GT 400
Operators Manual

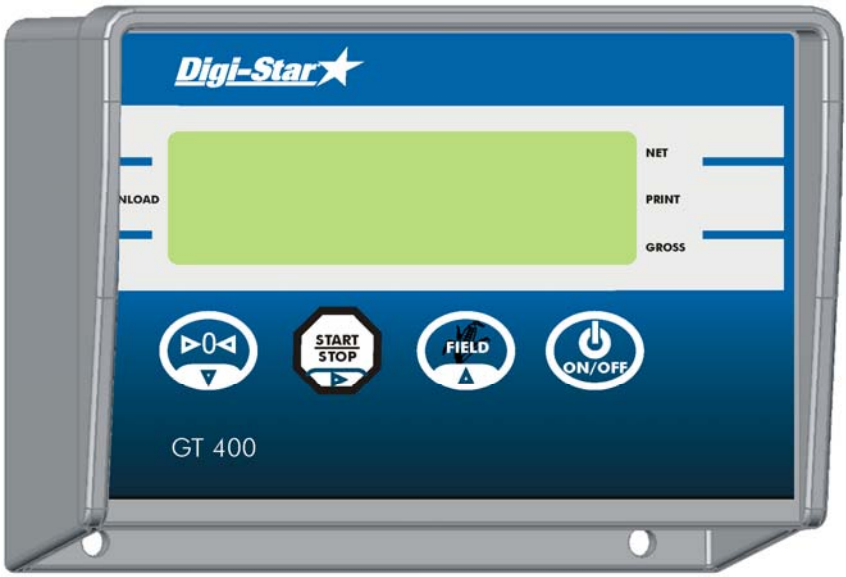

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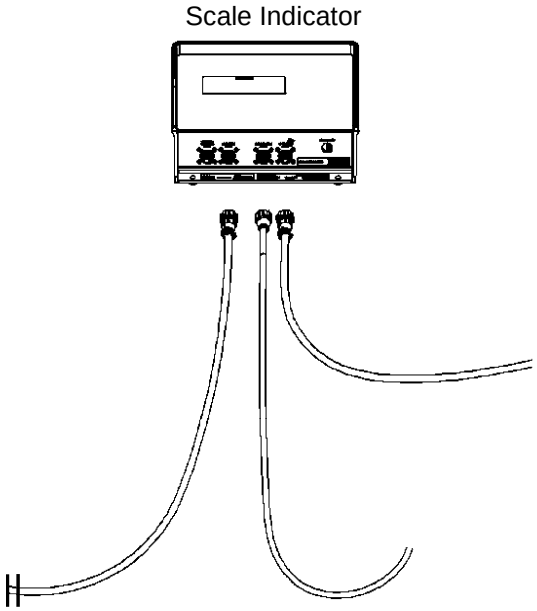
TABLE OF CONTENTS

CHARGING BATTERY OR WELDING

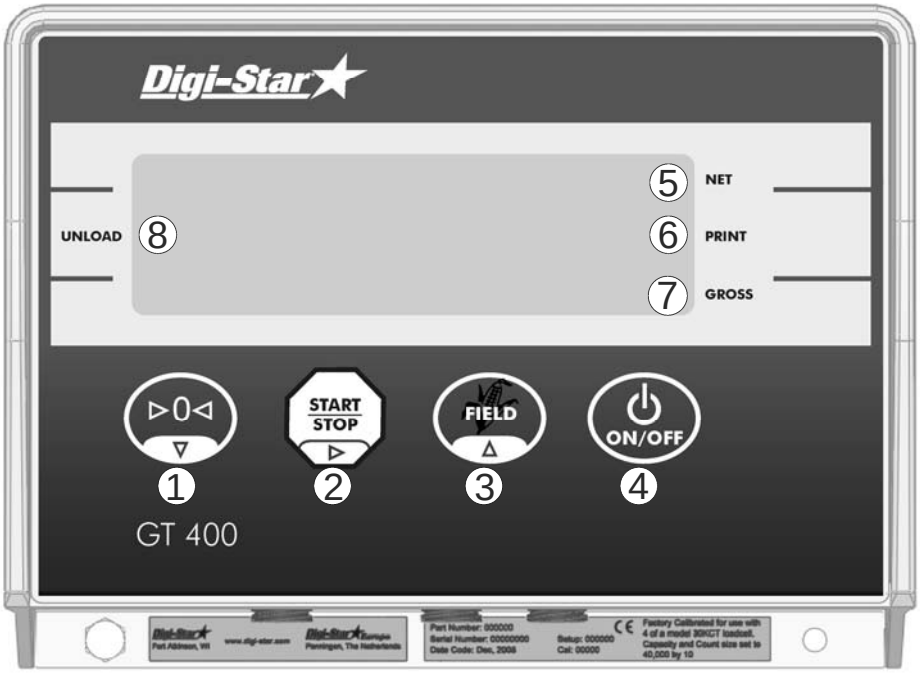


Important: Disconnect all indicator leads before charging battery or welding. Damage may occur to indicator and load cells.

Warning! Disconnect the indicator power cord before jump-starting or fast charging a battery.

Disconnect all indicator leads before welding on equipment. Damage may occur to the indicator and load cells.

INDICATOR OVERVIEW



① ▷0◁ - ZERO/BALANCE operation when the scale is empty.

② START STOP - start unloading and stop unloading, indicator displays amount unloaded, stores or prints data to serial port when complete.

③ FIELD - edit name and display weight accumulation value.

④ ON/OFF - turns the unit on and off.

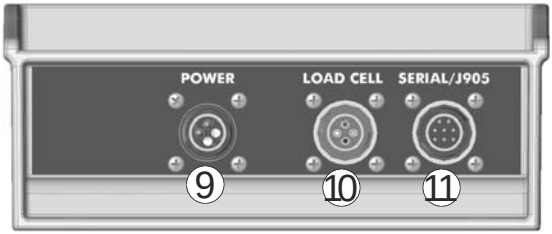
⑤ Net – arrow flashes in net mode.

⑥ Print – arrow flashes when printing or saving to Data-Down-Loader.

⑦ Gross – arrow flashes in gross mode.

⑧ Unload – arrow flashes in unload mode.

Bottom Panel



Wire Color	Wire Function
RED	Battery (+12Vdc)
BLACK	GROUND
ORANGE	Not Used
BLUE	Not Used

⑨ - Power Cord Connection – +12 VDC.

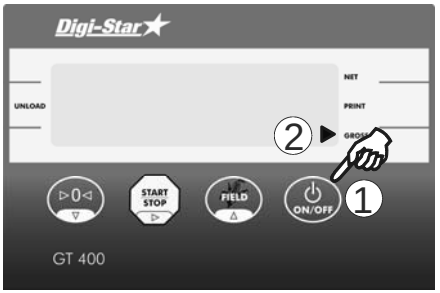
⑩ - Load Cell Connection – Connect the cable from the J-Box.

⑪ - PRINTER OR DDL – Attach the printer or Data-Down-Loader to the "SERIAL/J905 port on the bottom panel.

Pin	J905 Connector Signals
1	20ma Current Loop (+)
2	Com #1 Out (Tx) - DDL & Computer
3	Com #1 In (Rx) - DDL & Computer
4	Com #1 Out (Tx) - Printer
5	+12 VDC
6	Gnd – Available for any Com device
7	Com #2 In (Rx)
8	20ma Current Loop (-) is GND

OPERATION

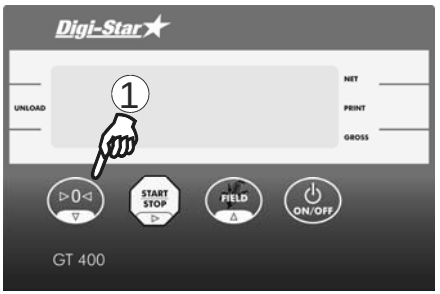
TURNING ON THE SCALE



1. Press ON/OFF.
2. Scale enters the GROSS weighing mode indicated by flashing arrow.

ZERO BALANCING

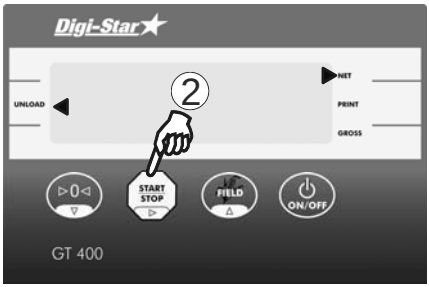
Note: *Zero balance indicator when empty at least once a day or more as required. If zero balance is not correct it only affects the gross weight reading, it does not affect accuracy of net weight displayed.*

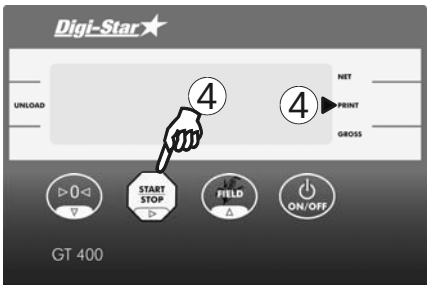


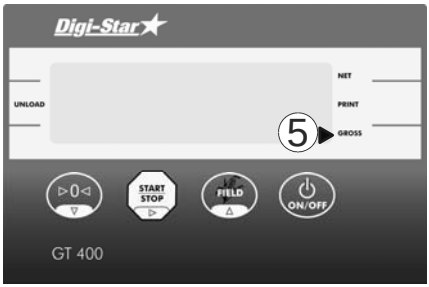
1. Press and hold ▷0◁ to zero balance.

LOADING AND UNLOADING

Note: *For best accuracy park scale on level surface and allow weight reading to stabilize before Zero balancing the scale and before beginning to unload.*







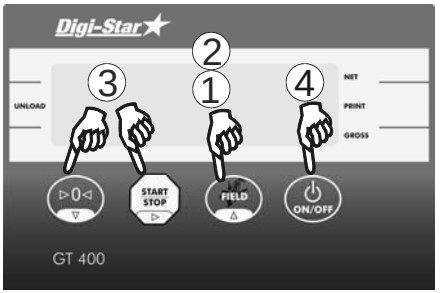
1. Load cart.
2. Press START STOP to begin unloading. Display reads Zero. Arrows point to Net and Unload.
3. Unload weight from cart. Display shows amount unloaded.
4. Press START STOP after unloading is complete. Data is automatically added to accumulator and saved to printer or DDL (See print format section, page 9), a flashing arrow will point to PRINT.

Note: Print and accumulator features are available with Serial Option only.

5. Indicator displays GROSS weight remaining on scale.

FIELD ID

6 character identification value stored in internal memory of indicator to identify field being unloaded, truck being loaded or other information.

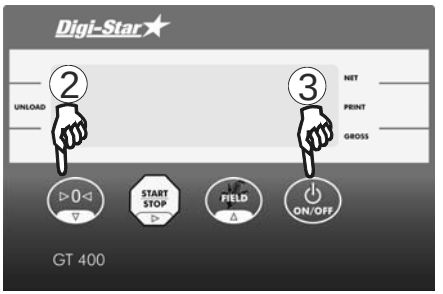


1. Press FIELD. FIELD is displayed and a flashing cursor or character is displayed in the first position.
2. Press FIELD to scroll available characters. Hold FIELD for 4 seconds to increase second scroll rate.
3. Press ▷0◁ to scroll backwards through available characters. Press START STOP to move to the next character.
4. Press ON/OFF to accept and save.

PRINT ACCUMULATION

(Serial Option Only)

Stores accumulated value in memory location called PRTACC.



***Note**: Each time "PRINT" command is executed weight value on display is added to PRTACC value.*

1. After saving Field ID (see above), PRTACC is displayed momentarily followed by accumulated weight.
2. Pressing ▷0◁ while value is displayed clears accumulator memory. Indicator displays "ACCUMULATOR MEMORY EMPTY".

Press ON/OFF to return to GROSS mode.

PRINT FORMATS

Three print formats are available to output PRTACC value and FIELD ID to DDL or printer.

PRTAC1: FIELD ID, 4856, GR, 274575, PA, 05FE08, 1:44P

PRTAC2: FIELD ID, 05FE08, 1:44P
4856, GR, 274575, PA

Includes following information:

- FIELD ID
- Weight
- Weight Tag (NE, GR, Load/Unload)
- Accumulated Weight
- Print Accumulator Tag
- Date and Time

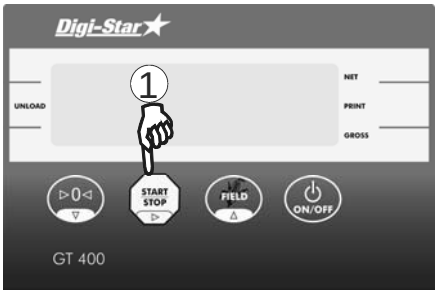
PRTAC3: FIELD ID, 5977, LB, ,GR, 309719,PA,05FE08, 4:42P

Includes above and adds “Unit of Measure”.

See “Setting Options” (page 11) to change print format (PRTFMT).

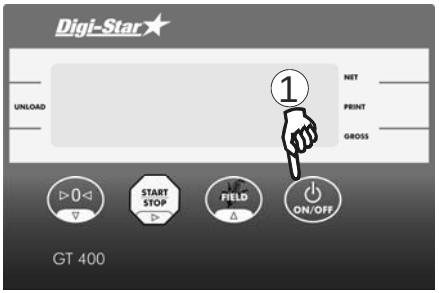
SAVING/PRINTING GROSS WEIGHTS

(Optional w/ Serial Option)



1. Press and hold START STOP for three seconds to send displayed weight data out serial port and add displayed weight to accumulated weight.
   - Weight will be accumulated until cleared.
   - Weight is always stored as a positive value.

TURNING OFF THE SCALE



1. Press ON/OFF until "BYE" is displayed.

SETTING OPTIONS

The Indicator has optional settings that allow flexibility in the way that the scale is used and data is collected.

CHANGING OPTIONS USING LONG FORM SETUP

Enter Long Form Setup by holding FIELD and ON/OFF for three seconds.

Press FIELD to advance to desired menu 1,2,3,4,CALIB, or EXIT,

press ON/OFF to select.

Press ON/OFF to advance to desired parameter.

Press FIELD to advance to proper setting.

Press ON/OFF to save setting and advance to next parameter.

Hold START STOP and press ON/OFF to return to indicator operation.

Default settings from the factory vary with options and due to customer preferences.

Setting/ Display	**Options (Bold = Default)**	**Description**
MENU 1		
Language LANGAG	 **ENGLSH** NEDERL FRANCS DEUTSH ITAL PORT ESPAN DANSK MAGYAR VESTA	Select from list English Dutch French German Italian Portuguese Spanish Danish Hungarian Spanish
Display Rate D RATE	1, **2**, 3, 4	Display updates 1,2,3 or 4 times per second.
FIELD ID FIELD	**NEW EZ**	Identity of FIELD location, Truck ID or Grain Cart ID.

MENU 2		
Time Format TIME F	**AM/PM**, 24	Select time format
TIME TIME	SET TIME	FIELD changes time, START STOP selects hh,:mm,or:ss.
Date Format DATE F	1-mm-dd **2-mm/dd/yy** 3-mm/dd/yyyy 4-dd-mm 5-dd/mm/yy 6-dd/mm/yyyy 7-ddmoyy 8-ddmoyyyy	Select date format
Date DATE	**dd, mm,yy**	FIELD changes date - START STOP moves to next field.
Tare TAREAP	On/**OFF**	Tare automatically sends data to SERIAL connector.
1 Line Print IL PRT	ON/**off**	Data printed on one line.
Auto Print APRINT	On/**OFF**	Pressing keys will auto-print weight values.
Interface COM IN	**DOWNLD**, EZ CMD , EZ2CMD	Interface selections: DOWNLD = Data Down Loader, EZ CMD = Original EZ Commands EZ2CMD = EZII Escape Commands.
Print Format PRTFMT	AUTO, wronly, download, dt+tm, id+tm, idwttm, animal, 3200-a, 3200-B, 32-tmr, batch 1, fdinfo, wtrctm, eidinf, eid, eidvid, **prtac1**, prtac2, prtac3, feed-1, prtac4, prtac5, prtac6, bufinf,	Select alternate & comma (CSV) formats.

ZEROUT	*	Perform the Zero/Balance for SCOREM #11 weight output and Analog Output Option (4-20mA).
C1 DLY	.10	Select seconds to delay before advancing to next line.
C2 DLY	OFF	Select seconds to delay before advancing to next line.
PRTACC	-	Reset Print Accumulator
MENU 3		
Display Count Count	.01, .02, .05, .1, .2, .5, 1, 2, 5, **10,** 20, 50, 00.	Select display weight increment. If count is set too small, readings will be unstable and indicator will not be accurate.
Display Unit LB-KG	**lb** / kg	Unit of measure. When changing weight unit using long form, calibration is adjusted so scale displays accurately in new display unit.
Capacity CAP	85000	Enter MAXIMUM weight measurable on scale.
Menu 4 is not used.		

WEIGHING ERRORS

Over-Capacity Limit (OVRCAP)

The display shows the message "OVRCAP" if the weight on the scale system exceeds the capacity limit. The capacity value is entered in SETUP to warn of overloading the scale system.

Over Range (+RANGE)

The display shows the message "+RANGE" if the weight on the scale system exceeds the maximum weight measurable by the scale system. The over range value is always the system's maximum A/D counts multiplied by the scaling factor. The actual weight at which over range occurs depends on the calibration, zero, and display count size.

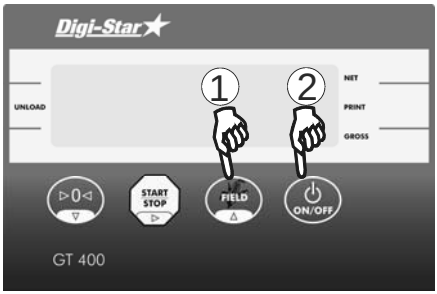
Under Range (-RANGE)

The display shows the message "-RANGE" if the weight on the scale system is less than the minimum weight measurable by the scale system. The under range value is always the system's minimum A/D counts multiplied by the scaling factor. The actual weight at which under range occurs will depend on the; calibration, zero, and display count size.

Low Battery Indication (LO BAT)

If the supply voltage drops below the (10.5 Volts), the message "RECHARGE BATTERY - TURNING OFF" and "LO BAT" will periodically show on the display to alert the operator of the low battery condition.

RUN SELF TEST



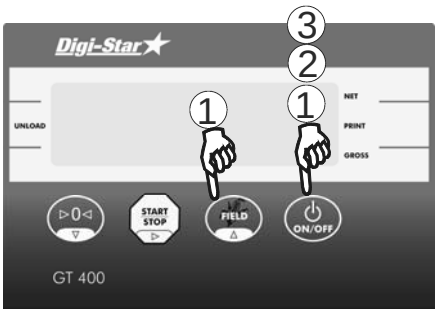
1. Press FIELD 3 seconds until the LB symbol starts to blink. Release.
2. Press ON/OFF to start the Self Test.

SHORT FORM CALIBRATION

The Short Form Setup & Calibration procedure allows you to change "SETUP" and "CAL" numbers of indicator. Setup and calibration numbers are displayed during self-test.

Do not attempt to calibrate scale if indicator is not reading stable weights. Calibration procedure will not fix instability, inconsistencies, or flashing "RANGE" messages.

CURRENT SETUP AND CALIBRATION NUMBER



To run self test with indicator ON:

1. Press FIELD until LB symbol starts to blink. Release, then press ON/OFF to start Self Test.
2. Press ON/OFF to "pause" Self-Test while numbers are displayed.
3. Press ON/OFF again to allow self-test to complete normally.

SETUP # _____
CAL # _____

SETUP NUMBER

Following is a list of functions that are controlled by the "SETUP" number:

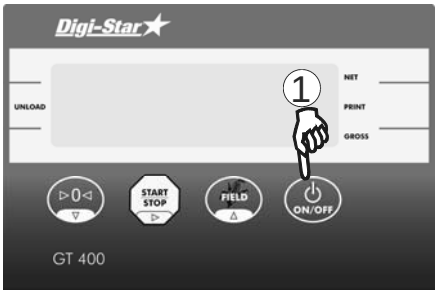
Weigh Method (W MTHD)	Gain
Display Units (LB-KG)	Scale Capacity
Display Counts (COUNT)	

CALIBRATION NUMBER

The “CAL” number is adjusted to make scale read proper weight for different load cells and to make accuracy adjustments on a scale system. Systems should be checked with known weights and adjusted if necessary to insure accuracy. Both setup and calibration numbers are changed to convert a scale from lbs to kgs.

CALIBRATING SCALE FOR MAXIMUM ACCURACY

Write down current SETUP and CAL numbers of your GT 400 indicator. These numbers are displayed during Self Test.

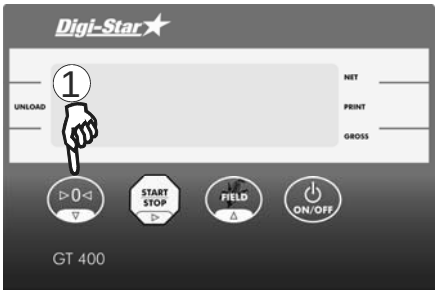


1. Press ON/OFF to "pause" Self-Test while setup and calibration numbers are displayed. Press ON/OFF again to "resume"

SETUP # _____
CAL # _____

Note: To accurately calibrate scale, you need a large amount of weight that has a known value. For best results you should have at least as much weight as largest load you plan to weigh.

DETERMINING NEW SETUP AND CALIBRATION NUMBERS



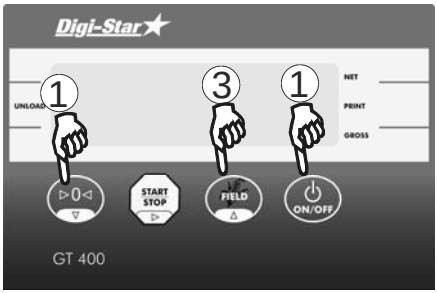
1. Press ▷0◁ to Zero-Balance.
2. Put KNOWN WEIGHT on scale platform and write down WEIGHT DISPLAY.

Perform following equation to find ACCURATE CAL #.

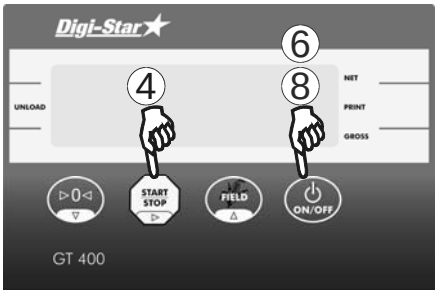
$$\frac{\text{Known Weight}}{\text{Displayed Weight}} \times \text{Existing Calibration Number} = \text{Accurate Calibration Number}$$

The setup number does not change.

ENTER A NEW SETUP AND CALIBRATION NUMBER



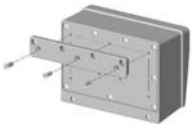
1. Press and hold ▷0◁ press ON/OFF for 3 seconds to enter short form calibration.
2. The display will flash “SETUP” and then display the 6-digit setup number with the right digit flashing. To modify the setup number:
3. Press FIELD several times to increment digit to it proper value.



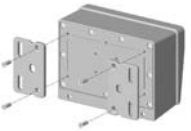
4. Press START STOP to advance blinking digit left.
5. Repeat steps 3 and 4 for each digit as required.
6. Press ON/OFF to enter new setup number and display calibration number.
7. Repeat steps 3 and 4 to modify the calibration number.
8. Press ON/OFF to enter new calibration number and display will go back to normal.
9. Verify the accuracy of scale.

INSTALLATION

INDICATOR MOUNTING



Rail Mounting
Included



Wing Mount
Included

Wedge Mount
Optional

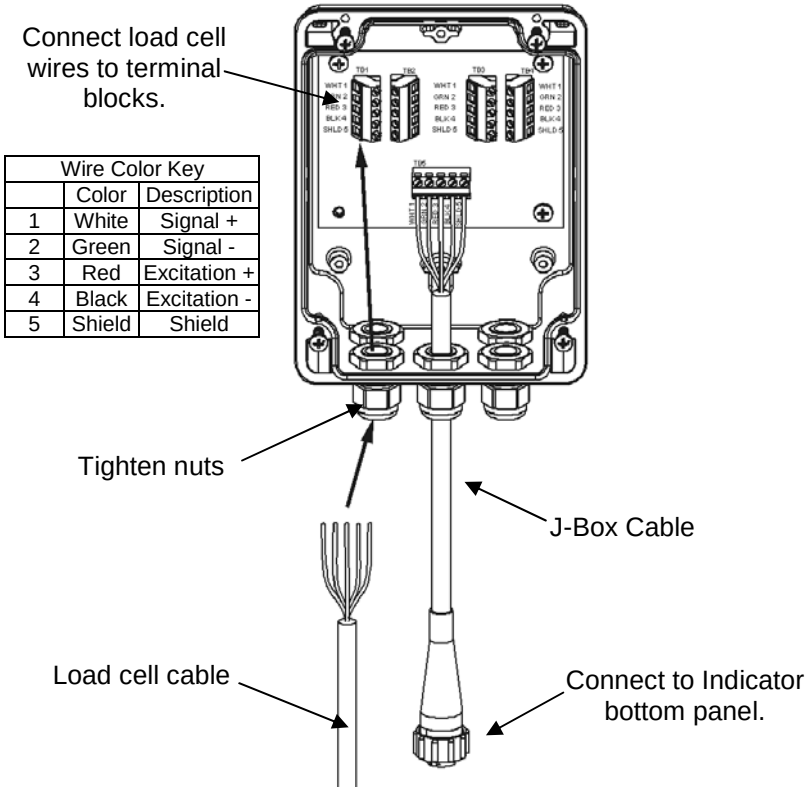
RAM Mount
Optional

POWER CONNECTION

Power can be obtained directly from a 12VDC battery or from a 120V or 220V AC power cube that plugs into a wall outlet. Attach power cable to POWER connector located on bottom panel of scale.

Connect RED wire from power cable to +12VDC and BLACK wire to GROUND. The indicator is fused internally at two amps.

LOAD CELL CONNECTION



Wire Color Key		
	Color	Description
1	White	Signal +
2	Green	Signal -
3	Red	Excitation +
4	Black	Excitation -
5	Shield	Shield

Figure 2. J-Box Connections

INDICATOR CALIBRATION

If you connect an indicator to a different weighing implement, the calibration and setup number may need to change. Refer to calibration procedures (page 15-17) or contact your Digi-Star representative for assistance.

Lightning Protection

Stationary systems use “Lightning-Protected” J-boxes and ground to protect scale when lightning strikes nearby. Please call your Digi-Star representative to request instructions F3050.