SMART WEIGHING SOLUTIONS

rinstrum

5230
(Truck Weigher)
Digital Indicator
Applications Manual

For use with Software Versions 2.0 and above

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SPECIAL NOTE
Trade Use of the Rinstrum 5230

This manual may occasionally make reference to Trade Use settings of the **5230.** Only properly marked Trade Certified versions of the **5230** can be used in **Legal for Trade** applications. Trade Certification is available only on **5230** units with software Versions 2.0 and above.

Some individual settings may not be legal for trade use. Please check regulations with the appropriate Weights and Measures Authority.

"Everything should be made as simple as possible, but not simpler."

- Albert Einstein -

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1.   Introduction

The **5230** Truck Weighing indicator is designed to handle commonly used truck weighing functions without the need for an expensive data handling printer or the complexity of a PC based system. The dedicated keypad helps with the logical steps to perform required functions required on most sites.

Storing or printing first weights and printing full dockets with Truck, Product and Destination IDs makes the **5230** the ideal indicator for weighbridge controls. An optional **5230 Viewer** package is also available to make programming the information into the **5230** easier.

The unit is capable of a one only weighing or it can accommodate up to 10 axle weighings.   A Variable Multi-Axle option is available to allow for weighings where the number of axles in the first weighing differs from the second weighing.   An automatic weighing function has also been included in the **5230** to allow axle weighing to be performed with only one visit to the indicator.

Figure 1: Rinstrum 5230 Digital Indicator

1.1.   Audience

This Manual is aimed at the designer or installer who is familiar with the operation and setup of the **5230**.

1.2.   Scope

This manual provides information on some of the most commonly used functions of a weighbridge operation. It also provides information on how to individualise the system to suit customer requirements.

These examples in this manual represent only a sample of the full capabilities of the **5230** Truck Weigher. Refer to the **5230 Reference Manual** for full details on operation and setup.

1.3.   Manuals

For more information on the **5230 Truck Weigher**, refer to the **5230 Digital Indicator Reference Manual**, **5230 Quick Start Manual**, **5230 Operator Manual** or the **5230 Communications Manual** (available from www.rinstrum.com).

2. Preliminary Functions

This section and the following sections in this manual provide information on setting up specific aspects of the most commonly used functions for the **5230** (using the keypad).

It is assumed that the user has knowledge of the **5230** and that some menu options have been previously set (eg. BUILD).

Note: Creating IDs and altering most setup functions of the **5320** can also be performed with the optional **Rinstrum 5320 Viewer**. The Viewer allows setup and data to be transferred via a computer.

IDs: Truck IDs are required to perform weighing functions. Depending on the requirements, Product and Destination IDs may also be required. The following sections describe methods for creating each ID. The auxiliary display will reflect the type of ID being created (ie. Truck=TRK, Product=PRO or Destination=DST).

Reference Number: In each example the print tickets identify a reference number, (ie. 999999). Refer to Section 2.3 - Altering the Reference ID page 6.

2.1. Creating IDs Prior to a Transaction

2.1.1. Creating Truck IDs

• Press and hold the **<TRUCK>** key for two seconds.
• Press and hold the **<FIND>** key for two seconds.
• Enter the ID name from the alphanumeric keypad.
• Press the **<ACCEPT/OK>** key to create the ID.
• Another Truck ID can now be created by pressing and holding the **<FIND>** key for two seconds or the **<ACCEPT/OK>** key can be pressed to return to the normal display.

2.1.2. Creating Product IDs

• Press and hold the **<PRODUCT>** key for two seconds.
• Press and hold the **<FIND>** key for two seconds.
• Enter the ID name from the alphanumeric keypad.
• Press the **<ACCEPT/OK>** key to create the ID.
• Another Product ID can now be created by pressing and holding the **<FIND>** key for two seconds or the **<ACCEPT/OK>** key can be pressed to return to the normal display.

2.1.3. Creating Destination IDs

• Press and hold the **<DEST>** key for two seconds.	
• Press and hold the **<FIND>** key for two seconds.	
• Enter the ID name from the alphanumeric keypad.	
• Press the **<ACCEPT/OK>** key to create the ID.	
• Another Destination ID can now be created by pressing and holding the **<FIND>** key for two seconds or the **<ACCEPT/OK>** key can be pressed to return to the normal display.	

2.2. Creating IDs During a Transaction

• During a transaction, when prompted for the Truck (TRK), Product (PRO) or Destination (DST) ID, press and hold the **<FIND>** key for two seconds.	
• Enter the ID name from the alphanumeric keypad.	
• Press the **<ACCEPT/OK>** key to create the ID and continue with the transaction.	

2.3. Altering the Reference ID

• Press and hold the **<ID>** key for two seconds to display **REF.ID** alternating with the current setting.	
• Enter the new reference number from the numeric keypad.	
• Press the **<ACCEPT/OK>** key to save the reference number.	
• Press the **<ESC/C>** key to return to normal operation	

2.4.   Printer Setup (Serial Port 2)

In each example the printer port **SER.P2** has been set to the choices in the following table.

Note: In the examples the **PRN.TYP** has been set to **FIXED.1, FIXED.2** or **FIXED.3**. Samples of the different printer tickets using various options accompany each example.

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO ⊕〇⊕	FIRST 1	SECOND 2		PRINT ⊙	ACCEPT ✔
Ü **SER.P2**	**TYPE**	Set to PRINT	PRINT = Enables printer output AUTO.LO = Enables auto transmission at 10Hz OFF = Disables printer output		**Save**
	PRN.OPT	PRN.TYP	Set to FIXED.1, FIXED.2 or FIXED.3		**Save**
	BAUD	9600	300, 600, 1200, 2400, 4800, 9600, 19200 Set to PC or Printer Requirements		**Save**
	BITS	N 8 1 -	N = None (O = Odd, E = Even) 8 = 8 Data Bits (7 = 7 Data Bits) 1 = 1 Stop Bit (2 = 2 Stop Bits) - = No DTR Hand Shaking (D = DTR Hand Shaking enabled) Set to PC or Printer Requirements		**Save**

3.   Single Weight Ticketing (One Pass Only)

With **Single Weight Ticketing** the gross weight of a truck is printed but not stored.

An option is available to allow for a user defined Print ID to be entered for each weighing (as in this example). Fixed printouts are available to give details of the transaction (including ID if entered). This function does not allow for Product or Destination.

3.1.   Operation

Single Weight Ticketing
• The truck drives on the scale.
• Press the **<PRINT>** key.
• The unit prompts with **ENTER ID**. Enter a user defined ID from the alphanumeric keypad (eg. ABC123).
• Press the **<ACCEPT/OK>** key to accept your choice, print the ticket and return to normal operation.

3.2.   Sample Print Ticket (FIXED.1)

```
UNIT ID       : 22
ID            : ABC123

DATE          : 07-03-03
TIME          : 11:24
REFERENCE No.: 999999
SEQUENCE No. : 000080

GROSS WEIGHT :     75.6  t
```

3.3. Setup (Single Weight Ticketing (One Pass Only))

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO →()←	FIRST 1	SECOND 2	PRINT ⊙	ACCEPT ✓
BUILD Ü				

TRUCK	**OPER**
	
	Ü
		Set to N I S - -	N = Normal Weighing (A = Automatic)
			I = Prompt for ID Print (- = Don't)
			S = Single Axle (M = Multiple,
			   V = Variable)
			- = Don't Print/Totalise Destination
			   (D = Do)
			- = Don't Print/Totalise Product (P = Do)
				Save

	UNIT.ID	Set Unit ID to 22	Set the system ID (If 00 ID not printed)	**Save**
	DSTURB	Set to 0.5t	Disturbance required to re-arm Printer	**Save**
	TRK.MIN	Set to 0.5t	Required minimum weight before operation	**Save**
Disturbance/Truck Min may all need to be tuned into the bridge application.				
Ü **END**				

For instructions on printer setup refer to Section 2.4 page 7.

4. Single Weighing (In-Out)

Single Weighing allows a vehicle to be weighed and the weight stored as a first weight. This first weight can be printed if required. When the second weight is performed, the difference between the first and second weight is registered as the net weight. The vehicle can be either fully loaded or empty on the first weighing.

Fixed printouts are available to give all details of the transaction. As well as logging the Truck ID, a Product ID and Destination ID can also be logged on the printout. The Totals for Truck, Product and Destination IDs are available on the front display and also through the printer port.

4.1. Operation

First Weighing
• Press the **<FIRST>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept the displayed Truck ID.
• The unit displays the current weight and **DRIVE ON** alternately. (Auxiliary Display = **1ST**)
• The truck drives on the scale. When the weight is stable, press **<ACCEPT/OK>**.
• Press **<PRINT>** to store/print the result or press **<ACCEPT/OK>** to only store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.

Second Weighing
• When the truck returns to the scale, press the **<SECOND>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept the displayed Truck ID.
• If Products and/or Destinations are enabled, the unit will prompt for a Product and/or Destination ID.   Find or create the ID(s) and then press **<ACCEPT/OK>** to continue.
• The unit then displays the current weight and **DRIVE ON** alternately. (Auxiliary Display = **2ND**)
• The truck drives on the scale. When the weight is stable, press **<ACCEPT/OK>**.
• The unit will display **PRINT** and then print and store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.

4.2. Sample Print Tickets (FIXED.1)

```
              FIRST WEIGHING                              SECOND WEIGHING
UNIT ID      : 22                          UNIT ID      : 22
TRUCK        : 350BMC                       TRUCK        : 350BMC
                                            PRODUCT      : CEMENT
DATE         : 06-03-03                     DESTINATION  : S CITY
TIME         : 14:57
REFERENCE No.: 999999                       DATE         : 06-03-03
SEQUENCE No. : 000054                       TIME         : 14:58
                                            REFERENCE No.: 999999
                                            SEQUENCE No. : 000055
1ST WEIGHT   :     58.2  t
                                            1ST WEIGHT   :      58.2  t

                                            2ND WEIGHT   :     167.6  t


                                            NET WEIGHT   :     109.4  t
```

4.3. Setup (Single Weighing (In-Out))

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO ◦O◦	FIRST 1	SECOND 2		PRINT ⊙	ACCEPT ✓
BUILD					
Ü					
TRUCK	**OPER**	Set to N - S D P	N = Normal Weighing (A = Automatic) - = Don't Prompt for ID Print (I = Do) S = Single Axle (M = Multiple, V = Variable) D = Print/Totalise Destination (- = Don't) P = Print/Totalise Product (- = Don't)	**Save**
	Ü				
	UNIT.ID	Set Unit ID to 22	Set Unit ID (If 00 ID is not printed)	**Save**
	DSTURB	Set to 0.5t	Disturbance required to re-arm Printer	**Save**
	TRK.MIN	Set to 0.5t	Required minimum weight before operation	**Save**
Disturbance/Truck Min may all need to be tuned into the bridge application.					
Ü					
END					

For instructions on printer setup refer to Section 2.4 page 7.

5. Single Weighing with 7 Day Preset Tare (In-Out)

A **Single Weighing with Preset Tare** allows the weight of a vehicle to be entered via the keypad. The weight is stored as a first weight preset tare and can be set to expire after a selectable time frame. With a preset tare weighing, only a second weighing is required with the loaded vehicle.

Fixed printouts are available to give all details of the transaction. As well as logging the Truck ID, a Product ID, Destination ID and Preset Tare can also be logged on the printout. The Totals for Truck, Product and Destination IDs are available on the front display and also through the printer port.

It is advisable to check with local authorities to ensure the preset tare functionality is legal for trade use.

5.1. Operation

Preset Tare Weighing
• Press the **<SECOND>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• If Products and/or Destinations are enabled, the unit will prompt for a Product and/or Destination ID. Find or create the ID(s) and then press **<ACCEPT/OK>** to continue.
• The unit displays six digits where the preset tare weight can be entered. (Auxiliary Display = **PT**) Enter the weight to be used for the preset tare and press **<ACCEPT/OK>**.
• The unit displays the current weight and **DRIVE ON** alternately. (Auxiliary Display = **2ND**)
• The truck drives on the scale. When the weight is stable, press **<ACCEPT/OK>**.
• Press **<PRINT>** to store/print the result or press **<ACCEPT/OK>** to only store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.

5.2. Sample Print Ticket (FIXED.1)

```
UNIT ID        : 22
TRUCK          : 350BMC
PRODUCT        : CEMENT
DESTINATION    : S CITY

DATE           : 07-03-03
TIME           : 11:19
REFERENCE No.: 999999
SEQUENCE No.  : 000076

GROSS WEIGHT  :     37.6  t

TARE WEIGHT   :      2.7  t PT

NET WEIGHT    :     34.9  t
```

5.3.   Setup (Single Weighing with 7 Day Preset Tare (In-Out))

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO	FIRST	SECOND	PRINT	ACCEPT
BUILD				
Ü				
TRUCK	**OPER**	Set to N - S D P	N = Normal Weighing (A = Automatic) - = Don't Prompt for ID Print (I = Do) S = Single Axle (M = Multiple, V = Variable) D = Print/Totalise Destination (- = Don't) P = Print/Totalise Product (- = Don't)	**Save**
	TAR.EXP	Set to 7 Days	Tare Expiry IMMED, 7 Days, 14 Days, Never	**Save**
	UNIT.ID	Set Unit ID to 22	Set Unit ID (If 00 ID is not printed)	**Save**
	DSTURB	Set to 0.5t	Disturbance required to re-arm Printer	**Save**
	TRK.MIN	Set to 0.5t	Required minimum weight before operation	**Save**
Tare Expire/Disturbance/Truck Min may all need to be tuned into the bridge application.				
Ü				
END				

For instructions on printer setup refer to Section 2.4 page 7.

6. Batch Process Single Weighing (In-Out)

With **Batch Process Single Weighing** the batching is performed directly on the weighbridge. The operation allows a truck to be tared off and, via the optional outputs, a silo can be controlled to dump a specified amount of product into a truck while it is still on the weighbridge.

Fixed printouts are available to give all details of the transaction. As well as logging the Truck ID, a Product ID and Destination ID can also be logged on the printout. The Totals for Truck, Product and Destination IDs are available on the front display and also through the printer port.

6.1. Operation

Batch Process Weighing
• The truck should be on the scale.
• Press the **<REMOTE>** key (previously defined in Setup as a **FILL** input) .
• Press the **<FIND>** key and then the first letter of the Truck ID. (Auxiliary Display = **TRK**)
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• If Products and/or Destinations are enabled, the unit will prompt for a Product and/or Destination ID. Find or create the ID(s) and then press **<ACCEPT/OK>** to continue.
• Enter the slow fill target for Setpoint 1 using the numeric keypad. (Auxiliary Display = **TGT**)
• Press **<ACCEPT/OK>** to accept the target weight.
• The **FILL** prompt will flash on the display, alternating with the current weight.
• Press the **<REMOTE>** key (**FILL** input) again. This starts the fill process (assuming interlocks are in place and the minimum weight is on the scale).
• The message **FIRST STORED** displays to indicate the truck weight has been stored. The accepted IDs will then flash on the display, alternating with the current weight.
• The filling procedure runs and the Range/Output Display will reflect the current configuration.

• To pause the batch operation press the **<REMOTE>** key (**FILL** input). The message **PAUSE OPER** displays alternately with the last accepted ID and the current weight. Another press of the same **<REMOTE>** key will restart the operation.
• To abort the batch operation, press the **<ESC/C>** key for two seconds.

6.2. Sample Print Ticket (FIXED.1)

```
TRUCK         : 350BMC
PRODUCT       : CEMENT
DESTINATION   : S CITY

DATE          : 06-03-03
TIME          : 15:37
REFERENCE No.: 999999
SEQUENCE No. : 000059

1ST WEIGHT    :       2.5  t

2ND WEIGHT    :      12.9  t

NET WEIGHT    :      10.4  t
```

6.3. Setup (Batch Process Single Weighing (In-Out))

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO ⇥0⇤	FIRST 1	SECOND 2	PRINT ☉	ACCEPT ✔
BUILD				
Ü				
SPEC	Ü			
	FUNCTN	REM 1	FILL	**Save**
	Ü			
	AUX.DSP	Set to FILL.PC	FILL.PC = Fill Percentage TIME = Current Time	**Save**
TRUCK	**OPER**	Set to N - S D P	N = Normal Weighing (A = Automatic) - = Don't Prompt for ID Print (I = Do) S = Single Axle (M = Multiple, V = Variable) D = Print/Totalise Destination (- = Don't) P = Print/Totalise Product (- = Don't)	**Save**
	Ü			
	UNIT.ID	00 (Default)	Set Unit ID (If 00 ID is not printed)	**Save**
	DSTURB	Set to 0.5t	Disturbance required to re-arm Printer	**Save**
	TRK.MIN	Set to 0.5t	Required minimum weight before operation	**Save**
Ü				
Disturbance/Truck Min may all need to be tuned into the bridge application.				
SET.PTS	**SET.TYP**	SETP 1	SLOW	**Save**
		Set to N _ _ S -	N = Net (G = Gross) _ = Not Used _ = Not Used S = Single Beep (D = Double, - = None) - = No Jogging (J = Auto Jogging)	**Save**
	GEN.OPT	OPTION	E D - E = Pause on Error D = Delay before Fill - = One Feeder Only (All speeds together)	**Save**
	IN.FLT	IN.FLT 1	Set in-flight compensation (Note: Not auto in-flight)	**Save**
Ü				
END				

For instructions on printer setup refer to Section 2.4 page 7.

7. Multiple Axle Weighing (In-Out)

A **Multiple Axle Weighing** allows up to 10 axles of a vehicle to be weighed and the weights stored as a first weight. These weights can be printed if required. With the first and second weighings, the number axles on the vehicle must be the same. When the second weighing is performed, the difference between the first and second weight is registered as the net weight. The vehicle can be either fully loaded or empty on the first weighing.

Fixed printouts are available to give all details of the transaction. As well as logging the Truck ID, a Product ID, Destination ID and axle weights can also be logged on the printout. The Totals for Truck, Product and Destination IDs are available on the front display and also through the printer port.

7.1. Operation

First Weighing
• Press the **<FIRST>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• Enter the number of axles (maximum 10) from the numeric keypad. (Auxiliary Display = **AXL**) In the case of split weighing, enter the number of weighings required to obtain a total weight.
• Press **<ACCEPT/OK>** to accept the displayed number of axles.
• The unit then displays the current weight and **AXLE 1** alternately. (Auxiliary Display = **1-n** where **n** equals the total number of axles)
• The truck drives on the scale to the first axle. When the weight is stable, press **<ACCEPT/OK>**.
• The truck drives on the scale to the next axle. When the weight is stable, press **<ACCEPT/OK>**. Continue until all weighings are accepted.
• Press **<PRINT>** to store/print the result or press **<ACCEPT/OK>** to only store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.
Second Weighing
• When the truck returns to the scale, press the **<SECOND>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• If Products and/or Destinations are enabled, the unit will prompt for a Product and/or Destination ID. Find or create the ID(s) and then press **<ACCEPT/OK>** to continue.
• The unit then displays the current weight and **AXLE 1** alternately. (Auxiliary Display = **1-n** where **n** equals the total number of axles)
• The truck drives on the scale to the first axle. When the weight is stable, press **<ACCEPT/OK>**.
• The truck drives on the scale to the next axle. When the weight is stable, press **<ACCEPT/OK>**. Continue until all weighings are accepted.
• The unit will display **PRINT** and then print and store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.

7.2. Sample Print Ticket (FIXED.2)

```
        FIRST WEIGHING            SECOND WEIGHING
TRUCK          : 350BMC          TRUCK          : 350BMC
                                 PRODUCT        : COAL
DATE           : 06-03-03        DESTINATION    : N CITY
TIME           : 15:51
REFERENCE No.: 999999            DATE           : 06-03-03
SEQUENCE No. : 000061            TIME           : 15:54
                                 REFERENCE No.: 999999
AXLE 1         :      2.2  t      SEQUENCE No. : 000062
AXLE 2         :      3.2  t
AXLE 3         :      4.9  t      AXLE 1         :      2.5  t
                                 AXLE 2         :      4.4  t
                                 AXLE 3         :      7.3  t
1ST WEIGHT     :     10.3  t
                                 1ST WEIGHT     :     10.3  t

                                 2ND WEIGHT     :     14.2  t


                                 NET WEIGHT     :      3.9  t
```

7.3. Setup (Multiple Axle Weighing (In-Out))

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO ⊷○⊷	FIRST 1	SECOND 2	PRINT ⊙	ACCEPT ✔
BUILD				
Ü				
TRUCK	**OPER**	Set to N - M D P	N = Normal Weighing (A = Automatic) - = Don't Prompt for ID Print (I = Do) M = Multiple Axle (S = Single, V = Variable) D = Print/Totalise Destination (- = Don't) P = Print/Totalise Product (- = Don't)	**Save**
	Ü			
	UNIT.ID	00 (Default)	Set Unit ID (If 00 ID is not printed)	**Save**
	DSTURB	Set to 0.5t	Disturbance required to re-arm Printer	**Save**
	TRK.MIN	Set to 0.5t	Required minimum weight before operation	**Save**
Disturbance/Truck Min may all need to be tuned into the bridge application.				
Ü				
END				

For instructions on printer setup refer to Section 2.4 page 7.

8. Variable Axle Weighing (In-Out)

A **Variable Axle Weighing** allows up to 10 axles of a vehicle to be weighed and the weights stored as a first weight. These weights can be printed if required. With the first and second weighings, the number axles on the vehicle may be different (eg. due to retractable axles, or in the case of logging industries, where the boggy is carried on the back of the prime mover when not loaded). When the second weighing is performed, the difference between the first and second weight is registered as the net weight. The vehicle can be either fully loaded or empty on the first weighing.

Fixed printouts are available to give all details of the transaction. As well as logging the Truck ID, a Product ID, Destination ID and axle weights can also be logged on the printout. The Totals for Truck, Product and Destination IDs are available on the front display and also through the printer port.

8.1. Operation

First Weighing
• Press the **<FIRST>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• Enter the number of axles (maximum 10) from the numeric keypad. (Auxiliary Display = **AXL**) In the case of split weighing, enter the number of weighings required to obtain a total weight.
• Press **<ACCEPT/OK>** to accept the displayed number of axles.
• The unit then displays the current weight and **AXLE 1** alternately. (Auxiliary Display = **1-n** where **n** equals the total number of axles)
• The truck drives on the scale to the first axle. When the weight is stable, press **<ACCEPT/OK>**.
• The truck drives on the scale to the next axle. When the weight is stable, press **<ACCEPT/OK>**. Continue until all weighings are accepted.
• Press **<PRINT>** to store/print the result or press **<ACCEPT/OK>** to only store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.
Second Weighing
• When the truck returns to the scale, press the **<SECOND>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• If Products and/or Destinations are enabled, the unit will prompt for a Product and/or Destination ID. Find or create the ID(s) and then press **<ACCEPT/OK>** to continue.
• Enter the number of axles (maximum 10) from the numeric keypad. (Auxiliary Display = **AXL**) In the case of split weighing, enter the number of weighings required to obtain a total weight.
• Press **<ACCEPT/OK>** to accept the displayed number of axles.
• The unit then displays the current weight and **AXLE 1** alternately. (Auxiliary Display = **1-n** where **n** equals the total number of axles)
• The truck drives on the scale to the first axle. When the weight is stable, press **<ACCEPT/OK>**.
• The truck drives on the scale to the next axle. When the weight is stable, press **<ACCEPT/OK>**. Continue until all weighings are accepted.
• The unit will display **PRINT** and then print and store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.

8.2.   Sample Print Ticket (FIXED.3)

```
           FIRST WEIGHING          | SECOND WEIGHING
TRUCK         : 350BMC             | TRUCK         : 350BMC
                                   | PRODUCT       : COAL
DATE          : 07-03-03          | DESTINATION   : N CITY
TIME          : 09:57             |
REFERENCE No.: 999999             | DATE          : 07-03-03
SEQUENCE No. : 000074             | TIME          : 09:59
                                   | REFERENCE No.: 999999
AXLE 1        :      3.5  t        | SEQUENCE No. : 000075
AXLE 2        :      4.1  t        |
                                   | 1ST WEIGHT    :      7.6  t
1ST WEIGHT    :      7.6  t        |
                                   | 2ND WEIGHT    :     19.9  t
                                   |
                                   | NET WEIGHT    :     12.3  t
```

8.3.   Setup (Variable Axle Weighing (In-Out))

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO ⊕	FIRST 1	SECOND 2		PRINT ⊙	ACCEPT ✓
BUILD					
Ü					
TRUCK	**OPER**	Set to N - V D P	N = Normal Weighing (A = Automatic) - = Don't Prompt for ID Print (I = Do) V = Variable Axle (S = Single, M = Multiple) D = Print/Totalise Destination (- = Don't) P = Print/Totalise Product (- = Don't)		**Save**
	Ü				
	UNIT.ID	00 (Default)	Set Unit ID (If 00 ID is not printed)		**Save**
	DSTURB	Set to 0.5t	Disturbance required to re-arm Printer		**Save**
	TRK.MIN	Set to 0.5t	Required minimum weight before operation		**Save**
Disturbance/Truck Min may all need to be tuned into the bridge application.					
Ü					
END					

For instructions on printer setup refer to Section 2.4 page 7.

9. Automatic Multiple Axle Weighing (In-Out)

An **Automatic Multiple Axle Weighing** allows up to 10 axles of a vehicle to be weighed and stored automatically with only one visit to the indicator at the axle scales. Either an alarm or an alphanumeric remote display is required to indicate to the driver that the print has been accepted and to move forward to the next axle. (When the **5230** is in automatic weight accept mode, the **6500** is the most appropriate remote display unit.) When the second weighing is performed, the difference between the first and second weight is registered as the net weight. The vehicle can be either fully loaded or empty on the first weighing.

Fixed printouts are available to give all details of the transaction. As well as logging the Truck ID, a Product ID, Destination ID and axle weights can also be logged on the printout. The Totals for Truck, Product and Destination IDs are available on the front display and also through the printer port.

9.1. Operation

First Weighing
• Press the **<FIRST>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID.
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• Enter the number of axles (maximum 10) from the numeric keypad. (Auxiliary Display = **AXL**) In the case of split weighing, enter the number of weighings required to obtain a total weight.
• Press **<ACCEPT/OK>** to accept the displayed number of axles.
• The unit then displays the current weight and **AXLE 1** alternately. (Auxiliary Display = **1-n** where **n** equals the total number of axles)
• The truck drives on the scale to the first axle. After a period of no motion, the weight will be automatically accepted and **AXLE 2** will display.
• The truck drives on to the next axle. After a period of no motion, the weight will be automatically accepted. Continue until all weighings are accepted.
• The unit then displays **PRINT** and then **DRIVE OFF** when all weighings are complete. The truck drives off the scale.
Second Weighing
• When the truck returns to the scale, press the **<SECOND>** key.
• Press the **<FIND>** key and then the first letter of the Truck ID. (Auxiliary Display = **TRK**)
• Press the **<FIND>** key to scroll until the code is displayed. (If the truck is commonly used the first letter is not required. Pressing the find key will scroll through the last 10 trucks.)
• Press **<ACCEPT/OK>** to accept displayed Truck ID.
• If Products and/or Destinations are enabled, the unit will prompt for a Product and/or Destination ID. Find or create the ID(s) and then press **<ACCEPT/OK>** to continue.
• Enter the number of axles (maximum 10) from the numeric keypad (Auxiliary Display = **AXL**). In the case of split weighing, enter the number of weighings required to obtain a total weight.
• Press **<ACCEPT/OK>** to accept the displayed number of axles.
• The unit then displays the current weight and **AXLE 1** alternately. (Auxiliary Display = **1-n** (where **n** equals the total number of axles)
• The truck drives on the scale to the first axle. After a period of no motion, the weight will be automatically accepted and **AXLE 2** will display.
• The truck drives on to the next axle. After a period of no motion, the weight will be automatically accepted. Continue until all weighings are accepted.
• The unit will display **PRINT** and then print and store the result.
• The unit then displays **DRIVE OFF**. The truck drives off the scale.

9.2. Sample Print Ticket (FIXED.2)

```
          FIRST WEIGHING          | SECOND WEIGHING
TRUCK         : 350BMC            | TRUCK         : 350BMC
                                  | PRODUCT       : COAL
DATE          : 07-03-03          | DESTINATION   : N CITY
TIME          : 09:35             |
REFERENCE No.: 999999             | DATE          : 07-03-03
SEQUENCE No. : 000072             | TIME          : 09:36
                                  | REFERENCE No.: 999999
AXLE 1        :      4.2  t        | SEQUENCE No. : 000073
AXLE 2        :      6.4  t        |
AXLE 3        :      9.1  t        | AXLE 1        :      9.1  t
                                  | AXLE 2        :     13.5  t
                                  | AXLE 3        :     18.9  t
1ST WEIGHT    :     19.7  t        |
                                  | 1ST WEIGHT    :     19.7  t
                                  |
                                  | 2ND WEIGHT    :     41.5  t
                                  |
                                  | NET WEIGHT    :     21.8  t
```

9.3. Setup (Keypad)

- To enter setup press and hold both the **<ZERO>** and **<FIND>** keys together for two seconds.
- Each press of the **<ESC/C>** key will go back one step in the menus.
- The bottom of the LCD display prompts for key functions (Group, Item, Select, Edit, OK).
- In the instructions below the Down Arrow Ü indicates that the button above requires numerous presses to access the next setup option.

ZERO	FIRST	SECOND	PRINT	ACCEPT
BUILD				
Ü				
TRUCK	**OPER**	Set to A - M D P	A = Automatic Weighing (N = Normal) - = Don't Prompt for ID Print (I = Do) M = Multiple Axle (S = Single, V = Variable) D = Print/Totalise Destination (- = Don't) P = Print/Totalise Product (- = Don't)	**Save**
	Ü			
	UNIT.ID	00 (Default)	Set Unit ID (If 00 ID is not printed)	**Save**
	DSTURB	Set to 0.5t	Disturbance required to re-arm Printer	**Save**
	TRK.MIN	Set to 0.5t	Required minimum weight before operation	**Save**
Disturbance/Truck Min may all need to be tuned into the bridge application.				
Ü				
END				

For instructions on printer setup refer to Section 2.4 page 7.

Notes:

Notes:

SMART WEIGHING SOLUTIONS

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