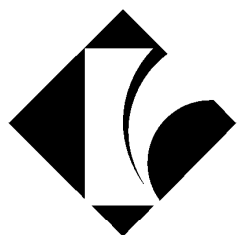


SMART WEIGHING SOLUTIONS



rinstrum

**In-Motion Axle Scale
axleWEIGHr
Operator Manual**

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1. Overview and Safety

1.1. Overview

This precision digital indicator uses the latest Sigma-Delta A/D technology to ensure fast and accurate weight readings. There is a soft power on/off function that retains memory of its state. Once an instrument is turned on it will automatically start up again if the external power is interrupted. Day-to-day operating settings (eg. ZERO, TARE, CLOCK, etc.) are retained when power is removed.

The instrument provides zero, tare, gross/net, truck and print on the fixed function keys and supports special functions (eg. printing, unit switching, etc.), via user definable function key and external inputs.



1.2. Operating Environment

- Temperature: -10 to +50°C ambient (14 °F to 122 °F)
- Humidity: <90% non-condensing
- Storage: -20 to +50°C ambient (-4 °F to 122 °F)

1.3. Electrical Safety

- For your protection all mains electrical hardware must be rated for environmental conditions of use.
- Pluggable equipment must be installed near an easily accessible power socket outlet.
- To avoid the possibility of electric shock or damage to the instrument, always switch off or isolate the instrument from the power supply before maintenance is carried out.

1.4. Cleaning

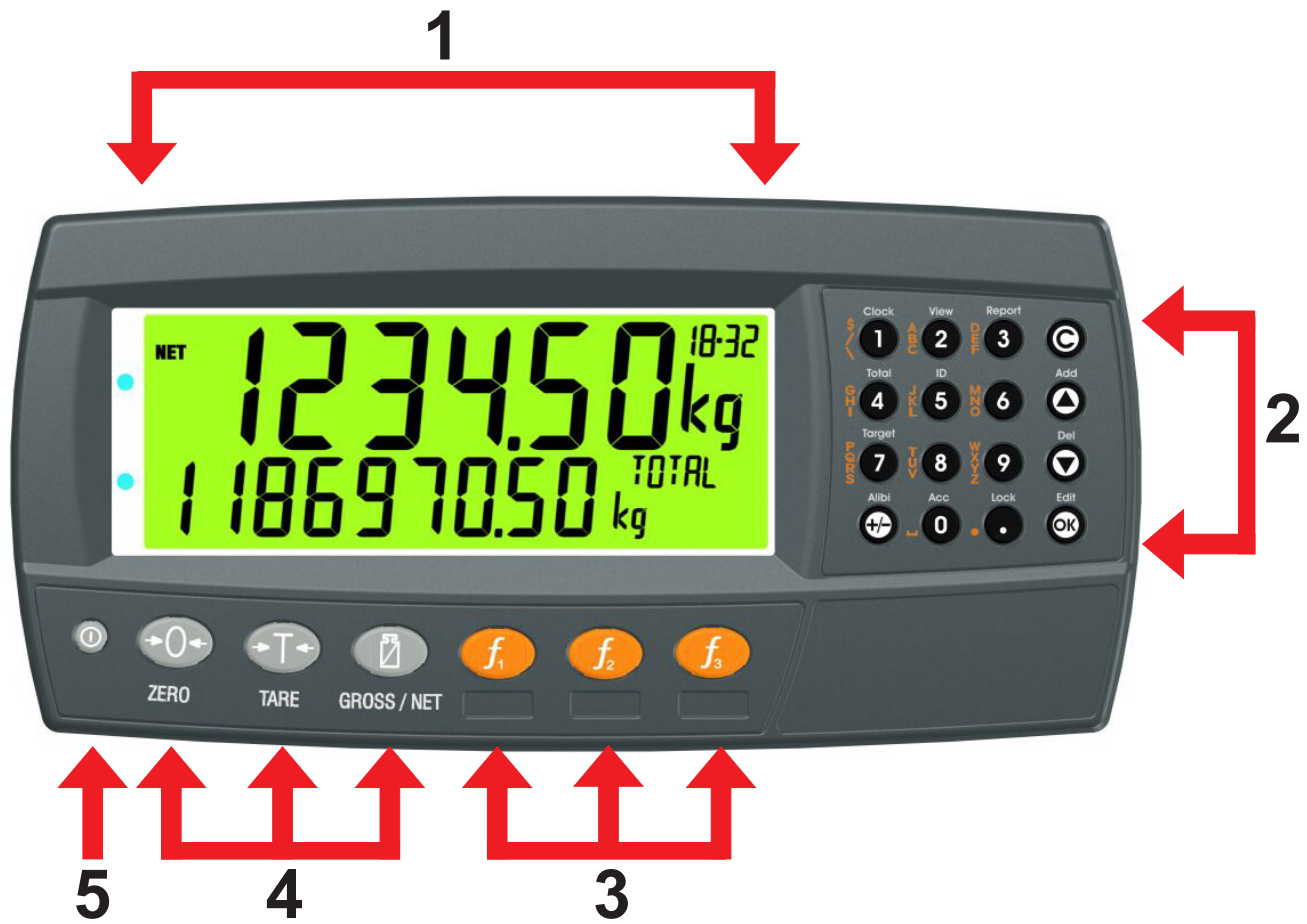
- To maintain the instrument, never use harsh abrasive cleaners or solvents. Wipe the instrument with a soft cloth **slightly** dampened with warm soapy water.

1.5. User Responsibilities

- All electronic and mechanical calibrations and/or adjustments required for making this equipment perform to accuracy and operational specifications should be performed by trained service personnel.
- Absolutely no physical, electrical or program modifications other than selection of standard options and accessories are to be made to this equipment.
- Electrical connections other than those specified may not be performed.
- Physical alterations, such as holes, etc., are not allowed.

2. User Interface and Display

2.1. Overview



Code	Description
1	Display
2	Numeric Keypad
3	Function Keys (user defined)
4	Function Keys (Fixed)
5	Power Key

2.2. Display

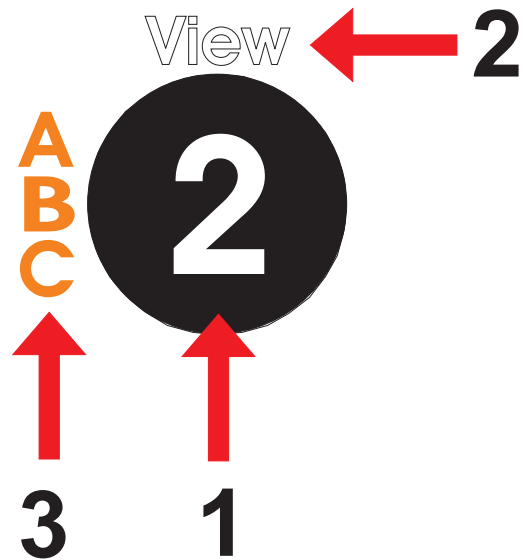


Code	Description
1	Primary Annunciators
2	Primary Display
3	Auxiliary Display
4	Primary Units
5	Secondary ID Eg Product Name = CONCRETE in example above.
6	Miscellaneous Annunciators
7	Secondary Units
8	Secondary Display

2.3. Primary Annunciators

Symbol	Name	Description
HOLD	HOLD	Visible when the displayed reading is held.
NET	NET	Visible when the displayed reading represents Net weight.
⇒0⇐	ZERO	Visible when the gross reading is within $\pm \frac{1}{4}$ of a division of true zero.
~	MOTION	Visible when the displayed reading is not stable.
┌	ZERO BAND	Visible when the displayed weight is within the zero 'dead' band setting.
⇐ ! ⇨	RANGE	Indicates current range (for dual range/interval).

2.4. Keypad



Code	Description	
1	Numeric Button	0-9
2	White Characters	Hold 2 seconds
3	Orange Characters	(Alpha and Symbols)
	Cancel	Undo last command; step backwards (including in setup menus).
	Up	Move cursor backwards; previous option
	Down	Move cursor forwards; next option
	OK	Accept this choice
	Decimal Point	Place decimal point
	+/-	Change to negative or positive number; Change Editing VIEW (eg ASCII vs string)

2.5. Strings

There are 3 different methods of editing strings:

- Normal string editing (auxiliary display: STR)
- Numerical string editing (auxiliary display: S.NUM)
- ASCII string with character position (auxiliary display: S.ASC)

Use the <+/-> key to cycle between these options.

2.5.1. Normal String Editing

Normal string editing is most useful where strings are small and contain no lowercase or unprintable characters. The available characters are printed in orange on the keypad.

Special keys are:

- <OK>: Accept changes and finish.
- <Long press of cancel>: Cancel and exit without changes
- <Cancel>: Delete character
- <Up>, <Down>: Move cursor
- <Long press of down>: Delete string after cursor
- <+/->: Switch editing modes

2.5.2. Numerical String Editing

Numerical string editing is useful when entering strings containing only numbers. The available characters are the numbers and the decimal point.

Special keys are:

- <OK>: Accept changes and finish.
- <Long press of cancel>: Cancel and exit without changes
- <Cancel>: Delete character
- <Up>, <Down>: Move cursor
- <Long press of down>: Delete string after cursor
- <+/->: Switch editing modes

2.5.3. ASCII String Editing

ASCII string editing is useful where tokens or other unprintable characters are required. ASCII codes are entered as numbers. Print tokens are entered in this mode.

Special keys are:

- <OK>: Accept ASCII code/Accept changes and finish.
- <Long press of cancel>: Cancel and exit without changes
- <0> to <9>: Enter a new code
- <Cancel>: Delete character
- <Up>, <Down>: Move cursor
- <Long press of down>: Delete string after cursor
- <+/->: Switch editing modes

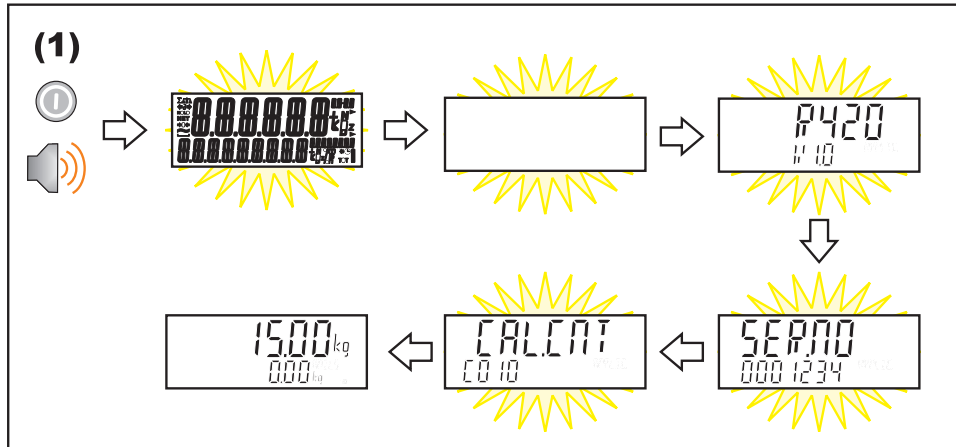
3. Basic Operation

3.1. Power Key



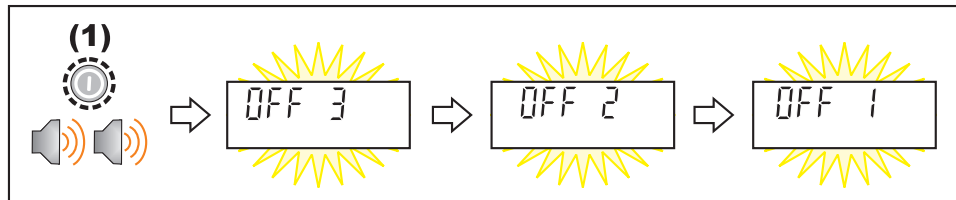
ON

Turn Instrument ON - Short press <Power>



OFF

Turn Instrument OFF - Long press <Power>

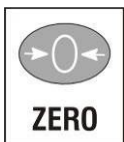


Additional Power Information

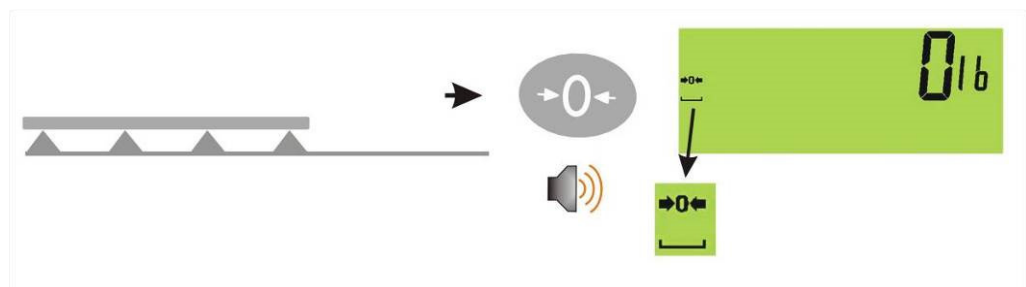
Power Key Locked: If the power key is locked, the Instrument cannot be turned off from the front keypad.

Automatic Operation: Instrument will operate whenever external power is available and will not need to be manually turned on again if the power is interrupted.

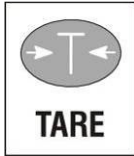
3.2. Zero Key



When an empty scale has drifted away from a true zero reading, this key is used to perform a zero adjustment on the scale display. The zero adjustment is stored when power is removed and is re-used when next powered up.



3.3. Tare Key



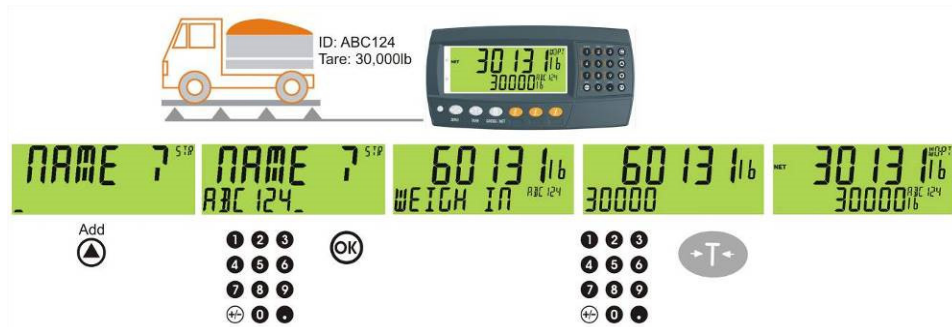
The Tare key is used to temporarily set the scale to zero. The display will show the Net weight and the NET annunciator will be lit.

The weight tared is deducted from the allowable range of the scale, reducing the maximum weight that can be displayed.

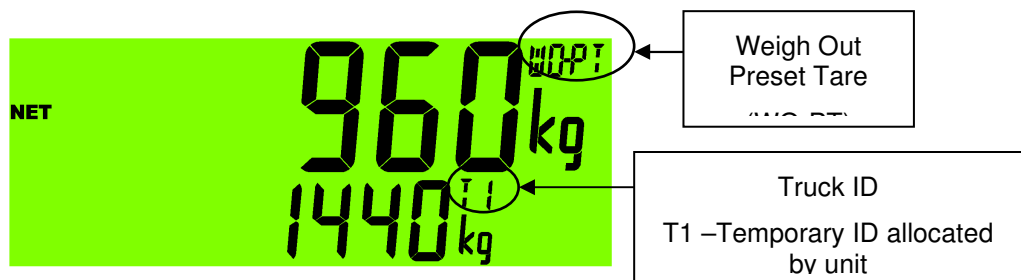
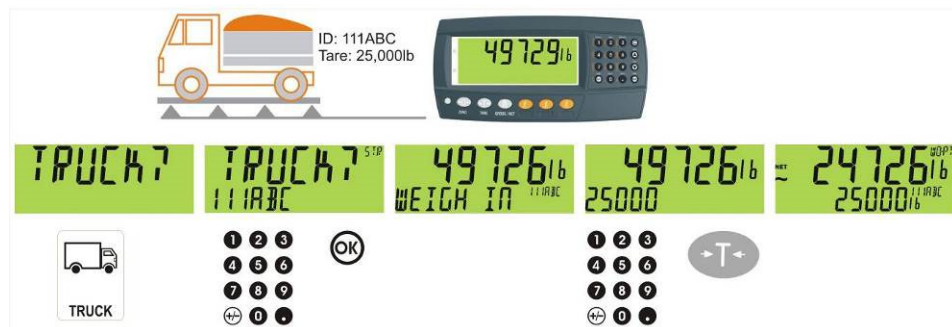
Preset Tare: Preset Tare values are entered using the Numeric Keys followed by the TARE key. (E.g. to enter 1.5kg as a preset tare, press <1> <.> <5> <TARE>)

The tare adjustment is stored when power is removed and is re-used when next powered up.

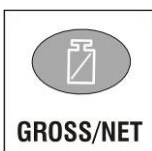
Setting Preset Tare on a Permanent Truck ID



Setting Preset Tare on a Temporary Truck ID



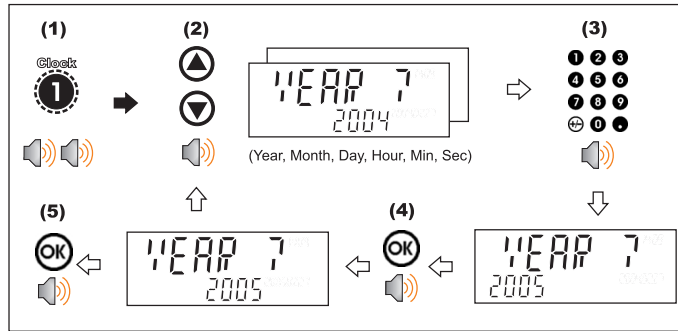
3.4. Gross/Net Key



This key toggles the weight display between the Gross weight and the Net weight (provided that a Tare has previously been acquired using the <TARE> key).

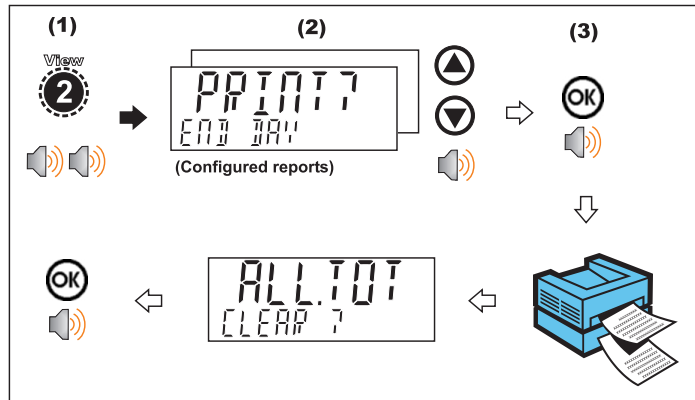
3.5. Clock

A long press of the 1 key (Clock) allows the system time and date to be viewed and changed



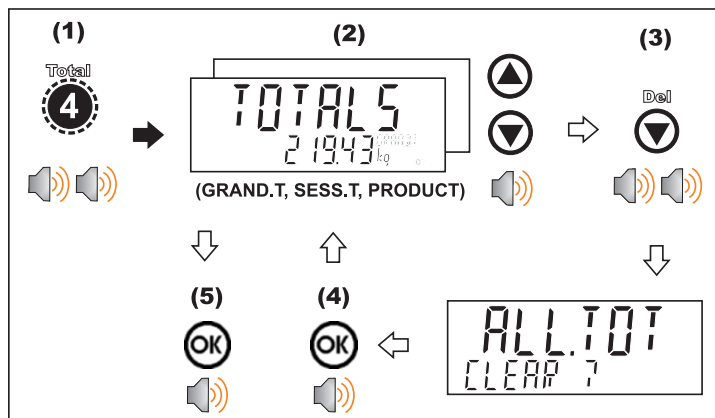
3.6. Report

A long press of the 3 key (Report) allows reports to be printed.



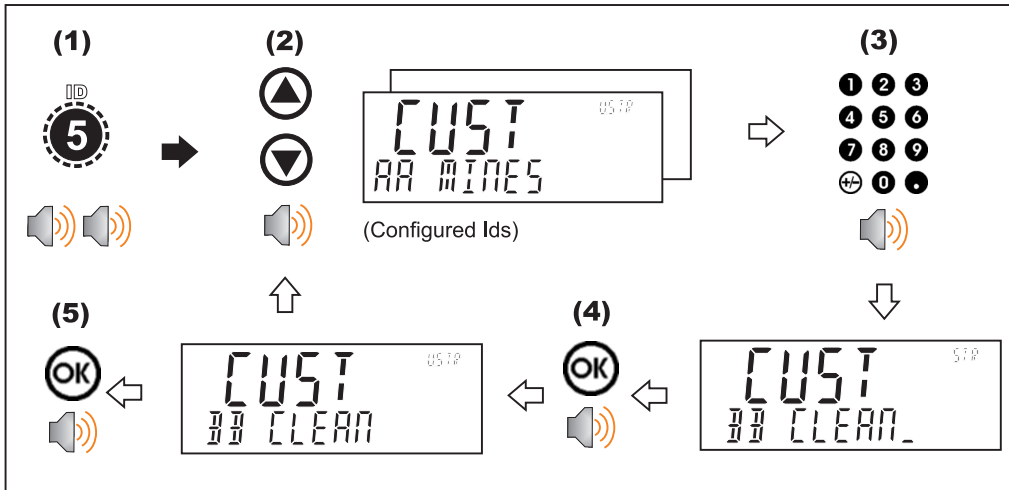
3.7. Total

A long press of the 4 key (Total) allows totals to be viewed and cleared.



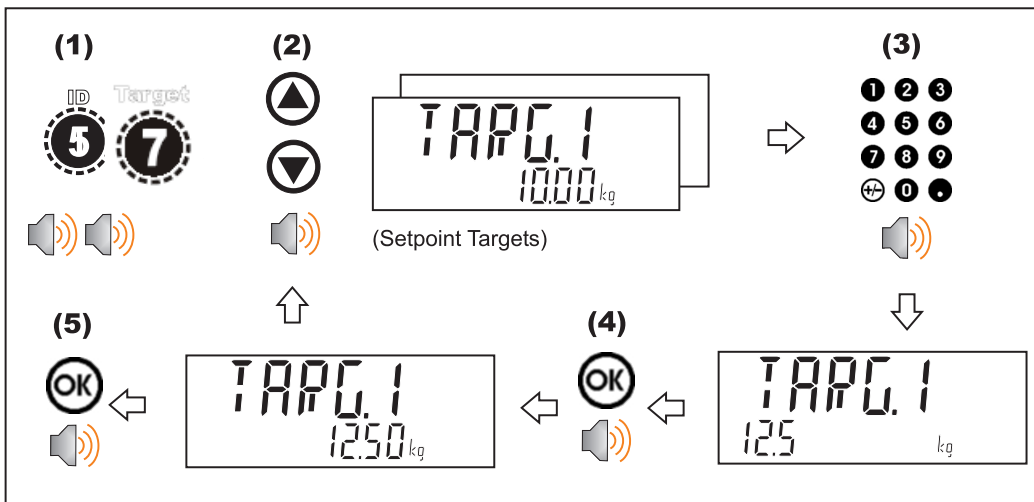
3.8. User ID

A long press of the 5 key (ID) allows User IDs to be viewed and cleared.



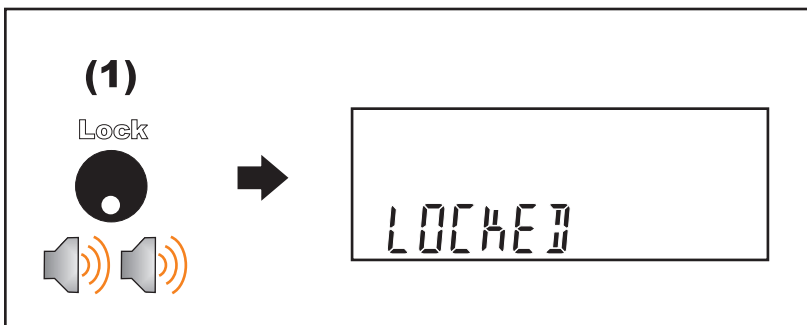
3.9. Target

A long press of the 7 key (Target) allows setpoint targets to be viewed and changed.



3.10. Lock

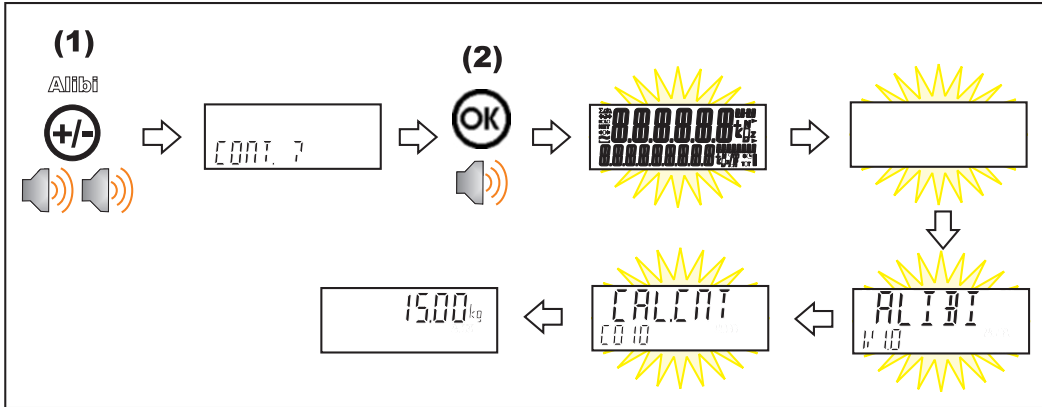
A long press of the . key (Lock) allows instrument to be locked. The instrument can be unlocked by entering the operator passcode when prompted.



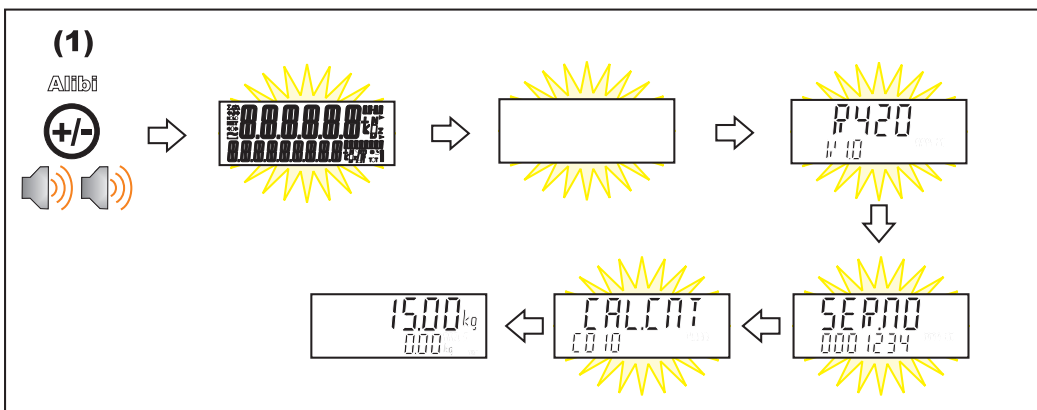
3.11. Alibi

A long press of the +/- key (Alibi) will switch the instrument to Alibi mode. Alibi mode is used to verify scale readings. To return from Alibi mode, long press the +/- key (Alibi) again.

3.11.1. Switching to Alibi Mode

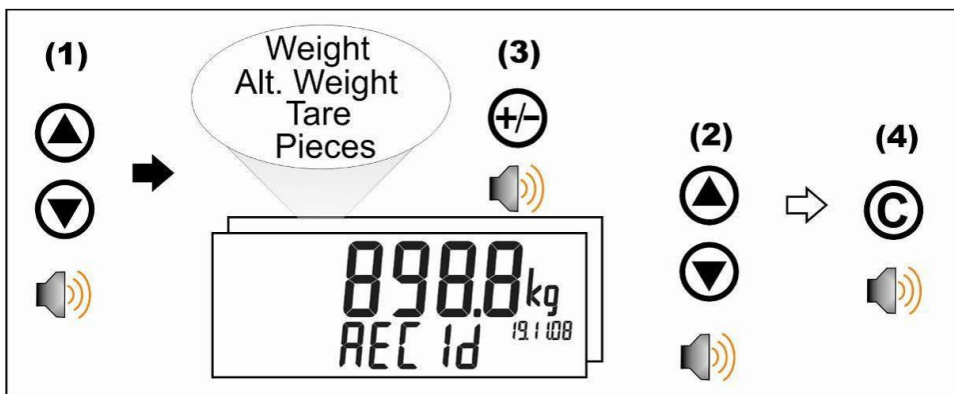


3.11.2. Returning from Alibi Mode



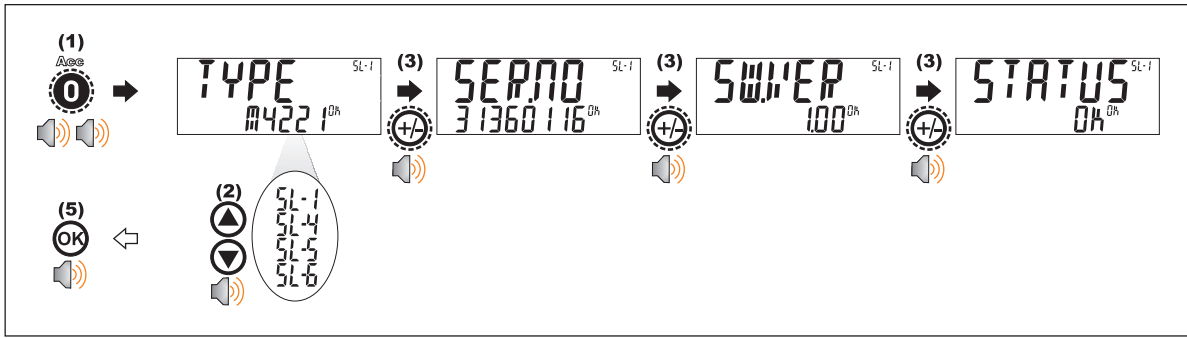
3.11.3. Viewing DSD records in Alibi mode

From Alibi mode you can view DSD records (when a DSD is fitted) by pressing the up arrow key to view the latest record, pressing the down arrow key to view the oldest record or by entering a number than pressing the OK key to view that specific record. Once viewing records you can use the +/- key to display the different information stored in the record, use the up arrow key to move onto the next record or use the down arrow key to move onto the previous record. Once you are finished viewing records you can return to Alibi mode by pressing the C key.

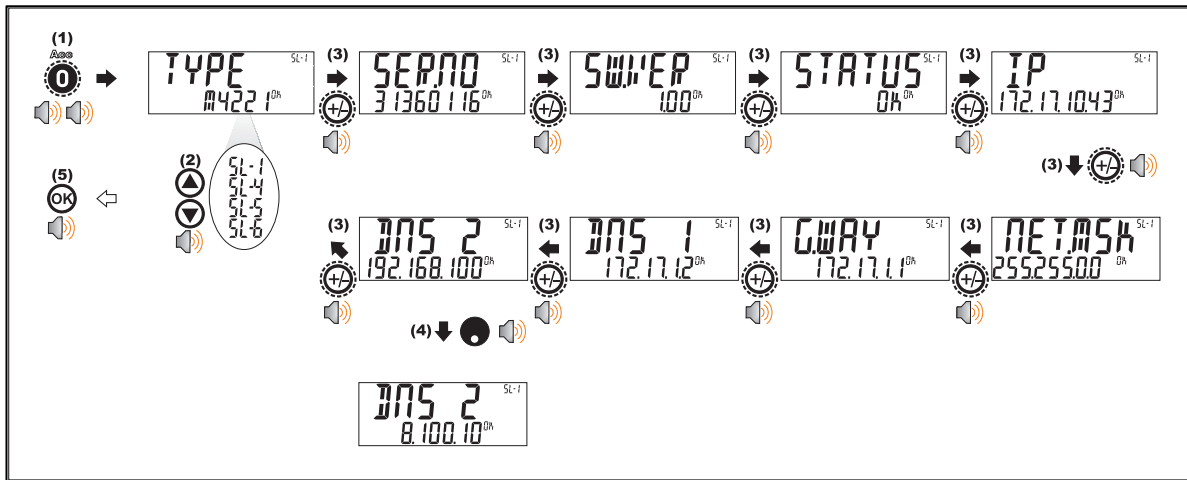


3.12. Acc

A long press of the 0 key (Acc) is used to view information about the attached accessory modules.



When a M4221 Ethernet module is attached, the current IP (Internet Protocol) settings can be viewed from the Acc menu. The "." key allows the second half of longer IP addresses to be displayed. In this example the DNS 2 IP address is 192.168.100.10.



3.13. Stability Considerations

Some functions (e.g. Tare and Zero) require a stable weight. These functions will wait for up to 10 seconds for stable weight. If a stable weight is not available 'MOTION ERROR' is displayed and the function is cancelled.

3.14. Passcodes

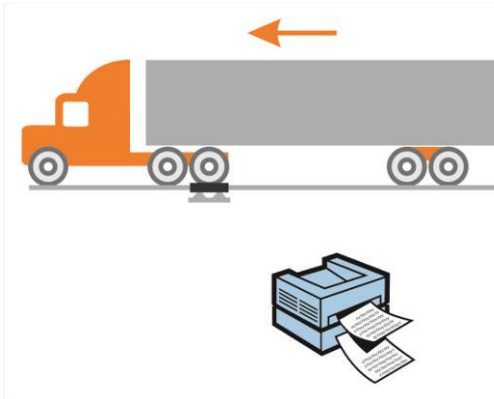
The instrument has three levels of passcode to provide security for instrument functions, calibration and general configuration.

- Full Setup Passcode
- Safe Setup Passcode
- Operator Passcode

The operator passcode is used to protect access to instrument functions available from the front panel keypad. The operator generally needs to enter the Operator Passcode only once to gain access to multiple functions. To lock the instrument again press the '.' key for two seconds (LOCK function).

4. Truck Weighing Operation

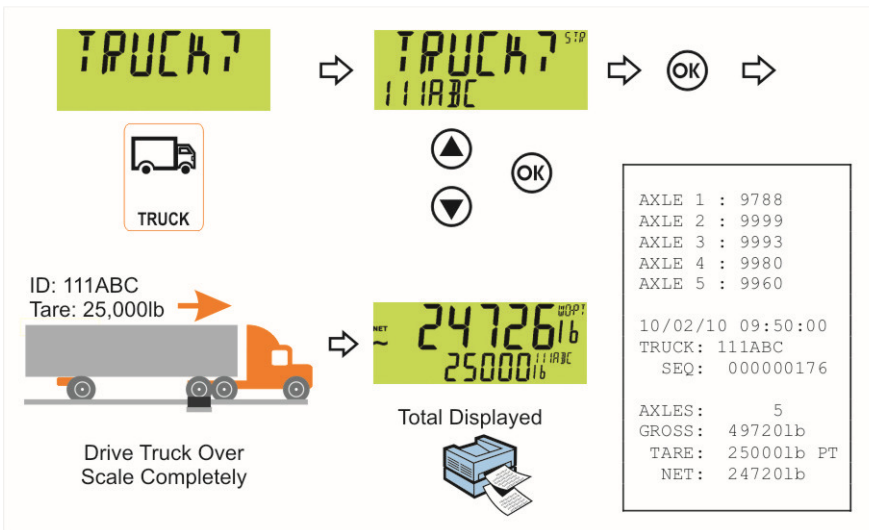
4.1. Print Current Weight of Truck



AXLE 1 : 97881b
 AXLE 2 : 99991b
 AXLE 3 : 99931b
 AXLE 4 : 99801b
 AXLE 5 : 99601b
 19/09/13 15:03:05
 SEQ: 000000053

AXLES: 5
 TOTALS: 497201b

4.2. Single Pass - Permanent Truck ID with Preset Tare



TRUCK

ID: 111ABC
 Tare: 25,000lb

Drive Truck Over Scale Completely

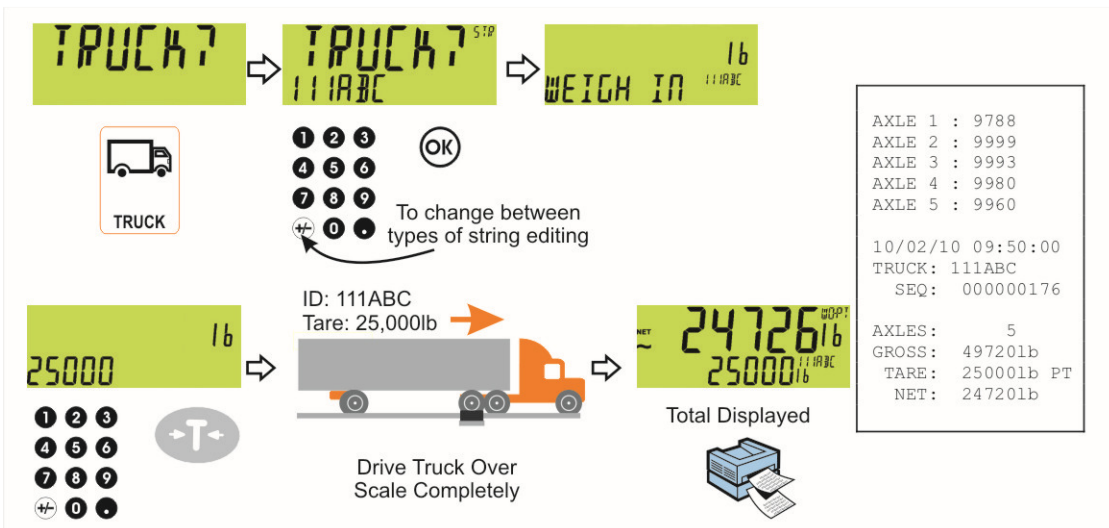
Total Displayed

AXLE 1 : 9788
 AXLE 2 : 9999
 AXLE 3 : 9993
 AXLE 4 : 9980
 AXLE 5 : 9960

10/02/10 09:50:00
 TRUCK: 111ABC
 SEQ: 000000176

AXLES: 5
 GROSS: 497201b
 TARE: 250001b PT
 NET: 247201b

4.3. Single Pass - Temporary ID (Operator Entered) with a Preset Tare



TRUCK

ID: 111ABC
 Tare: 25,000lb

Drive Truck Over Scale Completely

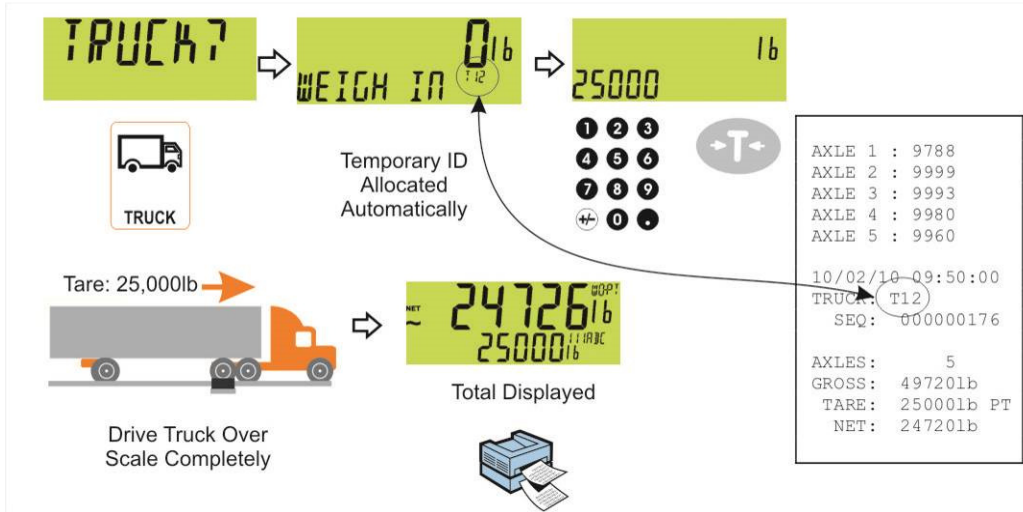
Total Displayed

AXLE 1 : 9788
 AXLE 2 : 9999
 AXLE 3 : 9993
 AXLE 4 : 9980
 AXLE 5 : 9960

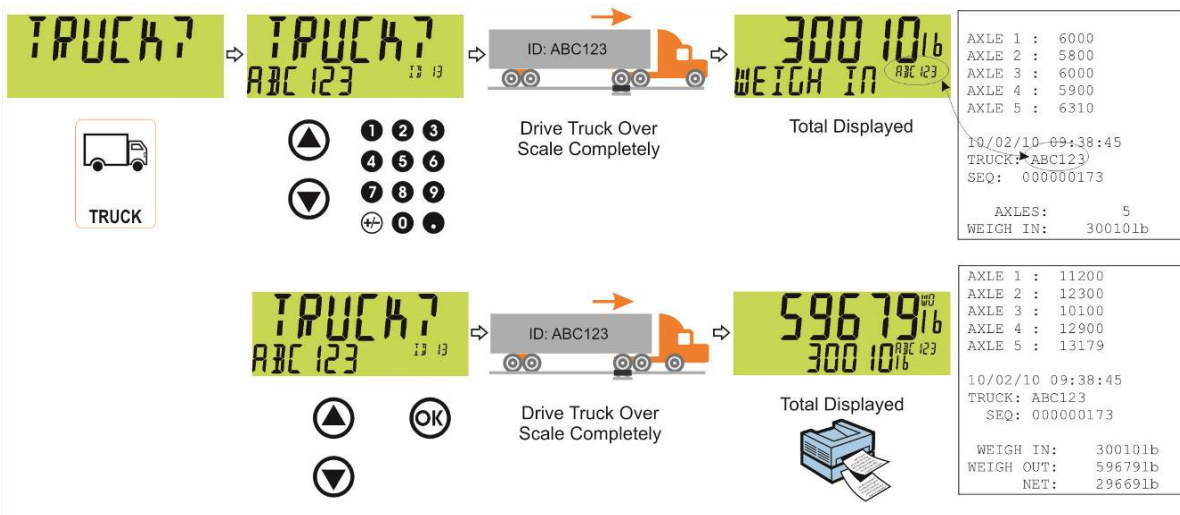
10/02/10 09:50:00
 TRUCK: 111ABC
 SEQ: 000000176

AXLES: 5
 GROSS: 497201b
 TARE: 250001b PT
 NET: 247201b

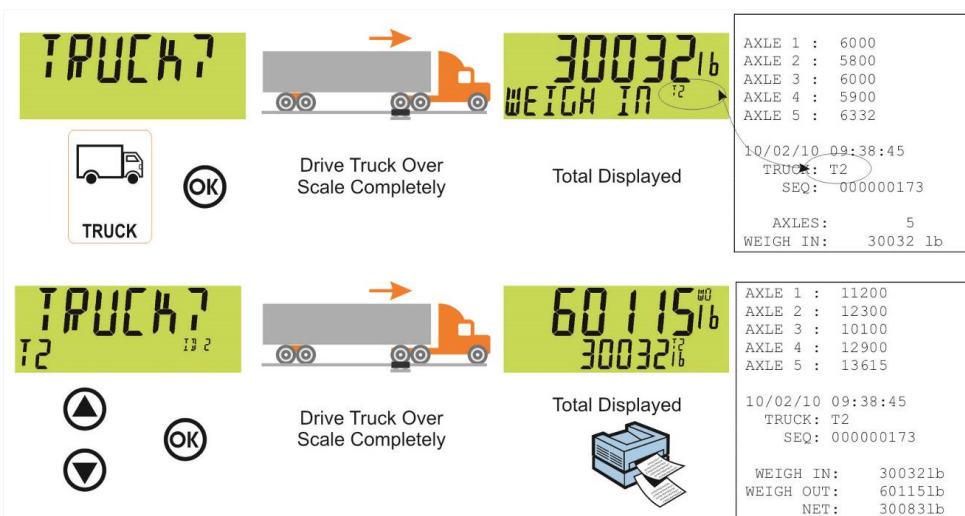
4.4. Single Pass – Automatic Temporary ID Allocated with a Preset Tare



4.5. Two Pass



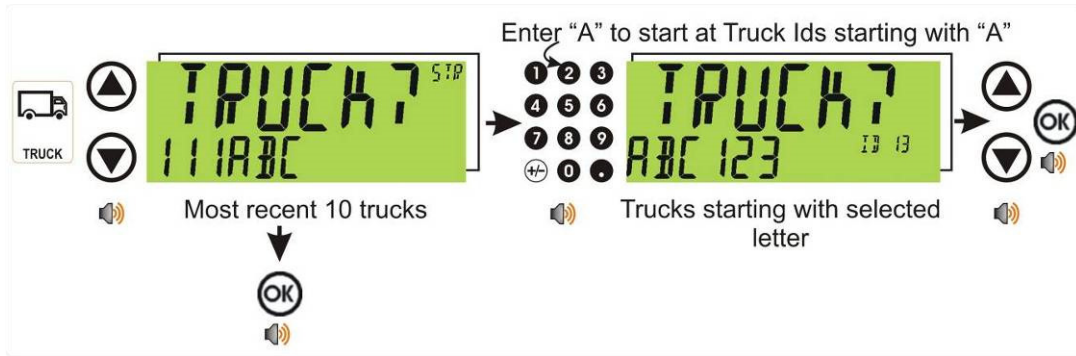
4.6. Two Pass – Automatic Temporary ID Allocated



5. Select/Adding/Deleting Truck IDs

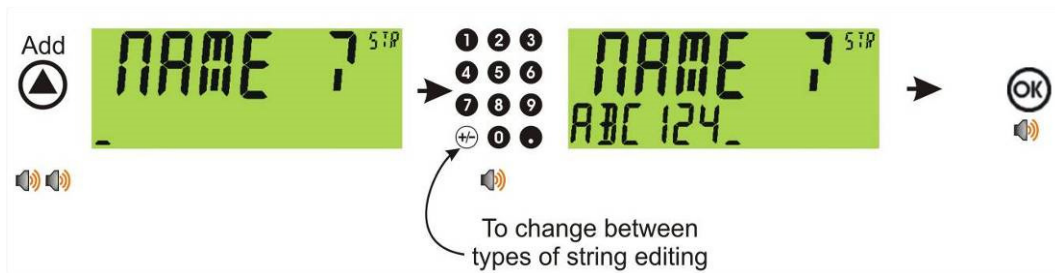
5.1. Select a Truck ID - Short Press of Up and Down keys

A short press of the up and down arrow keys will allow the user to select the desired truck from a list of the most recently used. The keypad can be used to enter the first letter of the truck name. The <UP> and <DOWN> keys will then step through the list of trucks starting with the entered letter.



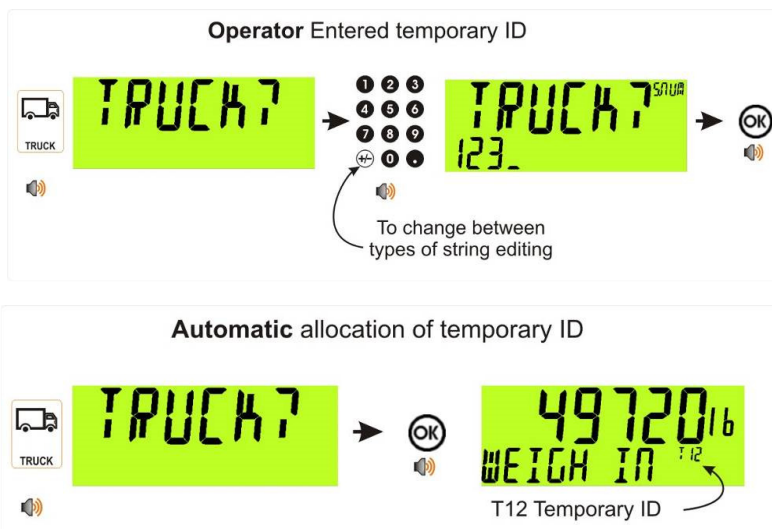
5.2. Add a Permanent Truck ID - Long Press of the Up Key (Add)

A long press of the up arrow (Add) key will create a new **permanent** truck ID for which a name is specified. If a truck exists with that name it will be selected, otherwise a temporary truck with that name will be created.



5.3. Add a Temporary Truck ID – Truck Key

A short press of the Truck key allows you to enter a name followed by the <OK> key. If a name isn't specified a temporary one will be allocated in format T followed by a number (eg. T12). **As this is only a temporary Truck ID it will be automatically deleted at the end of the weigh out process.**



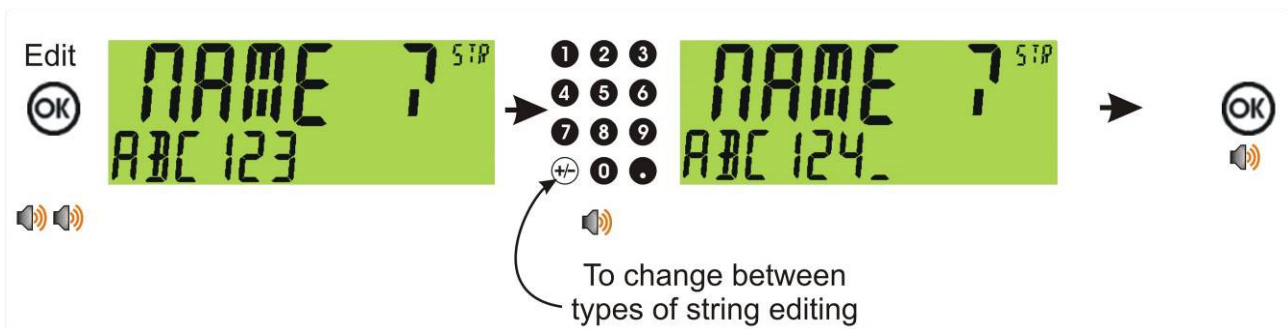
5.4. Delete a Truck ID - Long Press of the Down Key (Del)

A long press of this key allows the user to delete a truck. Trucks can only be deleted if the total weight is 0. Truck totals can be cleared using a long press of the 4 key (Total).



5.5. Edit a Truck ID - Long Press of the OK Key (Edit)

A long press of this key allows the user to change the name of a truck.



6.Function Keys – Truck/Print/Units

6.1. Truck Key



TRUCK



TRUCK

A short press of the Truck key will allow you to enter a name or use the arrow keys to select and existing product or enter a name for a new temporary product, refer also to 4 Truck Weighing Operation

Print Current Weight of Truck

```

AXLE 1 : 97881b
AXLE 2 : 99991b
AXLE 3 : 99931b
AXLE 4 : 99801b
AXLE 5 : 99601b
19/09/13 15:03:05
SEQ: 000000053

AXLES: 5
TOTALS:497201b
    
```

6.2. Single Pass - Permanent Truck ID with Preset Tare

TRUCK

ID: 111ABC
Tare: 25,000lb

Drive Truck Over Scale Completely

Total Displayed

```

TRUCK?
111ABC
    
```

OK

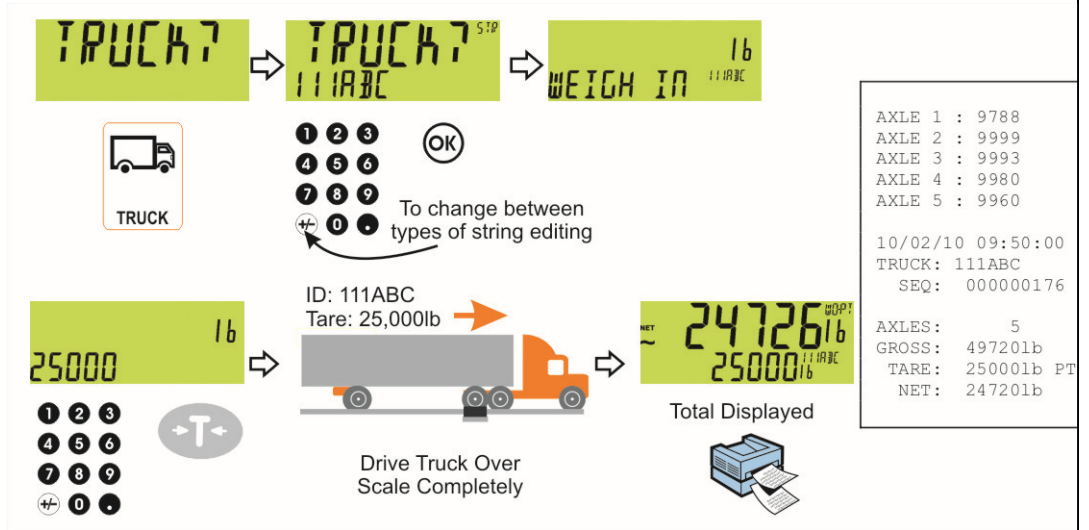
```

AXLE 1 : 9788
AXLE 2 : 9999
AXLE 3 : 9993
AXLE 4 : 9980
AXLE 5 : 9960

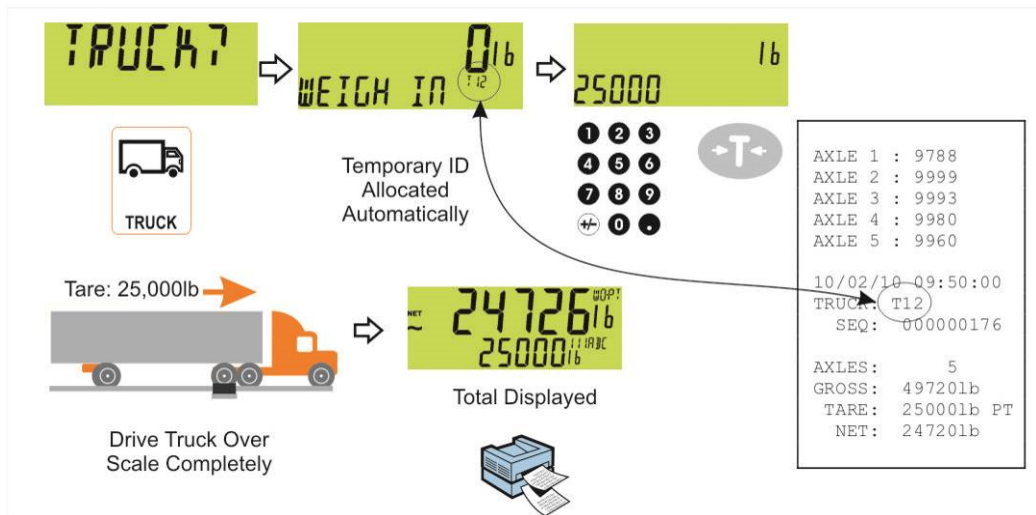
10/02/10 09:50:00
TRUCK: 111ABC
SEQ: 000000176

AXLES: 5
GROSS: 497201b
TARE: 250001b PT
NET: 247201b
    
```

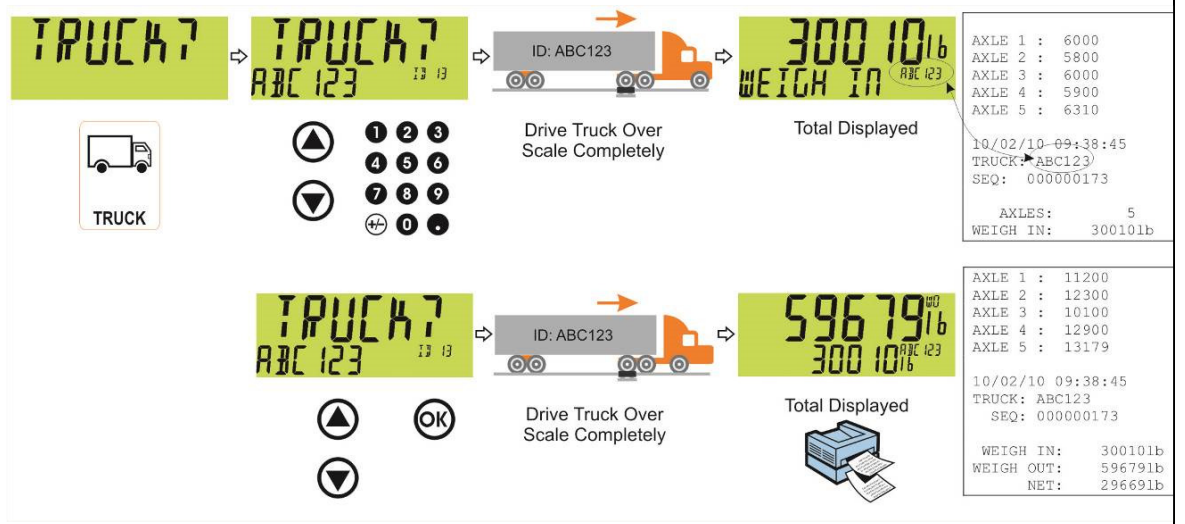
6.3. Single Pass - Temporary ID (Operator Entered) with a Preset Tare



6.4. Single Pass – Automatic Temporary ID Allocated with a Preset Tare



6.5. Two Pass



6.6. Two Pass – Automatic Temporary ID Allocated

Pass 1: TRUCK? → Drive Truck Over Scale Completely → Total Displayed: 30032 lb. WEIGH IN T2

Pass 2: TRUCK? T2 → Drive Truck Over Scale Completely → Total Displayed: 60115 lb. WEIGH IN T2

AXLE 1 :	6000
AXLE 2 :	5800
AXLE 3 :	6000
AXLE 4 :	5900
AXLE 5 :	6332

10/02/10 09:38:45
TRUCK: T2
SEQ: 000000173
AXLES: 5
WEIGH IN: 30032 lb

AXLE 1 :	11200
AXLE 2 :	12300
AXLE 3 :	10100
AXLE 4 :	12900
AXLE 5 :	13615

10/02/10 09:38:45
TRUCK: T2
SEQ: 000000173
WEIGH IN: 30032lb
WEIGH OUT: 60115lb
NET: 30083lb

Select/Adding/Deleting Truck IDs page 16.

Truck Key to enter an ID

A short press of the Truck key allows you to enter a name followed by the <OK> key. If a name isn't specified a temporary one will be allocated in format T followed by a number (eg. T12). **As this is only a temporary Truck ID it will be automatically deleted at the end of the weigh out process.**

Operator Entered temporary ID

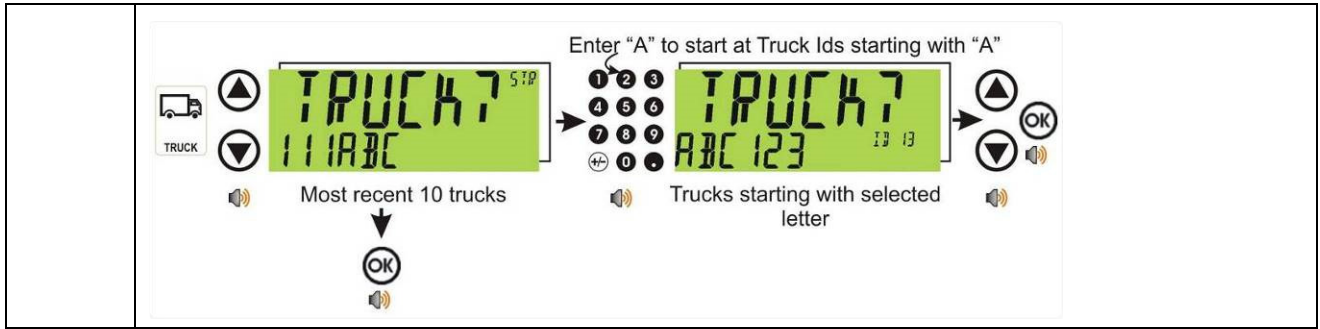
To change between types of string editing

Automatic allocation of temporary ID

T12 Temporary ID

Truck Key to select a Truck ID

Press the Truck key followed by a short press of the up and down arrow keys to select the desired truck from a list of the most recently used. The keypad can be used to enter the first letter of the truck name. The <UP> and <DOWN> keys will then step through the list of trucks starting with the entered letter.



6.7. Print Key

 	<p>A Print key can be used to skip the IDLE wait and print the truck total.</p>
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6.8. Units Key

 	<p>The Units key is used to convert primary (calibrated) units to alternative units.</p> <p>Short press A short press switches between primary and alternative units.</p> <div style="text-align: center;"> </div> <p>Long press A long press allows the units conversion factor to be entered. If lb/kg switching is chosen, this will be unavailable.</p> <div style="text-align: center;"> </div>
----------	--

7. Calibration

7.1. Known Weights

- Identify truck to use for calibration and take truck to a local certified static scale to obtain “known weights.”
- Drive the truck with known weights on scale in the same direction at least 5 times and record each individual weight.
- Record weights in supplied spreadsheet AXLE-804, entering the known weight in the Green “Known Weight” column, and the weights from each of the 5 runs in the “Actual Weight” column.

axleWEIGHr test & calibration calculator				axleWEIGH TM			
Directions:		Enter Known weights.	Run truck and enter weights up to 5 times.	Enter Cal Factor and save test page			
		Enter Values into Green colored cells					
		Always start a minimum of 20' away from scale, idle across the scale without using the gas pedal.					
Truck no#							
TEST 1	Known Weight	Actual Weight				Error	% error +/-
1st Run	27150	27060				-90	-0.33%
2nd Run	27150	27088				-62	-0.23%
3rd Run	27150	27100				-50	-0.18%
4th Run	27150	27107			Factory	-43	-0.16%
5th Run	27150	27134	Cal Factor	Cal Number	Enter Cal Factor	-16	-0.06%
Average Weight	27150	27098	1.001926	1.000000	1.001926	-52	-0.19%

Alternatively, you can use the below formula to average weights and determine the dynamic scale adjustment factor:

Divide the average of 5 weighments using formula $K/R=D$

K = Known weight of truck (reference)

R = Average reading of 5 weighments from axle scale

D = Dynamic Scale Adjustment

Using “Cal Factor” result in spreadsheet/formula, set the calibration factor in the instrument.

7.2. Dynamic Scale Factor

To set the Dynamic Scale Factor:

- Press and hold [F3] for 2 seconds to enter the configuration menu.
- The lower display will show: **DISCARD**.
- Use the [UP] [DOWN] arrow keys to scroll to **DYN.SCL**. Press [OK] to show **INBOUND**. Press [OK] to change current value: **1.000000**.
- Enter your Dynamic factor up to 6 decimal places. X.XXXXXX and press [OK].
- Use the [UP] [DOWN] arrow keys until **QUIT** appears then press [OK] to exit.



8. Information Management Setup

8.1. Aggregate, Harvest, Generic & Truck CSV File Configuration

8.1.1. USB Files

A USB jump drive comes with the console unit, part of the service kit supplied with the unit. The USB is used to store the CSV files the console uses for transaction and ticket configuration. Basic prestored information comes preloaded on the console once the desired package is selected. Further customization is possible using the USB jump drive.

To customize the files, an external PC/tablet with USB drive is required. Once the files are modified on a PC/tablet, the USB is temporarily installed in the console and the existing files are replaced with the newly changed files.

The USB drive is also used to download transaction records (as needed) to integrate into the owners' system.

8.1.2. To customize the CSV file

Remove the USB from the instrument and insert in the USB drive of a PC or tablet.

Locate and open the USB drive. Click the appropriate file (aggregate.csv, harvest.csv, or generic.csv) that matches the information package selected during startup. (An example of the harvest file is shown below.)

Do not change the data in the header (data inside the box). To setup your data, change the names to suit your operation. The example used below shows the Harvest setup. The procedures are the same for Aggregate and Generic file setup.

farm	field	Descriptic Map	acres	TotalAcre:	Crop	Variety
FARM 1	FIELD 1				Corn	P104
FARM 1	FIELD 2				Corn	P104
FARM 2	FIELD 1				Corn	P104
FARM 2	FIELD 2				Corn	P104
FARM 3	FIELD 1				Corn	P104

EXAMPLE PRINT OUT

```

04/17/15 09:03:31 000000168
FARM: FARM 1 FIELD 2 MAP:
CROP: Corn VARIETY: P104
TRUCK: TRUCK 1

AXLE 1: 22320 lb
AXLE 2: 22320 lb

TARE: 22000 lb
GROSS: 44640 lb
NET: 22640 lb

OUTBOUND TICKET W/PRE-SET TARE
                    
```

This menu controls critical axleWEIGHr settings. The default menu settings should not be altered unless advised by Rinstrum.

If you only have 1 farm, then the farm names in the "farm" column will all be the same. The "field" names however MUST all be different.

Farm & Field Column : This information should be setup and edited as new farms/ fields are added or removed. These should all be typed in capital letters. The R423 display is optimal with upper case lettering.

Description, Map, Acres Column: This information will not print on the ticket but will be stored in the database and pulled out when using thumb drive.

Crop & Variety Column: This information will print out on the ticket and will need to be updated yearly based on crop data.

Example: Aggregate.csv setup

	A	B	C	D	E	F
1	Pit_ID	Pit_Description	Material_ID	Material_Description	Destination	
2	Pit 1	Southwest	10	Washed Sand	Kansas City	
3	Pit 2	North	20	1/2" Washed rock	Meridian	
4	Pit 3	East	30	3/4" Washed rock	St Johnsbury	
5	Pit 4	Lane County	40	Slag	Meridian	
6	Pit 5	Johnson County	50	Granite	Kansas City	
7						

Example: Generic.csv setup

	A	B	C	D	E
1	Material_ID	Material_Description	Origin	Destination	
2	10	Washed Sand	St. Louis	Kansas City	
3	20	1/2" Washed rock	Chicago	Meridian	
4	30	3/4" Washed rock	Dallas	St Johnsbury	
5	40	Black mulch	Kansas City	Overland Park	
6	50	Missouri River Rock	Warsaw	Kansas City	
7					

Once you have completed updating your files on the USB drive, remove the USB from the PC/Tablet and return it to the USB port in the console to complete the uploading process. (**Note – this only needs to be done once a year.**)

8.1.3. Truck.csv File editing

TRUCK.CSV SETUP				EXAMPLE PRINT OUT	
id	truck	pass	tare	<pre> HARVEST ----- 06/15/18 13:23:06 000000243 FARM: FARM1:FIELD 1 MAP: CROP: Corn VARIETY: P110 TRUCK: TRUCK 1 AXLE 1: 6520 lb AXLE 2: 8780 lb AXLE 3: 6740 lb AXLE 4: 5460 lb AXLE 5: 4820 lb TARE: 27150 lb GROSS: 32320 lb NET: 5170 lb OUTBOUND TICKET W/PRE-SET TARE </pre>	
1	TRUCK 1	1	27150		
2	TRUCK 2	1	26500		
3	FB1	1	27150		
4	FB2	1	26500		
5	FAIRBANKS3	2	0		
6	FAIRBANKS4	2	0		
7	MERIDIAN1	2	0		
8	MERIDIAN2	2	0		

The truck file allows for editing/ adding trucks. You can create custom names instead of the default "Truck 1",

“Truck 2” etc. The header should not be altered (id,truck, pass, tare) but the data below it is configurable.

Id & Truck Column

Id and truck must be unique and will display to the screen & print on the ticket. The id number should be sequential and in order. (Example: 1,2,3,4 etc.).

The labels in the truck column will print out to the ticket.

Pass & Tare Column

If pass equals 1 pass, then you must enter in the tare weight. If pass equals 2 then tare will equal zero lbs. Pass must be equal to “1” or a “2”.

The tare value will print to the ticket. The tare value is typically the emptyweight of the truck/ wagon.

Data Log Output

The harvest_datastore.csv (or aggregate_datastore.csv, or generic_datastore.csv) file contains all the weight data for each truck including the location and material configuration.

Example: Harvest_datastore.csv

date	time	printid	truck.id	Truck	gross	Net	farm	farm.field	farm.varie	moisture
4/13/2015	9:50:34	120	1	TRUCK 1	44640	0	FARM 1	FIELD 1	P104	1
4/13/2015	9:51:08	121	2	TRUCK 2	44640	43990	FARM 3	FIELD 1	P104	99
4/13/2015	9:52:27	123	1	TRUCK 1	44640	0	FARM 2	FIELD 2	P104	15
4/13/2015	9:52:48	124	2	TRUCK 2	44640	43990	FARM 3	FIELD 1	P104	99
4/13/2015	9:54:34	127	1	TRUCK 1	44640	0	FARM 2	FIELD 2	P104	15
4/13/2015	9:54:49	128	2	TRUCK 2	44640	43990	FARM 3	FIELD 1	P104	99
4/13/2015	10:17:09	130	1	TRUCK 1	44640	22640	FARM 1	FIELD 1	P104	15
4/13/2015	10:17:37	131	2	TRUCK 2	44640	43990	FARM 2	FIELD 2	P104	22
4/13/2015	10:22:19	137	1	TRUCK 1	44640	22640	FARM 1	FIELD 1	P104	15
4/13/2015	10:22:49	139	2	TRUCK 2	44640	43990	?	?	?	0
4/13/2015	10:23:21	141	4	TRUCK 4	66960	22320	?	?	?	0
4/13/2015	10:24:03	142	1	TRUCK 1	44640	22640	FARM 1	FIELD 1	P104	15
4/13/2015	10:28:01	143	9	AARON	44640	44005	FARM 3	FIELD 1	P104	66
4/13/2015	10:33:07	144	2	TRUCK 2	44640	43990	?	?	?	0
4/13/2015	10:33:25	145	9	AARON	44640	44005	FARM 3	FIELD 1	P104	66
4/13/2015	10:33:53	146	1	TRUCK 1	44640	22640	?	?	?	0
4/13/2015	10:34:51	147	1	TRUCK 1	44640	22640	FARM 1	FIELD 1	P104	1
4/13/2015	10:35:51	149	3	TRUCK 3	44640	0	FARM 1	FIELD 2	P104	66

9. Clicker Operation

The axleWEIGHr Weigh System includes remote “clickers” (key fobs) that interact with the console and accelerate the weighing process. Each clicker gets assigned to a specific truck. Assigning a clicker/key fob to a vehicle may be completed by the scale operator or by the driver during the first weighing.

The clicker has a small red LED inside the case that lights when pressed. When pressing the key fob, the user should be somewhere in the range of 75-150 feet from the antennae system. If the “GREEN” traffic light does not illuminate after pressing the button, verify the red LED on key fob lights when pressed.

If the red LED does not light when pressed, try replacing the battery. The fob uses battery L1028 (A23 alkaline 12V). The fob will need to be replaced if the replacement battery does not correct the problem.



9.1. To add a Clicker/Key Fob to a New Entry:

The scale operator may assign the clicker/key fob as follows:

- Press the arrow UP (ADD) key.
- Use the console keypad to type a truck name and push [OK].
- Choose ONE.PASS or press the down arrow to switch to TWO.PASS. Press [OK].
- Choose FARM and/or FARM FIELD (options may change depending on the software package chosen at start-up). Use the UP/Down arrows to change options and click [OK].
- When the green traffic light appears, long press F3. Configuration options appear.
- Scroll to KEY.BIND and press [OK].
- Press the clicker and DONE appears. The clicker is now linked to the ID.

9.2. To add a Clicker/Key Fob to an Existing Truck ID:

- Short press [F1] and the list of existing truck ID appears.
- Choose **FARM** and/or **FARM FIELD** (options may change depending on the software package chosen at start-up). Use the UP/Down arrows to change options and click [OK].
- When the green traffic light appears, long press **F3**. Configuration options appear.
- Scroll to **KEY.BIND** and press [OK].
- Press the clicker and **DONE** appears. The clicker is now linked to the ID.

9.3. To Add an Unassigned clicker and Truck ID:

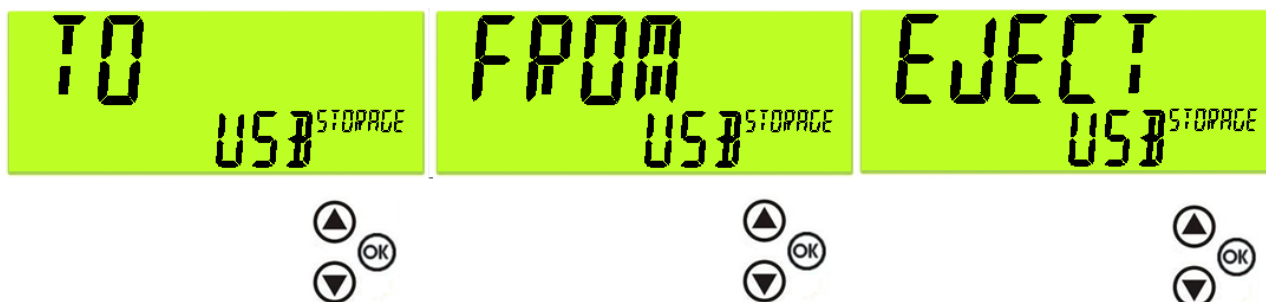
If a driver has been given a clicker not yet associated to the truck, they will receive the message “NOT FOUND” when the button is pressed. This means the clicker is functional and been detected by the system, but the truck ID has not been created. The driver can long press the **UP** arrow key to create the new truck name.

- Use the UP/DOWN keys to scroll through the list of Truck IDs.

10. USB Operation

Using the USB drive provided with the axleWEIGHr system, the CSV files can be moved from the USB to the console and back to the USB.

There are 3 options to select once the USB drive has been detected by the console.



10.1. TO USB

This means you will send the harvestlog.csv (or aggregatelog.csv, or genericlog.csv) file to the USB drive. (This creates a copy only –the original log file will remain on the console).

10.2. FROM USB

This means you will duplicate the files from the USB drive. If you have modified the truck.csv file or the harvestlog.csv (or aggregatelog.csv, or genericlog.csv) file then they will overwrite your truck configuration and yourfarm & field configuration.

10.3. EJECT USB

This will prepare the console for the USB drive to be removed.

11. Outdoor Console

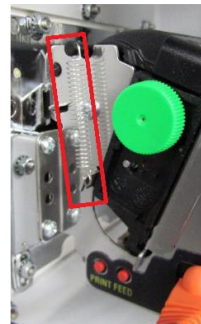
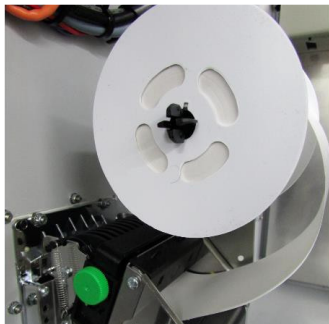
11.1. Traffic Lights

If traffic lights are fitted to the console While at Zero & stable weight the traffic lights should both be off. There are various conditions that will activate the lights. If there are errors the RED light will activate. See table below.

Code	Description	
Red	Solid On	Error – Check Scale Display for Code
Red	5 Sec then Off	Normal Operation (Ticket Prints)
Green	Solid On	Clicker Press Detected/ Truck in Process of Weighing/ Motion Detected over 1000 lbs.
Both Off	Green & Red are Both off	Scale is in Idle Mode/ No Power to Scale

11.2. Built in Kiosk Printer Operation

The Kiosk style printer uses thermal paper that will need to be loaded upon first use. This paper is a special thermal style paper that can be ordered directly through Rinstrum. Load the paper into the printer with the inside facing upwards as shown below. If the power is on to the printer the paper sensor will feed automatically once paper is detected.



Ensure tension spring is configured for maximum tension as shown above to ensure optimal printing operation. There is a "PRINT" test button shown in figure above used to perform a single test page.

12. Error Messages

12.1. Overview

Several error messages may be displayed to warn of operation outside of the acceptable limits. These messages may appear on either the primary or the secondary display. Short messages (XXXXXX) will appear as a single message. Longer messages (XXXXXX) (YYYYYY) will appear on the display in two parts, first the (XXXXXX) part, then the (YYYYYY) part.

12.2. Weighing Errors

These messages show status messages or errors that may occur during normal weighing operation.

Error	Description	Resolution
(U.LOAD)	The weight is below the minimum allowable weight reading.	Increase the weight or decrease the minimum allowable weight reading.
(O.LOAD)	The weight is above the maximum allowable weight reading. Warning - overloading may damage mechanical scale elements.	Check the condition of load cell connections. Check for damaged load cell.
(ERROR) (RANGE)	The weight reading is beyond the limit set for Zero operation. The operation of the <ZERO> key is limited in the setup during installation. The indicator cannot be Zeroed at this weight.	Increase the Zero Range (Z.RANGE) or use the <TARE> key instead.
(ERROR) (MOTION)	Scale motion has prevented a <ZERO> or <TARE> operation from occurring on command.	Try the operation again once the scale is stable.
(ERROR) (ADC)	An error with the ADC has prevented a <ZERO> or <TARE> operation from occurring	Ensure loadcell cabling is correct.

12.3. Axle Weighing Errors

These messages show status messages or errors that may occur during axel weighing operation.

Error	Description
(ERROR) (MOTION)	There was too much motion to capture the axle.
(WEIGHT) (LOW)	The captured axle weight was below the value set in MIN.WGT
(TOO) (FAST)	The capture was shorter than the time set in MIN.TIM.
(TOO) (SLOW)	The capture took too long.
(WRONG) (WAY)	Truck crossed the weigh bridge in the wrong direction (only when using start and end inputs).
(ERROR) (ILOCK)	The interlock went low during an axle capture or the interlock time was exceeded.
(ERROR) (Exxxx)	Axle weighing will be aborted if an application error occurs during the truck.
(ERROR)	Axle weighing will be aborted if the scale is overloaded during the truck.

Error	Description
(O.LOAD)	
(ERROR) (U.LOAD)	Axle weighing will be aborted if the scale is underloaded during the truck

12.4. Diagnostic Errors

The instrument continually monitors the condition of the internal circuits. Any faults or out-of-tolerance conditions are shown on the display as an **E** type error message, a scale service technician is required to handle these faults.

13. Outdoor Console Connections

13.1. Overview

The axleWEIGHr scale can use either an indoor console (standalone indicator and printer) or an outdoor console connecting usually to a remote display, clicker system and printer depending on which parts are included in the kit. Both units use M12 connectors for simplified connectivity.

13.2. Power Connection to Console



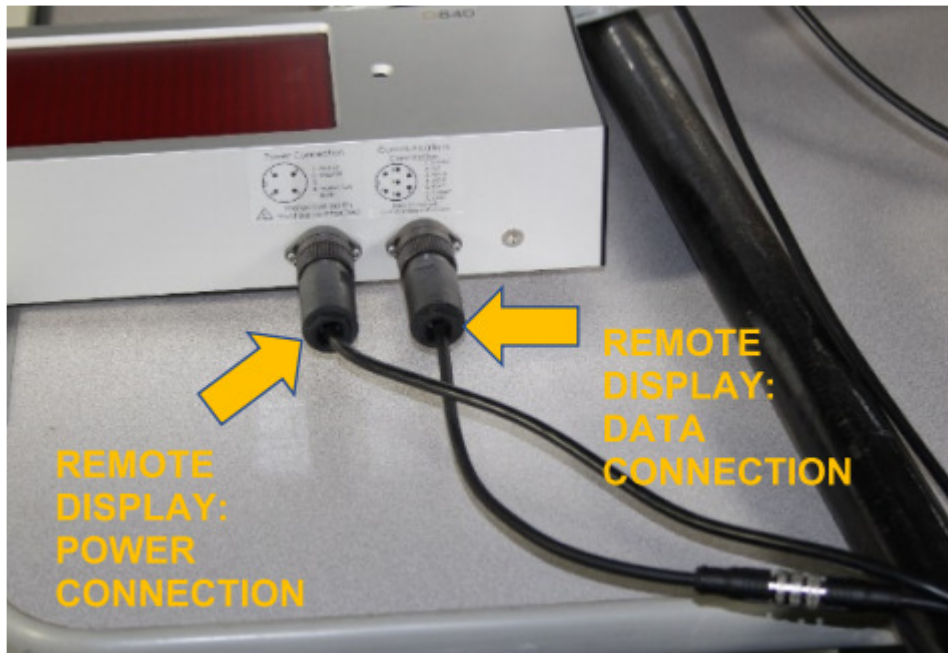
13.3. Load cell home run cable connection from scale to Console

A 90ft (30m) home run cable is run from the scale junction box (load cell) back to the console.



13.4. Remote Display Connections

The remote display has a data connection from the console (M12) for the weight reading and requires power.



13.5. Clicker system Connections

The clicker system uses an external antenna box that must be connected back to the console.

