SYSTEM CONFIGURATION

Configuration Menus

The JID-SC20K force data instrument contains three menus to configure the instrument system:

Setup ("F") Menu – Configures all metrologically-related parameters including calibration procedures.

User ("A") Menu – Configures COM2 communication parameters and other misc parameters, e.g. automatic turn off.

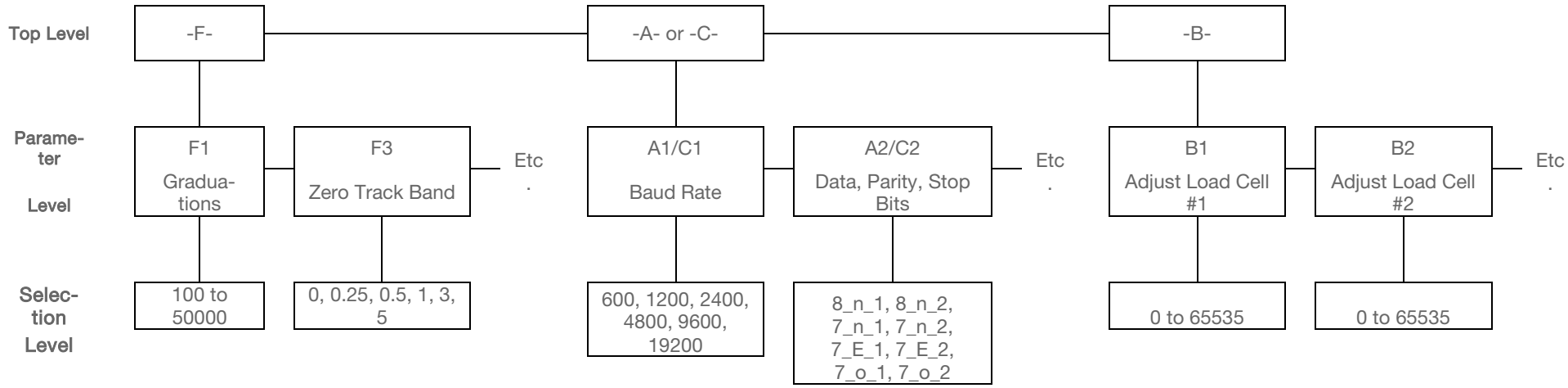
COM1 ("C") Menu – Configures COM1 communication parameters. **NOTE:** This menu will not appear for wireless systems (see F29).

Bluetooth ("B") Menu – Configures all parameters relating to the RF weighing module(s). **NOTE**: This menu will not appear for cabled systems (see F29).

The configuration menus are laid out in the following vertical arrangement:

- Top [Menu selection] level
- Parameter level
- Selection level (or function level, e.g. span calibration)

Please review the following chart to get a feel for how to navigate among the various menus and parameters.



NOTE: The -C- menu appears in place of the -B- menu for cabled systems.

Entering the Setup ("F") Configuration Menu

To access this menu, please follow these directions:

1. Switch off the instrument by pressing and holding down the ON/OFF key for about 5 seconds.
2. Press and hold down the ON/OFF key (about 20 seconds) until the screen shows "-F-".
3. Scroll down using the PEAK (down) key to reach the parameter level. The instrument shows "F 1".
4. Move from one "F" menu parameter to the next by using the DATA (left) or ON/OFF (right) keys. For example, to go from F1 to F2, press the ON/OFF key. To go from F2 back to F1, press the DATA key.
5. Once you have arrived at the proper "F" menu parameter, e.g. "F 1", press the PEAK (down) key once to arrive at the selection level. The instrument displays the current parameter setting.
6. To scroll thru the available parameter settings, use the DATA (left) or ON/OFF (right) keys.
7. Once the setting you want is displayed on the screen, press the ZERO (set) key to save this value and revert back up to the parameter level, e.g. "F 1".
8. In order to save all parameter settings, it is imperative to exit all menus in the following manner: At the parameter level, press the UNITS (up) key twice (two times) to exit the Set-up Menu. The instrument displays 'SAvE' and then automatically powers off.

Setup ("F") Menu Descriptions

This section provides more detailed descriptions of the selections found in the Setup Menu Chart. Factory-set defaults are shown in **bold** with a checkmark; (√).

CODE/NAME	DESCRIPTION	SELECTION LIST
F1 Graduations	Specifies number of full-scale graduations, i.e. capacity / division. Pressing the **PEAK** key to scroll down one level begins the sequence.	Key-in 100 - 50000 **50000**
F2 Sampling Rate	Sets the sampling rate in Hertz (measurements per second). Use 10 Hz for most applications or 80 Hz for extra fast response time **NOTE:** This menu is not applicable to wireless systems	**10** 80
F3 Zero Track Band	Selects the range within which the instrument will automatically zero. Note that the instrument must be in standstill to automatically zero. Selections are in display divisions (d).	OFF 0.25d **0.5d** 1d 3d 5d
F6 Digital Filter	Averages weight readings to produce higher stability. Lower number provides a faster response. Choose the speed that works best for your application.	0 to 12 **8**

CODE/NAME	DESCRIPTION	SELECTION LIST
F8 Calib. Unit	Selects the primary base unit to be used in the calibration process. Also the default unit for normal operation. "1" = primary unit is lb "2" = primary unit is in kg "3" = primary unit is oz "4" = primary unit is in g	**1** 2 3 4
F9 Display Divisions	Determines the desired weight increments. Value should be consistent with legal requirements.	**1** 2 5
F10 Decimal Pt.	Determines location of the decimal point.	**0** 0.0 0.00 0.000 0.0000 00
F11 No. of L/C wires	Selects the number of wires on the load cell(s) to be connected to the instrument . Cabled systems only. "4" = four wires "6" = six wires (SENSE)	**4** 6
F13 Gravity (g)	Allows you to select the gravity (g) of the location of the instrument system. Expressed in m/s^2. Pressing the **PEAK** key to scroll down one level begins the sequence.	Key-in 9.750 to 9.850 **9.797**
F15 Span Calibration - Negative	Places instrument into the negative span calibration routine. Scrolling down with the PEAK key one level begins the procedure.	Press **PEAK** key to begin sequence
F16 Zero Calibration	Places instrument into the zero calibration routine. Scrolling down with the PEAK key one level begins the procedure.	Press **PEAK** key to begin sequence
F17 Span Calibration - Positive	Places instrument into the positive span calibration routine. Scrolling down with the PEAK key one level begins the procedure.	Press **PEAK** key to begin sequence
F18 View Calibration	Actuates the function that allows you to view both the zero and span calibration value. The values displayed in this function are valid only after Calibration (F16 & F17) has been successfully completed. Scrolling down with the PEAK key one level begins the procedure. Multi-point cal	Press **PEAK** key to begin sequence
F19 Key-in Zero	Allows you to key-in known zero calibration value in case of memory loss in the field. Scrolling down with the PEAK key one level begins the procedure.	Press **PEAK** key to begin sequence
F20 Key-in Span	Allows you to key-in span calibration values. Scrolling down with the PEAK key one level begins the procedure.	Press **PEAK** key to begin sequence
F21 Factory Reset (US)	This sub-menu will reset all parameters in the “F” and “A” menu to the default settings. It will not overwrite any previously saved calibration data. USE WITH CAUTION!	Press the **PEAK** key twice to execute
F22 Factory Reset (EU)	This sub-menu will reset all parameters in the “F” and “A” menu to the default settings. It will not overwrite any previously saved calibration data. USE WITH CAUTION!	Press the **PEAK** key twice to execute
F23 Full Factory Reset	This sub-menu will reset all system parameters to the default settings. It will not overwrite any previously saved calibration data. **USE WITH EXTERME CAUTION!**	Press the **PEAK** key twice to execute

CODE/NAME	DESCRIPTION	SELECTION LIST
F24 Fine Tune 4-20 mA	Actuates the function that allows you to fine-tune the optional 4-20 mA analog output. Pressing the PEAK key to scroll down one level begins the sequence.	Press the **PEAK** key to begin sequence
F25 Set Point Function	Selects the number of function of the set points and relay outputs. See user's guide for definitions	0 to 10 **0**
F29 Load Cell Input	Selects the load cell input source. "AdC" = Internal A/D (cabled), "1rAdIo" = One external wireless A/D module, "2rAdIo" = Two external wireless A/D modules	**AdC** 1rAdIo 2rAdIo
F30 Special Application	Used to select one special application feature, subject to local legal requirements. "0" = None (Gross/Net), , " "2" = Remote Display, "5" = Peak Hold, "	0 2 **5**
F32 Center of Zero Band	Selects the range around gross zero within which the instrument will display the Center of Zero annunciator. Selections are in display divisions (d).	**0.25d** 0.5
F34 Auto Print Min. Weight	Selects the minimum weight at which the auto print function will work if enabled. Selections are in display divisions (d). Scrolling down with the PEAK key one level begins the procedure. "0" = Disabled	Key-in 0 - 100 **1**
F35 Default Units Mode	Selects the power up units mode. Scrolling down with the PEAK key one level begins the procedure. "1" = Pounds (lb), "2" = Kilograms (kg), "3" = ounces (oz), "4" = grams (g), "5" = Newtons	**1** 2 3 4 5
F36 Default Peak Mode	Selects the power up peak mode. Scrolling down with the PEAK key one level begins the procedure. "rEAL" = Live, "HoLd P" = Positive Peak, "HoLd U" = Negative Peak	**rEAL** HoLd P HoLd U

Fine-tune 4-20 mA output (F24)

1. While in the Setup Menu mode, scroll to "F 24", then scroll down once using the PEAK key to enter Fine-tune menu. The instrument outputs 4 mA and displays a number.
2. While monitoring the voltage across R_L (see Appendix), use the right (ON/OFF) or left (DATA) keys to change the displayed value until the measured voltage is exactly 1 VDC.
3. Press the SET (ZERO) key to save. The instrument outputs 20 mA and displays another number.
4. While monitoring the voltage across R_L, use the right (ON/OFF) or left (DATA) keys to change the displayed value until the measured voltage is exactly 5 VDC.
5. Press the SET (ZERO) key to save and revert back to F24.

Entering the User (“A”) or COM (“C”) Menu

NOTE: Follow the same steps to enter the COM (“C”) Menu– just substitute “C” for “A” below

1. Switch off the RF force data instrument by pressing and holding down the ON/OFF key for about 5 seconds.
2. Press and hold down the ON/OFF key (about 20 seconds) until the screen shows “-F-”.
3. Press the ON/OFF (right) key once. The screen displays “-A-”.
4. Scroll down using the PEAK (down) key to reach the parameter level. The instrument shows “A 1”.
5. Move from one “A” parameter to the next by using the DATA (left) or ON/OFF (right) keys. For example, to go from A1 to A2, press the ON/OFF key. To go from A2 back to A1, press the DATA key.
6. Once you have arrived at the proper “A” menu parameter, e.g. ”A 1”, press the PEAK (down) key once to arrive at the selection level. The instrument displays the current parameter setting.
7. To scroll thru the available parameter settings, use the DATA (left) or ON/OFF (right) keys.
8. Once the setting you want is displayed on the screen, press the ZERO (set) key to save this value and revert back up to the parameter level, e.g. ”A 1”.
9. In order to save all parameter settings, it is imperative to exit all menus in the following manner: At the parameter level, press the UNITS (up) key twice (two times) to exit the User Menu. The instrument displays ‘SAvE’ and then automatically powers off.

User (“A”) and COM (“C”) Menu Descriptions

This section provides more detailed descriptions of the selections found in the User Menu Chart. Factory-set defaults are shown in **bold** with a checkmark; (√).

CODE/NAME	DESCRIPTION	SELECTION LIST
A1/C1 Baud Rate	Selects the baud rate for data transmission through the serial port.	600, 1200, 2400, 4800, **9600** √, 19200, 38400, 57600, 115200
A2/C2 Data Bits, Parity and Stop Bits	Selects the number of data bits and parity of serial transmission. "8_n_1" = 8 data bits with no parity bit and one stop bit "8_n_2" = 8 data bits with no parity bit and two stop bits "7_n_1" = 7 data bits with no parity bit and one stop bit "7_n_2" = 7 data bits with no parity bit and two stop bits "7_E_1" = 7 data bits with even parity bit and one stop bit "7_E_2" = 7 data bits with even parity bit and two stop bits "7_o_1" = 7 data bits with odd parity bit and one stop bit "7_o_2" = 7 data bits with odd parity bit and two stop bits	**8_n_1** √ 8_n_2 7_n_1 7_n_2 7_E_1 7_E_2 7_o_1 7_o_2
A3/C3 Serial Port Mode	Selects the mode of the serial port: Refer to Appendix B for more information. "0" = Demand Full Duplex "1" = Continuous Full Duplex “2” = Auto Print	**0** √ 1 2
A4 MP-20 Print Header	Tells MP-20 printer to print the header information. Valid only when **A6** is set to “2” or “4”. "0" = Do NOT Print Header "1" = Print Header	**0** √ 1
A5 Units Key	Selects function of the Units key. **NOTE**: The UNITS key will not function if ounces or grams are selected for F8. "no" = Disabled "YES" = Enabled	no **YES** √
A6/C6 Output String	Selects fixed output string for serial port. Refer to Appendix B for details. "0" = String Format 1 (Condec Demand) "1" = String Format 2 (Condec Continuous) "2" = Text Print Ticket “3” = Text Print Ticket with MP-20 Auto Label Feed	**0 (A6)** √ 1 **2 (C6)** √ 3
A7 ID Number	Selects the ID number mode. "no" = Disabled "YES" = Enabled	**no** √ YES
A8 Set ID Number	Allows you to key-in the ID number. Pressing the PEAK key to scroll down one level begins the sequence.	Key-in 0 to 999999 **123456** √

CODE/NAME	DESCRIPTION	SELECTION LIST
A9/C9 Line Feeds	Allows you to key-in the number of line feeds. Pressing the PEAK key to scroll down one level begins the sequence.	Key-in 0 to 99 **8**
A10 Auto Power Off - RF Digital Instrument	Allows you to configure the automatic power off time for the RF force data instrument. Expressed in minutes of inactivity (keys and weighing platform). Pressing the PEAK key to scroll down one level begins the sequence.	Key-in 0 to 30 **30**
A12 Backlight Brightness	Selects the brightness of the LCD backlight. Selections are in % of full brightness.	0 (OFF) 20 50 75 **100**
A13/C13 Handshaking	Selects function of the hardware handshaking. (NOTE: Receive pin is used for handshaking). "0" = Disabled "1" = Enabled	**0** 1
A18 Date	Selects function of the printed date. "no" = Disabled "YES" = Enabled	**no** YES
A19 Date Format	Selects the printed format for date. "USA" = mm/dd/yy "IntL" = dd/mm/yy	**USA** IntL
A20 Set System Time & Date	Allows you to set the system time and date. Pressing the PEAK key to scroll down one level begins the sequence.	Press **PEAK** key to begin sequence
A22 Low Battery Auto Power Off - RF Digital Instrument	Allows you to configure the automatic power off time of the instrument after it enters a low battery condition. Expressed in minutes. Pressing the PEAK key to scroll down one level begins the sequence.	Key-in 0 to 99 **2**
A23 Audible Key Feedback	Selects function of the audible key feedback (beeper). "no" = Disabled "YES" = Enabled	no **YES**
A24 Diagnostics	Used to access the listed test functions (one at a time). Pressing the **PEAK** key begins the sequence. "A24-U1" = Display segment test, "A24-U2" = A/D converter test, “A24-U3” = Input test, “A24-U4” = Output test (all) “A24-U5” = Serial Port test (both), “A24-U6” = Keyboard test	Press **PEAK** key to begin sequence
A25 Decimal Point	Selects printed (not displayed) decimal point character. "0" = Period (‘.’) "1" = Comma (‘,’)	**0** 1

Setting system time and date (A20)

1. Switch off the instrument by pressing and holding down the ON/OFF key for about 5 seconds.
2. Press and hold down the ON/OFF key (about 20 seconds) until the screen shows "-F-".
3. Press the ON/OFF (right) key once. The screen displays "-A-".
4. Scroll down using the PEAK (down) key to reach the parameter level. The instrument shows "A 1".
5. Move from A1 to A20 by pressing the DATA (left) key repeatedly until the screen shows "A 20".
6. Once you have arrived at A20 press the PEAK (down) key once. The screen displays "ho_xx" where 'xx' is the current hour, e.g. "15". One digit will be flashing.
7. Use the four directional keys to adjust the displayed value to the actual hour value. Increase the flashing digit by pressing the UNITS key. Decrease the flashing digit by pressing the PEAK key. Pressing the DATA key or the ON/OFF key will change the position of the flashing digit.
8. After entering the exact value, press the ZERO key to save the value. The screen displays "n¬_xx" where 'xx' is the current minute, e.g. "55". One digit will be flashing.
9. Use the four directional keys to adjust the displayed value to the actual minute value. Increase the flashing digit by pressing the UNITS key. Decrease the flashing digit by pressing the PEAK key. Pressing the DATA key or the ON/OFF key will change the position of the flashing digit.
10. After entering the exact value, press the ZERO key to save the value. The screen displays "dA_xx" where 'xx' is the current day of the month, e.g. "14". One digit will be flashing.
11. Use the four directional keys to adjust the displayed value to the actual day value. Increase the flashing digit by pressing the UNITS key. Decrease the flashing digit by pressing the PEAK key. Pressing the DATA key or the ON/OFF key will change the position of the flashing digit.
12. After entering the exact value, press the ZERO key to save the value. The screen displays "n¬_xx" where 'xx' is the current month of the year, e.g. "02". One digit will be flashing.
13. Use the four directional keys to adjust the displayed value to the actual month value. Increase the flashing digit by pressing the UNITS key. Decrease the flashing digit by pressing the PEAK key. Pressing the DATA key or the ON/OFF key will change the position of the flashing digit.
14. After entering the exact value, press the ZERO key to save the value. The screen displays "yE_xx" where 'xx' is the current month of the year, e.g. "11". One digit will be flashing.
15. Use the four directional keys to adjust the displayed value to the actual year value. Increase the flashing digit by pressing the UNITS key. Decrease the flashing digit by pressing the PEAK key. Pressing the DATA key or the ON/OFF key will change the position of the flashing digit.
16. After entering the exact value, press the ZERO key to save the value and revert back up to the parameter level, e.g. "A 20".
17. In order to save all parameter settings, it is imperative to exit all menus in the following manner: At the parameter level, press the UNITS (up) key twice (two times) to exit the User Menu. The instrument displays 'SAvE' and then automatically powers off.

Diagnostics (A24)

Here is a brief description of each test mode:

A24-U1 Display Test – Lights up all display segments, counting down from 666666 to 11111. Test ends automatically when complete.

A24-U2 ADC Test – Shows internal A/D converter counts – useful for troubleshooting weighing issues. End test manually by pressing the ZERO (Set) key.

A24-U3 Input Test – Displays input logic (0 or 1) of input terminal. "0" mean input pin is grounded; "1" means input pin is open. End test manually by pressing the ZERO (Set) key.

A24-U4 Output Test – Sets all output pins 'ON'. End test manually by pressing the ZERO (Set) key.

A24-U5 Serial Test – Transmits a data string continuously out both serial ports ("TEST1" on COM1 and "TEST2" on COM2). End test manually by pressing the ZERO (Set) key.

A24-U6 Keyboard Test – Displays a keycode for each key pressed on the keypad. See Table below. End test manually by pressing the ZERO (Set) key.

Key	Keycode
Units	1
Peak	2
Zero	3
Data	4
On/Off	5

Entering the Bluetooth ("B") Menu

NOTE: This menu applies to remote wireless A/D systems only.

1. Switch off the display unit by pressing and holding down the ZERO/OFF key for about 5 seconds.
2. Press and hold down the ON/OFF key (about 20 seconds) until the screen shows "-F-".
3. Press the ON/OFF key until the screen displays "-B-".
4. Scroll down using the PEAK (down) key to reach the parameter level. The instrument shows "B 1".
5. Move from one "B" parameter to the next by using the DATA (left) or ON/OFF (right) keys. For example, to go from B1 to B2, press the ON/OFF key. To go from B2 back to B1, press the DATA key.
6. Once you have arrived at the proper "B" menu parameter, e.g. "B 1", press the PEAK (down) key once to arrive at the selection level. The instrument displays the current parameter setting.
7. To scroll thru the available parameter settings, use the DATA (left) or ON/OFF (right) keys.
8. Once the setting you want is displayed on the screen, press the ZERO (set) key to save this value and revert back up to the parameter level, e.g. "B 1".

9. In order to save all parameter settings, it is imperative to exit all menus in the following manner: At the parameter level, press the UNITS (up) key twice (two times) to exit the Bluetooth Menu. The instrument displays 'SAvE' and then automatically powers off.

Bluetooth ("B") Menu Descriptions

This section provides more detailed descriptions of the selections found in the Bluetooth Menu Chart. Factory-set defaults are shown in **bold** with a checkmark; (√).

CODE/NAME	DESCRIPTION	SELECTION LIST
B1 Adjust Load Cell (Corner) #1 Factor	This parameter allows you to adjust ('tweak') the digital corner compensation factory for load cell/corner #1. Be sure to perform a digital corner calibration (via B10) before using this procedure. Pressing the PEAK key to scroll down one level begins the programming sequence.	Key-in 0 to 6.5535 **1.0000**
B2 Adjust Load Cell (Corner) #2 Factor	This parameter allows you to adjust ('tweak') the digital corner compensation factory for load cell/corner #2. Be sure to perform a digital corner calibration (via B10) before using this procedure. Pressing the PEAK key to scroll down one level begins the programming sequence.	Key-in 0 to 6.5535 **1.0000**
B3 Adjust Load Cell (Corner) #3 Factor	This parameter allows you to adjust ('tweak') the digital corner compensation factory for load cell/corner #3. Be sure to perform a digital corner calibration (via B10) before using this procedure. Pressing the PEAK key to scroll down one level begins the programming sequence.	Key-in 0 to 6.5535 **1.0000**
B4 Adjust Load Cell (Corner) #4 Factor	This parameter allows you to adjust ('tweak') the digital corner compensation factory for load cell/corner #4. Be sure to perform a digital corner calibration (via B10) before using this procedure. Pressing the PEAK key to scroll down one level begins the programming sequence.	Key-in 0 to 6.5535 **1.0000**
B6 Restore factory calibration	Restores factory calibration data. Scrolling down with the PEAK key one level begins the procedure.	Press **PEAK** key to begin sequence
B8 RFTM Auto Power Off	This parameter allows you to set the automatic power off timeout for the TI-500 RFTM. "0" = Always on "1" = 30 minutes "2" = 1 hour "3" = 2 hours	0 1 2 **3**
B9 RFTM Low Battery Force Off	This parameter allows you to set the automatic power off timeout in minutes for the TI-500 RFTM during a low battery condition. Pressing the PEAK key to scroll down one level begins the programming sequence.	Key-in 0 to 99 **10**
B10 Digital Corner Calibration	Places instrument into the digital corner calibration routine. Scrolling down with the PEAK key one level begins the procedure.	Press **PEAK** key to begin sequence

SYSTEM CALIBRATION

Calibration Overview

Digital system calibration is accomplished in two steps: zero calibration (F16) and positive span calibration (F17). A third calibration for negative span calibration is also available via F15. You can calibrate up to 7 points per side.

Here is the recommended sequence for multiple fixtures and multiple calibration points:

1. Put load cell onto test fixture
2. Go to F17 and press the down key; indicator prompts for the first calibration point
3. key in number 111111 and press NET/GROSS key ; indicator will show “FIT” momentarily and then automatically record the fixture reference point
4. Follow F17 procedure as written for up to 7 calibration points (do not exit F17)
5. Repeat steps 2 thru 6 for negative span calibration (F15)
6. Put the Loadcell onto the final fixture
7. Go to F16 and perform zero calibration

For dual wireless A/D modules systems (e.g. TI-500 RFTM-2BE), a digital corner calibration feature is also available. It does not require a specific test weight value, but the maximum weight that should be used is approximately 25% of the rated capacity of the platform.

NOTE: Please perform corner calibration prior to executing zero/span calibration.

Digital Corner Calibration (dual wireless units only)

1. Switch off the RF force data instrument by pressing and holding the ON/OFF key for about 5 seconds.
2. Press and hold down the ON/OFF key (about 20 seconds) until the screen shows “-F-”.
3. Press the ON/OFF key until the screen displays “-B-”.
4. Scroll down once using the PEAK key to enter the “Bluetooth” menu. Instrument shows “B 1”.
5. While in the Bluetooth Setup mode, scroll to "**B 10**", and then scroll down once using the PEAK key to enter corner calibration menu. The instrument will display a value. This value is the internal A/D count and can prove useful when trying to troubleshoot setup problems.
6. Remove all items from the weighing platform.
7. Press the ZERO key to save the zero point value. The display will show "**Corn-1**".
8. Place the test weight on the load cell/corner #1 of the weighing platform.
9. Wait 2-3 seconds to allow the internal reading to stabilize.
10. Press the ZERO key to save the load cell/corner #1 calibration. The display will show "**Corn-2**".
11. Repeat steps 8-10 for the remaining load cells/corners. At the conclusion of corner #4 calibration, the display will show "**Set--**".
12. Press the ZERO key to finish the corner calibration and revert back up to B10.
13. In order to save all parameter settings, it is imperative to exit all menus in the following manner: At the parameter level, press the UNITS (up) key twice (two times) to exit the Bluetooth Menu. The instrument displays ‘SAvE’ and then automatically powers off.