Select AM/PM or 24 HR time format.

TIME (D.A.N. 1202) Time

Enter the time. Use the LEFT/RIGHT arrows or FUNCTION key to select hours/minutes/seconds. Use the UP/DOWN arrows or SELECT key to increment value.

DATE F (D.A.N. 1203) 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

mm = 2-digit month (ex. January=01) – dd = 2-digit date (ex. 23) – yy = 2 digit year (ex. Year 2000=00)

yyyy = 4-digit year (ex. 2000) – MM = 2-character month (ex. January=JA)

DATE (D.A.N. 1204) Date

Enter the Date. Use the LEFT/RIGHT arrows or FUNCTION key to select hours/minutes/seconds. Use the UP/DOWN arrows or SELECT key to increment value

DT CHK (D.A.N. 1205) Date Check

When enabled, adds verification of the system date at power up. An error will be displayed if the date is 2011 or before. The operator will be prompted to press ON to set the time and date if an invalid date is found.

MENU 1.4 – REMOTE INPUTS (JUMP LIST 14)

RMINP1 (D.A.N. 1401) Remote Input 1 (Power port – Pin 4)

When line is pulled low, the following functions can be performed. Line may also be triggered with a high state; jumper JU2 pins 2-3 and U17 installed.

NOTE: Not all features will be available depending on model.

PRESET	Re-enters the last preset value entered.
SWITCH	Displays an editable message for an 'OPEN' or 'CLOSED' condition on the remote input line. (See <i>RIMSG1</i> , <i>RISTAT</i> , <i>RITIME</i> for additional options)
TARE	Performs the TARE function and “zeroes” the display.
PRINT	Performs a PRINT function.

HOLD	Performs a HOLD function, pull line low again to display “held” weight. Press ON to cancel HOLD and display weight change.
NETGRS	Performs a NET/GROSS function.
M+	Performs a M+ function, when line is pulled low the displayed weight will be stored to memory. This will be followed by RM and display the memory total.
ZERO	Performs a zero/balance
MIXCTR	Enables the “Rotation Counter” on equipped indicators.
INGRED	Used with EZ3410/TMR3610/TMR4610. If a recipe is loaded, will perform an ingredient advance. If no recipe is loaded a TARE will be performed.
RECHCK	Rechecks the weight when using the “lock-on” weigh method with Stock Weigh indicators.
SEEDTD	Used to advance Seed Tender scale to next seed dispense operation; re-enters preset.
ST STP	Performs a START/STOP function when using Harvest Tracker indicators.
FSWTC	Used with RPM START/STOP CONTROL (RSSCTL - D.A.N. 6401) to perform a START/STOP function with the use switch. See Feedbox Start/Stop Polarity (FS POL – D.A.N 6411) for switch polarity.
TR HLD	When enabled will display and remain on the GROSS weight if T/R button is held for three (3) seconds. If not enabled, the GROSS weight will be momentarily displayed if T/R button is held for three (3) seconds.

RI1MSG (D.A.N 1402) REMOTE INPUT 1 SWITCH MESSAGE

Used to edit the remote input 1 message that is displayed for an ‘OPEN’ or ‘CLOSED’ condition on the remote input line of the power cord. The default message is ‘OPEN’

R1STAT (D.A.N 1403) REMOTE INPUT 1 SWITCH STATE

Determines if the Remote Switch Message or Alarm Output lamp is displayed/illuminated for an ‘OPEN’ or ‘CLOSED’ condition on the remote input line of the power cord. The default setting is ‘CLOSED’.

R1TIME (D.A.N. 1404) REMOTE INPUT 1 SWITCH TIME

Used to set how often the Remote Switch Message 1 is displayed for an ‘OPEN’ or ‘CLOSED’ condition on the remote input line of the power cord. For the default value of 2, the message is displayed every 2 seconds. The maximum setting is 9 seconds.

RMINP2 (D.A.N. 1411) Remote Input 2 (Remote port – Pin 3/TR)

When line is pulled low the same functions as remote input 1 can be performed.

(See Remote Input 1 (**RMINP1 – D.A.N 1401**) for available settings.

RI2MSG (D.A.N 1412) REMOTE INPUT 2 SWITCH MESSAGE

Used to edit the remote input 2 message that is displayed for an ‘OPEN’ or ‘CLOSED’ condition on the remote input line of the power cord. The default message is ‘OPEN’

R1STAT (D.A.N 1413) REMOTE INPUT 2 SWITCH STATE

Determines if the Remote Switch Message or Alarm Output lamp is displayed/illuminated for an 'OPEN' or 'CLOSED' condition on the remote input line of the remote port. The default setting is 'CLOSED'.

R1TIME (D.A.N. 1414) REMOTE INPUT 2 SWITCH TIME

Used to set how often the Remote Switch Message 2 is displayed for an 'OPEN' or 'CLOSED' condition on the remote input line of the power cord. For the default value of 2, the message is displayed every 2 seconds. The maximum setting is 9 seconds.

MENU 1.9 – DIAGNOSTIC 1 (JUMP LIST 19)

LCDIAG (D.A.N. 1997) Load cell diagnostic

This feature will display a load cell diagnostic screen when connected to a UT. (ScaleLink models)

Information displayed includes the following: Measured Load cell current, number of connected load cells, excitation voltage, IC supply voltage, and input voltage.

PRG ID (D.A.N. 1998) Program ID

This feature will display the indicator model and the program ID currently loaded. This will be displayed repeatedly until a key is pressed.

EST WT (D.A.N. 1999) Estimated 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 2.0 – COMMUNICATIONS, REMOTE, & ISOBUS (JUMP LIST 2)

REMOTE (D.A.N. 2001) Remote

When enabled, will send display data to a standard Cab Control Remote. When set to MTLINE, the contents of the 3-line display will also be sent.

NOTE: This setting will need to be enabled in to use Remote Terminal functionality (RMTERM – D.A.N 2402)

SCL NO (D.A.N. 2002) Wireless Scale Number

This number is used to identify this specific indicator to the Cab Control unit and the Datalink software. Up to 48 different numbers can be selected.

EXTRAD (D.A.N. 2003) External Radio

This enables the option for an indicator with a J905 port, to attach an external radio or WiFi module. The external radio or WiFi module will communicate with Cab Control units and Datalink in the same manner as an internal radio. The WiFi modules will also communicate with smartphone and tablet apps.

DDL (D.A.N. 2004) DDL

When enabled, allows connection of a DDL (Data Downloader) to an indicator with a serial port.

EZ2AUD (D.A.N. 2005) EZ2 Audible Commands

When enabled, an audible notification sounds when an EZ2 command is sent or received.

MENU 2.1 – SCOREBOARD & OPERATIONAL STATUS MESS. (JUMP LIST 21)

SCOREM (D.A.N. 2101) Scoreboard Modes

There are multiple scoreboard modes available; this feature causes the indicator to continuously send data. No data is transmitted when SCOREM is set to '0'. See pages 11 & 12 for connections.

Refer to D3648 for the most up to date details on scoreboard functions.

- | | |
|---|--|
| 0 | Disable scoreboard output. |
| 1 | Transmit weight displayed once per second. <ul style="list-style-type: none"> • Starts with <STX> (Start of Text - Dec. 2). • Six digit displayed weight value (may include a decimal). Some digits may provide additional information as follows: |

<STX>ABBB<CR>

A = either a minus sign, SPACE, number, or a dollar(\$). *The dollar(\$) appears when the "Lock On" weigh method and has "locked onto" a weight value.*

B = a number or a SPACE.

C = a number, SPACE, or a '-' minus sign indicating a TR command is active.

D = a number or a '-' minus sign indicating that motion is active.

- Ends with a <CR> (Carriage Return- Dec. 13).

Output examples: (Note: Data sent will start with a <STX> and end with <CR>).

- | | |
|------------|---|
| " 1530" | - Normal weight value. |
| "- 1530" | - Negative weight value. |
| "\$ 1530" | - "Locked On" animal weight value. |
| " 15-0" | - Normal weight value also showing that the TR is being used. |
| " 153-" | - Normal weight value also showing motion is active. |
| " 142.5" | - Normal decimal weight value. |
| "- 142.5" | - Negative decimal weight value. |
| "\$ 142.5" | - "Locked On" animal decimal weight value. |
| " 14-.5" | - Normal weight decimal value also showing that the TR is being used. |

" **142-5**" - Normal weight decimal value also showing motion is active.

2 Transmit weight displayed 2 times per second.

Same data format as setting 1

3 Transmit weight displayed 3 times per second.

Same data format as setting 1

4 Transmit weight displayed 10 times per second.

Same data format as setting 1

5 Transmit weight displayed using the Display Rate setting (D RATE D.A.N. 1002).

Same data format as setting 1

6 Transmit weight display whenever the displayed weight changes to a different value.

Same data format as setting 1

7 Transmit comma delimited data which includes the basic weighing information 1 time per second.

- Includes Gross Weight, display unit, weight tag (GR, M+, etc...), Total Rotation Count, Date & Time with seconds.
- Ends with a <CR>,<LF>. (Carriage Return, Line Feed) PA

Output example:

```

          1          2          3          4
1234567890123456789012345678901234567890
"    280, LB, GR,   187, 03JL03,  3:41:21"
```

8 Transmit comma delimited data which includes the basic weighing information once every 5 seconds.

- Same data format as setting 7

9 Selection #9 is reserved.

11 Transmit comma delimited data which includes the "serial gross weight" 2x/second.

The serial gross weight data can be sent at any available baud rate, 1 start bit, 7 or 8 data bits, EVEN, ODD, or NONE parity bit, and 1 stop bit on pin 2 (COM #1 Tx line) or pin 4 (COM #2 TX line) on the Serial / Printer connector.

See Port Settings Menu 2.2 for more information.

- Starts with <STX> (Start of Text)
- Six digit Serial Gross Weight "whole number" value (ie.1000 not 100.0) "LB" or "KG" unit of measure.
- Space character.

LINE STATUS (Five potential messages)

- "EB" – ZEROOUT has not been performed.
- "ES" – Indicator currently in a menu
- "ER" – Indicator in an OVERCAP or RANGE message
- "SC" – Internal calibration is taking place
- "SG" – Serial Gross weight.
- The <ETX> (End of Text) control character.
- Checksum Character (C) value that includes all bytes starting after the <STX> up through, but not including the <ETX>.
- Ends with a <CR> (Carriage Return)

Output example:

<STX>999999LB EB<ETX>i<CR>

Value is calculated using a "serial zero/balance point" (ZEROOUT D.A.N. 2102) 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.

- 12 Transmit comma delimited data which includes the "displayed gross weight" 10 times per second. (Format follows SCOREM 11)

Output example:

<STX> 670LB SG<ETX>j<CR>

- 14 Transmit weight displayed, and tons per acre 1 time per second.

- Starts with <STX> (Start of Text)
- Six digit displayed weight value (may include a decimal).

1 2

12345678901234567890

" 18490, 3.8"

Transmit comma delimited data which includes the feeding status 1 time per second.

- Includes Preset, Net Weight, Gross Weight, display unit,(O – Operator, P – PC requested command), M – Motion, weight tag (GR, M+, etc...), ID, Rotation counter, Date & Time.
- Ends with a <CR>,<LF>.

Output example:

1	2	3	4	5	6
123456789012345678901234567890123456789012345678901234567890123456789					
500,	220,	1300, LB, P,	GR,	,	0, 18MY15, 11:20:19<CR><LF>

27

Transmit comma delimited data which includes the “timer” or “mix counter” 1 time per second.

- Includes Preset, Net Weight, Gross Weight, Ingred/Pen Name, Recipe, Timer/Counter, Time, Date.
- Ends with a <CR>,<LF>. (Carriage Return, Line Feed).

Output example:

1	2	3	4	5	6
1234567890123456789012345678901234567890123456789012345678901234567890					
"	200,	130,	340, Ing	, RecNam, 00:01:15, 10:48A, 23MY12"	

37

Transmit comma delimited data 1 time every 5 seconds which includes the basic weighing information for each scale platform, starting "left-to-right" with Scale A, Scale B, Scale C, and Scale D.

- Starts with <STX> (Start of Text).
- Includes Weight displayed, display unit & weight tag (GR, M+, etc...) for each scale.
- The <ETX> (End of Text) control character.
- Checksum Character (C) value that includes all bytes starting after the <STX> up through, but not including the <ETX> .
- Ends with a <CR> (Carriage Return).

Output example:

Scales A, B, C, & D with scale A selected at the indicator.

^ = STX

@ = ETX

C = Checksum

~ = CR

1	2	3	4	5	6
1234567890123456789012345678901234567890123456789012345678901234567890					
"^ >	280LB GR,	11300LB NE,	1520LB GR,	2850LB NE@C~"	

Output example: Scales A & B with scale B selected at the indicator.

```

      1           2           3           4           5
12345678901234567890123456789012345678901234567890
" ^    280LB GR,> 11300LB NE@C~"

```

The weight tag changes from (NE,GR, or LU) to (NC,GC,or LC) when indicator is performing internal temperature calibrations (which can take up to 3 seconds). The weight sent at this time is the same weight prior to internal temperature calibrations. This occurs every 20 minutes but is done several times during the first 20 minutes after power up.

Output example: Scales A & B with scale B selected at the indicator. Both scales are being calibrated.

```

      1           2           3           4           5
12345678901234567890123456789012345678901234567890
" ^    280LB GC,> 11300LB NC@C~"

```

- Weight will appear as "999999ES" when operator is in Short/Long Form Menu's.

Output example: Scales A & B with scale B selected at indicator, B scale is in setup.

```

      1           2           3           4           5
12345678901234567890123456789012345678901234567890
" ^    280LB GR,> 999999LB ES@C~"

```

- Weight will appear as "999999ER" when weighing errors (+/-RANGE, CHK AD, OVERCAP etc..) are detected by the scale.

Output example: Scales A & B with scale B selected at the indicator, B scale has an error.

```

      1           2           3           4           5
12345678901234567890123456789012345678901234567890
" ^    280LB GR,> 999999LB ER@C~"

```

38 Transmit comma delimited data with basic weighing information for each scale platform one time per second.

- Same data format as setting 37.

39 Transmit comma delimited data with basic weighing information for each scale platform ten times per second.

- Same data format as setting 37.

ZEROUT (D.A.N. 2102) Zero Output

Use this selection to Zero / Balance the weight for the Continuous Serial Gross Weight - Scoreboard Mode setting #11 & 12 (described above).

ZEROFP (D.A.N. 2103) Front Panel Zerout

When enabled, allows the Serial Gross Weight to be Zero/Balanced using Front Panel [Zero] key rather than the Zero Output selection **ZEROUT (D.A.N 2102)**.

SCRM 2 (D.A.N. 2104) Scoreboard Mode 2

Select scoreboard output number 2

OPSTAT (D.A.N. 2111) Operating Status

The Continuous Operating Status setting in Menu 2 will cause one or more data packets to be transmitted from the scale continuously.

Refer to the *EZII Escape Computer Command Set document D3648* for more information.

-DVADJ (D.A.N. 2199) Dynamic Variable Adjust

When enabled, causes the negative sign to be left justified and numeric values to be right justified.

MENU 2.2 – PORT SETTINGS (JUMP LIST 22)

Computer/Printer Port 1 – Pin 2

C1 BD (D.A.N. 2201) COM 1 Baud Rate

Sets Com 1 baud rate for 1200 – 115200

C1 PAR (D.A.N 2202) COM 1 Parity

Sets Com 1 parity to EVEN, ODD, or NONE

C1DATA (D.A.N 2203) COM 1 Data Bits

Sets Com 1 data bits or 7 or 8

C1 DLY (D.A.N 2204) 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
.10	1/10 of a second
.25	1/4 of a second
.50	1/2 of a second
.75	3/4 of a second

1	1 Second
2	2 Seconds
3	3 Seconds
4	4 Seconds
5	5 seconds

Computer/Printer Port 2 – Pin 4

C2 BD (D.A.N. 2211) COM 2 Baud Rate

Sets Com 1 baud rate for 1200 – 115200

C2 PAR (D.A.N 2212) COM 2 Parity

Sets Com 1 parity to EVEN, ODD, or NONE

C2DATA (D.A.N 2213) COM 2 Data Bits

Sets Com 1 data bits or 7 or 8

C2 DLY (D.A.N 2214) 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

MENU 2.3 – PRINT (JUMP LIST 23)

TAREAP (D.A.N. 2301) Tare Auto Print

When enabled, print data will be sent to serial port when the indicator "TARE" function is used.

1L PRT (D.A.N. 2302) 1 Line Print

ON - Formats printer output data on one line.

OFF - Formats printer output data in up to two lines.

APRINT (D.A.N. 2303) Auto Print

When enabled, pressing the following keys will automatically print weight values.

ZERO, HOLD, TARE, TR, ID, NET/GROSS, TIMER, M+, RM, CM, and MS. APRINT also works with remote input settings for both RMINP1 and RMINP2.

TARE, HOLD, NETGRS, M+, and ZERO

Auto Print prints all transactions. This feature also works with wireless transmitters.

PRTFMT (D.A.N. 2304) Print Format

Many data output formats are available. See the end of this manual for more details.

PRTACC (D.A.N. 2305) Print Accumulation

This feature is designed to automatically keep a running total of the weights printed. It is similar to a Memory Plus (M+) feature, but it is done automatically each time the weight is printed. Another difference from the M+ feature is that the weight value is always recorded as a positive weight. For example, if the Print Accumulation contained a value of 5000 and -1500 was printed, the new Print Accumulation value would be 6500 (change the -1500 to +1500 and then add it to 5000 = 6500). The Print Accumulation can be viewed by entering Menu 2 of the Long Form Setup. Select either the "PRTAC1" or "PRTAC2" print formats to have the Print Accumulation sent to a printer. To clear the Print Accumulation value, press the Zero key while the PRTACC value is displayed in the Long Form. The Print Accumulation value is stored in non-volatile memory and will be retained even after the scale is turned off. Also accessible to view or clear on seed tender indicators after saving FIELD information.

BUFFER (D.A.N. 2306) Print Buffer

ON - Data sent to the printer port is also stored in the scale's non-volatile "record" memory. When this setting is accessed in the Long Form, the percentage of the available record memory is displayed.

MENU 2.4 – REMOTE DISPLAY (JUMP LIST 24)

RMDISP (D.A.N. 2401) Select Remote Display Type

EZ2 Most Remote Displays, including RD1000 or RD2000

EZ3MUX First Generation RD2400 Remote Display

COG RD2500V Remote Display

RMTERM (D.A.N. 2402) Remote Terminal

ON - Allows external devices to use the Cab Control Communication on a serial “wired” interface.

BARGRP (D.A.N. 2411) Bar Graph Mode

Select how the bar graph works on the RD4000. The bar graph can be set to work for gross weight, presets, timers/counters, or ingredients.

OFF = No display

RIGHT = Bar graph begins with no display and fills from “left to right”

LEFT = Bar graph begins with a full display and is removed from “right to left”

MIDOUT = Bar graph begins with no display and fills from middle to full display

MIDIN = Bar graph begins with a full display and is removed from full display to middle

NOTE: These settings will also affect the TMR4610 bar graph display.

WTGRPH (D.A.N. 2412) Bar Graph enable

Enables the bar graph for gross weighing mode.

BAR WT (D.A.N. 2413) Bar Graph Weight

Enter the Gross Full-Scale Weight to activate all LED’s of the bar graph on the RD4000 remote. This is used with all Bar Graph Modes. If set to a weight value of 12,000, approximately half of the bar graph will be lit when the gross weight displayed is 6,000

PRGRPH (D.A.N. 2414) Preset Graph Enable

Enables the bar graph for preset weights.

TMGRPH (D.A.N. 2415) Timer Graph Enable

Enables the bar graph for timers/counters.

INGRPH (D.A.N. 2416) Ingredient Graph Enable

Enables the bar graph for ingredient preset weights.

NONDSR (D.A.N. 2417) Non-Digi-Star Display

This feature adds support for Non-Digi-Star displays. Some remote displays cannot accept the speed at which the data is transmitted. The feature will slow down the timing to be more compatible with competitors’ remote displays.

NOTE: For feature to work correctly Bootloader needs to be version 160725 or newer.

MENU 2.7 – ISOBUS (JUMP LIST 27)

ISO WT (D.A.N. 2701) Isobus Weight

Set to periodically output the most current Gross, Net & Load/Unload weights to external devices connected to the Serial Port. Settings start at "OFF" (no transmissions) and increase in 0.1 second increments up to 2.0 seconds.

ISOADR (D.A.N. 2702) Isobus Base Address

Allow the ISOBUS Scale Link to claim a specific address. Upon being commanded to change addresses, the ISOBUS Scale Link stores the new address, ends the use of the current address, and performs a new address claim starting at the new address. The default address is typically 144 (0x90).

ISOINT (D.A.N. 2704) ISOBUS VT INSTANCE NUMBER

Preferred virtual terminal instance to display mask on.

ISOINT (D.A.N. 2705) Isobus VT Instance Number

Preferred virtual terminal instance to display mask on.

ISO SG (D.A.N. 2706) Isobus Serial Gross

Enables serial gross output to be transmit on CANBUS.

CANMSG (D.A.N 2711) CAN MESSAGE TYPE

Allows for entry of a proprietary can message type.

CANINT (D.A.N 2712) CAN MESSAGE INTERVAL

Allows editing of the interval time for the CANMSG output.

MENU 2.8 – WIFI (JUMP LIST 28)

WIFINM (D.A.N. 2801) WIFI NAME

WIFI network SSID

WIFIPS (D.A.N. 2802) WIFI Password

Password for WIFI network

WIFICH (D.A.N. 2803) WIFI Channel

Select WIFI channel number for Datalink and/or Cab Control communications.

WIFVER (D.A.N. 2804) Display WIFI Version

Displays version of connected WIFI-ERM.

MENU 3.0 – WEIGHT (JUMP LIST 3)

COUNT (D.A.N. 3001) 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 or greater than 1/4000 of the capacity. This command changes the Setup number. See also (D.A.N. 8711)

CAP (D.A.N. 3002) Scale Capacity

Enter MAXIMUM weight measurable on scale. This will change the last 3 digits in the setup number. See also (D.A.N. 8711).

WMA1-1 (D.A.N. 3003) Weigh Method 1 Adjust 1

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 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.

WMA1-2 (D.A.N. 3004) Weigh Method 1 Adjust 2

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. 3005) Weigh Method 1 Adjust 3

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. 3006) Weigh Method 2 Adjust 1

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. 3007) Weigh Method 2 Adjust 2

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. 3008) Weigh Method 2 Adjust 3

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.

ABCDSP (D.A.N. 3091) A,B,C,D Display Format

Allows the weight for the ABCD scales to be displayed individually as four "SINGLE" scales (as on previous ABC scale systems), or always together showing the "TOTAL" (A+B+C+D) or "COMBINED" which also displays the A+B+C+D weight. The "COMBINED" setting also causes the Balance, Tare, Net and Gross function to be performed to ALL 4 scales at the same time. Please note: Each input (A,B,C,D) have their own Setup and Calibration and also scale specific settings.

ABCDSP (D.A.N. 3092) A, B, C Display Format, Gain

Select gain setting to be used for scale platform. (.75mv/v, 3mv/v)

MENU 3.1 – MOTION (JUMP LIST 31)

MOTION (D.A.N. 3101) Motion

When enabled, 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.

MOT WT (D.A.N. 3102) Motion Weight

Standard motion detection will activate when the weight displayed has moved more than "2 display counts" in less than "2 seconds". The standard motion detection is selected whenever the indicator is first turned ON or the "Motion Weight" value is set to "0". The "Motion Weight Value" has a range from 0 (OFF) – 999999. The weight value is either lb or kg depending on settings for Display Units in Long Form Setup.

*NOTE: To use Motion Weight, the motion detection feature **MOTION (D.A.N. 3101)** in Menu 3 must be On*

MENU 3.2 – ANALOG OUT (JUMP LIST 32)

LOW WT (D.A.N. 3201) 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. 3202) Analog High Weight

For Units with Analog Output

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. 3203) 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.

-ANALG (D.A.N 3204) Negative Analog Output

Allows the analog output 4-20mA setting to represent weight values less than the Analog Low Weight selection (LOW WT) in Menu 2. This setting allows the signal to represent weights as low as 3mA. This is useful to show weight values below the Zero/Balance point when the Analog Low Weight selection (LOW WT) is set to 0.

ANTEST (D.A.N 3209) Analog Output Test

Allows testing of the analog output. Each of the following outputs can be tested: Normal, Minimum, Maximum, and Saw.

Press SELECT to cycle through available tests.

NOTE: Tests will run continuously until menu item is exited.

MENU 3.3 – ACCELEROMETER (JUMP LIST 33)

Note: Accelerometer must be enabled to use feature. Please contact support for more information.

NOTLVL (D.A.N. 3304) Accelerometer Machine Level

Allows of leveling of accelerometer when installed on machine. Park machine on level ground and level accelerometer.

ACLFLT (D.A.N. 3305) Accelerometer Filter

Decrease this number to smoothen filtering.

DEGOAL (D.A.N. 3307) Accelerometer Delta Degree Adjust

Enter maximum allowable degree change to save a new value.

ACLAVG (D.A.N. 3308) Accelerometer Average

Enter frequency of averaging sample data.

ORIENT (D.A.N. 3309) Accelerometer Forward Direction

Set forward direction of accelerometer (Back, Front, Left, Right, Top, Bottom)

P ADJ (D.A.N. 3311) Accelerometer Pitch Adjust

Allows adjustment of the accelerometer pitch (Entered in degrees)

R ADJ (D.A.N. 3312) Accelerometer Roll Adjust

Allows adjustment of the accelerometer roll (Enter in degrees)

P RANG (D.A.N. 3313) Accelerometer Pitch Range

Enter maximum range of the displayed pitch.

R RANG (D.A.N. 3314) Accelerometer Roll Range

Enter maximum range of the displayed roll.

OVRFRC (D.A.N. 3315) Accelerometer Over Force

Enter maximum force device will use to calculate angles without error.

MENU 4.0 – PRESET, ALARM, & TIMER (JUMP LIST 4)

P MTHD (D.A.N. 4001) Pre-Alarm Method

Select WEIGHT OR PERCNT to activate Pre-Alarm

P-ALM (D.A.N. 4002) Pre-Alarm

Enter a value to activate an early warning that scale is reaching the preset weight.

AL OUT (D.A.N. 4003) Alarm Out

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.

SWITCH Select Alarm Output setting “SWITCH” to illuminate the lamp for an ‘OPEN’ or ‘CLOSED’ condition on the remote input line or the power cord.

*NOTE: SWITCH option will not be present unless **RMINP1 (D.A.N. 1401)** or **RMINP2 (D.A.N. 1411)** are set to SWITCH*

BUZZER (D.A.N. 4004) Alarm Buzzer

How long the buzzer sounds can now be modified. It can be set to stay on continuously when alarm is active, selectable from 1-10 seconds, or OFF.

RELAY (D.A.N. 4005) +12VDC Alarm Output

OFF No 12V signal will be activated

PRESET Standard preset relay, lamp, and alarm functionality. Uses the preset to determine the pulses of the light, buzzer, and 12V signal.

SETPNT Uses the weight threshold to activate and deactivate the 12V signal

PRTDLY (D.A.N. 4006) Preset Advance Delay

PRTDLY controls the number of seconds to wait before auto-advancing to the next to print the preset, clear the preset, and clear the “Preset ID” once the target weight has been reached. Enter value in seconds, a value of 0 sets manual advance.

RLYOUT (D.A.N. 4008) Relay Out

Selects the state of the relay when a preset is reached. SIG 12V or SIG 0V

PRCLPT (D.A.N. 4009) Preset Clear on Print

When enabled, the preset and preset ID will be cleared when a print occurs. Default setting is ON.

MENU 4.1 – SETPOINT (JUMP LIST 41)

SETOUT (D.A.N. 4101) Gross Set Point Output

Gross Set Point determines when the +12VDC Alarm Output becomes active.

SIG 12V The relay will turn on when the weight is equal to or exceeds the Gross Set Point weight.

SIG 0V The relay will turn off when the weight is equal to or below the Gross Set Point weight.

SETCHG (D.A.N. 4102) Set Point Weight Change

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. 4103) Set Point Delay Time

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.

SETPNT (D.A.N. 4104) +12VDC Alarm Output

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. 2102)**.

SETCTR (D.A.N. 4105) Set Point Counter

This setting is used with Gross Set Point feature and counts the number of times the gross weight on the scale activates the Gross Set Point. Access the value through the Long Form to display the counter value. Reset the counter to 0 in the Long Form by pressing 0 on the keypad while the SETCTR value is displayed.

STWTSC (D.A.N. 4106) Set Point Weight Source

This feature allows the operator to select the weight source to trigger the SETPNT.

NORMAL – Displayed weight.

MENU 4.2 – PRESET TOLERANCE (JUMP LIST 42)

T MTHD (D.A.N. 4201) Tolerance Method

Select WEIGHT OR PERCENT to activate Tolerance.

TOLER (D.A.N. 4202) Tolerance

The Tolerance feature is a "tolerance window" for the entered preset. 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 Preset Advance Delay Time while the weight is in the tolerance window. The auto-advance Delay Timer resets every time the weight moves out of the tolerance window.

NOTE: Tolerance can be used in any RELAY mode. Refer to **RELAY (D.A.N. 4005)**

OVERLK (D.A.N. 4203) Tolerance Over Lock

When enabled, prevents the scale from auto-advancing if the amount being loaded or unloaded has exceeded the preset tolerance amount and has caused the scale to display "OVER".

MENU 4.3 – MIXER REVOLUTIONS (JUMP LIST 43)

TMRCTR (D.A.N. 4301) Timer Counter

Selects if the mix timer or the rotation counter feature will be displayed when the TIMER/COUNTER key is pressed.

DRATIO (D.A.N. 4302) 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.

MENU 5.0 – PORT OUTPUTS (JUMP LIST 5)

Each of the following outputs can be set to any communication port for added flexibility.

RMDPRT (D.A.N. 5001) Remote Display Port

Selects serial remote display output. Off, COM1, COM2, or COM3

EXRPRT (D.A.N. 5003) External Radio Port

Sets external radio port. Off, COM1, COM2, or COM3

PRPORT (D.A.N. 5005) Printer Port

Sets printer port. Off, COM1, COM2, or COM3

SCPORT (D.A.N. 5006) Scoreboard Port

Sets scoreboard port. Off, COM1, COM2, or COM3

OPSTAT (D.A.N. 5007) Opstat Port

Sets opstat port. Off, COM1, COM2, or COM3

CANPRT (D.A.N. 5111) CAN Port

Used to send a specific message via the CAN bus

DBGPRT (D.A.N. 5999) Debug Port

Sets internal debug port. Off, COM1, COM2, or COM3

MENU 7.1 – SCALE SPECIFIC SETTINGS (JUMP LIST 71)

SCALE PLATFORM A

SCALID (D.A.N. 7101) SCALE ID SETUP

Identity of scale location (Truck ID or Mixer Number).

W MTHD (D.A.N. 7103) WEIGH METHOD

Select weigh method 1-General, 2-Slow, 3-Fast, or 4-Lock - On (Stockweigh only)

LB-KG (D.A.N. 7104) DISPLAY UNIT

Display pounds - lb or kilograms – kg

COUNT (D.A.N. 7105) DISPLAY COUNT

Select display count size of weigh values.

CAP (D.A.N. 7106) CAPACITY

Enter MAXIMUM weight measurable on scale.

WMA1-1 (D.A.N. 7107) WM1 ADJUST 1

Increase this number to smoothen weighing (2 to 100)

WMA1-2 (D.A.N. 7108) WM1 ADJUST 2

0=OFF. Use value less than WMA1-1 for quick weight response.

WMA1-3 (D.A.N. 7109) WM1 ADJUST 3

Enter the weight to activate quick weight response.

WMA2-1 (D.A.N. 7111) WM2 ADJUST 1

Increase this number to smoothen weighing.

WMA2-2 (D.A.N. 7112) WM2 ADJUST 2

0=OFF. Use value less than WMA2-1 for quick weight response.

WMA2-3 (D.A.N. 7113) WM2 ADJUST 3

Enter the weight to activate quick weight response.

MOTION (D.A.N. 7114) MOTION

ON = motion arrow flashes for unstable weight.

MOT WT (D.A.N. 7115) MOTION WEIGHT

Enter weight used to detect Motion. 0=Standard Motion detection.

TAREAP (D.A.N. 7116) TARE AUTO PRINT

ON = tare will auto-print displayed weight.

SAVTAR (D.A.N. 7117) SAVE TARE

ON = Indicator will save tare weight to non-volatile memory.

WT COM (D.A.N. 7118) WEIGHT COMPENSATION

Enables weight compensation functionality for scale platform A

AD FLT (D.A.N. 7119) AD FFT FILTERING

Enables A/D FFT filtering for scale platform A

CAL100 (D.A.N. 7121) FRACTIONAL WEIGHT CALIBRATION

Enables use of fractional CAL numbers for scale platform A

GAIN (D.A.N. 7122) GAIN

Select gain setting to be used for scale platform. (.75mv/v, 1.5mv/v, 3mv/v)

SCALE PLATFORM B**SCALID (D.A.N. 7151) SCALE ID SETUP**

Identity of scale location (Truck ID or Mixer Number).

W MTHD (D.A.N. 7153) WEIGH METHOD

Select weigh method 1-General, 2-Slow, 3-Fast, or 4-Lock - On (Stockweigh only)

LB-KG (D.A.N. 7154) DISPLAY UNIT

Display pounds - lb or kilograms – kg

COUNT (D.A.N. 7155) DISPLAY COUNT

Select display count size of weigh values.

CAP (D.A.N. 7156) CAPACITY

Enter MAXIMUM weight measurable on scale.

WMA1-1 (D.A.N. 7157) WM1 ADJUST 1

Increase this number to smoothen weighing (2 to 100)

WMA1-2 (D.A.N. 7158) WM1 ADJUST 2

0=OFF. Use value less than WMA1-1 for quick weight response.

WMA1-3 (D.A.N. 7159) WM1 ADJUST 3

Enter the weight to activate quick weight response.

WMA2-1 (D.A.N. 7161) WM2 ADJUST 1

Increase this number to smoothen weighing.

WMA2-2 (D.A.N. 7162) WM2 ADJUST 2

0=OFF. Use value less than WMA2-1 for quick weight response.

WMA2-3 (D.A.N. 7163) WM2 ADJUST 3

Enter the weight to activate quick weight response.

MOTION (D.A.N. 7164) MOTION

ON = motion arrow flashes for unstable weight.

MOT WT (D.A.N. 7165) MOTION WEIGHT

Enter weight used to detect Motion. 0=Standard Motion detection.

TAREAP (D.A.N. 7166) TARE AUTO PRINT

ON = tare will auto-print displayed weight.

SAVTAR (D.A.N. 7167) SAVE TARE

ON = Indicator will save tare weight to non-volatile memory.

WT COM (D.A.N. 7168) WEIGHT COMPENSATION

Enables weight compensation functionality for scale platform A

AD FLT (D.A.N. 7169) AD FFT FILTERING

Enables A/D FFT filtering for scale platform A

CAL100 (D.A.N. 7171) FRACTIONAL WEIGHT CALIBRATION

Enables use of fractional CAL numbers for scale platform A

GAIN (D.A.N. 7172) GAIN

Select gain setting to be used for scale platform. (.75mv/v, 1.5mv/v, 3mv/v)

SCALE PLATFORM C**SCALID (D.A.N. 7201) SCALE ID SETUP**

Identity of scale location (Truck ID or Mixer Number).

W MTHD (D.A.N. 7203) WEIGH METHOD

Select weigh method 1-General, 2-Slow, 3-Fast, or 4-Lock - On (Stockweigh only)

LB-KG (D.A.N. 7204) DISPLAY UNIT

Display pounds - lb or kilograms – kg

COUNT (D.A.N. 7205) DISPLAY COUNT

Select display count size of weigh values.

CAP (D.A.N. 7206) CAPCITY

Enter MAXIMUM weight measurable on scale.

WMA1-1 (D.A.N. 7207) WM1 ADJUST 1

Increase this number to smoothen weighing (2 to 100)

WMA1-2 (D.A.N. 7208) WM1 ADJUST 2

0=OFF. Use value less than WMA1-1 for quick weight response.

WMA1-3 (D.A.N. 7209) WM1 ADJUST 3

Enter the weight to activate quick weight response.

WMA2-1 (D.A.N. 7211) WM2 ADJUST 1

Increase this number to smoothen weighing.

WMA2-2 (D.A.N. 7212) WM2 ADJUST 2

0=OFF. Use value less than WMA2-1 for quick weight response.

WMA2-3 (D.A.N. 7213) WM2 ADJUST 3

Enter the weight to activate quick weight response.

MOTION (D.A.N. 7214) MOTION

ON = motion arrow flashes for unstable weight.

MOT WT (D.A.N. 7215) MOTION WEIGHT

Enter weight used to detect Motion. 0=Standard Motion detection.

TAREAP (D.A.N. 7216) TARE AUTO PRINT

ON = tare will auto-print displayed weight.

SAVTAR (D.A.N. 7217) SAVE TARE

ON = Indicator will save tare weight to non-volatile memory.

WT COM (D.A.N. 7218) WEIGHT COMPENSATION

Enables weight compensation functionality for scale platform A

AD FLT (D.A.N. 7219) AD FFT FILTERING

Enables A/D FFT filtering for scale platform A

CAL100 (D.A.N. 7221) FRACTIONAL WEIGHT CALIBRATION

Enables use of fractional CAL numbers for scale platform A

GAIN (D.A.N. 7222) GAIN

Select gain setting to be used for scale platform. (.75mv/v, 1.5mv/v, 3mv/v)

SCALE PLATFORM D

SCALID (D.A.N. 7251) SCALE ID SETUP

Identity of scale location (Truck ID or Mixer Number).

W MTHD (D.A.N. 7253) WEIGH METHOD

Select weigh method 1-General, 2-Slow, 3-Fast, or 4-Lock - On (Stockweigh only)

LB-KG (D.A.N. 7254) DISPLAY UNIT

Display pounds - lb or kilograms – kg

COUNT (D.A.N. 7255) DISPLAY COUNT

Select display count size of weigh values.

CAP (D.A.N. 7256) CAPACITY

Enter MAXIMUM weight measurable on scale.

WMA1-1 (D.A.N. 7257) WM1 ADJUST 1

Increase this number to smoothen weighing (2 to 100)

WMA1-2 (D.A.N. 7258) WM1 ADJUST 2

0=OFF. Use value less than WMA1-1 for quick weight response.

WMA1-3 (D.A.N. 7259) WM1 ADJUST 3

Enter the weight to activate quick weight response.

WMA2-1 (D.A.N. 7261) WM2 ADJUST 1

Increase this number to smoothen weighing.

WMA2-2 (D.A.N. 7262) WM2 ADJUST 2

0=OFF. Use value less than WMA2-1 for quick weight response.

WMA2-3 (D.A.N. 7263) WM2 ADJUST 3

Enter the weight to activate quick weight response.

MOTION (D.A.N. 7264) MOTION

ON = motion arrow flashes for unstable weight.

MOT WT (D.A.N. 7265) MOTION WEIGHT

Enter weight used to detect Motion. 0=Standard Motion detection.

TAREAP (D.A.N. 7266) TARE AUTO PRINT

ON = tare will auto-print displayed weight.

SAVTAR (D.A.N. 7267) SAVE TARE

ON = Indicator will save tare weight to non-volatile memory.

WT COM (D.A.N. 7268) WEIGHT COMPENSATION

Enables weight compensation functionality for scale platform A

AD FLT (D.A.N. 7269) AD FFT FILTERING

Enables A/D FFT filtering for scale platform A

CAL100 (D.A.N. 7271) FRACTIONAL WEIGHT CALIBRATION

Enables use of fractional CAL numbers for scale platform A

GAIN (D.A.N. 7272) GAIN

Select gain setting to be used for scale platform. (.75mv/v, 1.5mv/v, 3mv/v)

MENU 7.1 – SCALE SPECIFIC SETTINGS (SCALES A & B - JUMP LIST 71)

NOTE: Scale specific settings can be affected by the same global settings shown. When changed they will affect the currently selected scale.

Global Setting	SCALE PLATFORM A	SCALE PLATFORM B
Scale ID Number See SCALID (D.A.N. 1003)	SCALID (D.A.N. 7101)	SCALID (D.A.N. 7151)
Weigh Method See W MTHD (D.A.N. 1002)	W MTHD (D.A.N. 7102)	W MTHD (D.A.N. 7152)
Display Unit See LB-KG (D.A.N. 1008)	LB-KG (D.A.N. 7103)	LB-KG (D.A.N. 7153)
Capacity See CAP (D.A.N. 3002)	CAP (D.A.N. 7104)	CAP (D.A.N. 7154)
WM1 Adjust 1 See WMA1-1 (D.A.N. 3003)	WMA1-1 (D.A.N. 7107)	WMA1-1 (D.A.N. 7157)
WM1 Adjust 2 See WMA1-2 (D.A.N. 3004)	WMA1-2 (D.A.N. 7108)	WMA1-2 (D.A.N. 7158)
WM1 Adjust 3 See WMA1-3 (D.A.N. 3005)	WMA1-3 (D.A.N. 7109)	WMA1-3 (D.A.N. 7159)
WM2 Adjust 1 See WMA2-1 (D.A.N. 3006)	WMA2-1 (D.A.N. 7111)	WMA2-1 (D.A.N. 7151)
WM2 Adjust 2 See WMA2-2 (D.A.N. 3007)	WMA2-2 (D.A.N. 7112)	WMA2-2 (D.A.N. 7152)
WM2 Adjust 3 See WMA2-3 (D.A.N. 3008)	WMA2-3 (D.A.N. 7113)	WMA2-3 (D.A.N. 7153)
Motion See MOTION (D.A.N. 3101)	MOTION (D.A.N. 7114)	MOTION (D.A.N. 7154)
Motion Weight See MOT WT (D.A.N. 3102)	MOT WT (D.A.N. 7115)	MOT WT (D.A.N. 7155)
Tare Auto Print See TAREAP (D.A.N. 2301)	TAREAP (D.A.N. 7116)	TAREAP (D.A.N. 7156)
Save Tare See SAVTAR (D.A.N. 1102)	SAVTAR (D.A.N. 7117)	SAVTAR (D.A.N. 7157)

MENU 7.2 – SCALE SPECIFIC SETTINGS (SCALES C & D - JUMP LIST 72)

<i>Scale Specific Setting</i>	SCALE PLATFORM C	SCALE PLATFORM D
Scale ID Number See SCALID (D.A.N. 1003)	SCALID (D.A.N. 7201)	SCALID (D.A.N. 7251)
Weigh Method See W MTHD (D.A.N. 1002)	W MTHD (D.A.N. 7202)	W MTHD (D.A.N. 7252)
Display Unit See LB-KG (D.A.N. 1008)	LB-KG (D.A.N. 7203)	LB-KG (D.A.N. 7253)
Capacity See CAP (D.A.N. 3002)	CAP (D.A.N. 7204)	CAP (D.A.N. 7254)
WM1 Adjust 1 See WMA1-1 (D.A.N. 3003)	WMA1-1 (D.A.N. 7207)	WMA1-1 (D.A.N. 7257)
WM1 Adjust 2 See WMA1-2 (D.A.N. 3004)	WMA1-2 (D.A.N. 7208)	WMA1-2 (D.A.N. 7258)
WM1 Adjust 3 See WMA1-3 (D.A.N. 3005)	WMA1-3 (D.A.N. 7209)	WMA1-3 (D.A.N. 7259)
WM2 Adjust 1 See WMA2-1 (D.A.N. 3006)	WMA2-1 (D.A.N. 7211)	WMA2-1 (D.A.N. 7261)
WM2 Adjust 2 See WMA2-2 (D.A.N. 3007)	WMA2-2 (D.A.N. 7212)	WMA2-2 (D.A.N. 7262)
WM2 Adjust 3 See WMA2-3 (D.A.N. 3008)	WMA2-3 (D.A.N. 7213)	WMA2-3 (D.A.N. 7263)
Motion See MOTION (D.A.N. 3101)	MOTION (D.A.N. 7214)	MOTION (D.A.N. 7264)
Motion Weight See MOT WT (D.A.N. 3102)	MOT WT (D.A.N. 7215)	MOT WT (D.A.N. 7265)
Tare Auto Print See TAREAP (D.A.N. 2301)	TAREAP (D.A.N. 7216)	TAREAP (D.A.N. 7266)
Save Tare See SAVTAR (D.A.N. 1102)	SAVTAR (D.A.N. 7217)	SAVTAR (D.A.N. 7267)

MENU 8.0 – SIGN-ON & MAINTENANCE MESSAGES

SIGNON (D.A.N. 8001) SIGNON MESSAGE

When enabled, entered SIGNON message will scroll continuously until a key is pressed.

SIGMSG (D.A.N. 8002) SIGNON MESSAGE

Allows the entry of custom message up to 120 characters. The SIGNON message will be displayed after the model number upon power up. *Refer to 10/60/SL2 Application Note #3 for more information.*

MANTMG (D.A.N. 8011) MAINTENANCE MESSAGE

Allows entry of a custom message up to 120 characters that is based off the hour meter. The message can be used to alert the user of maintenance needed on the equipment. User will need to acknowledge message by pressing the “ON” or “ENTER” key. Message will be displayed on each power cycle and every 4 hours of operation until cleared by **MANCLR (D.A.N. 8013)**. *Refer to 10/60/SL2 Application Note #3 for more information.*

MANTTM (D.A.N. 8012) MAINTENANCE MESSAGE TIME

Entry of time for the maintenance message to be triggered.

MANCLR (D.A.N. 8013) MAINTENANCE MESSAGE CLEAR

Clearing of maintenance message time or entry of new time.







MARQUE (D.A.N. 8031) MARQUE ACTIVATION

Displays current time if weight is less than 2% capacity and no motion is detected.

MENU 8.1 – CALIBRATION

CAL (D.A.N. 8121) Dead Weight Calibration

Procedure to calibration with known weight:

1. Enter **(D.A.N. 8121)** and press , the indicator will display WT CAL and prompt to zero the scale. Press and hold the ZERO key to zero the system.
 2. Scale will now prompt "ADD WT". Place a known weight on system (ex. 5000 lb. test weight) on the scale platform and press the ON key. If calibration weight is at least 5% of the scale capacity, the message "CAL" will be displayed.
 3. If the scale capacity is not at least 5%, the system will not accept the calibration value and display the message "ADD WT". Add more weight to the scale until the 5% capacity weight has been exceeded.
 4. After the 5% capacity weight has been reached, the indicator displays the message "CAL". The weight value estimated to be on the scale at that time is displayed. The weight on the scale is estimated based on the previous calibration value.
 5. Correct the weight value by pressing the  or  key to increment the digit and the  or  key to select the digit to change.
- NOTE: The scale will not accept the weight entered if motion is detected (weight is not stable) and will display the error message "MOTION."*
6. When the display reads the correct weight, press the  key to automatically determine and store the full-scale calibration value. The message "GOOD" is displayed for a successful calibration.

T CALB (D.A.N. 8123) Temperature Calibration

The scale compensates for changes in temperature that affect the circuitry in the indicator. The scale does not process load cell signals during TCALB. The CAL annunciator is on momentarily during TCALB based on model. If set to ON, the indicator recalibrates often when first turned on. Recalibration decreases as the indicator warms up.

CALMAT (D.A.N. 8124) Calibration Match

"Scale Matching" functionality allows the user to adjust the calibration number by inputting two weight values. The first weight value is the "display" weight (current indicator weight). The second weight value is the "actual" (or real) weight value. The calibration value will scale all weight values (including balance points). Calibration = "actual weight" / "display weight"

MENU 8.2 – MEMORY MANAGEMENT

TMR Models

CLEAR MEMORY/REUSE (D.A.N. 8201)

ON – will clear feedline memory. CLEAR – Reuses feedlines. NET/GROSS – Exits back to weighing mode.

CLEAR NVRAM (D.A.N. 8202)

Resets all the internal data storage values stored in the non-volatile memory.

GT/NT Models

CLEARR (D.A.N. 8211) CLEAR RECORDS

Erases all data records stored in memory.

CLEAR NVRAM (D.A.N. 8212)

Resets all the internal data storage values stored in the non-volatile memory.

MENU 8.7 – SETUP NUMBER & SETTINGS

SETUP (D.A.N. 8711) Setup Number

Quick entry value to select weigh method (1-4 lb) (5-8 kg), gain (1-9), display counts (0-9), and capacity (*1000)

Weigh Method			
1	2	3	4 = lbs
5	6	7	8 = kg.
General	Slow	Fast	Lock-on

Gain			
Gain Setting	Max Signal (mV/V)		
	EZ 150 EZ 210 EZ 320	EZ II Rev. 0A, 0B, 0C Software	EZ II Rev. 1.0 and Later Software
1	2.00	3.0	3.0
2	1.50	1.5	1.5
3	1.14	.75	1.5
4	.84	.75	.75
5	.47	.38	.75
6	1.90 (50Hz)	3.0	3.0
7	1.30 (50Hz)	1.5	1.5
8	.97 (50Hz)	.75	1.5
9	.66 (50Hz)	.38	.75

Gain Setting Requirement

Gain must be set above the maximum mV/V output expected on a system.

Example: Four cell 50K-CT system. 2.5 mV/V @ 200,000 lb.
Expected maximum load is 100,000 lb (1.25mV/V).
Setting should be "2" (1.5mV/V).



Display Counts (0-9)									
0	1	2	3	4	5	6	7	8	9
.01 .02 .05 .1	.2	.5	1	2	5	10	20	50	100
8 Select in long form only									

Capacity X 1000

Display Count Setting Recommendation

Recommended display count setting equals capacity divided by 4,000. Example: System has capacity of 40,000 lb. Display count code should be "6" or more (10 lb/count or greater).

Capacity Setting Recommendation

Capacity should be set as low as possible but must be set higher than the maximum safe gross load expected on the system.

CAL (D.A.N. 8712) CALIBRATION NUMBER

Weight displayed at 0.4mV/V for these loadcells.

SAVMEN (D.A.N. 8713) SAVE CURRENT RESTORE IMAGE

Saves the current and restore settings to XML files on the USB

LD MEN (D.A.N. 8714) LOAD CURRENT RESTORE IMAGE

Loads any of the restore images from USB and saves those settings in memory

ST SET (D.A.N. 8715) SAVE SETTINGS TO RESTORE IMAGE

Stores current settings into 1 of restore point images. (USER, OEM, FACTORY)

SW SET (D.A.N. 8716) RESTORE SETTINGS TO RESTORE POINT

Restores a restore point to current settings. (USER, OEM, FACTORY)

SYSDTF (D.A.N. 8719) SYSTEM DATE FORMAT

This option will use the system date format when printing stored records (via serial). When this option is disabled, all stored records printed serially will use a (Date format 7 – DD/MO/YY). If this option is enabled, all stored records will use the system date format as set in (DATE F – D.A.N 1203). By default, this will be disabled

L POOL (D.A.N. 8732) LOAD DISPLAY POOL

Load a display pool from the USB device into internal memory

D POOL (D.A.N. 8733) DISPLAY POOL STATUS

Show/Display pool status in internal memory

S FACT (D.A.N. 8734) SAVE RAW FACTOR TO USB

Saves a raw ISOBUS 4kb factor from internal memory (serial flash) onto a USB device

L FACT (D.A.N. 8735) LOAD RAW FACTOR FROM USB

Load a raw ISOBUS 4kb factor from the USB device into internal memory

ISOUSE (D.A.N. 8743) VIEW ISOBUS UTILIZATION

View ISOBUS CAN traffic usage as a percent (between 0-100%)

ISO VT (D.A.N. 8745) ISOBUS VT ENABLE

Allows the scales user interface to display on a Virtual Terminal.

Default value for Scale Link ISOBUS scales is ON.

Note: Disabling the Virtual Terminal communications does not affect the settings for ISO WT (D.A.N. 2701) when broadcasting weight values to ISOBUS.

ISONAM (D.A.N. 8746) ISOBUS NAME

Allows selection of the device name. SL1 or SL2 (For use in ISOBUS applications)

APPSND (D.A.N. 8747) APPLICATION SEND

Allows sending of application specific information (For use in ISOBUS applications)

SCALE SPECIFIC SETUP AND CALIBRATION

NOTE: Scale specific Setup /Calibration can be affected by the same global settings shown. When changed they will affect the currently selected scale.

<i>Global Setting</i>	SCALE PLATFORM A	SCALE PLATFORM B	SCALE PLATFORM C	SCALE PLATFORM D
SETUP NUMBER {SETUP} See SETUP (D.A.N. 8711)	8771	8772	8773	8774
CALIBRATION NUM. {CAL} See CAL (D.A.N. 8712)	8781	8782	8783	8784

ISONAM (D.A.N 8798) ISOBUS NAME

Allows entry of name for use in ISOBUS applications

KEYTEST (D.A.N. 8888)

Enables the front panel key test. Press ON key to exit.

KEYDMP (D.A.N. 8899) Key log Dump

Downloads the last 680 keys pressed on the indicator.

NOTES: