WEIGH-TRONIX

WI-130 WDAC
Service Manual

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Specifications

Power Input	115 Volts AC, 500 mA 50/60 Hz single phase 230 Volts AC, 250 mA, 50/60 Hz single phase *Optional 10-32 volts DC and AC noted above*
Excitation	10 Volts DC or 10 volts AC square wave capable of driving up to twenty 350-ohm weight sensors or 1 Quartzell™ transducer
Operational Keys	Zero, Tare, Print, Units, Select, Enter, Escape, Clear, 0-9, Decimal Point and Five Soft Keys labeled per selected operational routine. All keys provide users with tactile and audio acknowledgment when they are activated.
Operational Annunciators	Displayed symbols indicate motion, center of zero, unit of measure and more.
Display	1" H x 4.3" W vacuum fluorescent dot graphic display (32 X 128 dot layout)
Display rate	Selectable, 0.1 to maximum readable updates
A to D Conversion Rate	60 times per second
Unit of Measure	Pounds, kilograms, grams, ounces, pounds and ounces and two selectable custom units
Capacity Selections	Up to 10,000,000 selectable
Incremental Selections	Multiples and sub multiples of 1, 2, 5
Decimal locations	88888888 pick any location relative to division size
Displayed Resolution	Up to 1 part in 10,000,000
Audio Output	Audio tone for key contact assurance or operational alarms
Time and Date	Battery protected real time clock is standard
Internal Resolution	1,000,000 counts analog, Quartzell™ transducer higher
Harmonizer™ digital filtering:	Fully programmable to ignore noise and vibration
Standard input and outputs:	Four communications choices: Com 1: RS232, RS-485/422 Com 2: RS232, 20 mA current loop *(One bi-directional signal per port)* Two set point I/O ports via OPTO 22 I/O modules
Available Options	- Multi scale inputs - DC operation at 10 to 32 VDC, 3.5 Amp - OPTO 22 I/O Modules - Remote Expanded Control Interface for 8, 16, 24, or 32 OPTO 22 I/O Modules - Alpha-numeric, PC style keyboard - Quartzell transducer interface - Analog interface
Operating Temperatures	14 to 104° F (-10 to 40° C), 10 to 90% relative humidity
Enclosure	Stainless steel wash down enclosure
Dimensions	12 3/8" H x 10 3/4" W x 5 1/4" D (31.43 cm x 27.31 cm x 13.34 cm)
Weight	17.5 lb, 7.8 kg
Agencies	NIST Class III/IIIL Certified COC# 95-008 Canada Consumer Affairs pending OIML pending UL pending CSA pending FCC Class A
Warranty	2 year

Introduction

About This Manual

This manual covers the information you need to configure and service your WI-130 Weight Data Acquisition Controller (WDAC).

Major sections of this manual are headed by titles in a black bar like *Introduction* above. Subheadings appear in the left column. Instructions and text appear on the right side of the page. Occasionally notes, tips, and special instructions appear in the left column.

Front Panel Keys and Functions

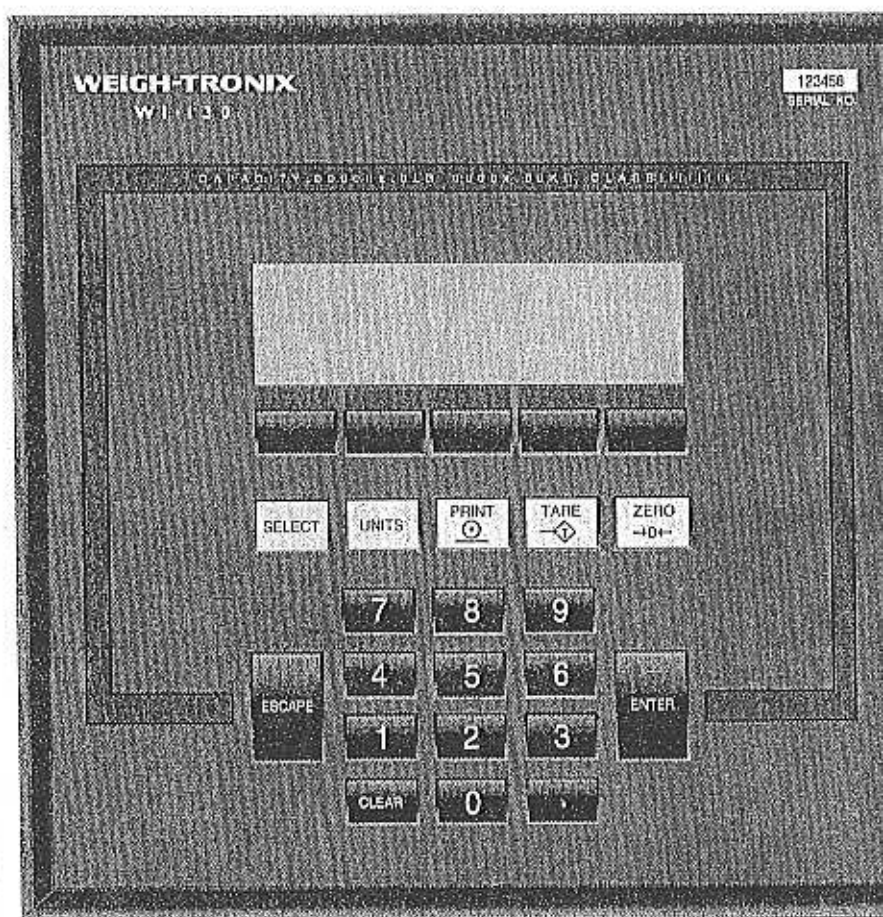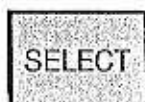The front panel is shown in Figure 1.

Figure 1
WI-130 Front Panel

Hard Keys

The keys on the front panel of the WI-130 are of two types, hard keys and soft keys. Hard keys are labeled directly and soft key labels appear on the display. Soft keys function differently at different times so their labels change as needed.

Below are brief descriptions for each of the hard key functions:

SELECT
Repeatedly press the SELECT key to scroll through the available weight reading displays. (Examples - gross, net, tare, minimum, maximum, etc.)

UNITS
Press the UNITS key to scroll through the available units of measure

PRINT
Press the PRINT key to send data to a connected printer.

TARE
Press the TARE key to enter a tare weight, then press SELECT to see the net display mode.

ZERO
Press the ZERO key to establish a zero reference. A center-of-zero icon will be displayed. During motion an M will appear below the center-of-zero icon.

ESCAPE
Press the ESCAPE key to back out of menus or cancel a numeric entry without accepting the value.

CLEAR
Press the CLEAR to clear values from the display.

ENTER
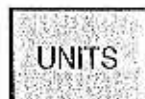Press the ENTER key to enter a keyed in value or accept a displayed choice.

The keys on the front panel of the WI-130 are of two types, hard keys and soft keys. Hard keys are labeled directly and soft key labels appear on the display. Soft keys function differently at different times so their labels change as needed.
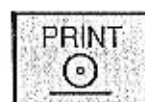
Below are brief descriptions for each of the hard key functions:

Hard Keys

SELECT

Repeatedly press the SELECT key to scroll through the available weight reading displays. (Examples - gross, net, tare, minimum, maximum, etc.)
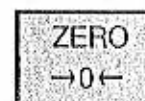
UNITS

Press the UNITS key to scroll through the available units of measure

PRINT

Press the PRINT key to send data to a connected printer.

TARE

Press the TARE key to enter a tare weight, then press SELECT to see the net display mode.

ZERO →0←

Press the ZERO key to establish a zero reference. A center-of-zero icon will be displayed. During motion an M will appear below the center-of-zero icon.

ESCAPE

Press the ESCAPE key to back out of menus or cancel a numeric entry without accepting the value.

CLEAR

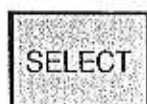Press the CLEAR to clear values from the display.

ENTER

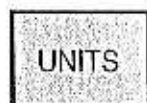Press the ENTER key to enter a keyed in value or accept a displayed choice.

The numeric keypad is for entering numbers.

Soft Keys

Soft keys are so-called because their function is not fixed. Function can change as the mode of operation changes or as the program for your particular setup changes.

Their are five soft keys located directly below the display. If the keys are needed during any operation, a label for each active key appears in the display directly above. There are only five key labels available at one time but this does not limit the potential usefulness of these keys. Programs can be created to enable one key to access another level of operation with five more key names and functions.

There are three levels of WI-130 setup you can access through the front panel:

User level

> The first level is the **User** level. These are the most commonly changed values and parameters that you will use in the course of operating the WI-130.

Configuration level

> The second level is the **Configuration** level. These items deal with some of the basic functions of the WI-130 and do not need to be accessed very often.

Calibration level

> The third level is the **Calibration** level. This section will need to be accessed only when the scale is being calibrated, or if you change scale capacity or division size.

A different password is needed to access each level. Once you access the level you want, the display presents a series of soft key choices. By pressing the appropriate soft key and following text prompts on the display, you can set up your WI-130 to suit your needs.

You must key in the password within 5 seconds of accessing the password screen or the WI-130 returns to normal operation.

Following are the instructions you need to access the setup of the WI-130.

1. Press and hold the **ESCAPE** key until the WI-130 beeps...

    The display asks for a password and looks like Figure 2.

Figure 2
Password display

Below are the passwords and details for the three setup levels.

IMPORTANT NOTE
The WI-130 can be sealed for legal for trade use and the software protected from change by a hardware connection on the main board. If P19 is jumpered, the system is sealed and programs cannot be downloaded, uploaded or altered. If P19 is not jumpered the system is not sealed and programs can be downloaded from the SimPoser software. A jumper on P19 does not affect the USER level. This level can be accessed and changed no matter what the condition of P19.

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User level

The User level is not affected by the condition of P19 on the main board.

The default User password is 111.

Key in 111 and press **ENTER. . .**   the screen in Figure 3 is displayed.
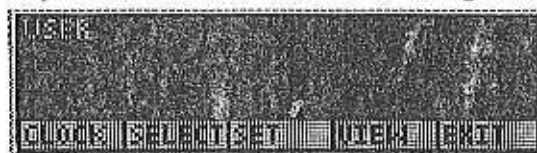
Figure 3
User level soft key group

Figure 4 is a flowchart showing what soft keys or choices appear as you press the soft keys shown in Figure 3.

The values under SELECT in the flowchart to the right are not saved after a power down and power up.
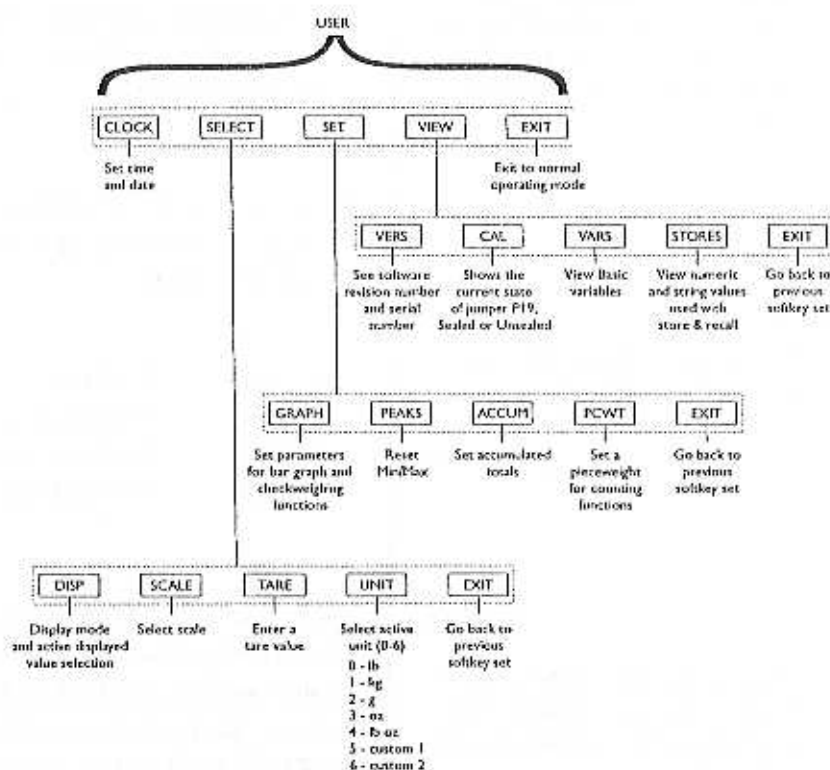
Figure 4
Soft key flowchart for User level

Clock

Press the **CLOCK** soft key to access the time and date setting function.

1. The display shows the current hour value. If this is not correct key in a new value and press **ENTER** or press **ENTER** to accept the current value. . .   The display shows the minutes value.

2. Repeat step 1 for minutes, seconds, year, month, day, and day of the week (1=Sunday, 2=Monday, etc.). . . Display returns to display shown in Figure 3.

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USER-SELECT Level

While in the this level the display will show USER-SELECT in the top left to remind you of where you are in the USER level.

DISP (Display Mode)

The display mode you pick may not be the one that appears on the display. A display mode called out in the WT BASIC program overrides the setting you make through the front panel.

Variable (#11) is a variable value called out in a WT-BASIC program. ADC (#13) stands for Analog to Digital Counts.

Press the **SELECT** soft key to access the USER-SELECT soft key group:

- **DISP** Press this key to set the current display mode.
- **SCALE** Press this key to select the scale number you want to use.
- **TARE** Press this key to enter a known tare weight.
- **UNIT** Press this key to select the active units of measure.
- **EXIT** Press this key to go back to the previous soft key set.

Following is a detailed description of the four functions listed above.

If you press the **DISP** soft key, follow these instructions:

1. The display shows the current display mode number. Press **ENTER** to accept this value or key in a new number from the list in Appendix 1, then press **ENTER** to accept it.   The display asks for the ACTIVE VALUE. This is the active display value.

2. Choose one of the following active display values by keying in 0-13, then press **ENTER**. . .   The display returns to the USER-SELECT screen.

0 = Gross	4 = Max	8 = Count Total	12=Piece Weight
1 = Net	5 = Rate of Change	9 = Trans. Total	13=ADC
2 = Tare	6 = Gross Total	10=Count	
3 = Min	7 = Net Total	11=Variable	

SCALE

You cannot select a scale number unless it has been activated in the SimPoser program and downloaded to the WI-130.

If you press the **SCALE** soft key the display will ask you to select a scale number. The currently active scale number is displayed. You can simply type a new scale number and press the **ENTER** key. If you have multiple scales attached to the indicator, this function chooses which scale's weight is displayed and which one the **ZERO** and **TARE** keys will affect.

TARE

If you press the **TARE** soft key the display will show the current tare value for the active scale. You may key in a new tare weight and press the **ENTER** key to override the previous tare weight.

UNIT

If you press the UNIT soft key the display will ask you to key in a number (0-6) which represents the value you want to be active. Below are the seven units to choose from and the corresponding number you need to key in for this function:

0- lb	4- lb oz
1- kg	5- custom 1
2- g	6- custom 2
3- oz	

Press the **EXIT** soft key to return to the USER level soft key group.

USER-SET Level

Press the **SET** soft key to access the USER-SET soft key group shown below:

- **GRAPH** Press this key to set the parameters for bar graph and check-weighing functions.
- **PEAKS** Press this key to reset the Min/Max.
- **ACCUM** Press this key to set the accumulator totals.
- **PCWT** Press this key to set the pieceweight for counting functions.
- **EXIT** Press this key to go back to the previous soft key set.

Following is a detailed description of the four functions listed above.

GRAPH

If you press the **GRAPH** soft key, follow these instructions:

1. The current MIN setting is displayed. Press **ENTER** to accept this value or key in a new value and press **ENTER**. . .   The UNDER value is displayed.

2. Repeat step one, accept or change the value, for UNDER, OVER, MAX, and BASIS values. BASIS is same as the active values (0-13) shown below. These values now apply when using the bar graph or checkweighing display.

Variable (#11) is a variable value called out in a WT-BASIC program. ADC (#13) stands for Analog to Digital Counts.

0 = Gross	4 = Max	8 = Count Total	12=Piece Weight
1 = Net	5 = Rate of Change	9 = Trans. Total	13=ADC
2 = Tare	6 = Gross Total	10=Count	
3 = Min	7 = Net Total	11=Variable	

PEAKS

If you press the **PEAKS** soft key the display asks if you want to reset the MIN and MAX values now in memory. You are given the choice of YES or NO. After choosing the display returns to the USER-SET level display.

ACCUM

If you press the **ACCUM** soft key, follow these instructions:

1. The display shows you the current GROSS TOTAL in the accumulator. You can change this by keying in a new number and pressing **ENTER** or press **ENTER** to move to the next ACCUM value. . .   The display shows the NET TOTAL value.

2. Repeat step 1 for NET TOTAL, COUNT TOTAL, and TRANS(action) TOTAL. . .   The display returns to the USER-SET screen.

PCWT

If you press the PCWT soft key the display shows the current value for the piece weight. Accept this by pressing the **ENTER** key or key in a new piece weight and press **ENTER**.

Press the **EXIT** key to return to the USER level soft key group.

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USER-VIEW Level

Press the **VIEW** soft key to access the USER-VIEW soft key group:

- **VERS** Press this key to see WI-130 firmware revision date and time. Serial number is currently not used. Configuration information is displayed if a program has been downloaded from SimPoser software.
- **CAL** Press this key to view the state of jumper P19(Sealed/Unsealed).
- **VARS** Press this key to view the BASIC variables.
- **STORES** Press this key to view the numeric and string values used with store and recall.
- **EXIT** Press this key to go back to the previous soft key set.

Following is a detailed description of the four functions listed above.

VERS

If you press the **VERS** soft key you will see the firmware version number. Serial number is currently not used. When you press any key, if you have never downloaded a file from SimPoser, you will see only the word CONFIGURATION and no other information. If you have downloaded a file, the following information is displayed:

> License # of the SimPoser software.
> Name of license holder.
> Version number of the SimPoser software.
> Name of the downloaded file (application program).
> Time and date of the last download.

Press any key again and the USER-VIEW level is displayed.

CAL

Press the **CAL** soft key to see the current state of jumper P19. The display will show *Sealed* or *Unsealed*.

VARS

If you press the **VARS** soft key you will be able to scroll through the variables you have in your basic program. Press the **FIRST** soft key to see the first one and the **NEXT** soft key to scroll to the next one. Repeat this until you are through and press the **EXIT** soft key to return to the USER-VIEW level.

If no variables are defined the screen will show **NO VARIABLES DEFINED**.

STORES

If you press the **STORES** soft key, follow these instructions:

1. The display asks if you want to DISPLAY NUMERICS?, and gives you the choice of **YES** or **NO**. If you press **YES** the display will look like this:

There are three types of memory:
- Standard
- Expanded
- Memory Card

Standard memory has locations 0-1023 for numeric storage and 0-511 for string storage.

Expanded memory has locations 1024-8191 for numeric storage and 512-4095 for string storage.

The memory card has locations 8192-73727 for numeric storage and 4096-36863 for string storage.

If you do not have the memory installed, the location returns a zero.

2. Press **PREV** (previous) to see the previous numeric record. Press **NEXT** to see the next numeric record. Press **SELECT** and the display will let you enter a specific numeric record number. When you press **ENTER** that record number will be displayed.

3. If you press **NO** in step one the following screen is displayed.
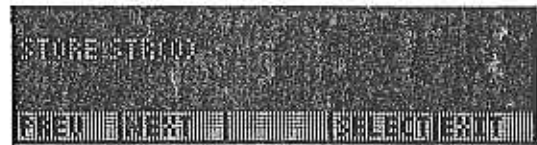
4. This screen lets you view all the strings stored in your BASIC program. View them the same way you did the numeric values.

5. Press **EXIT** to return to the USER-VIEW level.

Press **EXIT** to return to the USER level. Press EXIT one more time and you are back to normal operation. You have now seen all the parts of the USER level. The next section of the manual covers front panel configuration.

Configure level

You must key in the password within 5 seconds of accessing the password screen or the WI-130 returns to normal operation.

When your changes are completed, secure and protect them by placing a jumper on P19!

The deafult password for the Configure level is 2045.

1. Press and hold the **ESCAPE** key until the WI-130 beeps. Key in 2045 and press **ENTER. . .**   the screen in Figure 5 is displayed.

Figure 5
Configuration level display

Figure 6 is a flowchart showing what soft keys or choices appear as you press the soft keys shown in Figure 5.

Under Misc. (print format) in the flowchart to the right, the default print format 0 shows gross, tare and net weights. If you choose another print format (1-16) you need to define the format in SimPoser and download it to the WI-130.
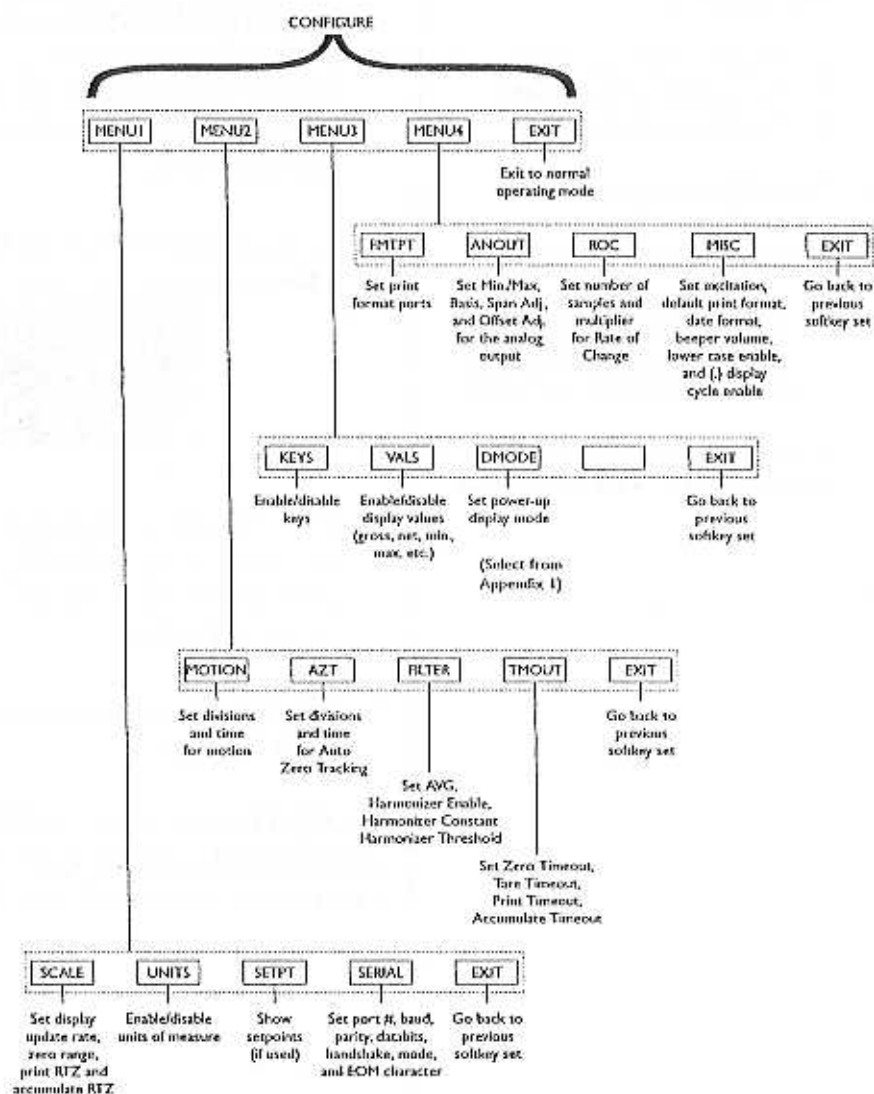
Figure 6
Soft key flowchart for Configure level

CONFIGURE-MENU 1 Level

Press the **MENU1** soft key to access the following soft key group:

- **SCALE**   Press this key to set display update rate, zero range, print return to zero, and accumulate return to zero.
- **UNITS**   Use this key to enable/disable units of measure.
- **SETPT**   Use this key to show setpoints, if used.
- **SERIAL**   Use this key to set port #, baud rate, parity, databits, handshake, mode, and EOM character.
- **EXIT**   Press this key to go back to the previous soft key set.

When your changes are completed, secure and protect them by placing a jumper on P19!

Following are detailed instructions for setting these parameters.

If you press the **SCALE** soft key, follow these instructions:

SCALE

Any value for display update rate greater than 2 will be considered as the maximum update rate or 99.

1. The display will show the *current display rate* (.1, .25, .5, 1, 2, 99). Accept this by pressing the **ENTER** key or key in a new value and press the **ENTER** key... The display shows the zero range value. If a non-valid number is keyed in the value will default to 99.

2. Repeat step one for zero *range* (0-100% allowed)... This is the percentage of capacity that you are allowed to zero using the **ZERO** hard key.

*By default, when the **PRINT** key is pressed, a print operation and an accumulation take place. If you do not want the accumulation to occur, a WT-BASIC program assigning only the DO PRINT command to the **PRINT** key needs to be downloaded to the WI-130. A WT-BASIC program can also define an ACCUM. soft key and assign accumulation to that key only.*

3. Repeat step one for *print return to zero* (0-100% of cap. allowed)... If you press the PRINT key, the weight must fall below this percentage of scale capacity before another print operation will be allowed.

4. Repeat step one for *accumulate return to zero* (0-100% allowed)... If you perform an accumulation, the weight must fall below this percentage of scale capacity before another accumulation operation will be allowed.

UNITS

If you press the **UNITS** soft key, follow these instructions:

Custom unit names must be defined by SimPoser software program.

1. The display asks if you want to enable the LB unit of measure and shows you the current state (ON or OFF). If the condition is as you want it, simply press the **ENTER** key. If you want to change the condition, press the YES or NO soft key, then the ENTER key to move to the next unit of measure... The kilogram unit of measure is the next one shown.

The custom conversion factor is the number to be multipied by the weight (in calibration units) to get the desired custom unit. Example: 1 lb = 5 inches of a certain steel rod. Custom unit is inches. Calibration unit is lb. Conversion factor is 5. With six lbs of weight on the scale, 30 inches would be displayed. (Six lbs x 5 = 30 inches of steel)

2. Repeat step 1 for kilograms, grams, ounces, pounds & ounces, and custom units 1 and 2. The display asks for the conversion factor for each custom unit. Key in a value and press **ENTER**... The display returns to the CONFIGURE-MENU1 display.

SETPT

Setpoint operations must be defined by the SimPoser software program.

If you press the **SETPT** soft key the display asks you SHOW SETPOINTS? What this means is, if you say yes, the display will show when setpoints turn on and off by lighting small dots in the upper right corner. Press the **YES** soft key if you want to see these dots, and press **NO** if you do not.

If you press the SERIAL soft key, follow these instructions:

1. The display prompts you for serial port # to configure. Press **ENTER** if displayed port is OK or key in a new port number and press **ENTER**. . .
    The baud rate code number is displayed.

2. Press **ENTER** to accept the baud rate or key in a new baud rate code number from the table below and press **ENTER**. . .
    The parity code number is displayed.

    Baud Rate Codes

0 = 300	4 = 9600
1 = 1200	5 = 19,200
2 = 2400	6 = 38,400
3 = 4800	7 = 56,700

Setting this parameter to SET will simulate 2 stop bits and no parity detection.

3. Press **ENTER** to accept the parity or key in a new parity code number from the table below and press **ENTER**. . .
    The databits setting is displayed.

    Parity Codes

0 = NONE	3 = SET
1 = ODD	4 = CLEAR
2 = EVEN	

4. Press **ENTER** to accept the databits setting or key in the new databits value (7 or 8) and press **ENTER**. . .
    The handshake protocol code number is displayed.

CTS is a hardware handshake (ready/busy) which requires two extra wires in your cable.

Xon/Xoff is a software handshake requiring no additional hardware.

5. Press **ENTER** to accept the handshake protocol setting or key in a new code number for the handshake from the table below and press **ENTER**. . .
    The mode code number is displayed.

    Handshake Protocol Codes

0 = NONE	2 = Xon / Xoff
1 = CTS	3 = BOTH

6. Press **ENTER** to accept the mode setting or key in a new code number from the table below and press **ENTER**. . .
    The EOM (end of message) value is displayed.

    Serial Mode Control Codes

0 = BASIC control	2 = Disabled
1 = Keyboard	3 = Multidrop

BASIC Control - Control of the serial port is through the BASIC program executing in the WI-130.

Keyboard - Control of the serial port is through an attached keyboard.

Disabled - The serial port is not in use for this configuration.

Multidrop - The serial port is configured in RS-485 Multidrop mode.

7. Press **ENTER** to accept the EOM character or key in a new number from 0-256 and press **ENTER**. . .

The display returns to the CONFIGURE-MENU1 display.

This completes the instructions for all the parameters of Menu 1.

EOM ASCII code #13 is carriage return.

CONFIGURE-MENU 2 Level

Press the **MENU2** soft key to access the following soft key group:

• MOTION — Use this key to set the motion detection window size in divisions and the time window in seconds.

For example: If you set divisions to 3 and seconds to 1, if the weight value does not change more than 3 divisions in one second, the scale or weight is considered stable.

• AZT — Use this key to enable AZT. If you enable AZT you can set the division size and seconds. The division size you pick defines a range above and below zero. When scale weight is inside this range for the number of seconds you picked, ½ of the weight will be zeroed. The indicator will repeat removing ½ the weight every X seconds. X being the number of seconds you have picked.

•FILTER — Use this key to set up the Harmonizer filtering. A full explanation is given below.

The A-D weight conversion happens 60 times per second in the WI-130. AVG is the number of conversions you want to average. For example, if you pick 30, the unit will average the weight values from the last 30 conversions or ½ second and uses that value for displayed data.

The next choice you have is for turning the Harmonizer filtering on or off. If you turn the Harmonizer filtering on you need to set the Harmonizer Constant. Typical values are between 1-8. Set the number low for small vibration problems and higher for more dampening effect.

In the SimPoser software the Harmonizer constant choices are 0 through 6. This setting is to be made in the "real world" on a working system so there are more levels available from the front panel.

The purpose of the Harmonizer Threshold is so the indicator will respond quickly to large weight changes. Harmonizer Threshold is the amount of weight change, in calibration units beyond which the Harmonizer will be temporarily disabled. For example, if you set this to 10 lbs, a weight change over pounds occurring during the sample time (½ sec. in our example) will disable the Harmonizer until the weight change during the sample time drops below 10 lbs.

• TMOUT　Use this key to set Zero Timeout, Tare Timeout, Print Timeout and Accumulate Timeout. This is the amount of time the WI-130 will wait for motion to cease and perform the function after the key is pressed.

For example, if Zero Timeout is set to 3 seconds, when the **ZERO** key is pressed the unit will zero the scale if there is no motion. If there is motion and motion ceases within 3 seconds the unit will zero the scale. If motion doesn't cease the key press is ignored.

• EXIT　Press this key to go back to the previous soft key set.

Following are detailed instructions for setting these parameters.

MOT'N (motion)

If you press the **MOT'N** soft key, follow these instructions:

1. The current value for the motion window size, in divisions, is shown. Press **ENTER** to accept this value or key in a new value and press **ENTER**. . .

   The current time window in seconds is displayed.

2. Press **ENTER** to accept this time period or key in a new value and press **ENTER**. . .

   The display returns to the CONFIGURE-MENU2 display.

AZT (auto zero tracking)

If you press the **AZT** soft key, follow these instructions:

1. The current value for the AZT window size, in divisions, is shown. Press **ENTER** to accept this value or key in a new value and press **ENTER**. . .

   The current time window in seconds for AZT is displayed.

2. Press **ENTER** to accept this time period or key in a new value and press **ENTER**. . .

   The display returns to the CONFIGURE-MENU2 display.

FILTER

If you press the **FILTER** soft key, follow these instructions:

1. The display shows the current value for the number of samples to average. Press **ENTER** to accept this value or key in a new value and press **ENTER**. . .

   The display shows the state of the Harmonizer filtering(ON or OFF).

When your changes are completed, secure and protect them by placing a jumper on P19!

2. Press **YES** to enable Harmonizer or **NO** to disable the Harmonizer parameter, then press **ENTER** ...   The current Harmonizer Constant value is displayed.

3. Press **ENTER** to accept this value or key in a new value and press **ENTER** ...   The current Harmonizer Threshold value is displayed. This value is in calibration units.

4. Press **ENTER** to accept this value or key in a new value and press **ENTER** ...   The display returns to the CONFIGURE-MENU2 display.

TMOUT (timeout)   If you press the **TMOUT** soft key, follow these instructions:

1. The current value for Accumulate Timeout is displayed. Press **ENTER** to accept this value or key in a new value and press **ENTER**.

2. Repeat step 1 for Print Timeout, Zero Timeout, and Tare Timeout. ...   The display returns to the CONFIGURE-MENU2 display.

Press the **EXIT** soft key to return to the CONFIGURE display.

CONFIGURE-MENU 3 Level

Press the **MENU3** soft key to access the following soft key group:

- **KEYS**   Press this key to enable or disable front panel keys.
- **VALS**   Press this key to enable or disable the display values (gross, net min., max., ect.)
- **DMODE** Press this key to pick a power-up display mode from the over 3 available. See *Appendix 1: Display Samples.*
- **EXIT**   Press this key to go back to the previous soft key set.

Following are detailed instructions for setting these parameters.

KEYS   If you press the **KEYS** soft key, follow these instructions:

1. The current setting (enabled ON or OFF) for the **SELECT** hard key is displayed. Press **YES** to enable the key or **NO** to disable the key, then press **ENTER** ..   The current setting for the **UNITS** hard key is displayed.

2. Repeat step I for **UNITS, PRINT, TARE, ZERO, AUTOTARE,** and **KEYPAD TARE...**

The display returns to the CONFIGURE-MENU3 display.

VALS If you press the **VALS** soft key, follow these instructions.

1. The current setting (enabled ON or OFF) for the **GROSS** display value is displayed. Press **YES** to enable the active value or **NO** to disable this active display value, then press **ENTER** ..

The current setting for the **NET** active value is displayed.

2. Repeat step I for all the display values (NET, TARE, MIN., MAX., ROC, G-TOT, N-TOT, C-TOT, #-TOT, COUNT, VARIABLE, PCWT, and ADC. . .

The display returns to the CONFIGURE-MENU3 display.

DMODE If you press the **DMODE** soft key, press **ENTER** to accept the display mode number shown or key in a new number (see *Appendix I*) and press ENTER.

The display returns to the CONFIGURE-MENU3 display. Press the **EXIT** key to return to the CONFIGURE display.

CONFIGURE-MENU 4
Level

Press the **MENU4** soft key to access the CONFIGURE-MENU 4 soft key set:

• **FMTPT** Press this key and enter the serial port # you want each of 16 print formats to be printed through.

• **ANOUT** Press this key to select the Minimum, Maximum and Basis parameters used with the optional Analog Output card.

Minimum Value
The Minimum Value is the lowest value that will be represented by the Analog Output.

Maximum Value
The Maximum Value is the highest value that will be represented by the Analog Output.

Selection Basis
Selection basis is the active display value upon which the output of the analog output will be based.

When your changes are completed, secure and protect them by placing a jumper on P19!

Span Adjust
Allows you to adjust the highest value of the analog output.

Offset Adjust
Allows you to adjust the lowest value of the analog output.

• **ROC**   ROC stands for Rate of Change. Press this key to set up your WI-130 Indicator to calculate Rate of Change for flow rate, or weight/time, applications.

ROC Samples
The number of samples over which the rate of change of weight is determined. The WI-130 converts weight from A to D at 60 times per second. If ROC Samples is set to 60, the WI-130 is determining the rate of weight change over one full second.

ROC Mult
The ROC Multiplier allows you to enter a conversion factor to translate weight to some other unit of measure, such as gallons or some other weight unit based upon the calibration unit of measure.

ROC Examples:

If pounds is your calibration unit, pick a sample value of 60 and a multiplier of 1. The display will show the rate of change in pounds/second.

$$\frac{\text{Cal Unit}}{\text{Custom Unit weight in Calibration Units}} = \frac{1}{8} = 0.125$$

For gallons of water/second set the sample value at 60 and the multiplier to 0.125. Water = 8 lbs/gallon (8 lbs is close enough for our example) so their are 0.125 gallons per pound. See formula to the left.

To get gallons/minute, do not change the sample size but rather multiply the 0.125 by 60 to get a value equal to gallons/pounds/minute (7.5). The display will then show you a rate of change in gallons per minute. (This is the flow over the last second not over a whole minute's time.)

• **MISC**   Press this key to set excitation, default print format, date order, beeper volume, lower case enable (for pre-formatted text only), and decimal (.) display cycle enable.

• **EXIT**   Press this key to go back to the previous soft key set.

Following are detailed instructions for setting these parameters.

FMTPT

The default print format 0 shows gross, tare and net weights. If you choose another print format (1-16) you need to define the format in SimPoser and download it to the WI-130.

If you press the **FMTPT** soft key, follow these instructions:

1. The current serial port number assigned to Format 1 is displayed. Press **ENTER** to accept this serial port or key in a new serial port number and press **ENTER**. . .   The serial port assignment for Format 2 is displayed.

2. Repeat step 1 for up to 16 print formats and press the **ENTER** key. . .   The display returns to the CONFIGURE-MENU4 display.

ANOUT (analog output)

Example:
4mA-20mA output
Minimum value = 0 lbs gross weight
= 4mA output.
Max value = 1000 lbs gross weight
= 20mA output.

Basis is set to 0, which is gross weight.

Adjustments to the actual output of the analog output pcboard are only allowed through the front panel of controls of the WI-130 and are dependent on the actual weight on the scale. Therefore, in the example above, a 1000 lb weight must be placed on the scale to allow adjustment of maximum value.

Offset Adjust and Span Adjust may have values between ±5000 counts.

If you press the **ANOUT** soft key, follow these instructions:

1. The display shows the current value used to represent the MIN (minimum) output from the analog output card . Press **ENTER** to accept the current value or key in a new value and press **ENTER**. . .   The display shows the current MAX value.

2. Press **ENTER** to accept the current MAX value or key in a new value and press **ENTER**. . .   The display shows the current selection upon which the output is based.

3. Press **ENTER** to accept the current basis or key in a new value from the table below and press **ENTER**. . .   The display shows the highest adjustment value.

-1 = Disabled	3 = Min	7 = Net Total	11= Variable
0 = Gross	4 = Max	8 = Count Total	12= Piece Weight
1 = Net	5 = Rate of Change	9= Trans. Total	
2 = Tare	6 = Gross Total	10= Count	

4. Press **ENTER** to accept the current highest adjustment value or key in a new value (-5000 to +5000) and press **ENTER**. . .   The display shows the current lowest offset adjustment value.

5. Press **ENTER** to accept the lowest current offset adjustment value or key in a new value (-5000 to +5000) and press **ENTER**. . .   The display returns to the CONFIGURE-MENU4 display.

ROC

If you press the **ROC** soft key, follow these instructions:

1. The display shows the current value for SAMPLES. Press **ENTER** to accept the current value or key in a new one and press **ENTER**. . .   The current multiplier value is displayed.

2. Press **ENTER** to accept the current value or key in a new one and press **ENTER**. . .   The display returns to the CONFIGURE-MENU4 display.

MISC

The default print format 0 shows gross, tare and net weights. If you choose another print format (1-16) you need to define the format in SimPoser and download it to the WI-130.

When your changes are completed, secure and protect them by placing a jumper on P19!

If the decimal display is ON you can scroll through all the display modes (see Appendix 1) by pressing the decimal (.) hard key on the indicator. Only the text supplied by your BASIC application program will be displayed.

If you press the **MISC** soft key, follow these instructions.

1. The display shows current setting for the AC excitation. Press **ENTER** to accept the current setting or key in a new setting from the table below and press **ENTER**. . . The display shows the default print format.

   AC Excitation
   0 = DC   2 = 600 Hz
   1 = 300 Hz   3 = 1200 Hz

2. Press **ENTER** to accept the current print format as the default for the PRINT key or key in a new format (0-16) and press **ENTER**. . . The display shows the date preference format.

3. Press **ENTER** to accept the date format or key in a new one from table below and press **ENTER**. . . The display shows the beeper volume setting.

   Date Preference Format
   0 = MMDDYY   1 = DDMMYY

4. Press **ENTER** to accept the current volume level or key in a new level (see table below) and press **ENTER**. . . The display shows the current type style selection for screen text.

   Beeper Volume
   0 = OFF   2 = Medium
   1 = Low   3 = High

5. Press **ENTER** to accept the current type style selection or key in a new style from the table below and press **ENTER**. . . The decimal display cycle is shown.

   Type Style
   0 = no lowercase   1 = lowercase

6. Press **ENTER** to accept the current decimal display cycle setting or key in a new value from the table below and press **ENTER**. . . The display returns to the CONFIGURE-MENU4 display.

   Decimal Display Mode
   0 = OFF   1 = ON

Press **EXIT** twice to return to normal operation. If you changed the configuratic you will be asked if you want to save changes. Press **YES** if you do. **NO**, if not.

Calibrate level

You must key in the password within 5 seconds of accessing the password screen or the WI-130 returns to normal operation.

The default password for the Calibrate level is 30456.

1. Press and hold the **ESCAPE** key until the WI-130 beeps. Key in 30456 and press **ENTER...**   the screen in Figure 7 is displayed.
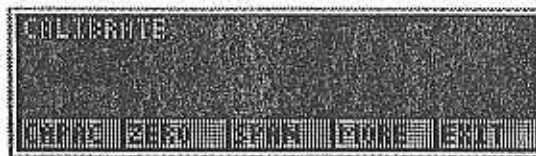

Figure 7
Calibrate level display

Figure 8 is a flowchart showing what soft keys or choices appear as you press the soft keys shown in Figure 7.
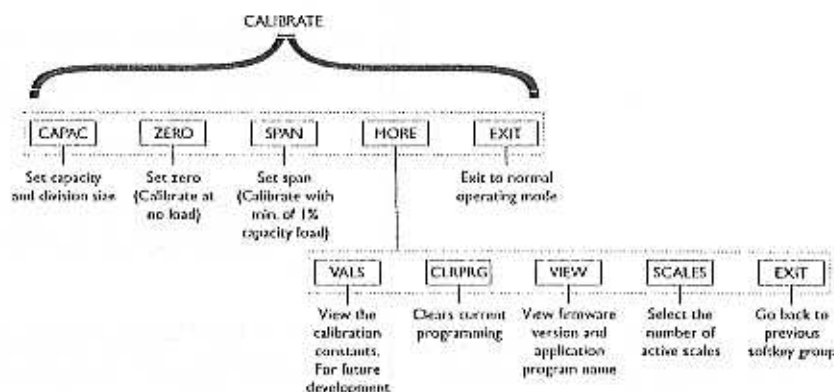

Figure 8
Soft key flowchart for Calibrate level

Press the **CAPAC** soft key to set the capacity and division size of the scale.

Press the **ZERO** soft key to set the zero reference (calibrate at no load).

Press the **SPAN** soft key to set the span (calibrate with load).

Press the **MORE** soft key to access the following soft key group:

- **VALS** Press this key to see the calibration constants. These numbers are for future development.
- **CLRPRG** Press this key to clear the BASIC program and the configuration of your WI-130. **DO THIS ONLY WHEN ABSOLUTELY NECESSARY.**
- **VIEW** Press this key to view the firmware version.
- **SCALES** Press this key to select the number of active scales.
- **EXIT** Press this key to go back to the previous soft key group.

Following are detailed instructions for setting or viewing the above parameters.

CAPAC (capacity)

If you press the **CAPAC** soft key, follow these instructions:

1. The display shows the current value for the capacity. Press **ENTER** to accept this value or key in a new capacity and press **ENTER**. . .   The current division size is displayed.

2. Press **ENTER** to accept the division size or key in a new one and press **ENTER**. . .   The display returns to the CALIBRATE display.

ZERO

If you press the **ZERO** soft key the display asks you to remove all weight from the scale then press **ENTER**. After the indicator has calibrated the zero point, the display says DONE and asks you to press any key. Above the text you will see the weight displayed. It should read zero in the increments you've chosen. If not you should perform this step again. The display then returns to the CALIBRATE display.

SPAN

If you press the **SPAN** soft key, follow these instructions:

1. The current span calibration weight is displayed. Press **ENTER** to accept this weight or key in a new one and press **ENTER**. . .   The display prompts you to apply the test weight load to the scale.

You may use as little as 1% of full capacity to span the system but Weigh-Tronix recommends using as close to 100% of full capacity as possible.

2. Apply the test weight load to the scale and press **ENTER**. . .   The indicator determines the span and tells you when it is done. Above the text, the display should show you the correct test weight. If not perform the span again.

3. Press any key to return to the CALIBRATE display.

The soft key group and functions accessed by the **MORE** soft key are explained on the previous page.

As you try to exit the calibration section the display will ask if you want any changes saved. Press the **YES** key if you want changes saved, **NO** if you do not.

This concludes the calibration section of the manual.

Disassembly

Follow the instructions in this section to disassamble the WI-130.

1. Unplug the WI-130 from the power source.

2. Remove the back of the WI-130 by removing the fourteen acorn nuts and pulling the back cover from the case. See Figure 10.
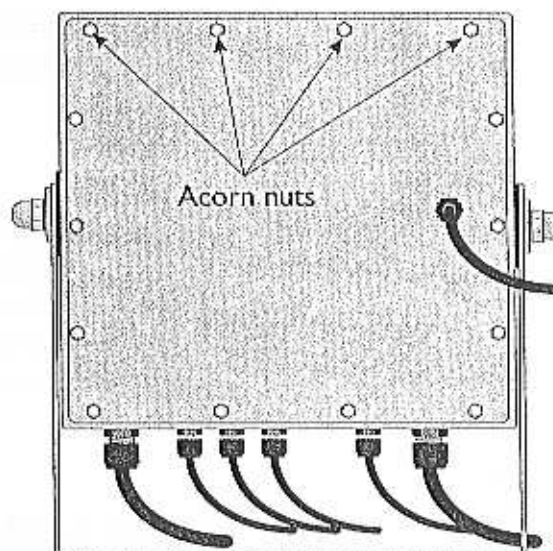

Figure 10
Back view of the WI-30

3. If you need to remove the power supply board from the inside of the back cover, begin by disconnecting the power supply wires and the wires leading to the main board. Remove the four screws in the corners of the transformer and the two holding the pc board as shown in Figure 11.
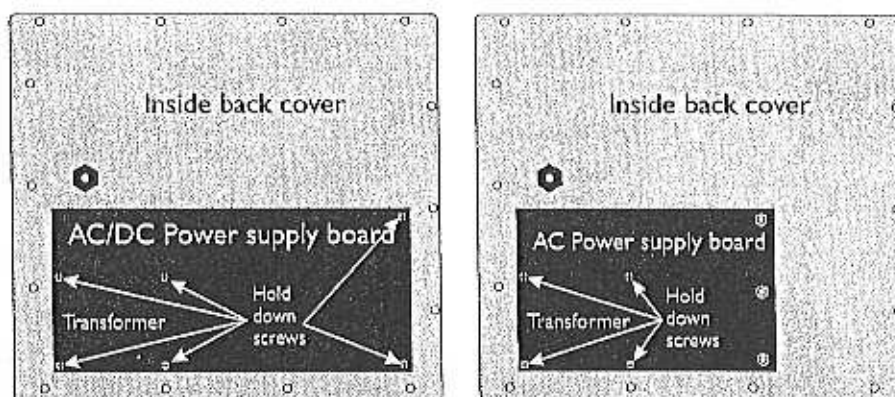

Figure 11
Power supply board

4. If you need to remove the main board, disconnect the two ribbon cables from the main board. Remove the six hold down screws on the pc board, as shown in Figure 12 and pull out the main board. Take care because there is a hidden cable connecting the main board to the display board. Disconnect this

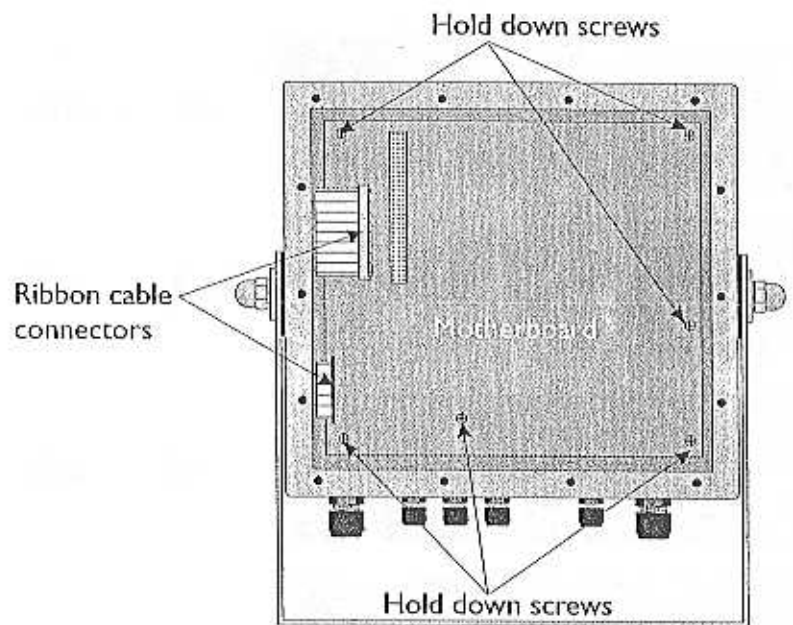before pulling the main board all the way out of the unit.

Figure 12
Main board

5. If you need to remove the display board, remove the four hold down screws shown in Figure 13
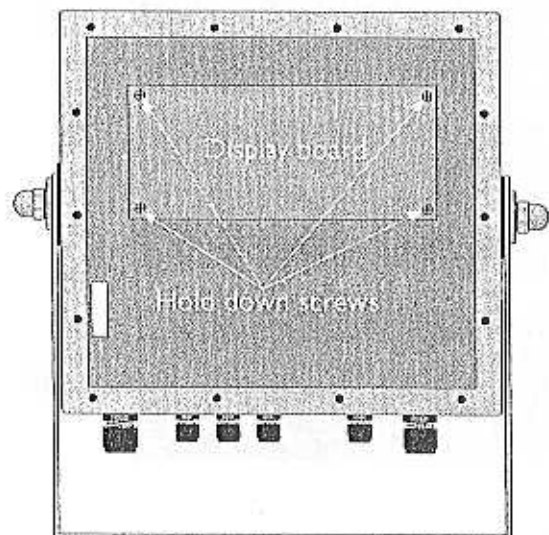

Figure 13
Display board

Re-assembly

Replace any of the boards if needed and re-assemble the unit by reversing the disassembly procedure.

Appendix 1: Display Samples

19.96 LB GROSS — #1
19.96 LB GROSS / LOGOS FONTS GRAPH ENTRY TIMER — #2
19.96 LB GROSS / LOGOS FONTS GRAPH ENTRY TIMER — #3
19.96 LB GROSS / LOGOS FONTS GRAPH ENTRY TIMER — #4
19.96 LB GROSS / TIMER / LOGOS FONTS GRAPH ENTRY TIMER — #5
TEST BASIC TEXT TEST BASIC TEXT TES (x4) — #6
19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES (x3) — #7
19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES (x2) — #8
19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES (x2) — #9
19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES — #10

#11 — 19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES
#12 — 19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES
#13 — TEST BASIC TEXT TEST BASIC TEXT TES / TIMER
#14 — 19.96 LB GROSS / TIMER / TEST BASIC TEXT TEST BASIC TEXT TES
#15 — TEST BASIC TEXT TEST BASIC TEXT TES (x3) / LOGOS FONTS GRAPH ENTRY TIMER
#16 — 19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES (x2) / LOGOS FONTS GRAPH ENTRY TIMER
#17 — 19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES / LOGOS FONTS GRAPH ENTRY TIMER
#18 — 19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES / LOGOS FONTS GRAPH ENTRY TIMER
#19 — TEST BASIC TEXT TEST BASIC TEXT TES (x2) / LOGOS FONTS GRAPH ENTRY TIMER
#20 — 19.96 LB GROSS / TEST BASIC TEXT TEST BASIC TEXT TES / LOGOS FONTS GRAPH ENTRY TIMER

#21   #31

#22   #32

#23   #33

#24

#25   #34

#26   #35

#27   #36

#28   #37

#29   #38

#30   #39

The following are multi-scale displays. If all the lines are not used for scales, they are available for Basic text. #34 & 35 are small basic text. #36 &37 are large basic text.

WI-130 Front Panel Configuration Selections

USER LEVEL

111

Menu Select, DISP

    1. Display mode   _____   1-33

    2. Active value   _____   0=Gross, 1=Net, 2=Tare, 3=Minimum weight, 4=Maximum weight, 5=ROC 6=Gross Total, 7=Net Total, 8=Count Total, 9=Transaction Total, 10=Count, 11=Variable Value, 12=Piece weight, 13=A to D Conversions

Menu Select, SCALE

    1. Scale Number   _____   1-5

Menu Select, TARE

    1. Selected value   _____

Menu Select, UNIT

    1. Active unit   _____   0=Lb, 1=Kg, 2=Gram, 3=Oz, 4=Lb/Kg, 5=custom 1, 6=custom 2

Menu Set, GRAPH (requires appropriate display mode)

    1. Minimum value   _____

    2. Under value   _____

    3. Over value   _____

    4. Maximum value   _____

    5. Basis   _____   0=Gross, 1=Tare, 2=Net, etc.

CONFIGURE LEVEL

2045

MENU 1, Scale

    1. Display rate   _____   .1, .25, .5, 1, 2, Max

    2. Zero range   _____   0 to 100%

    3. Print RTZ (return to zero)   _____   0 to 100%

    4. Accumulate RTZ (return to zero) _____   0 to 100%

MENU 1, Units

    1. Lb   on   off

    2. Kg   on   off

    3. Gram   on   off

    4. Ounces   on   off

    5. Lb and ounces   on   off

    6. Custom 1   on   off   Value_____

    7. Custom 2   on   off   Value_____

MENU 1, Setpt (setpoint)

    1. Requires application program

CAL = 30456

MENU 1, Serial
   1. Port   _____
   2. Baud rate   _____   0=300, 1=1200, 2=2400, 3=4800, 4=9600,
                                        5=19200, 6=38400, 7=56700
   3. Parity   _____   0=none, 1=even, 2=odd, 3=set, 4=clear
   4. Data bits   _____   7,8
   5. Handshake   _____   0=none, 1=CTS, 2=Xon/Xoff, 3=1&2
   6. Mode   _____   0=basic control, 1=keyboard,
                                        2=disabled, 3=multi drop
   7. EOM   _____   End of message or address multi drop

MENU 2, Mot'n(motion)
   1. Divisions
   2. Time (seconds)   _____   .1 to 20
                              _____   .05 to 10

MENU 2, AZT(automatic zero tracking)
   1. Divisions
   2. Time (seconds)   _____   .1 to 20
                              _____   .05 to 10

MENU 2, Filter
   1. Avg(samples to average)   _____   0 to 120
   2. Harmonizer enable   _____   on   off
   3. Harmonizer constant   _____   0 to 8
   4. Harmonizer threshold   _____   0 to capacity

MENU 2, Tmout(time out in seconds)
   1. Accumulate time out   _____
   2. Print time out   _____
   3. Zero time out   _____
   4. Tare time out   _____

MENU 3, Keys

1. Select	on	off
2. Units	on	off
3. Print	on	off
4. Tare	on	off
5. Zero	on	off
6. Autotare	on	off
7. Keypad tare	on	off

MENU 3, Vals (active display values)

1. Gross	on	off
2. Net	on	off
3. Tare	on	off
4. Minimum	on	off
5. Maximum	on	off
6. ROC	on	off
7. G-total	on	off

Calibration Procedure

This is a practice session for calibrating the WI-130.

1. From weigh mode, press and hold
   ESCAPE until *SETUP PASSWORD*
   is displayed.

2. Key in 30456 then press ENTER. . .

   Displayed are 5 new soft key legends.

3. Press the CAPAC soft key. . .

   CAPACITY = 100 is displayed.

4. Press the CLEAR key to clear the current
   value, then key in **5000** and press
   ENTER. . .

   DIVISION = 0.02 is displayed.

5. Press the CLEAR key to clear the current
   value, then key in **5** and press
   ENTER. . .

   Displayed are the 5 soft key legends.

6. Set your System Test Unit dial to a value
   of 0.0 MV/V, (or empty the scale) then
   press the soft key labeled ZERO,
   and press ENTER. . .

   DONE will be displayed when the unit is
   finished setting this absolute zero value.
   (OK) ANY KEY is also displayed.

7. Press a key. . .

   Displayed are the 5 soft key legends.

8. Press the SPAN soft key. . .

   CAL WT(LB): 0 or a test weight value may be
   displayed.

9. Key in 5000, and Press ENTER. . .

   The display states **SPAN CALIBRATION**
   and prompts you to **APPLY LOAD,** and
   HIT ENTER

10. Set your System Test Unit dial to a value
    of 2.0 MV/V,(or load the weight on the scale)
    and press ENTER. . .

    DETERMINING SPAN...DONE will be
    displayed when the unit is finished setting
    the high span value.
    (OK) ANY KEY TO CONTINUE is also
    displayed.

11. Press a key, then press EXIT, and
    press YES, to save the new settings and
    return to normal weighing mode...

    The WI-130 returns to the normal operating
    mode that you have selected.

WI-130 OPERATIONAL EXERCISE

Please follow these directions to become familiar with the standard key functions on the WI-130.

1. Place material on the scale to display a weight.

2. Consecutively press the **SELECT** key to display the Active Display Modes.

3. If required, press the **SELECT** key consecutively until the Active Display Mode is (lbs Gross.)

4. Consecutively press **UNITS** key to observe all the currently enabled Units Of Measure, ending with lbs displayed.

5. There is a sample of different Screen Selections that are available for review in this indicator. Consecutively press the **decimal point (.)** to alter the screen displayed. As you enter these different displays, change the weight reading and observe the display. (Some screen selections have room left for text which is not included in your present operational program.)

6. To continue, select the Screen Selection with the **decimal point** key which provides a display of weight with unlabled soft keys. (The current program has not assigned any functions to the soft keys thus pressing them will have no effect.)

7. With a gross weight value displayed, press **TARE**.

8. To display the net weight value and the entered tare value, consecutively press the **SELECT** key.

9. With Gross weight displayed, begin keying in a **numeric value** (tare) and press enter.

WI-130 Application Program Creation Exercise

This exercise will familiarize you with developing a basic application program.

1. With the WI-130 Simposer Software operating, click on PROGRAM on the Menu Bar at the top of the screen and the Program Window will appear.

2. Click on FILE and then NEW, Editing a File Window will appear.

3. With the cursor in the upper left hand corner, Precisely type in this program:

```
Sub System_startup
        Dispmode(27)
        PRINT "Most Flexible"
        PRINT "Instrument"; CHR$(1); CHR$(1); CHR$(1)
        PRINT "In The Industry"
        Key 1, "You"
        Key 2, "Can"
        Key 3, "Label"
        Key 4, "Soft"
        Key 5, "Keys"
End Sub
```

4. Click on FILE and SAVE type MINE.

5. Click on the OK box or Press Enter.

6. Click on SIMULATOR and then START to see your creation.

7. To exit the simulator mode press and hold the ALT key and press X or, press both mouse buttons at the same time.

8. Attach the I/O interface cable from the WI-130 to your PC.

9. Click on DOWNLOAD and then click on the proper COM PORT for your PC. This will cause a copy of the program to be transferred into your WI-130.

(OVER)

Sample Print Format

This exercise helps you format a printout for a WP-232 printer.

1. With the WI-130 Configuration software operating, click on Format, then type the following exactly as shown:

\x0E\x0F Gross {gross}
\x0E\x0F Tare {tare}
\x0E\x0F Net {net}
\x0E\x0F {time$}
\x0E\x0F {date$}

I DID IT

2. When you are done typing this, click on FILE, SAVE to save this layout as FORMAT 1.

   The \x0E and \x0F are control codes that the printer responds too. These codes are in Hexadecimal (base 16) they set double high and double wide characters for the WP-232. The words Gross, Tare, etc. will be printed followed by their value. The last line prints as it is shown.

3. Next, click **Program** on the menu bar. By adding the following (sub routine) commands to the program (mine.cfg) the WI-130 can transmit FORMAT 1 to the printer when the PRINT key is pressed.

```
SUB PRINT_KEY
    FMTPRINT(1)
END SUB
```

4. There is one more thing to do before you are finished with this program. The WP-232 printers are 1200 baud, 8 data bits, and no parity. You need to change the WI-130 serial port configuration. Do this by clicking on **Configure**. Click on the **Serial Ports** button and change the baud rate in the dialog box to 1200, etc.

5. Click on **File**, then click on **Save as** and rename the file PRINT232 and click OK. Click on **Download** then choose COM1 and the program is downloaded to the WI-130.

6. Using the WI-130 indicator, dial in a weight value on the test unit (or place a weight on the scale) and press TARE, increase the weight reading and press PRINT.

Hint: If your program is not printing check the destination port setting under Format.

WI-130 Exercises

Simulator Mode
Keyboard Equivalents

When the simulation is running on your computer screen, you will see a duplicate of the front panel of the WI-130. The buttons on the screen are not touch sensitive so the following computer key strokes take the place of pressing front panel keys.

COMPUTER KEY STROKE	=	FRONT PANEL KEY
ALT + S		SELECT
ALT + U		UNITS
ALT + P		PRINT
ALT + T		TARE
ALT + Z		ZERO
ALT + X		EXIT
ALT + C		CLEAR
ESC		ESCAPE
ENTER		ENTER
F1		SOFT KEY #1
F2		SOFT KEY #2
F3		SOFT KEY #3
F4		SOFT KEY #4
F5		SOFT KEY #5

Sample Program

You do not need to know how to write a full-fledged program to run one. There are sample programs already in Simposer this exercise helps you to run a program. In this program you will see how the Basic commands are created and modified, how this program is run on the software simulator, and see this program downloaded and run on a WI-130.

In your Simposer Users Manual you have the WI-130 Basic commands used to write programs. This will help you follow the commands you will see in the sample program.

1. With the WI-130 Configuration software operating, click on **Program,** on the Menu Bar at the top of the screen. . .   The **Program** window appears.

2. You are going to load a previously written program called **SETCHECK.CFG**. To do this, click on **File** on the Menu Bar at the top of the screen. . .   The **file menu** drops down.

3. Click on **Open**. . .   The **Open** dialog box appears.

4. Locate and click on the file name **SETCHECK.CFG** and then click **OK**. . .   The file will appear on the **Program** screen.

That's how easy it is to open a program file. When a program file is open, it can be automatically run by using the simulator. This sample file sets up the unit as a checkweigher. Let's take a look at what this simulation looks like on the computer.
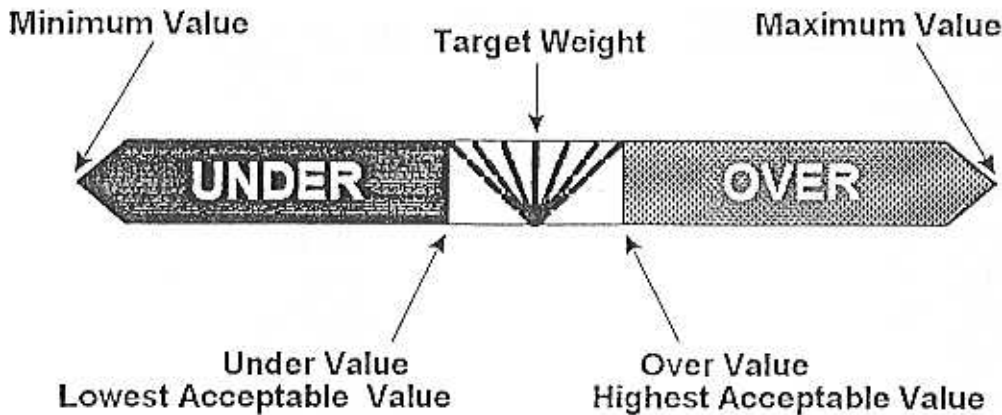
1. Click on **Simulator**, to start the simulation press **ENTER**. . .

A replica of the front panel appears prompting you to *ENTER MIN VALUE :* .

2. Key in 25 as a **minimum weight value** and press **ENTER**. . .

This is the weight at which the under arrow begins to decrease in length. See Figure 1. The display now prompts you to *ENTER MAX VALUE :*.

Figure 1   Weight values

Minimum Value   **Target Weight**   **Maximum Value**

Under Value   **Over Value**
Lowest Acceptable Value   **Highest Acceptable Value**

3. Key in 100 as a **maximum weight value** and press **ENTER**. . . .

This is the weight at which the over arrow stops increasing in length. The display now prompts you to *ENTER BELOW VALUE :*.

4. Key in 50 as the <u>lowest acceptable</u> weight and press **ENTER**. . .

The display prompts you to *ENTER ABOVE VALUE :*.

5. Key in 75 as the <u>highest acceptable</u> weight value and press **ENTER**. . . .

The check weighing screen is displayed with an active weight value.

6. Move the mouse to the right to increase the weight value and to the left to decrease it. . .

As the weight passes 25 pounds, the left arrow begins to shrink in size.

As you pass 50 pounds, the arrow changes to a needle graphic.

As the weight increased the needle moves from left to right. The needle will be centered when the weight is 62.5 pounds. This is halfway between 50 and 75, your lower and upper acceptable weights.

As you continue to increase the weight, the needle changes to the arrow at 75 pounds and expands to the right until 100 pounds is reached.

7. Click on **Download**, then choose **COM1**, the program is downloaded to the WI-130 you may now enter the values into the WI-130 for the graph to respond to...