DCSG Series

Digital Counting Scale
Dual-Channel

Operation Manual

Revision 2.0
February 15, 2000

Transcell Technology inc.

ATTENTION:

To extend the life of your digital scale, do not drop items to be weighed onto the platform or overload the scale beyond its rated capacity. Shock-loading and overloading may damage the load cell and void the warranty.

Contents subject to change without notice.

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Electromagnetic Compatibility Statement for Europe

PRODUCT DCSG	Directives with which this equipment complies:
Harmonized Standards applied:	**EMC 89/336/EEC** EMC Directive
	EMC 92/31/EEC EMC Directive
	EMC 73/23/EEC EMC Directive
EN 55011:1991 + A1:1997 + A2:1996 (Group 1, Class B)	**EN 45501:1993**
EN 61000-3-2:1995 + A13:1997	**IEC801-2:1991**
EN 61000-3-3:1995	**IEC801-3:1991**
	IEC801-4:1988
	Short Time Power Reductions
Year in which CE mark affixed **1999**	**Date of issue March 1999**

Electromagnetic Compatibility Statement for North America

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

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CHAPTER 1: INTRODUCTION TO THE TRANSCELL DCSG SERIES DIGITAL COUNTING SCALE

The Transcell Model DCSG Series Digital Counting Scale is an easy to use, high-resolution counting scale featuring keyboard tare, unit weight entry and item ID storage. It is equipped with many useful features that are normally found on much more expensive scale products, including dual-channel, memory accumulator and target values.

The scale is available in four avoirdupois weight capacities and four metric weight capacities. Table 1-1 shows the DCSG series product matrix.

If your Model DCSG Series Digital Counting Scale is part of a complete scale system or has been installed for you, it is necessary to read only Chapters 2 through 4 for complete scale operation. Prior to using the scale, please read this user's guide carefully and completely. Store the manual in a safe and convenient place so it will be available if you have questions concerning the operation of the scale.

If you are an installer, the remote scale's installation and wiring instructions are found in Appendix D. The scale contains two main setup menus: The Service Menu configures the scale to your remote weigh platform. The Supervisor Menu configures the serial communication ports and enables some user options. Chapter 5 covers both menus in detail. Chapter 6 covers system calibration. Prior to installing the scale, please read this manual carefully and completely. Store the manual in a safe and convenient place so it will be available if you have questions concerning the setup and operation of the scale.

MODEL	CAPACITY / GRADUATION	MODEL	CAPACITY / GRADUATION
DCSG-12	12 x 0.0005 lb	DCSG-6M	6000 g x 0.2 g
DCSG-30	30 x 0.001 lb	DCSG-15M	15 x 0.0005 kg (0.5 g)
DCSG-60	60 x 0.002 lb	DCSG-30M	30 x 0.001 kg (1 g)
DCSG-120	120 x 0.005 lb	DCSG-60M	60 x 0.002 kg (2 g)

TABLE 1-1: DCSG Series Product Matrix

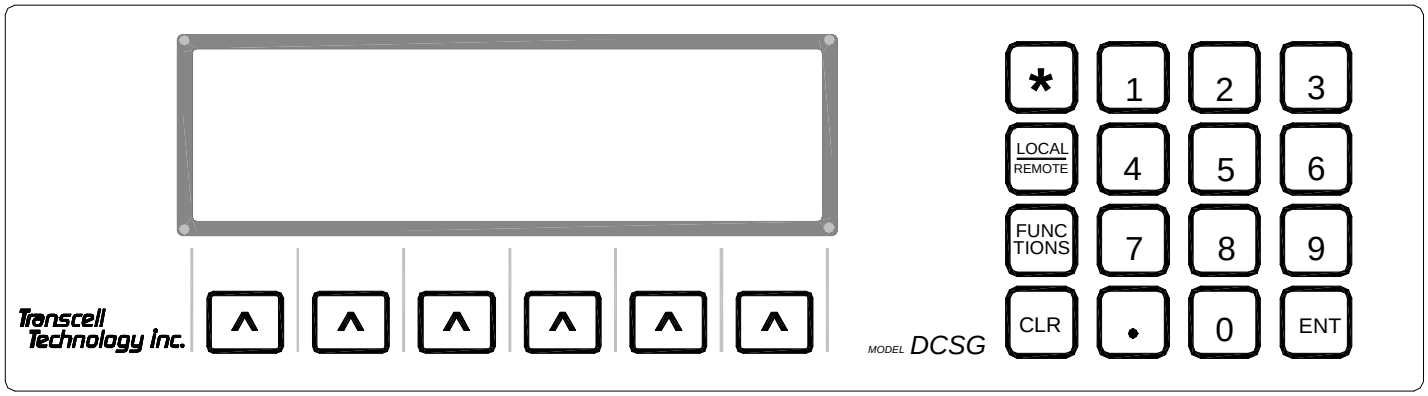


FIGURE 1-1: DCSG Series Front Panel

CHAPTER 2: GETTING STARTED

After unpacking the scale, a small amount of preparation is required before the scale can be used. Please refer to Figure 2-1 below as needed.

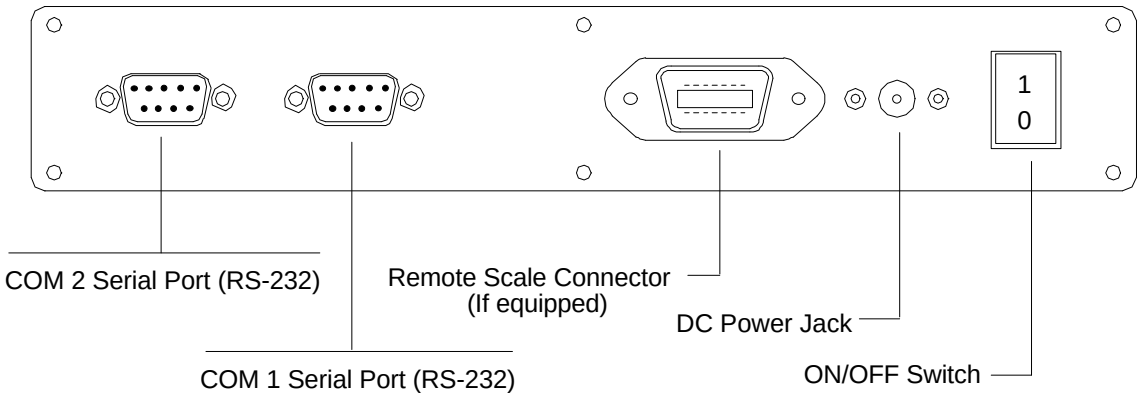


Figure 2-1: DCSG Back Panel

Step 1. Position the scale in its area of intended use. Observe the following guidelines for suitable location.

1. Choose a firm, stable floor or table.
2. Do not share an AC outlet with electrical noise producing equipment, such as refrigeration units. This includes products with electrical motors and/or relays.
3. Do not place the scale in an area with changing ambient temperature and/or high humidity.
4. Do not place the scale in an area prone to exposure to direct sunlight, wind, or dust.
5. Do not place the scale in an area with vibrating equipment.

Step 2. Install the AC Adapter.

1. After placing the scale in its area of use, locate the Model A41408 AC Adapter.
2. Connect the female end of the AC Adapter to the connector on the rear of scale, and then plug the adapter into an AC outlet.

Step 3. If applicable, install the serial printer to the COM1 serial port.

1. Connect the printer to the COM1 port using the optional serial cable. See Appendix B for cabling requirements and pinouts.
2. Configure the communication parameters and select the device type as detailed in Section 5.3.5.
3. Configure the formatting parameters for the printer as detailed in Section 5.2.2.
4. Set the current Time and Date as detailed in Section 5.2.3.

Step 4. If applicable, install the second serial device to the COM2 serial port. Currently, the second serial device can be a bar code scanner or a computer. **Note:** Some earlier models do not have a second serial port.

1. Connect the device to the COM2 port using the optional serial cable. See Appendix B for cabling requirements and pinouts.
2. Configure the communication parameters and select the device type as detailed in Section 5.3.5.

Step 5. If applicable, install the remote scale.

1. Connect the remote scale to the DCSG's remote scale port using the provided remote scale cable. Consult Appendix D for proper cabling.
2. Configure the remote scale's parameters in the Service Menu as detailed in Chapter 5.
3. Calibrate the remote scale as detailed in Chapter 6.
4. Enable the remote scale in the Supervisor Menu as detailed in Chapter 5.

Step 6. Turn the scale's AC power on to begin use.

CHAPTER 3: OPERATION

3.1 DISPLAY

The Model DCSG scale utilizes an LCD (Liquid Crystal Display) capable of displaying various sizes of characters and graphic images.

3.1.1 LIQUID CRYSTAL DISPLAY (LCD)

Figure 3-1 shows the display detail of the DCSG Series. As shown in Figure 3-1, the scale displays weight information as well as the soft keys. Soft keys are generic keys whose functions change as the scale's operation changes. When additional information is needed, the scale will prompt for the information in pop-up windows. Table 3-1 lists the various annunciators you may see and their meanings.

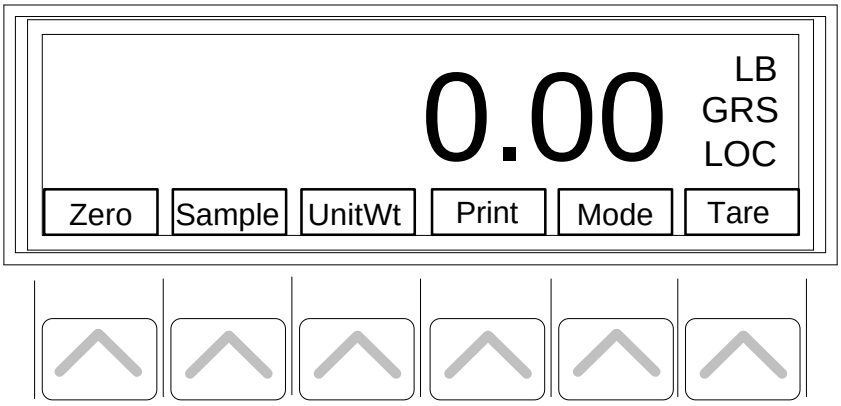


FIGURE 3-1: DCSG Display Detail

Annunciator	MEANING
Unit Wt	Indicates that the scale is displaying the unit weight of the items you are counting.
GRS, NET	Indicates that the scale is displaying gross or net weight.
LB, KG	Indicates the unit of the displayed weight.
PCS	Indicates the number of pieces on the platform.
REM, LOC	Indicates that the displayed weight is from the remote scale or the local scale.
T	Indicates that a tare has been established in the system.
LTD	Indicates that the scale is operating in "Limited Feature" mode as setup in the Service Menu. (See Chapter 5). Limited feature mode prohibits use of the FUNCTIONS key operations.

TABLE 3-1: DCSG Series Annunciator Definitions

3.2 KEYBOARD

The keyboard is composed of six soft keys, six function keys and ten numeric keys. Refer to Figures 3-1 and 3-2 for the overall layout and key locations.

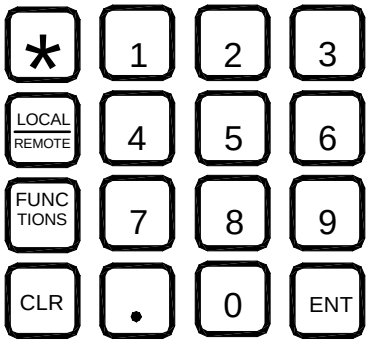


FIGURE 3-2: Function and Numeric Keys Layout

3.2.1 SOFT KEYS

Here are some soft keys that you will encounter during normal scale operation.

Zero - This key sets the scale to display zero.

Sample – This key puts the scale into sampling mode, which is used for piece counting. See Section 3.3.5 for more information.

Unit Wt – This key is used to enter a known unit weight of an item into the scale.

Mode – This key toggles the scale among the weight, pieces and unit weight display screens.

Tare - This key is used to establish a Tare provided the scale is not at or below Gross zero.

Print - This key is used to send weight information out to the serial interface port provided the scale is in a state of stability.

3.2.2 FUNCTION AND NUMERIC KEYS

CLR - This key is used to clear the current unit weight and tare from the scale. This key is also used to escape from a screen that you may have entered accidentally.

Decimal Point - This key is used to enter a decimal point when entering numeric values. This key is also used to activate and deactivate the hold feature if enabled in the Supervisor Menu.

ENT - This key is used to enter a numeric entry and to answer “YES” to a Yes/No question.

Local/Remote - This key is used to select the local or remote scale. The scale displays information pertaining only to the scale that is selected.

Functions - This key is used to access the scale’s advanced features and operations. See Chapter 4 for more information.

***** – This key is used to access the scale’s Supervisor and Service Menus. See Chapter 5 for more information.

0-9 – These keys are used to enter numeric and alphanumeric data into the scale.

3.3 GENERAL SCALE OPERATION

3.3.1 WEIGHING AN ITEM

1. First use the Local/Remote key to select the scale you wish to use to do the weighing.
2. If necessary, press the Zero soft key to obtain a weight reading of zero.
3. Place the object to be weighed on the scale's platter and allow the weight indication to stabilize. If the item weight exceeds the scale's weight capacity, it displays "*Maximum Scale Weight Exceeded*".
4. Read the weight shown on the display.

Note: If you wish to change the unit of measure, press the Functions key followed by the "More" and "lb-kg" soft keys.

3.3.2 TARING AN ITEM OF UNKNOWN WEIGHT

To weigh an item in a container, the weight of that container must first be subtracted from the overall weight to obtain an accurate weight reading. This is known as taring.

1. First use the Local/Remote key to select the scale you wish to use to do the weighing.
2. If necessary, press the Zero soft key to obtain a weight reading of zero.
3. Place the empty container on the scale's platter and allow the weight indication to stabilize.
4. Press the TARE soft key. The scale prompts "Key-in Tare?"
5. Press the No soft key. The display shows zero weight and turns the NET annunciator on.
6. Place the material to be weighed in the container and allow the weight indication to stabilize.
7. Read the weight shown on the display.

3.3.3 TARING AN ITEM OF KNOWN WEIGHT

If the weight of the container or object is known, you may enter this weight via the keyboard. This value must be rounded to the nearest scale division. For example, on a 60 x 0.002 lb scale, you must enter the tare weight value to the nearest 0.002 lb.

1. First use the Local/Remote key to select the scale you wish to use to do the weighing.
2. Press the TARE soft key. The scale prompts "Key-in Tare?"
3. Press the Yes soft key. The scale prompts for the tare value.
4. Using the numeric keys, key-in the known tare weight and press ENT. The display shows minus weight and turns the NET annunciator on.
5. Place the material to be weighed in the container and allow the weight indication to stabilize.
6. Read the weight shown on the display.

3.3.4 CLEARING A TARE

1. To clear a tare, press the CLR key at any time. The NET annunciator disappears and the gross weight is displayed.

3.3.5 PIECE COUNTING

This mode is used to indicate the number of pieces of an item you have placed on the scale's platform and is accessed by pressing the SAMPLE soft key. To ensure accuracy, the parts you are counting must be consistent in weight.

The scale uses the sampling method to determine the average piece weight (APW) of the items you wish to count. When sampling items, always count the parts in your hand and place them on the platform all at once. If the APW of the items is too light or the total weight of the sample is too light, accuracy cannot be guaranteed. You will get an error message, but piece counting will still be allowed. Consult Table 3-2 for minimum piece weights and sample weights.

1. If the items you will be counting require a container, you must first tare the container off by pressing the TARE soft key. The scale switches to NET mode and sets the displayed weight to zero.

   NOTE: Enabling the Auto Tare feature in the Supervisor Menu (Chapter 5) can eliminate this step.

2. Press the SAMPLE soft key. The scale will display "Add 10 pcs to the platter then press the ENT key". The scale is prompting you to place ten identical items on the platform.

   NOTE: If you wish to change the sample number, simply choose a displayed soft key selection. Available choices are 5, 10, 25, 50 and 100. If you have a non-standard sample amount, press the Key-in soft key to enter the sample number.

3. Place the sample items on the platform all at once and press the ENT key to take the sample. If the sample meets the limits shown in Table 3-2, the scale will now display the number of pieces on the scale. If it does not, the scale briefly displays an error message, but still allows piece counting. If this occurs, you should use a higher sample amount to achieve better piece count accuracy. Please see Appendix C for an explanation of the error messages.

   NOTE 1: You can eliminate the need to press the ENT key by enabling the Auto Sampling feature in the Supervisor Menu (Chapter 5).

   NOTE 2: You can program the scale to automatically switch from the local scale to the remote scale (if equipped) by enabling the Auto Switch Channel feature in the Supervisor Menu (Chapter 5). The scale will automatically switch channels after a successfully sample has been made.

   NOTE 3: If the scale displays a "Low Resolution" message, the unit weight of the items you wish to count is too light for your scale to process at all.

3.3.6 CLEARING THE PIECE COUNT

1. To clear the piece count, either press the CLR key to erase the sample or press the SAMPLE soft key to take a new sample.

MODEL	Capacity / Graduation	Minimum Piece Weight	Minimum Sample Weight
DCSG-12	12 x 0.0005 lb	0.0004 lb	0.0125 lb
DCSG-30	30 x 0.001 lb	0.0008 lb	0.025 lb
DCSG-60	60 x 0.002 lb	0.0016 lb	0.05 lb
DCSG-120	120 x 0.005 lb	0.004 lb	0.125 lb
DCSG-6M	6000 x 0.2 g	0.16 g	5 g
DCSG-15M	15 x 0.0005 kg (0.5 g)	0.4 g	12.5 g
DCSG-30M	30 x 0.001 kg (1 g)	0.8 g	25 g
DCSG-60M	60 x 0.002 kg (2 g)	1.6 g	50 g

TABLE 3-2: DCSG Sampling Limits

CHAPTER 4: ADVANCED FEATURES AND OPERATION

4.1 UNIT WEIGHT ENTRY

If you already know the unit weight (a.k.a. Average Piece Weight or APW) of the items you wish to count, then use the following procedure.

4.1.1 UNIT WEIGHT ENTRY

1. Press the UNIT WT soft key. The scale prompts you to enter the unit weight.
2. Using the numeric and decimal point keys, key-in the actual unit weight value.
3. Press the ENT key. If the unit weight is large enough, the scale will now display the number of pieces on the scale. If it does not, the scale briefly displays an error message, but still allows piece counting. Please see Appendix C for an explanation of the error messages.

   NOTE 1: If the scale displays a "Low Resolution" message, the unit weight of the items you wish to count is too light for your scale to process at all.

   NOTE 2: If so equipped, you may use your scale' s bar code scanner to scan in the unit weight from a pre-printed label. In order for the scale to properly read the data, the label must have been previously printed by a DCSG series scale.

4.2 ITEM ID STORAGE

Your scale can store piece weight information for up to 500 items of your choosing. These items are stored and retrieved under an Item ID number. The Item ID number is assigned and maintained automatically by the scale and cannot be changed. Each item entry stores the following information:

- Product ID – a numeric field consisting of up to 10 characters
- Name – an alphanumeric filed consisting of up to 15 characters
- Unit Weight (APW)
- Tare Weight - of the Container for Local Scale
- Tare Weight - of the Container for Remote Scale (if equipped)

After sampling an item, you can store its information automatically by adding a new item entry. Once created and stored, you can recall and modify the item's information by calling up its Item ID number. A list of all stored items can be called up very easily.

4.2.1 RECALLING AN EXISTING ITEM ENTRY

1. Press the FUNCTIONS key.
2. Press the Item ID soft key. The scale prompts for the Item ID number.
3. Key-in the Item ID number and press the ENT key. The scale automatically recalls the stored information.

   NOTE 1: If you do not know the Item ID number, press the List soft key. The scale displays the screen shown in Figure 4-1. Use the up/down arrow soft key and/or the PgUp and PgDn soft keys to highlight the item. Once the desired item is highlighted, press the Recall soft key.

   NOTE 2: If so equipped, you may use your scale' s bar code scanner to scan in the Product ID number from a pre-printed label. In order for the scale to properly read the data, a DCSG series scale must have previously printed the label.

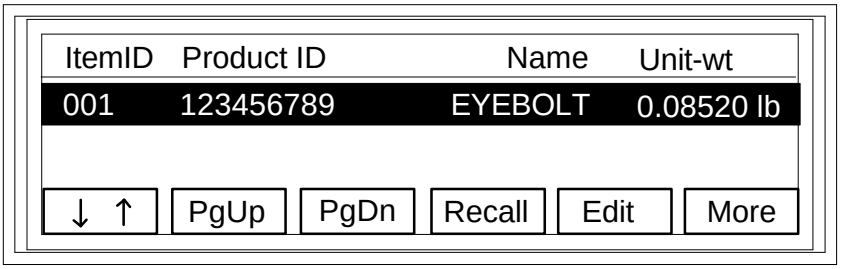


FIGURE 4-1: Item ID List Screen

4.2.2 ADDING A NEW ITEM ENTRY

1. Sample the new item or enter its unit weight (APW) into the scale as previously described.
2. Press the FUNCTIONS key.
3. Press the Item ID soft key. The scale prompts for the Item ID number.
4. Press the Add soft key. The scale displays a summary of information for the new item.

   NOTE: Some fields will be blank. You can edit this information later as detailed in the following section.
5. Press the Done soft key.

4.2.3 EDITING AN ITEM ENTRY

1. Press the FUNCTIONS key.
2. Press the Item ID soft key. The scale prompts for the Item ID number.
3. Press the List soft key. The scale displays a list of stored item entries.
4. Use the up/down arrow soft key and/or the PgUp and PgDn soft keys to highlight the item.
5. Once the desired item is highlighted, press the Edit soft key. The scale displays a list of stored item entries. The scale displays a summary of the item's information on the screen shown in Figure 4-2.

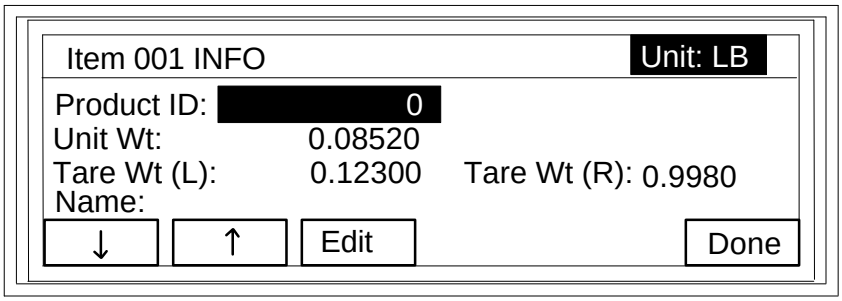


FIGURE 4-2: Edit Item ID Screen

6. Use the Up and Down soft keys to highlight the field you wish to edit.
7. Once the desired field is highlighted, press the Edit soft key.

   To edit a numeric field, simply enter in the new data using the numeric keys followed by the ENT key. Numeric fields include Product ID, Unit Wt, Tare Wt (Local) and Tare Wt (Remote). If you make an entry mistake, press the CLR key to restore the original data.

To edit the Name field, use the numeric keys to enter alphanumeric characters. Two numeric key strokes are required to enter a single alphanumeric character. Use Table 4-1 to determine how to enter each alpha character. When you are done entering the Name field, press the ENT key. If you make an entry mistake, press the CLR key to restore the original data.

"**0**" = 0 + 0	"**1**" = 0 + 1	"**2**" = 0 + 2	"**3**" = 0 + 3	"**4**" = 0 + 4	"**5**" = 0 + 5	"**6**" = 0 + 6
"**7**" = 0 + 7	"**8**" = 0 + 8	"**9**" = 0 + 9	"**A**" = 2 + 1	"**B**" = 2 + 2	"**C**" = 2 + 3	"**D**" = 3 + 1
"**E**" = 3 + 2	"**F**" = 3 + 3	"**G**" = 4 + 1	"**H**" = 4 + 2	"**I**" = 4 + 3	"**J**" = 5 + 1	"**K**" = 5 + 2
"**L**" = 5 + 3	"**M**" = 6 + 1	"**N**" = 6 + 2	"**O**" = 6 + 3	"**P**" = 7 + 1	"**Q**" = 7 + 2	"**R**" = 7 + 3
"**S**" = 7 + 4	"**T**" = 8 + 1	"**U**" = 8 + 2	"**V**" = 8 + 3	"**W**" = 9 + 1	"**X**" = 9 + 2	"**Y**" = 9 + 3
"**Z**" = 9 + 4	" " = 1 + 1					

TABLE 4-1: Entering Alphanumeric Characters

8. Once all fields are edited, press the Done soft key. The scale confirms that you wish to save the changes.
9. Press the Yes soft key to save the changes. Otherwise, press the No soft key.

4.2.4 DELETING AN ITEM ENTRY

1. Press the FUNCTIONS key.
2. Press the Item ID soft key. The scale prompts for the Item ID number.
3. Press the List soft key. The scale displays a list of stored item entries.
4. Use the up/down arrow soft key and/or the PgUp and PgDn soft keys to highlight the item you wish to delete.
5. Once the desired item is highlighted, press the More soft key.
6. Press the Delete soft key. The scale asks you to confirm this action.
7. Press the Yes soft key to delete the item or press the No soft key to exit without deleting.

4.2.5 DELETING ALL ITEM ENTRIES

NOTE: This procedure erases ALL items from memory storage. Once completed, this procedure cannot be undone. Use with extreme caution.

1. Press the * key. The scale prompts for the menu you wish to enter.
2. Select the Super soft key. The scale prompts for a password.
3. Enter in the password (1234). There is no need to press the ENT key.
4. Press the Item ID soft key.
5. Press the Initial soft key. The scale asks you to confirm this action.
6. Press the Yes soft key to erase all of the items from memory. The scale confirms the action and returns to the previous screen. Press the No soft key to exit without deleting.
7. Press the CLR key twice to return to normal operating mode.

4.3 MEMORY ACCUMULATOR

Your scale comes equipped with a handy memory accumulator, which can be used in conjunction with the piece counting feature. As with a hand-held calculator, the memory accumulator can be added to, displayed and cleared at anytime. To access the memory accumulator soft keys, press the FUNCTIONS key.

NOTE: This feature can be used when in PCS mode only.

4.3.1 DISPLAYING THE MEMORY ACCUMULATOR

1. Press the MR soft key. The scale briefly displays the total number of pieces, followed by the total number of entries.

4.3.2 ADDING TO THE MEMORY ACCUMULATOR

1. Press the M+ soft key. The scale adds the current number of pieces to the memory accumulator, then briefly displays the total number of pieces, followed by the total number of entries.

4.3.3 CLEARING THE MEMORY ACCUMULATOR

1. Press the MC soft key. The scale asks if you wish to clear the memory accumulator.
2. Press the ENT key to clear the accumulator memory or press the CLR if you do not wish to clear the accumulator memory.

NOTE: To exit the memory accumulator function, press the CLR key once.

4.4 USING THE TARGET VALUE

This function works in conjunction with the piece counting feature and allows your scale to act as a checkweigher. This is useful if you are filling a container with a pre-determined amount of items.

To use, you must enter two values – a lower limit value and an upper limit value. These are chosen based on the tolerance of your target value. For example, if you wish to fill a bottle with 100 items and you have a tolerance of ± 2 pieces, you would set your lower limit value to 98 and your upper limit value to 102. The lower and upper limit values may be the same if you have no tolerance allowance.

If the number of items on the platform is within the two limits, the scale flashes the “Target” soft and beeps.

NOTE: This feature can also be used when in weighing mode.

1. Press the FUNCTIONS key.
2. Press the TARGET soft key. The scale prompts for the lower limit value.
3. Use the numeric keys to key-in the lower limit value then press the ENT key. The scale prompts for the upper limit value.
4. Use the numeric keys to key-in the upper limit value then press the ENT key.
5. Place items on scale until the scale signals that the items are within the entered limits.

NOTE: To exit the target function, press the CLR key once.

CHAPTER 5: SETUP

5.1 SETUP OVERVIEW

The system setup consists of two setup areas: Supervisor Menu and Setup Menu. The Supervisor Menu allows configuration of items that customize operation of your scale. The Service Menu allows configuration of items that are more technical in nature. The Service Menu allows you to re-calibrate your scale.

5.2 SUPERVISOR MENU

The Supervisor Menu is used to configure the formatting of the information sent to your printer, set the time & date and enable some of the advanced features.

To access the Supervisor Menu, use the following instructions.

1. Press the * key. The scale prompts for Service Menu or Supervisor Menu.
2. Press the Super soft key. The scale prompts for a password.
3. Key-in the Supervisor Menu password (1234). There is no need to press the ENT key. You are now in the Supervisor Menu.

5.2.1 CONFIGURATION SUB-MENU (Config)

The Configuration sub-menu is used to enable some of the advanced features and to set the print format for the time and date. Table 5-1 lists the items which are contained in the Configuration sub-menu.

Item	Soft Key	Description
Remote Scale Enable/Disable	Remote	Allows you to change the status of the remote scale (if equipped). The default setting is disabled.
Auto Sampling Enable/Disable	AuSmpl	Allows you to change the status of the auto sampling feature. The default setting is disabled.
Auto Tare Enable/Disable	AuTare	Allows you to change the status of the auto tare feature. The default setting is disabled.
Auto Switch Channel Enable/Disable	AuSw	Allows you to change the status of the auto switch channel feature. The default setting is disabled.
Target Operation Enable/Disable	Target	Allows you to change the status of the target operation feature. The default setting is enabled.
lb/kg Conversion Enable/Disable	lb/kg	Allows you to change the status of the lb/kg conversion feature. The default setting is enabled.
Time Print Format	TmFmt	Let's you choose the format of the time on the serial printer. Choices are 12 hour (AM/PM) and 24 hour (military). The default setting is 12 Hour.
Date Print Format	DatFmt	Let's you choose the format of the date on the serial printer. Choices are standard (mm/dd/yy) and international (dd/mm/yy). The default setting is standard.
Hold Mode Enable/Disable	Hold	Allows you to change the status of the hold feature. The default setting is disabled.

TABLE 5-1: Configuration Sub-menu Items

To access the Configuration sub-menu, follow the instructions below.

1. Enter the Supervisor Menu as described above. The scale prompts for the area to setup.
2. Press the Config soft key. The Configuration sub-menu items are listed above the six soft keys. Press the More or Back soft keys to see more choices.
3. Press the soft key pertaining to the item you wish to modify. The scale shows the current status or selection of that item in the form of a highlighted soft key text.
4. Press the soft key corresponding to the desired status then press the ENT key. You may exit this screen without making changes by pressing the CLR key.
5. Repeat steps 3 and 4 above until the configuration is complete.
6. Press the CLR key twice to return to normal operating mode.

5.2.2 PRINT FORMAT SUB-MENU (PrtFmt)

This function is used to configure how the information appears on your printer. This sub-menu consists of Margin, Header, Starting Characters, Ending Characters and Field Selection.

1. Enter the Supervisor Menu as described above. The scale prompts for the area to setup.
2. Press the PrtFmt soft key. The Print Format sub-menu items are listed above the six soft keys.

5.2.2.1 MARGINS (Margin)

This function is used to configure the left margin on your printer. To use, enter the number of spaces to be printed prior to a line of information. The default setting varies according to the device selected for COM1.

1. Enter the Print Format sub-menu as described above.
2. Press the Margin soft key. The scale displays the current setting.
3. Use the numeric keys to enter in the new value and press the ENT key or just press the CLR key to keep the current value.

5.2.2.2 HEADER (Header)

This function allows three alphanumeric messages to be printed at the top of each printout. For example, your company name and address can be entered and printed. A maximum of 38 characters may be entered for each message. The default header messages can be found in Appendix B.

1. Enter the Print Format sub-menu as described above.
2. Press the Header soft key. The scale displays a message setup screen for the first message (MSG1).
3. Use the numeric keys 2 and 8 to change the character at the cursor. Use the numeric 4 and 6 keys to move the cursor left and right.
4. When finished with your message, press the ENT key. The scale asks you to confirm the changes. Press the Yes soft key to save the changes or the No soft key to exit without saving.
5. Repeat Steps 3 and 4 for Message 2 (MSG2) and Message 3 (MSG3).

5.2.2.3 STARTING CHARACTERS (Start)

This function allows you to program ASCII control codes which are sent to your printer before the messages and fields. You can program up to six control codes. Consult your printer manual for a list of available commands.

1. Enter the Print Format sub-menu as described above.
2. Press the Start soft key. The scale displays the six ASCII codes in decimal. A value of 255 indicates that no code is programmed.
3. Use the left and right soft keys to select (highlight) the control code you wish to edit.
4. When the control code is highlighted, press the Edit soft key. The scale prompts for a new control code.
5. Use the numeric keys to enter in the new control code in decimal (1-255).
6. Repeat Steps 3 through 5 until all control codes are edited.
7. Press the Done soft key to exit and save changes.

5.2.2.4 FIELD SELECTION (Fields)

This function allows you to specify which fields to print and in what order. Note that all fields automatically contain one CR/LF (carriage return / line feed) command. The available print fields appear in Table 5-2. The scale contains a default print ticket which is shown in Appendix B.

1. Enter the Print Format sub-menu as described above.
2. Press the Fields soft key. The scale displays the available fields in the “Fields for Selection” column and the selected fields in the “Fields Selected” column.
3. Use the up/down arrow soft key to scroll through each list. When a field is highlighted, it is selected. To jump from one column to the other, use the right/left arrow soft key.
4. To send a highlighted field from the available column to the selected column, use the Select soft key. To remove a highlighted field from the selected column, use the Delete soft key.
5. When you are finished programming the fields, press the Done soft key to exit and save changes.

FIELD NAME	DEFINITION
MSG1	The first alphanumeric message printed in the header.
MSG2	The second alphanumeric message printed in the header.
MSG3	The third alphanumeric message printed in the header.
CR/LF	Inserts an extra carriage return / line feed.
GROSS WT	The gross weight.
TARE WT	The container weight tared from the scale.
NET WT	The net weight which is gross weight minus tare weight.
UNIT WT	The unit weight (APW) of the items you are counting.
PIECES	The number of pieces currently on the platform.
TOTAL PCS	The total number of pieces stored in the memory accumulator.
TOTAL ENT	The total number of entries you have stored in the memory accumulator.
DATE	The current date.
TIME	The current time.
ITEM ID	The Item ID of the item being printed.
PROD. ID	The Product ID of the item being printed.
PROD. NAME	The Product Name of the item being printed.
CHANNEL	The channel (remote or local) that the weight information is coming from.

TABLE 5-2: Field Names and Definitions

5.2.2.5 ENDING CHARACTERS (Ending)

This function allows you to program ASCII control codes which are sent to your printer after the messages and fields. You can program up to six control codes. Consult your printer manual for a list of available commands.

1. Enter the Print Format sub-menu as described above.
2. Press the Ending soft key. The scale displays the six ASCII codes in decimal. A value of 255 indicates that no code is programmed.
3. Use the left and right soft keys to select (highlight) the control code you wish to edit.

4. When the control code is highlighted, press the Edit soft key. The scale prompts for a new control code.
5. Use the numeric keys to enter in the new control code in decimal (1-255).
6. Repeat Steps 3 through 5 until all control codes are edited.
7. Press the Done soft key to exit and save changes.

5.2.2.6 RESTORE DEFAULTS (Deflt)

This function allows you reset all print format parameters back to the factory default. Default settings will vary depending on the type of printer selected in Section 5.3.5.

Use with extreme caution – this process cannot be undone!

1. Enter the Print Format sub-menu as described above.
2. Press the Deflt soft key. The scale automatically restores the default settings and returns to the Print Format sub-menu screen.

5.2.3 SETTING THE SYSTEM CLOCK SUB-MENU (CLOCK)

This function is used to set the current date and time into the scale. Although you may choose any format to print the time and date, you must program the date using standard format and the time using military (24 Hr) format.

1. Enter the Supervisor Menu as described above. The scale prompts for the area to setup.
2. Press the Clock soft key. The scale displays the current time and date settings. A flashing cursor appears in the date field.
3. If the date is correct, press the ENT key to move to the time field. Otherwise, use the numeric keys to key-in the current date in Standard (mm/dd/yy) format. For example, for January 7, 2000 you would enter 010700. For November 30, 2000 you would enter 113000. There is no need to press the ENT key. The flashing cursor moves automatically to the time field.
4. If the time is correct, press the ENT key. Otherwise, use the numeric keys to key-in the current time in 24-Hour (Military) format. For example, for 9:00 AM you would enter 090900. For 5:00 PM you would enter 170000. (The last two digits are the seconds). There is no need to press the ENT key. When the time is entered, the flashing cursor disappears.
5. Press the ENT key to save the changes and exit this sub-menu.

5.2.4 ITEM ID SUB-MENU (ItemID)

This function is used to list, print or erase all items stored in the scale.

1. Enter the Supervisor Menu as described above. The scale prompts for the area to setup.
2. Press the ItemID soft key. The Configuration sub-menu items are listed above the six soft keys.

5.2.4.1 INITIAL ITEM ID's (Initial)

This function is used to erase all stored item ID's.

Use with extreme caution – this process cannot be undone!

1. Enter the Print Format sub-menu as described above.
2. Press the Initial soft key. The scale asks you to confirm this action.
3. Press the Yes soft key to proceed or press the No soft key to abort the operation.

5.2.4.2 PRINT ITEM ID's (Print)

This function is used to print all stored item ID's using the device connected to COM1.

1. Enter the Print Format sub-menu as described above.
2. Press the Print soft key. The scale sends the list to the device on COM1.

5.2.4.3 LIST ITEM ID's (List)

This function is used to list on the screen all stored item ID's. Once an ID is selected, it can be recalled, edited or deleted.

Refer to Section 4.2 for usage of this screen.

5.2.5 EXITING THE SUPERVISOR MENU

1. Press the CLR key twice to return to Normal Operating Mode.

5.3 SERVICE MENU

The Service Menu is used to configure both the local and remote scales. The local scale is setup and calibrated at the factory. The remote scale can be any size platform with up to four 350Ω load cells. The Service Menu is also used to configure both serial ports.

NOTE: Some earlier scales may not be equipped with two serial ports. In that case, use only the COM1 setup.

To access the Supervisor Menu, use the following instructions.

1. Press the * key. The scale prompts for Service Menu or Supervisor Menu.
2. Press the Servic soft key. The scale prompts for a password.
3. Key-in the Service Menu password (336699). There is no need to press the ENT key. You are now in the Service Menu.

5.3.1 LOCAL/REMOTE SCALE SUB-MENUS (Local/Remote)

The Local and Remote Scale sub-menus are identical in content and use. Table 5-3 lists the items which are contained in both sub-menus. The parameters for the Local Scale sub-menu are pre-configured for you at the factory.

To access the Local and Remote Scale sub-menus, follow the instructions below.

1. Enter the Service Menu as described above. The scale prompts for the area to setup.
2. Press the Local soft key to access the Local Scale sub-menu or press the Remote soft key to access the Remote Scale setup. The sub-menu items are listed above the six soft keys. Press the More or Back soft keys to see more choices.
3. Press the soft key pertaining to the parameter you wish to modify. The scale shows the current status or selection of that item in the form of a highlighted soft key text.
4. Press the soft key corresponding to the desired status then press the ENT key. You may exit this screen without making changes by pressing the CLR key.
5. Repeat steps 3 and 4 above until the configuration is complete.
6. Press the CLR key twice to return to normal operating mode.

5.3.2 CALIBRATION SUB-MENU (Calibrt)

The Calibration sub-menu is covered in detail in Chapter 6.

PARAMETER (Soft Key Text)	DESCRIPTION	AVAILABLE CHOICES
Graduations (Grads)	Specifies number of full scale graduations. Value should be consistent with legal requirements and environmental limits on the useful system resolution.	1,000 1,500 2,000 2,500 3,000 4,000 5,000 6,000 7,500 8,000 10,000 12,000 15,000 20,000 24,000 30,000 40,000 50,000 100,000
Creep Tracking (CrpTrk)	Sets the range within which the scale will attempt to offset the effects of load cell creep. Use a lower setting for lower capacity load cells and vice-versa. Selections are in seconds. **Note**: This spot was formerly occupied by the Span Gain parameter.	Off 1, 3, 5, 10, 15, 20, 30, 50, 60, 120, 180, 240
Zero Track Band (ZTrack)	Selects the range within which the scale will automatically zero. Note that the scale must be in standstill to automatically zero. Selections are in Display Divisions.	0 d, 0.5 d, 1 d 3 d, 5 d
Zero Range (Zrange)	Selects the range within which the scale may be zeroed. Note that the scale must be in standstill to zero the scale.	100% 1.9%
Motion Band (MotBand)	Sets the level at which motion is detected by comparing the present display update with the previous one. If motion is not detected for two seconds or more, scale is in standstill and can process a Print or Zero command. Maximum value varies depending on local regulations.	0.25 d 0.5 d 1 d 3 d 5 d 10 d
Digital Filter (DFltr)	Sets the scale's digital filtering method. The auto setting is a dynamic filtering algorithm which optimizes stability and response time. The settings 8 to 128 employ an averaging algorithm and the settings Full 8 to Full 32 employ a hybrid averaging/dynamic filtering algorithm.	Auto 8, 16, 32, 64, 128 Full 8, Full 16, Full 32
Overload Limit (OverLd)	Selects the desired formula which determines the point at which the scale shows overload. All selections are based on the primary calibration unit. "FS" = Full scale in primary units.	FS FS + 2% FS + 1d FS + 9d
Calib. Unit (CalUnt)	Selects the primary base unit to be used in the calibration process. Also the default unit for normal operation.	lb kg
Display Divisions (DspDiv)	Determines the desired weight increments. Value should be consistent with legal requirements.	1 2 5
Decimal Pt. (DecPnt)	Determines location of the decimal point.	0, 0.0, 0.00, 0.000 0.0000, 0.00000 00

TABLE 5-3: Local/Remote Scale Sub-menu Items

5.3.3 DIAGNOSTICS SUB-MENU (Diag)

The Diagnostics sub-menu allows you to test certain parts of the scale's operation for troubleshooting purposes. Available areas for testing include ADC (Analog-to-Digital Converter) test, keyboard test and display test. This sub-menu also allows you to key-in the scale's calibration. Table 5-4 lists the items which are contained in this sub-menu.

To access the Diagnostics sub-menu, follow the instructions below.

1. Enter the Service Menu as described above. The scale prompts for the area to setup.
2. Press the Diag soft key. Key-in the password (336699). The sub-menu items are listed above the six soft keys.
3. Press the soft key pertaining to the diagnostic function you wish to access.
4. Press the CLR key twice to return to normal operating mode.

Item	Soft Key	Description
ADC (Analog-to-Digital Converter) Test	ADTst	Shows the selected scale's internal counts. Useful for troubleshooting calibration problems. Use the L/R soft key to toggle scales. Press the Exit soft key to exit this function.
Keyboard Test	KeyTst	Shows the key code for any key pressed. Useful for troubleshooting keyboard problems. Consult Table 5-5 for a listing of key codes. Press the CLR key to exit this function.
Display Test	DspTst	Displays a number of test screens for analysis of display problems. Press any key to sequence through the test screens. Automatically exits after displaying last screen.
Calibration	CaliBrt	Thoroughly covered in Chapter 6.
Key-in Zero Calibration Value	KcalZR	Allows you to key in a zero calibration value from a prior successful calibration. The scale shows the currently saved value. If incorrect, key-in the new value and press the ENT. If correct, press the ENT key only.
Key-in Span Calibration Value	KCalSP	Allows you to key in a span calibration value from a prior successful calibration. The scale shows the currently saved value. If incorrect, key-in the new value and press the ENT. If correct, press the ENT key only.

TABLE 5-4: Diagnostics Sub-menu Items

Key	Code	Key	Code
SOFT KEY #1	16	FIVE (5) KEY	05
SOFT KEY #2	17	SIX (6) KEY	06
SOFT KEY #3	18	SEVEN (7) KEY	07
SOFT KEY #4	19	EIGHT (8) KEY	08
SOFT KEY #5	20	NINE (9) KEY	09
SOFT KEY #6	21	ZERO (0) KEY	00
STAR (*) KEY	13	LOCAL/REMOTE KEY	14
ONE (1) KEY	01	FUNCTIONS KEY	15
TWO (2) KEY	02	DECIMAL (.) KEY	10
THREE (3) KEY	03	ENTER KEY	12
FOUR (4) KEY	04	CLR KEY	EXITS

TABLE 5-5: Listing of Key Codes

5.3.4 RESTORE SYSTEM DEFAULTS SUB-MENU (SysDft)

The Restore System Defaults sub-menu allows you completely restore all configuration settings throughout the scale to those programmed at the factory. This procedure will not overwrite your item ID storage.

Use with extreme caution – this process cannot be undone!

To access the Restore System Defaults sub-menu, follow the instructions below.

1. Enter the Service Menu as described above. The scale prompts for the area to setup.
2. Press the SysDft soft key. The scale asks if you wish to restore factory defaults.
3. Press the Yes soft key to restore factory settings or press the No soft key to exit.
4. Press the CLR key twice to return to normal operating mode.

5.3.5 SETUP SUB-MENU (Setup)

The Setup sub-menu allows you to setup both serial ports (if equipped). This sub-menu also allows you to program the scale to operate in limited feature mode. In limited feature mode, access to the FUNCTIONS key is locked out during normal operating mode.

To access the Setup sub-menu, follow the instructions below.

1. Enter the Service Menu as described above. The scale prompts for the area to setup.
2. Press the Setup soft key. The sub-menu items are listed above the six soft keys.

5.3.5.1 COM PORT SETUP (COM1 / COM2)

The configuration items for both serial ports (COM1 and COM2) are mostly identical in content. Table 5-6 lists the items which are available to be configured for each serial port.

1. Enter the Setup sub-menu as described above.
2. Press the COM1 or COM2 soft key to configure the serial port of your choosing. The sub-menu items are listed above the six soft keys.
3. Press the soft key pertaining to the parameter you wish to modify. The scale shows the current status or selection of that item in the form of a highlighted soft key text.
4. Press the soft key corresponding to the desired status then press the ENT key. You may exit this screen without making changes by pressing the CLR key.
5. Repeat steps 3 and 4 above until the configuration is complete.
6. Press the CLR key twice to return to normal operating mode.

PARAMETER (Soft Key Text)	DESCRIPTION	AVAILABLE CHOICES
Device (Device) for COM1	Selects the device connected to the COM1 serial port. The default setting is LP452. DotPrt should be selected for a dot matrix serial printer. All others are popular models of thermal printers.	DotPrt LP452 TDP5 ET-LTP
Device (Device) for COM2	Selects the device connected to the COM2 serial port. The default setting is Scaner. Scaner should be selected for a Symbol LS2401 or compatible bar code scanner. PC should be selected for a full duplex connection to a PC or remote display. See Appendix B for serial data format.	Scaner PC
Baud Rate (Baud)	Selects the baud rate for data transmission through the serial port. The default setting for both ports is 9600.	600 1200 2400 4800 9600
Data Bits and Parity (Bits)	Selects the number of data bits and parity of serial transmission. The default setting is 8 None. "8 None" = 8 data bits with no parity bit and 1 stop bit "7 Odd" = 7 data bits with odd parity bit and 1 stop bit "7 Even" = 7 data bits with even parity bit and 1 stop bit	8 None 7 Odd 7 Even
Mode of Serial Transmission (Mode) for COM2	Selects when data will be sent out of the COM2 serial port to a computer or remote display. The default setting is Demand. "Contiu" = Continuous mode; send data continuously "Demand" = Demand mode; send data when a PRINT command is issued from the computer.	Contiu Demand

TABLE 5-6: COM 1 and COM2 Sub-menu Items

NOTE1: Factory set defaults are subject to change.

NOTE2: More devices may be supported in the future. Contact Transcell for an up to date list of supported devices.

NOTE 3: Whenever a new device is selected, the scale will automatically overwrite all of the parameters for the Print Format to factory defaults.

5.3.5.2 LIMITED FEATURE MODE (Limited)

Use this menu to enable or disable the limited feature mode of operation.

1. Enter the Setup sub-menu as described above.
2. Press the Limited soft key. The scale asks if you wish to enable the limited feature mode.
3. Press the Yes soft key to enable the limited feature mode. Press the No soft key to disable the limited feature mode.
4. Press the CLR key twice to return to normal operating mode.

5.3.6 EXITING THE SERVICE MENU

1. Press the CLR key twice to return to Normal Operating Mode.

APPENDIX A: SPECIFICATIONS

CONSTRUCTION:

Housings: Gray ABS
Sub-Platform: Metal
Platter: Stainless Steel
Feet: Non-skid Hard Rubber

DISPLAY:

240 x 64 Graphic LCD,
EL Backlighting

KEYPAD:

22-key Tactile Keypad

OVER CAPACITY ANNUNCIATION:

103% of Full Scale Capacity

OPERATING TEMPERATURE RANGE:

32°F to 104°F
(0°C to 40°C)

POWER SOURCE:

AC Adapter, 12VDC, 800 mA,
included

COM1 SERIAL PORT:

Simplex RS-232, DSUB9M

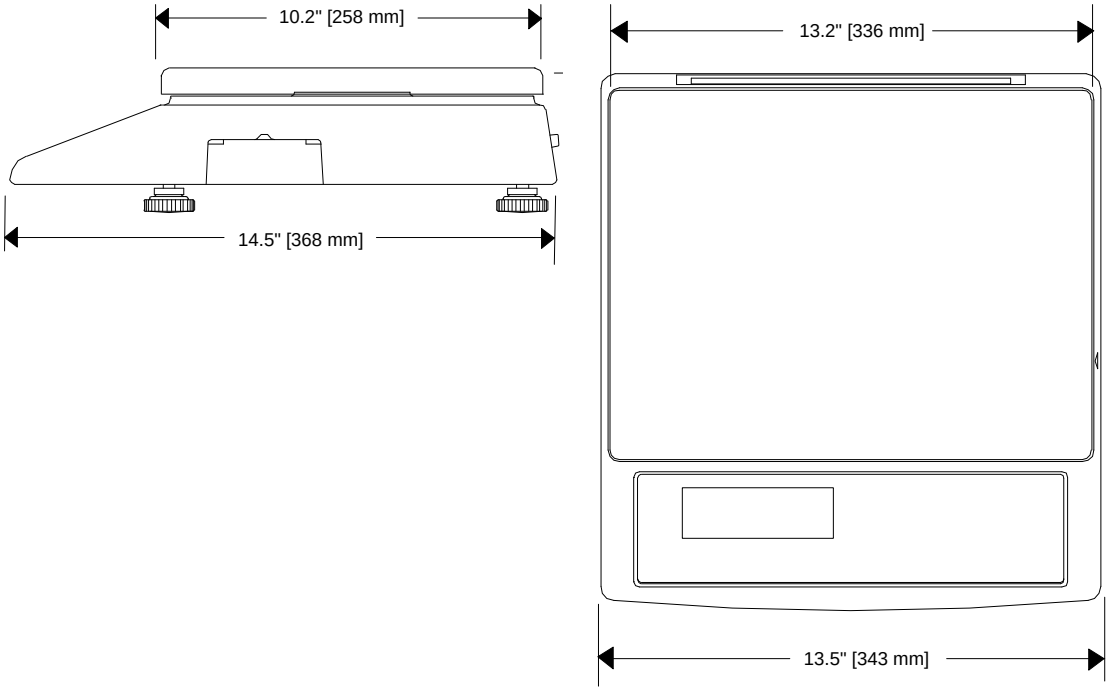
COM2 SERIAL PORT:

Full Duplex RS-232, DSUB9F

WEIGHT:

Net Weight: 23.0 lb (10.4 kg)
Shipping Weight: 24.0 lb (10.8 kg)

PHYSICAL DIMENSIONS:



APPENDIX B: SERIAL PORT INFORMATION

B.1 COM1 SERIAL PORT

B.1.1 CONNECTING THE SERIAL PRINTER

The COM1 serial port is a simplex RS-232 port designed for connection to a serial printer. Figure B-1 shows the serial port pinout. Figure B-2 shows a suggested cable diagram for a dot matrix serial printer. Figure B-3 shows a suggested cable diagram for a thermal serial printer. The cable shown in Figure B-3 is a standard Transcell cable – Model NMC-1.

Note: The COM1 serial port contains a non-standard pinout for a DSUB9 connector. Earlier DCSG models may contain a standard pinout for a DSUB9 connector. In this case, pin 3 is the Transmit Data (TXD) pin.

1. Plug the serial printer cable (not included) directly into the DSUB9 serial port connector.

Pin No.	Pin Name	Signal Level
2	Transmit Data	RS-232
5	Signal Ground	RS-232

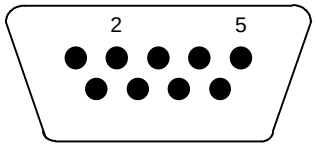


Figure B-1: Pin assignments for the COM1 serial port connector

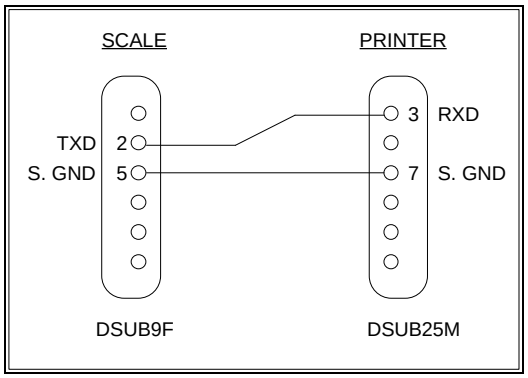


FIGURE B-2: Cable Diagram for Scale to Dot Matrix Printer

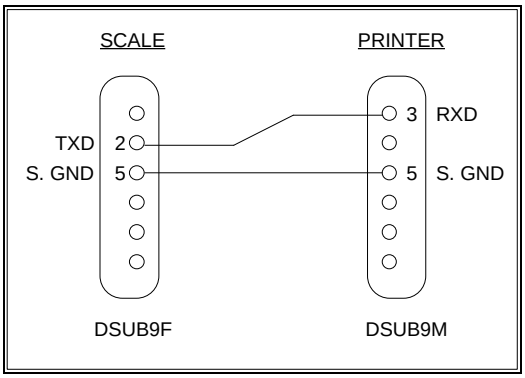


FIGURE B-3: Cable Diagram for Scale to Thermal Printer

B.1.2 DEFAULT PRINT FORMAT

Figure B-4 shows the fixed format of the print format. The fields can be enabled or disabled as described in Section 5.2.2.4.

FIGURE B-4: Default Print Format for Thermal Printer

B.2 COM2 SERIAL PORT

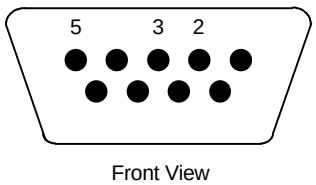
B.2.1 CONNECTING THE SCANNER, REMOTE DISPLAY OR COMPUTER

The COM2 serial port is a full duplex RS-232 port designed for connection to a computer, scanner or remote display. Figure B-5 shows the serial port pinout. Figure B-6 shows a suggested cable diagram for a PC-type computer. Figure B-7 shows a suggested cable diagram for a scanner. The cable shown in Figure B-6 is a standard Transcell cable – Model NMC-1.

Note: Earlier DCSG models may not be equipped with a COM2 serial port.

1. Plug the scanner, remote display or computer communication cable (not included) directly into the DSUB9 serial port connector.

Pin No.	Pin Name	Signal Level
2	Receive Data	RS-232
3	Transmit Data	RS-232
5	Signal Ground	RS-232



Front View

Figure B-5: Pin assignments for the COM2 serial port connector

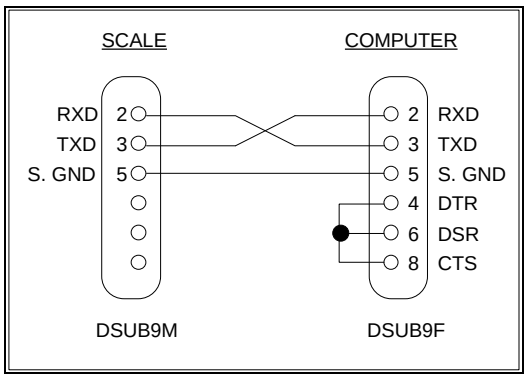


FIGURE B-6: Cable Diagram for Scale to Computer

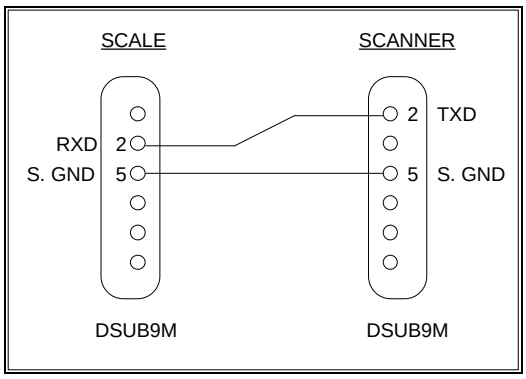


FIGURE B-7: Cable Diagram for Scale to Scanner

B.2.2 FULL DUPLEX MODES FOR COM2

B.2.2.1 DEMAND MODE

The Demand mode allows control from a host device, usually a PC, and can be activated by pressing the Print soft key. Figure B-8 shows the serial data format for the Demand Mode. Table B-1 shows the recognized host commands.

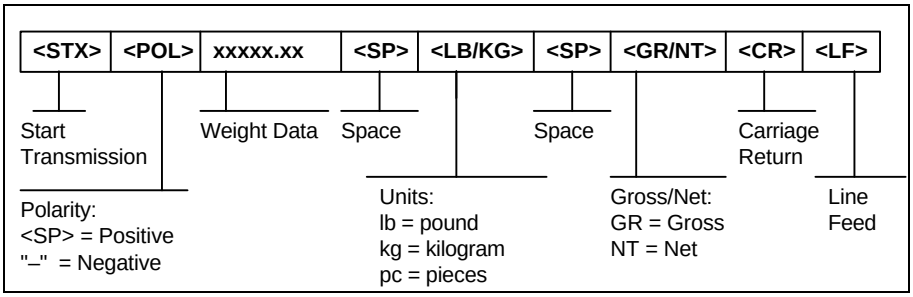


FIGURE B-8. Consolidated Controls Demand Mode

"P" - This command is sent to the scale to print the indicated display. The scale will not respond if the scale is in motion, positive overload or negative overload.

"Z" - This command is sent to the scale to zero the scale. If the scale is in motion, the scale will wait until a state of equilibrium is achieved. The scale will not respond at all if the scale is in positive overload or negative overload. The scale will also not respond if it is not in gross mode or within the zero range specified in F4 of the Setup Menu.

"T" - This command is sent to the scale to tare the scale. If the scale is in motion, the scale will wait until a state of equilibrium is achieved. The scale will not respond at all if the scale is in positive overload or negative overload. The scale will also not respond if it displaying a negative gross value.

"G" - This command is sent to the scale to revert to gross mode. The scale will not respond if the scale is in motion, positive overload or negative overload. The scale will also not respond if it is not in net mode.

"N" - This command is sent to the scale to revert to net. The scale will not respond if the scale is in motion, positive overload or negative overload. The scale will also not respond if it is not in gross mode or a tare has yet to be established.

"C" - This command is sent to the scale to toggle among the configured units.

TABLE B-1. Recognized Host Commands

B.2.2.2 CONTINUOUS MODE

The Demand mode is used to interface to computers, scoreboards and other remote devices requiring constant data updating. The transmission occurs at the end of each display update. Figure B-9 shows the serial data format for the Continuous Mode.

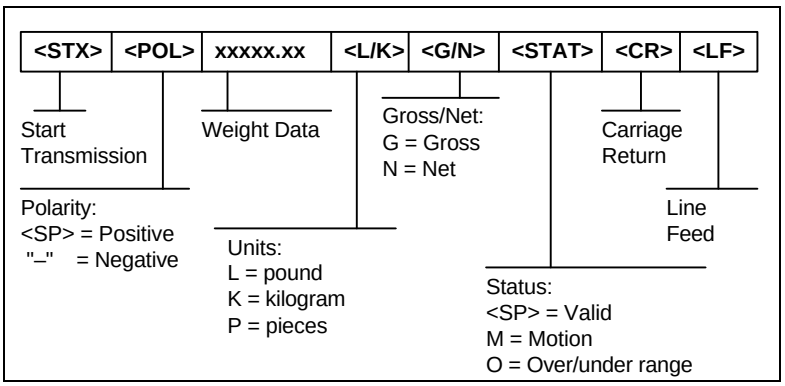


FIGURE B-9. Consolidated Controls Continuous Mode

APPENDIX C: ERROR MESSAGES

C.1 ERROR MESSAGES

If the scale encounters an error condition, it will display a message alerting the operator. A description of each display follows:

C.1.1 OPERATOR ERRORS

Message	Explanation
Maximum Scale Weight Exceeded	Indicates that the weighing capacity of the selected scale has been exceeded.
Not Enough Resolution	Indicates that there is not enough internal resolution to calculate the unit weight of an item. This means that the items you are counting are too light for the scale to process at all.
Unit Weight too Light	Indicates that unit weight of the items you are sampling or manually entering is too light for the scale to process accurately.
Sample Weight too Light	Indicates that total weight of the items you are sampling is too light for the scale to process accurately.
Invalid Tare Value Entered	Indicates that the tare weight value you are entering is not rounded to the nearest scale division. For example, you cannot enter 0.01 lb for a 0.05 lb increment scale.
Value Exceeds the Scale Capacity	Indicates that the tare weight value or unit weight value you are entering exceeds the capacity of the scale.
Remote Scale Error – Cannot Switch	Indicates that there is a problem with the remote scale or the remote scale has been disconnected.
Remote Scale Disabled	Indicates that the remote scale is disabled. Occurs when you press the Local / Remote key.
No Such ID in System	Indicates that the ID number you have entered or scanned does not exist in the scale.
No Pieces for Accumulating	Occurs when you press the M+ soft key with nothing on the scale platform.

C.1.2 CALIBRATION ERRORS

Message	Explanation
Scale Not Ready	Scale is unstable or there is an internal error in the scale.
ERROR: Value Exceeds Scale Capacity	Indicates that the test weight value you have chosen exceeds the scale's capacity.
ERROR: Value <1% of Scale Capacity	Indicates that the test weight value you have chosen is less than 1% of the scale's capacity.
ERROR: Internal Resolution Too Low	Occurs when you do not place the test weight on the scale during calibration. Can also indicate that there is an internal error in the scale.
Wrong Test Weight	During a multi-point calibration, the entered test weight value did not match the test weight applied to the scale. This error can also occur if the following relationship is not true: Cal Point 1 < Cal Point 2 < Cal Point 3
Invalid Data	Occurs when you enter a value of zero for the KcalZR or KcalSP functions. See Chapter 5 for more information.

APPENDIX D: REMOTE SCALE WIRING

D.1 REMOTE SCALE WIRING

The DCSG ships with a 15 ft shielded load cell cable for connection to the remote platform's load cell(s) or junction box. The DCSG supplies enough current to drive up to 4-350Ω load cells.

1. Plug the cable's 14-pin Centronics-type connector into the load cell port on the rear panel of the scale.
2. Wire the bare wires and shield to the remote platform's load cell(s) or junction box using the color codes shown in Figure D-1.

Color	Wire Name
RED	+Excitation
BLK	–Excitation
GRN	+Signal
WHT	–Signal

Figure D-1: Color Codes for Shielded Load Cell Cable

3. If you do not wish to use the shielded load cell cable, you may use own, following the pin assignments shown in Figure D-2. (A 14-pin Male Centronics-type connector is required).

Pin Nos.	Pin Name
1/8	+Excitation
3/10	–Excitation
5/12	+Signal
7/14	–Signal

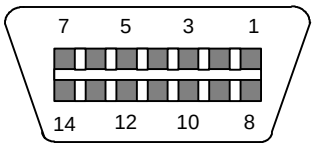


Figure D-2: Pin assignments for the Load Cell Port

LIMITED WARRANTY

Seller warrants that the DCSG Series Digital Counting Scale will conform to written specifications, drawings, and other descriptions made by the manufacturer, including any modifications thereof. The Seller warrants the goods against faulty workmanship and defective materials. If any goods fail to conform to these warranties, Seller will, as its sole and exclusive liability hereunder, repair or replace such goods if they are returned within the following warranty period:

Twelve (12) months from date of shipment from manufacturer.

These warranties are made upon the express condition that:

1) Transcell Technology, Inc. is given prompt written notice upon discovery by Buyer of such non-conformity, with a detailed explanation of the alleged deficiencies;

2) Such goods are returned to the Seller at the expense of the Buyer;

3) Examination of such goods by Seller discloses that the nonconformity actually exists and was not caused by accident, misuse, neglect, alteration, improper installation improper or unauthorized repair, or improper testing, and

4) Such goods have not been modified, altered, or changed by any person other than the Seller or its duly authorized repair agents.

5) Transcell Technology, Inc. will have a reasonable time to repair or replace such goods.

THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SELLER WILL NOT IN ANY EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of the Seller.