

**SCIENTECH<sup>®</sup>**



**PDA Software Program**

**Operation Manual**

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## Warning

Do not allow the Palm's batteries to go completely dead. If they do, all of the volatile memory, including Scientech programs, will be erased.

We recommend that the batteries be replaced as soon as the low battery indicator is visible on the Palm's display. Please understand that the Palm will maintain its memory for **only 1 minute** without batteries installed. It is imperative that charged batteries be installed as soon as the old ones are removed.

If your Palm does erase the Scientech programs please contact Scientech's Customer Service Department. They will be able to provide, at a nominal cost, an expansion card that will allow you to restore the Scientech programs.

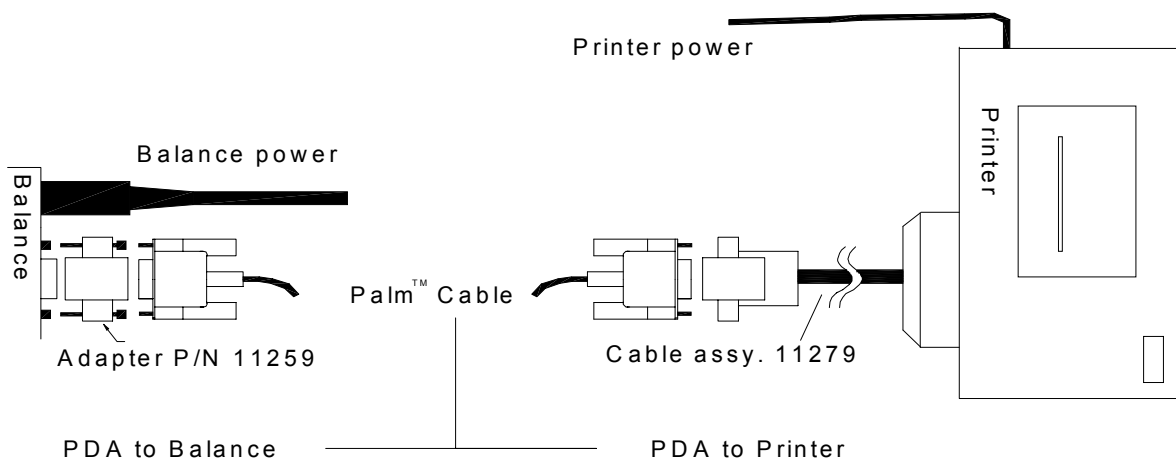
Thank you for choosing Scientech's optional personal digital assistant (PDA) software program. Please read this manual completely before using your PDA with this software. This information will enable you to fully utilize the equipment and should be located nearby for reference. The PDA is intended to be used only in the manner outlined in this manual. Misuse of the equipment may cause product failure.


If you obtained a PDA from Scientech, the PDA software program has already been loaded into the PDA. This program is set to operate at 9600 baud and even parity.

**To operate your Scientech balance with the PDA, you must confirm or change the balance RS232 configuration parameters to 9600 baud, local control off, parity even, auto send off, and continuous send off. Also the send-when-stable command should be off (refer to your balance instruction manual).**

**To operate your Scientech printer or any other serial (RS232) printer with the PDA, you must confirm or change the printer RS232 parameters to 9600 baud, parity even.**

Connect the PDA RS232 cable to the balance or printer using the adapters as shown below. If you do have one of these adapters, you must order it from Scientech. Connect the other end of the cable into the PDA. The PDA will not communicate with your Scientech balance or any serial printer without the adapters as shown below.



Turn on the balance (refer to the balance instruction manual about turn-on, warm-up and calibration). Turn on the PDA, locate the  Weight icon, and tap once.

You will now be able to choose either a direct communication flow between the PDA and printer  **Connect to Printer** or between the PDA and balance  **Connect to Balance** . If connected to the balance, the program begins by checking the connection and identifying the model and serial number for the balance. If you have records stored for the printer you will be notified at start up.

# GENERAL ASPECTS OF THE PDA PROGRAM

## ① Information icon

Press this icon to get information about the topic you are using at any time in the program.

## 📄 Save icon

Press this icon to save the displayed information to the clipboard.

..... 📄

When an underlined text area proceeds the save icon, you can enter any text or numeric information.

1. Tap on the line to get a cursor. ...l..... 📄
2. Tap on the 🎨 graffiti icon to make the PDA keyboard appear. Type in your message, then press **Done**.
3. Tap 📄 to save your message to the clipboard.

## ☑ Menu pull down icon.

Clipboard

Save  
Clear  
View  
Add time/date

Saves all data in the clipboard to a new record in the print buffer and clears clipboard

Clears everything from the clipboard.

View - shows the contents of the clipboard.

Adds a single line of current time and date to the clipboard

Tap anywhere on the screen and the pull down menu will disappear.

## Print Buffer

Tap the **Print Buffer** box and the print buffer screen will appear. The buffer will display the number of records in the print buffer waiting to be deleted or downloaded. You can view each record by pressing the left or right arrows to proceed backward or forward through the saved records.

Tapping the **Del** box will only delete the current record showing.

Tapping the **Del All** box will delete all records in the print buffer. Once you have downloaded all records, you must manually use the **Del All** box to clear out the print buffer.

To download a print record from the print buffer to a printer, disconnect the PDA RS232 cable from your Scientech balance and connect this cable to the printer using the adapter shown in first section of this manual. Make sure your printer has the correct RS232 configuration parameters of 9600 baud, even parity.

To download a print record from the print buffer to a computer, you must connect the PDA RS232 cable without any adapter into a COM port on the back of your computer. Then you should use HyperTerminal®, which is a Windows® accessory, as your computer-to-PDA communication software (see the last section of this manual on how to configure HyperTerminal correctly). You can also transfer files from HyperTerminal to Word® or Excel® (see that last section of this manual).

Tapping the **Print** box downloads the current record shown at the top of the screen to either a printer or computer. If you have more than one record to download, use the arrows keys to select the next record and tap the **Print** box to download. You must tap the **Print** box to download each report separately.

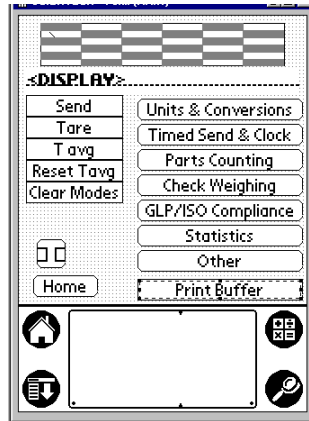
Once you have downloaded all records, you must manually use the **Del All** box to clear out the print buffer.

Tapping the **Main** box returns you to the Main Menu without deleting any records.

#### Scroll Bar

When long records are shown on the display, you will see a scroll bar to the right of the display. Drag the dark part of the bar downwards to reveal more of the data.

## MAIN MENU



**i** Information icon, Tap this icon to get help about any screen.

**Immediate action icons** - Tap the icon to get the following result:

<b>Send</b>	Reads the weight on the balance and places result in <:display>
<b>Tare</b>	Tares the balance remotely
<b>T avg</b>	Places the balance in time average mode remotely.
<b>Reset Tavg</b>	Resets the time average mode to the current weight.
<b>Clear modes</b>	Places the balance in normal weighing modes. Exits from Parts Counting, Conversions, and T avg modes.

**Special menu icons** - Tap the icon to get the following result:

**Units & conversions** Change to standard weighing units of measure such as grams, carats, ounces, troy ounces, and pennyweight. Enter user programmable custom unit of measure and custom conversions for any unit of measure you desire.

**Timed Send & Clock** “Set the balance internal clock (time & date) so that weight readings will include a time and date designation. Also send weight readings to the Timed Send Screen whenever the stability indicator lights up. Also set an automatic timed send interval to send weight readings in a set time period, collect these readings, and store the readings.”

**Parts counting** Enter parts counting mode. Save and retrieve part weights from the 50 internal memory balance registers.

**Check Weighing** Set high and low limits for check weighing. Keep track of total high, total low, total pass.

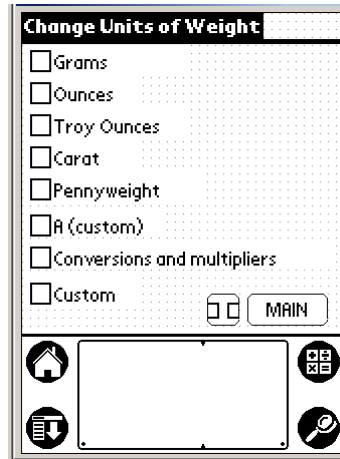
**GLP \ ISO Compliance** Perform and save GLP, ISO and AutoGLP<sup>†</sup> tasks.

**Statistics** Calculate average weight, standard deviation, number of samples, coefficient of variation, minimum and maximum weight. The statistics is conducted by manually tapping a PDA box to collect each sample weight reading.

**Other** Perform weighing conversions, register data changes, and miscellaneous functions.

**Print Buffer** Connect the PDA to a printer or computer and generate the hardcopy or a file from saved clipboard readings and the GLP, ISO, AutoGLP, and Auto Send collected reports.

## UNITS & CONVERSIONS MENU



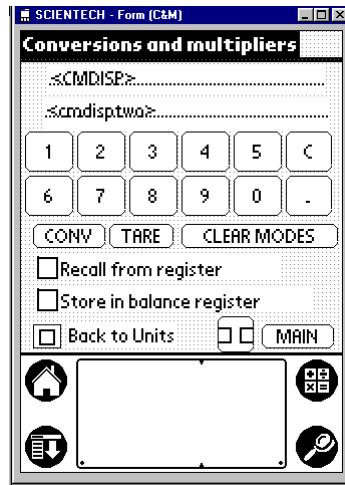
Check the appropriate box by tapping the empty square to automatically place the balance into **Grams**, **Ounces**, **Troy Ounces**, **Carats**, **Pennyweight**, or **A (custom)**. The balance will display the chosen unit of measure on its front panel and the PDA will revert back to the Main Menu (except when you check **Conversions and multipliers** and **Custom**).

If you check the **Custom** check box, you can enter a user programmable grams conversion factor. This conversion factor is multiplied by the grams reading to arrive at your special unit of measure, which will then be displayed as an “A” enunciator on the front panel of the balance. This unit of measure can be accessed through the MODE switch on the balance as well as the grams, ounces, troy ounces, carats, and pennyweight enunciators. This custom unit of measure is permanently available using the MODE switch on the balance until it is changed again. You can even unplug the PDA, and still have access to this “A” unit of measure via the Mode switch on the balance.

To enter the grams conversion factor after checking the **Custom** box, tap the **Enter Conversion Factor** bar. Then enter the conversion factor using the screen keyboard. The conversion factor cannot exceed 7 digits. Then tap **Enter**. Then tap the **Load Into Balance** bar. You will then be prompted to power cycle the balance (turn it off and then back on using the ON/OFF switch on the balance). You **MUST POWER CYCLE** for the balance to operate properly.

Check the **Conversions and multipliers** check box to multiply the current unit of measure displayed on the balance by a constant scale factor. See below for the **Conversion and multipliers** screen.

## CONVERSIONS & MULTIPLIER MENU



Use the keypad to enter a **CONV** (conversion) factor, which is multiplied by the displayed unit of measure reading, to arrive at your desired unit of measure reading. After entering the conversion factor, tap the **CONV** box to enter the conversion mode. The balance display will also show a **CNV** enunciator instead of a units of measure enunciator.

If you tap **Back to Units**, the balance will exit the conversion mode and the PDA will return to the Change Units of Weight screen.

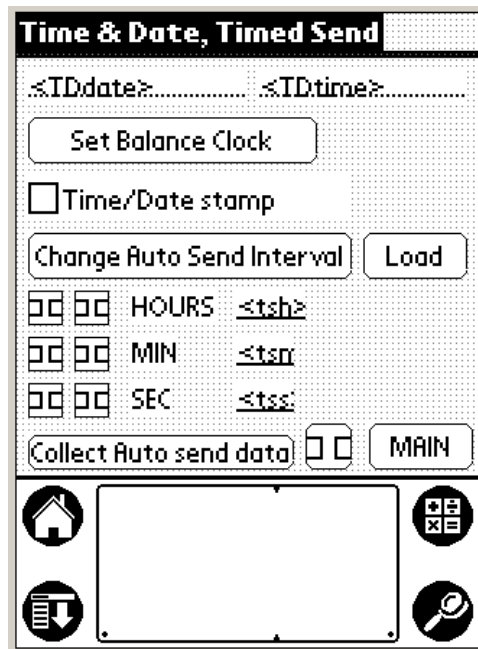
If you tap **Main**, the balance will remain in the conversion weighing mode and the PDA returns to the Main Menu.

You can store this conversion factor in one of the 50 balance memory registers to be recalled at any time. Use the < key on the PDA to erase any error during your entry of the conversion factor.

The **TARE** key tares the balance remotely but it remains in the conversion mode.

**CLEAR MODES** takes you back to your normal weighing mode before entering a conversion factor and the PDA will stay in the Conversions and multipliers screen.

## TIME & DATE, TIMED SEND MENU



Tap the **Set Balance Clock** to synchronize the balance internal clock with the PDA clock.

Use the **Time/Date stamp** check box to put a time and date stamp on each weight reading that is to be printed or sent to a file. To enable or disable the time/date stamp, tap the box labeled **Time/Date stamp**. When the time and date stamp is enabled, the box has a check mark. When disabled, the box is empty.

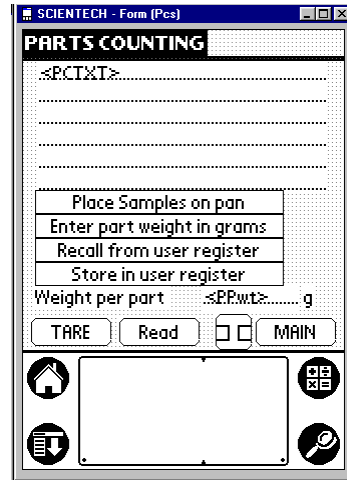
“The **Change Auto Send Interval** button allows you to automatically collect weight readings in two different ways. The first way is to use the Send When Stable command and the second is to use the Auto Send command over a set time period. To use the Send When Stable command, first set the Send When Stable to ON (refer to the Selectable Filters section of the balance instruction manual). Then tap the **Collect Auto send data** button to enter the data collection screen. Then tap **Start** to collect data whenever the stability indicator lights up.

To use the Auto Send command, first tap the **Change Auto Send Interval** button and then input the time period for each reading using the arrows. Then tap the **Collect Auto send data** button to enter the data collection screen. Then tap **Start** to begin collecting data. (Note: the Auto Send command will not operate if the Send When Stable command is on.)

When collecting data, the data collection screen will display the first ten weight readings and the current weight reading. However, the PDA will show all weight readings if you tap **Save** at the end of the collection period. To stop data collection, tap anywhere on the screen. If you tap **Save**, all weight readings will be stored in the print buffer. Refer to the Print Buffer section in this manual to see how to print or download to a computer file.

When finished with the Timed Send screen, be sure to turn off the Send When Stable or Auto Send command in your balance.

## PARTS COUNTING MENU

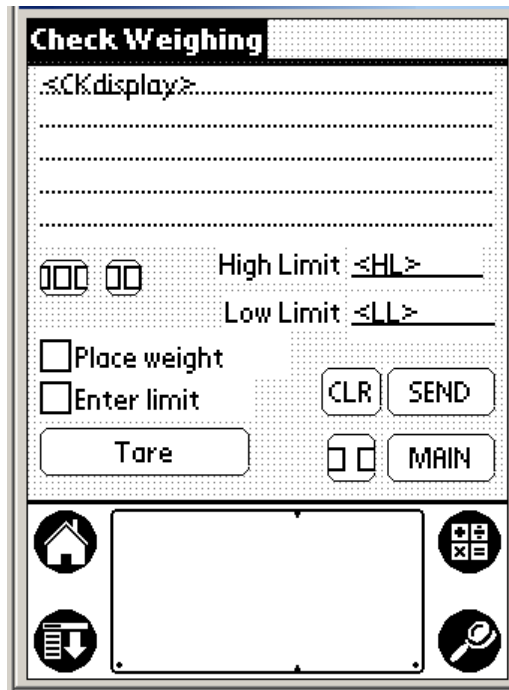


There are three ways in which to establish a parts counting routine. You may..

1. **Place Samples on the pan.** Place a know quantity of parts on the pan. You can enter the number of parts numerically by tapping **Place Samples on Pan**. This takes you to the sample size screen where you input the number of samples using the numeric keypad provided. Then tap **Enter**. The screen will display the individual part weight and total weight. The balance will enter into the pieces mode and display the number of pieces. To display the number of pieces, individual part weight, and total weight on the PDA, tap **Read**. Tapping **Tare** will zero out the number of pieces but stay in the parts counting mode. You can subsequently store the individual part weight into any of the 50 internal memory balance registers to be recalled later.
2. **Enter part weight in grams.** First make sure the unit of measure displayed on the balance is grams. Then you can enter the weight of an individual part in grams numerically by tapping **Enter part weight in grams**. This takes you to the part weight screen where you input the weight in grams of an individual part using the numeric keypad provided. Then tap **Enter**. The screen will display the individual part weight and total weight. The balance will enter into the pieces mode and display the number of pieces. To display the number of pieces, weight per part, and total weight on the PDA, tap **Read**. You can subsequently store the individual part weight into any of the 50 internal memory balance registers to be recalled later.
3. **Recall from user register.** Tap **Recall from user register**. This takes you to the memory register screen where you input the memory register in which you stored an individual part weight in grams. Enter the register number and tap **Enter**. This takes you to the parts counting screen and displays the register number and the weight per part. The balance will enter into the pieces mode and display the number of pieces. To display the number of pieces, weight per part, and total weight on the PDA, tap **Read**.

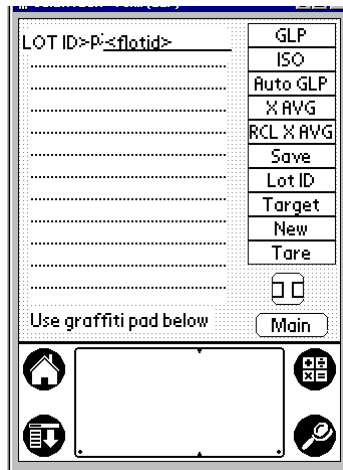
Note: If you store the individual part weight in a storage register, and then try to recall that register from the Other menu, the conversion factor in the register is the inverse of the grams per piece conversion factor. In the register, the number stored is a factor called pieces per gram. The PDA retrieves this factor and inverts it to display grams per piece.

## CHECK WEIGHING MENU



1. Remove all weight from the pan of the balance.
2. Tap the **Tare** box on the PDA to remotely tare the balance.
3. To enter a weight limit, check either the **Enter limit** or **Place weight** check boxes to enter a limit.
  - A. If you checked **Enter limit**, a keyboard will appear. Enter the low weight limit, and tap **ENTER**. The PDA display will return to the Check Weighing screen and will show the low weight limit you just entered. Now check **Enter limit** again to enter the high weight limit using the keyboard shown. Enter the high weight limit and tap **ENTER**. Both limit weights will now be displayed along with the boxes **ReDo** or **OK**. Check **ReDo** if you made a mistake and want to start over. Check **OK** if the limits you entered are satisfactory. The balance is now in the checkweighing mode. Tap **SEND** to take a weight reading and have the balance indicate if it is low or high.
  - B. If you checked **Place weight**, the display will ask you to place a weight on the pan that equals your low limit weight. When the weight is placed on the pan and the balance is stable, tap **SEND**. The low limit weight is entered into the display. Now check **Place weight** again. The display will ask you to place a weight on the pan that equals your high limit weight. When the weight is placed on the pan and the balance is stable, tap **SEND**. Both limit weights will now be displayed along with the boxes **ReDo** or **OK**. Check **ReDo** if you made a mistake and want to start over. Check **OK** if the limits you entered are satisfactory. The balance is now in the checkweighing mode. Tap **SEND** to take a weight reading and have the balance indicate if it is low or high.
4. Tapping **CLR** will reset all the checkweighing counters.
5. Tapping **Main** will exit the checkweighing mode and return the balance to a normal weighing mode.

## GLP & ISO MENU



Initially the **GLP**, **ISO**, **AutoGLP** & **Main** icons are visible. To use any of these programs, you must set the balance clock to the current time and date. To do this, go to the Main Menu, tap the **Timed Send % Clock** icon and then tap the **Set Balance Clock** box.

### Manual GLP report

Tapping **GLP** clears the balance XBAR statistics accumulator and enters the manual GLP mode. **XAVG**, **RCL X AVG**, **Lot ID**, **New** & **Tare** are made visible.

**Lot ID** - Tap this box to enter a lot ID for the statistics run via the graffiti pad with keyboard.

**Tare** - Tap this box to tare the balance before or between weight readings remotely.

**XAVG** - Tap this box each time to read and add the balance weight to the statistics accumulator.

**RCL X AVG** - Tap this box to end the statistics run and to show the completed statistics results.

**Save** - Tap this box to store the manual GLP results to the print buffer for downloading to a printer or file.

**New** - Tap this box to clear the screen and return to the GLP, Auto GLP, ISO display for another statistics run.


**Main** - Tap this box to exit the manual GLP program and return to the main menu.

### Auto GLP

The balance must be configured to Send When Stable from the front panel. See your balance instruction manual for directions.

Tapping **Auto GLP** clears the balance XBAR statistics accumulator and enters the auto GLP mode.

**Done**, **Run**, **New**, and **Main** icons are visible

The cursor appears next to the **Done** box prompting you to enter a lot ID. Tap on the  graffiti icon to make the PDA keyboard appear. Type in your lot ID, then tap **Done** in the graffiti screen and then tap the **Done** box next to the lot ID in the Auto GLP screen.

The sample (population) size for the run is displayed (default is 20) and can be increased or decreased using the arrow keys to the right of the sample size. Then use the up and down arrows to enter the number of samples for your statistics run.

To begin Auto GLP, tap **Run**.

- A. You will be directed to place the first object on the pan.
- B. After you place the first object on the weighing pan and when the balance reaches stability, it will send the weight reading automatically to the PDA. The PDA will beep and then tare the balance automatically.
- C. After automatically taring the balance, the PDA will beep and show “**Place next sample**” on the screen. Place the next object on the pan and items A-C will repeat until all samples have been collected.

Use the scroll bar on the right side of the screen to review all of the information collected.

**Save** – Tap this box to save the current auto GLP report to the print buffer for downloading to a printer or file.

**New** - Tap this box to clear the screen and return to the Auto GLP display for another statistics run.

**Main** - Tap this box to exit the Auto GLP program and return to the main menu.

## ISO report

**ISO** - Tap this box to clear the balance and enter the ISO mode.

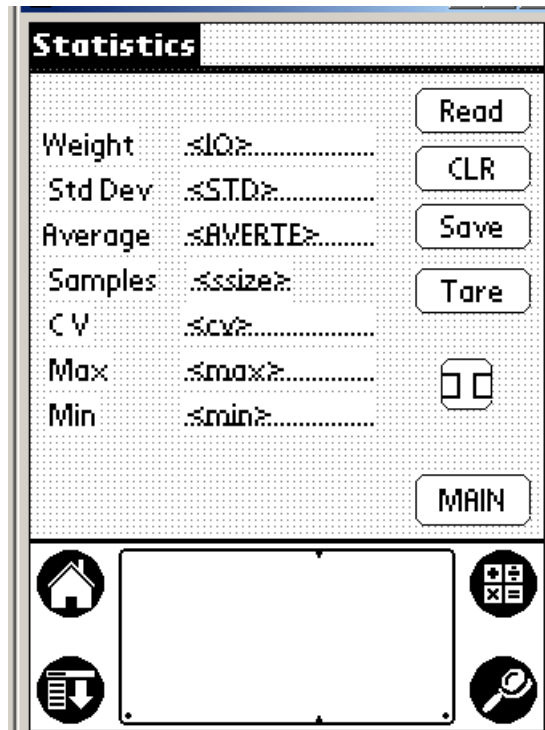
**TARG** – Tap this box to call up the keypad screen with the label “**ISO Target Weight**”. This allows the operator to input a floating point number. After entering the number, tap **ENTER**. The target weight is now displayed. **Tare & SEND** are made visible. User is prompted to “**Tare the balance**”. Tap the **Tare** button to tare the balance. Then place the calibration weight (weight you are using to check the balance) on the pan and tap **SEND**.

**Save** - Tap this box to save the current ISO report to the print buffer for downloading to a printer or file.

**New** - Tap this box to clear the screen and return to the ISO display for another weight check.

**Main** - Tap this box to exit the ISO program and return to the main menu.

## STATISTICS MENU



- Read** - Tap this box to acquire a weight reading into the statistics accumulator and to automatically update and display the statistics on your screen.
- CLR** - Tap this box to clear the screen and return for another statistics run.
- MAIN** - Tap this box to exit the statistics program and return to the main menu.
- Save** - Tap this box to save the current manual statistics run to the print buffer for downloading to a printer or file.
- Tare** - Tap this box to tare the balance remotely before or between weight readings.

## OTHER MENU



### Clearing Programmed Operation

Pressing the **CLEAR MODES** key erases all functions, returns the balance to its normal operating condition, and tares the balance which returns the display to zero. Information entered into the balance storage registers is unaffected by the **CLEAR MODES** key.

### Storage Registers

The keyboard give you access to 50 memory storage registers (0 through 49). You may store up to a seven digit number plus a decimal in these registers.

To store a number, press **(desired decimal number)** **SPACE** , **ENTER** , **SPACE** , **(desired register number)** , **SPACE** , **STORE** , **SEND TO BALANCE**.

To recall the number and display it , press **(desired register number)** , **SPACE** , **RECALL** , **SEND TO BALANCE**

### Taring (Zeroing and Subtracting)

To zero a weight shown in the display, press the **TARE** then **SEND TO BALANCE** key. This is the same as pressing the Zero switch on the balance's front panel.

To preset a tare weight, or to subtract a weight from the display, enter that weight (including the decimal) using the numeric keys and then press , **SPACE** , **TARE** , **SEND TO BALANCE**.

Example: A weighing boat weighs 50.1067 grams.

Press **50.1067** , **SPACE** , **TARE** , **SEND TO BALANCE**

The negative weight, -50.1067, will appear in the display. If that weight is then placed on the pan, the display will read zero.

Container weights may be permanently stored in any of the storage registers 0 through 49, then recalled and subtracted from displayed values.

Example: To enter container weight of 15.352 grams into storage register 1:

1. Press **15.352** **SPACE** , **ENTER** , **SPACE** , **1** **SPACE** , **STORE** , **SEND TO BALANCE**.

To recall storage register 1 and subtract it from displayed value:

2. Press **1** **SPACE** , **RECALL** , **SPACE** , **TARE** , **SEND TO BALANCE**.

To remove container weights from a storage register:

Press **0**, **SPACE**, **ENTER**, **SPACE**, **1** **SPACE**, **STORE**, **SEND TO BALANCE**.

### Calibrating to a Standard Weight

Using the Cal function key allows easy calibration to known weights. The procedure is:

1. Zero the display.
2. Place known weight on the pan.
3. Enter the weight using the keyboard, **SPACE**, **CAL**, **SEND TO BALANCE**.

To return the balance to normal operating mode, press **CLEAR MODES**.

### Weighing in Percent

You may weigh in percent using both the front panel controls or the keyboard. The keyboard procedure is:

1. Zero the display.
2. Place a sample on the pan that represents 100 percent.
3. Enter **100.00** (input desired decimal places) using the numeric keys on the keyboard followed by **SPACE**, **CAL**, **SEND TO BALANCE**.

To return the balance to normal operating mode, press **CLEAR MODES**.

### Percent Moisture Loss

You may do percent moisture loss using either the front panel controls or the keyboard. To measure the percent moisture loss in a sample, the keyboard procedure is:

1. Place container on the pan.
2. Press **TARE** then **SEND TO BALANCE**. This tares the balance.
3. Place sample in container and place container on the weighing pan.
4. Enter **100.00** (input desired decimal places) using the numeric keys on the keyboard followed by **SPACE**, **CAL**, **SEND TO BALANCE**.
5. Press **TARE** then **SEND TO BALANCE**. This tares the balances.
6. Place the container with sample in an oven and dry. Return the container with the sample to the balance pan and note the direct reading in percent of moisture loss. The percent moisture loss will appear as a negative number.

To return the balance to normal operating mode, Press **CLEAR MODES**.

### Percent Solids

You may do percent solids using either the front panel controls or the keyboard. To measure percent solids in a sample, the keyboard procedure is:

1. Place container on the pan.
2. Press **TARE** then **SEND TO BALANCE**. This tares the balance.
3. Place sample in container and place container on the weighing pan.
4. Enter **100.00** (input desired decimal places) using the numeric keys on the keyboard followed by **SPACE**, **CAL**, **SEND TO BALANCE**.
6. Place the container with sample in an oven and dry. Return the container with the sample to the balance pan and note the direct reading in percent of solids.

To return the balance to normal operating mode, press **CLEAR MODES**.

### Compounding

To compound by weight, the procedure is:

1. Place container on the pan.
2. Press **TARE** then **SEND TO BALANCE**.
3. Add first component to proper weight.

4. Press **TARE** then **SEND TO BALANCE**.
5. Add second component to proper weight.
6. Press **TARE** then **SEND TO BALANCE**.
7. Continue until all components are compounded.

**To compound by percent:**

Example: 3.852 grams equals 25 percent of the compound.

1. With nothing on the weighing pan, press **3.852**, **SPACE**, **TARE**, **SEND TO BALANCE**.
2. Press, **25.00**, **SPACE**, **CAL**, **SEND TO BALANCE**.
3. Place container on the pan.
4. Press **TARE** then **SEND TO BALANCE**.
5. Add first component to proper percent.
6. Press **TARE** then **SEND TO BALANCE**.
7. Add second component to proper percent.
8. Press **TARE** then **SEND TO BALANCE**.
9. Continue until all components are compounded.

To return the balance to normal operating mode, press **CLEAR MODES**.

**Multipliers or Basis Weight Measurements**

Conversion constants (multipliers) may be entered into the microprocessor allowing customized units of measure to be displayed. Basis weight, or weight per unit area, is commonly used in the paper industry. The multiplier must be formatted so that (grams)(multiplier) = units. ie: (grams)(pcs/g)=pcs

Example: To weigh in pounds per 3000 square feet and using a 1 ft<sup>2</sup> sample size:

1. Grams times 0.0022046226 equals pounds (avoirdupois).
2. Since you will be weighing a 1 ft<sup>2</sup> piece of paper, multiple step 1 by 3000.  
(0.0022046226 x 3000 = 6.6138678)
3. Press **6.613868** (can only use a maximum of seven significant digits plus a decimal), **SPACE**, **CONV**, **SEND TO BALANCE**. The balance now weighs in lbs/3000ft<sup>2</sup> only when a 1ft<sup>2</sup> sample size is used.
4. Press **TARE** then **SEND TO BALANCE** to get a good zero.
5. Place a 1 ft<sup>2</sup> piece of paper on the pan.
6. The display will indicate the basis weight in pounds per 3000 square feet.

To return the balance to normal operating mode, press **CLEAR MODES**.

This same conversion multiplier can be stored in any storage register 0 through 49 and recalled when desired.

Example: Using the multiplier 6.613868 as calculated above:

Press **6.613868**, **SPACE**, **ENTER**, **SPACE**, **CONV**, **SPACE**, **1**, **SPACE**, **STORE**, **SEND TO BALANCE** to store the multiplier in register 1.

To recall this multiplier and weigh in pounds per 3000 square feet:

Press **1**, **SPACE**, **RECALL**, **SPACE**, **CONV**, **SEND TO BALANCE**

**Special Units of Measurement**

Conversion constants (multipliers) may be entered into the microprocessor allowing customized units of weight to be displayed.

Example: Price of gold is to be displayed instead of the weight (troy ounces). Assume the price of gold is \$400.00 per troy ounce.

1. Select troy ounces as the desired unit of measure via the front panel of the balance.
2. Press **400.00**, **SPACE**, **CONV**, **SEND TO BALANCE**.
3. Press **TARE** then **SEND TO BALANCE** to get a good zero.

When gold items are placed on the pan, the price will be displayed.

To return the balance to normal operating mode, press **CLEAR MODES**.

**These conversion multipliers can also be stored in any of the storage registers 0 through 49 and recalled when desired.**

Example: Gold chain is being sold at \$40.00 per gram. The wholesaler wants to display first the weight of the gold chain in grams and then the price.

1. Enter \$40.00 as a multiplier into storage register 16 by Pressing **40.00**, **SPACE**, **ENTER**, **SPACE**, **CONV**, **SPACE**, **16**, **SPACE**, **STORE**, **SEND TO BALANCE** to store the multiplier in register 16.
2. Select the grams mode via the balance front panel. The balance will now weigh in grams.

To recall storage register 16 and multiply this conversion constant times the display value

press **16**, **SPACE**, **RECALL**, **SPACE**, **CONV**, **SEND TO BALANCE**

To return the balance to normal operating mode, press **CLEAR MODES**.

## DOWNLOADING THE PRINT BUFFER TO A COMPUTER

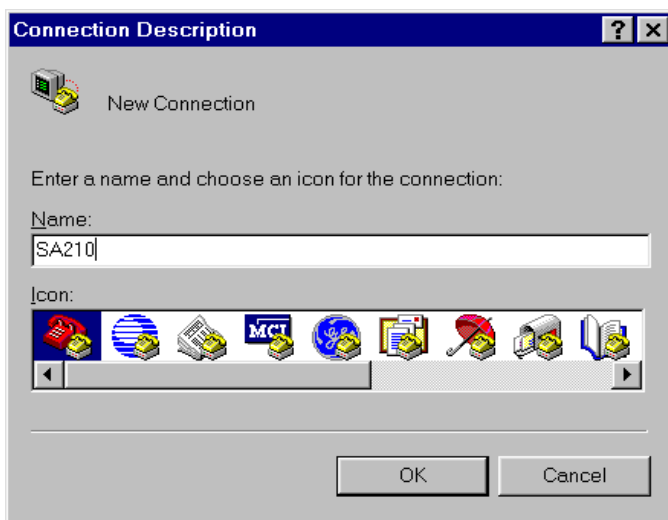
### Windows® HyperTerminal Instructions

These instructions explain how to create a communications pathway interfacing a Scientech balance or PDA to a PC with Windows as the operating system. You must have a modem in your computer for these instructions to work. Use be sure to set the Local Control on the balance to “oFF”. (See page 20 of the balance operating instructions.)

**Balance** – Connect the balance (using Scientech’s 10697 cable) to the COM port you are using on our computer.

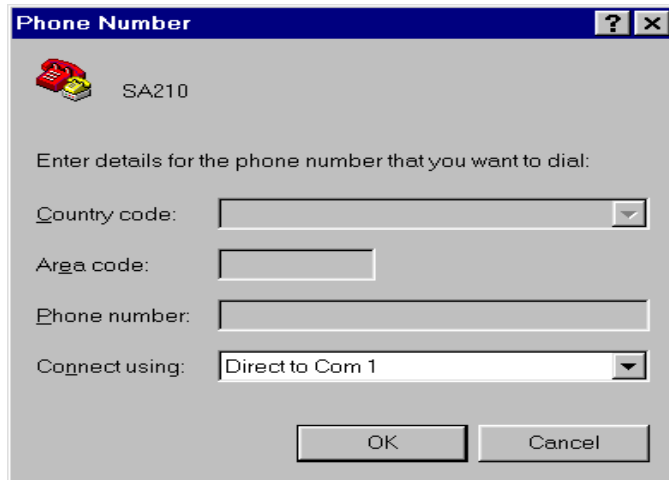
**PDA** – Connect the PDA without any adapters to the COM port you are using on your computer.

1. Click the “Start” button in the lower left corner of the Windows desktop.
2. Rest the cursor on the “Programs” selection till sub menu appears.
3. Rest the cursor on the “Accessories” selection till sub menu appears.
4. Double click the “Hyperterminal” selection. The HyperTerminal window will open.
5. Select the “Hypertrm” by double clicking the icon. The “Connection Description” window will open.
6. Type in the model number of your Scientech balance, for example “SA210”.

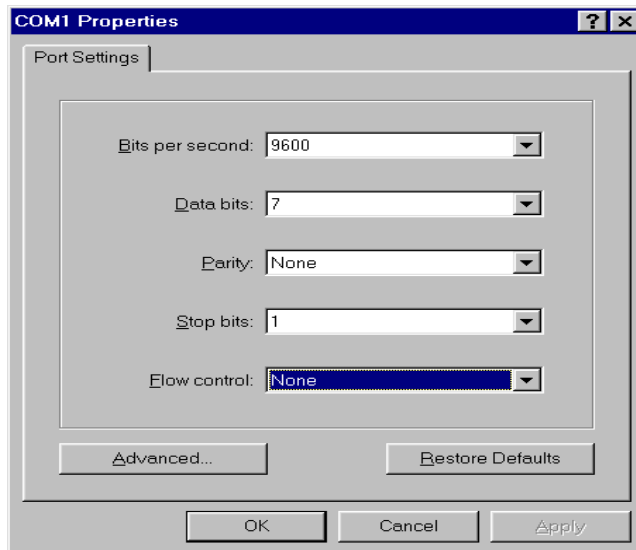


7. Select the icon you want to use for your balance.
8. Click on “OK”.

9. The “Phone Number” window will appear.

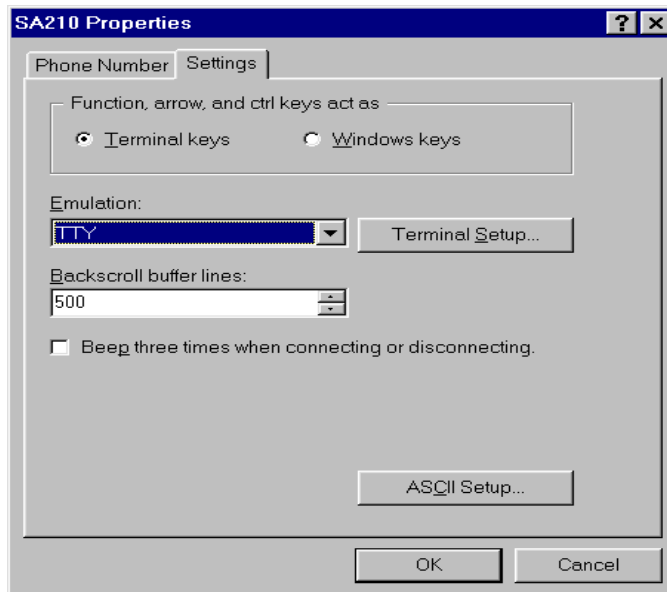


10. Click the down arrow in the “Connect using” box.
11. Select the correct Com port which is connected to your modem. Normally this will be “Direct to Com 1”.
12. Click on “OK”. The “COM1 Properties” window will appear.

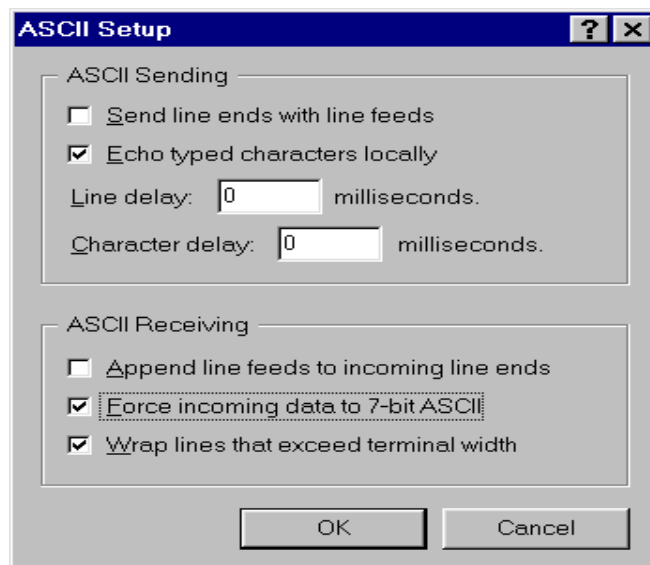


13. Enter the following parameters into the port settings: (These parameters are the default parameters of the Scientech balance when it was sent to you. If you changed the balance default parameters, you must change them back to what is shown below. See your balance instruction manual for guidance.)
  - A. Bits per second 9600
  - B. Data bits 7
  - C. Parity None
  - D. Stop bits 1
  - E. Flow control None

14. Click on “OK”. You will now be in the communications window.
15. Go to and click on “File” in the upper left corner of the communications window.
16. Click on “Properties”. The Properties window will appear.



17. Select the “Settings” tab in the Properties window.
18. Select the “Terminal keys” button.
19. Click the down arrow in the “Emulation” box.
20. Select “TTY”.
21. “Backscroll buffer lines” should be “500”.
22. Click on “ASCII Setup...”. The ASCII window will appear.



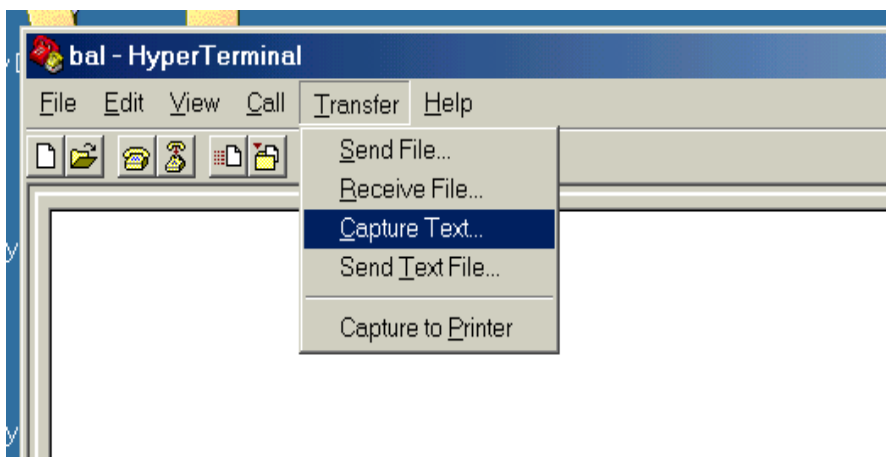
23. Do not select “Send line ends with line feeds”. (The small window should not be checked.)
24. Select “Echo typed characters locally”. (The small window should be checked.)
25. “Line delay” should be 0 milliseconds.
26. “Character delay” should be 0 milliseconds.
27. Do not select “Append line feeds to incoming line ends”. (The small window should not be checked.)
28. Select “Force incoming data to 7-bit ASCII”. (The small window should be checked.)
29. Select “Wrap lines that exceed terminal width”. (The small window should be checked.)
30. Click on “OK”.
31. To check if the balance or PDA is properly connected and communicating:  
Balance - Press the SEND key on the balance or type “SEND” and then press the ENTER key on your computer keyboard. If a weight reading appears on your computer screen, the balance is now communicating with the computer.  
PDA - Enter the Print Buffer screen, select a record, and tap **Print**. If a copy of the record appears on your computer screen, your PDA is now talking with the computer.

### Creating a Text file from HyperTerminal to Import into Word® or Excel®

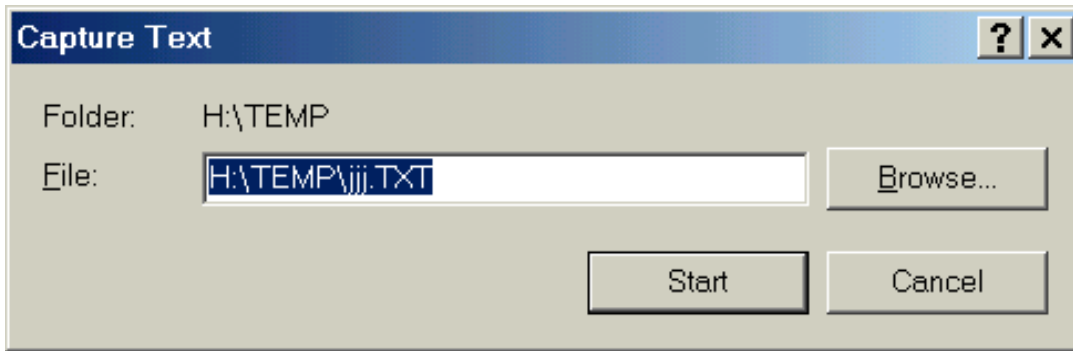
To save the data on your computer screen and/or transfer to Excel or Word, you must use the toolbar feature of HyperTerminal called "Capture Text". This feature allows you to send information from HyperTerminal to a text file for later evaluation. This text file then can be imported into Word or Excel.

First, make sure that you have setup the HyperTerminal correctly and that it is communicating with the balance or PDA. Also create a directory and file name into which you want to save the text file.

From the main toolbar select Transfer. Then select Capture Text.



Select the directory and file, which you have prepared beforehand, into which you want to enter the data from the HyperTerminal screen. Then press Start.



When you press Start, you can begin collecting data.

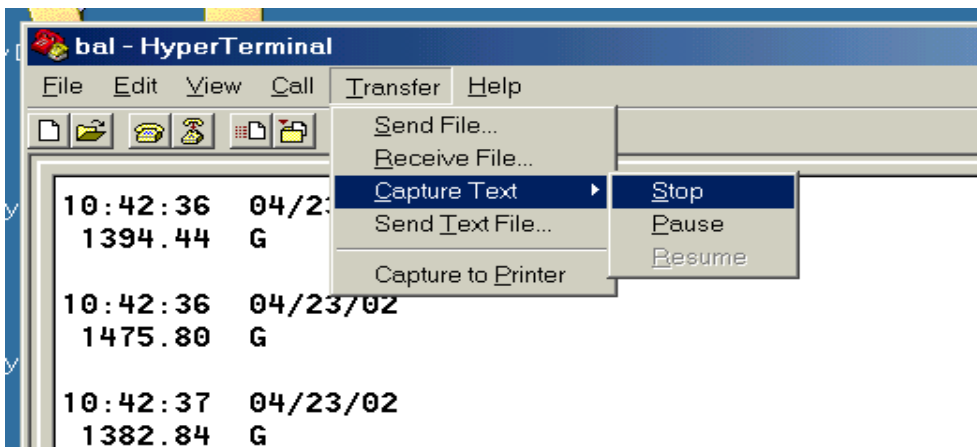
### Balance

To get a weight reading from the balance using HyperTerminal, type SEND and then press ENTER. To tare the balance, type ZERO and then press ENTER. To get a time and date stamp along with the weight reading, see page 24 of the balance operating instructions. To get continuous readings every 200ms, see page 20. To get readings whenever the balance reaches stability, see pages 10 and 20.

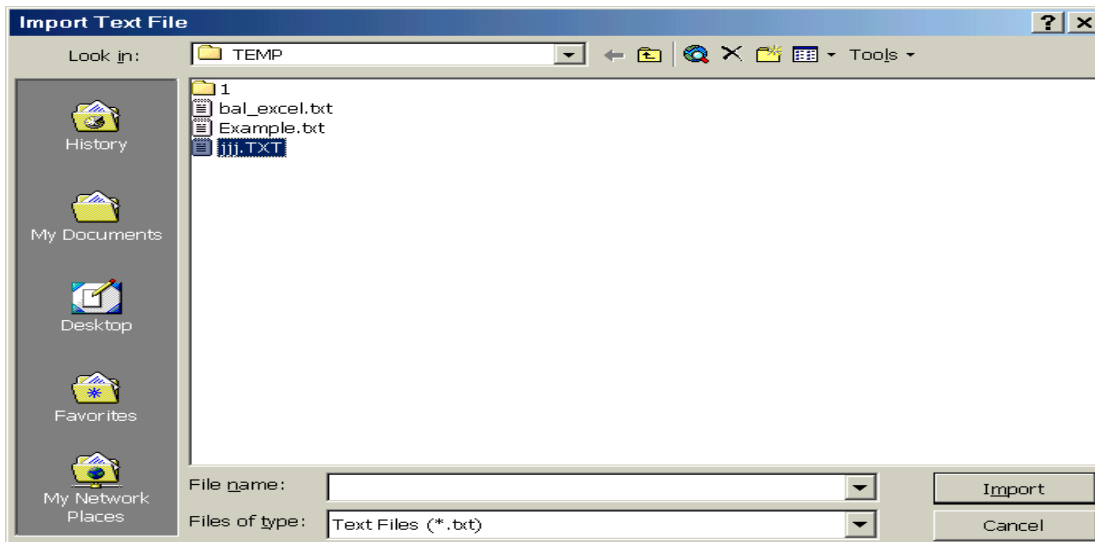
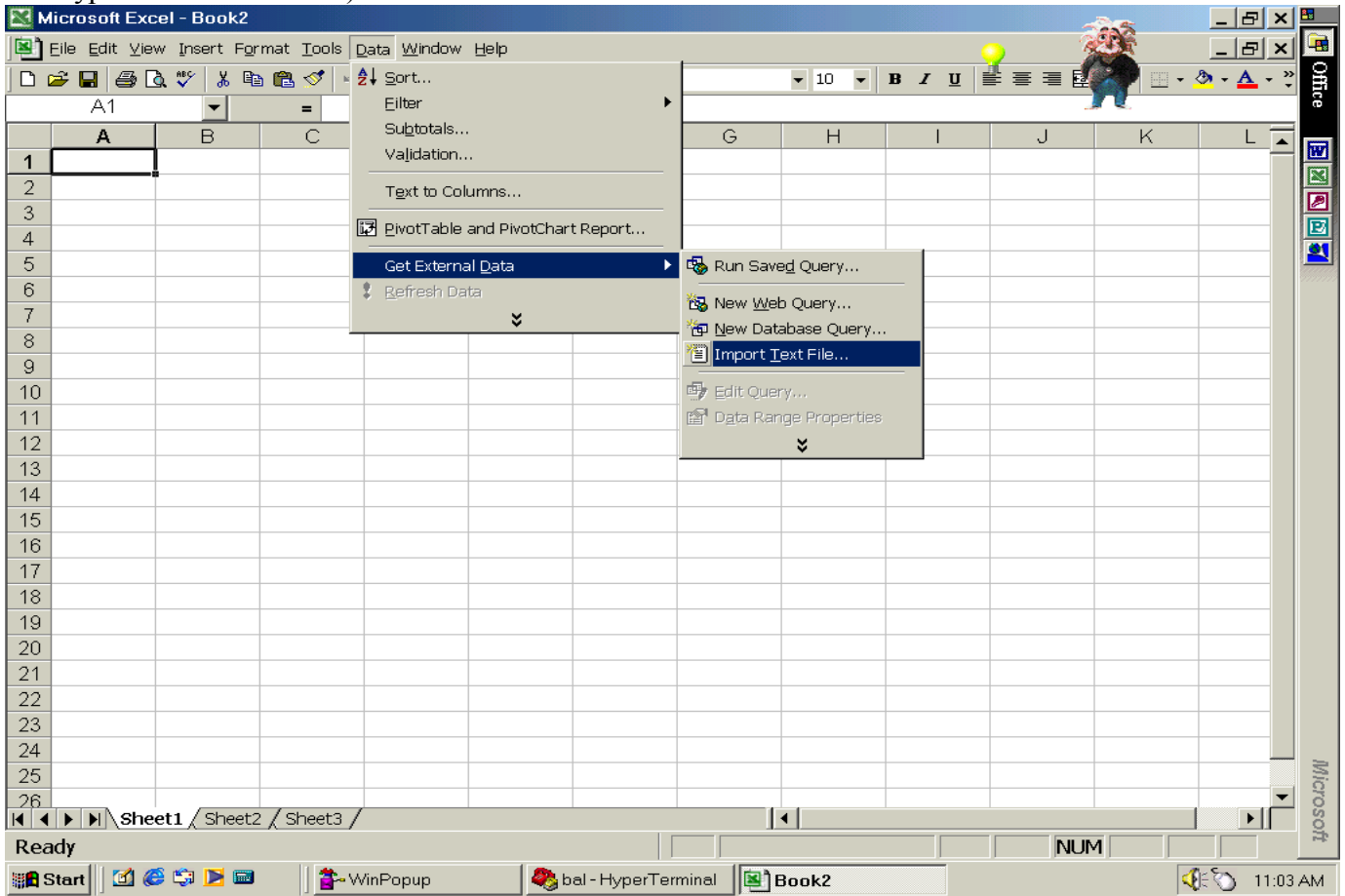
### PDA

To get a print buffer record, tap **Print** on the PDA screen.

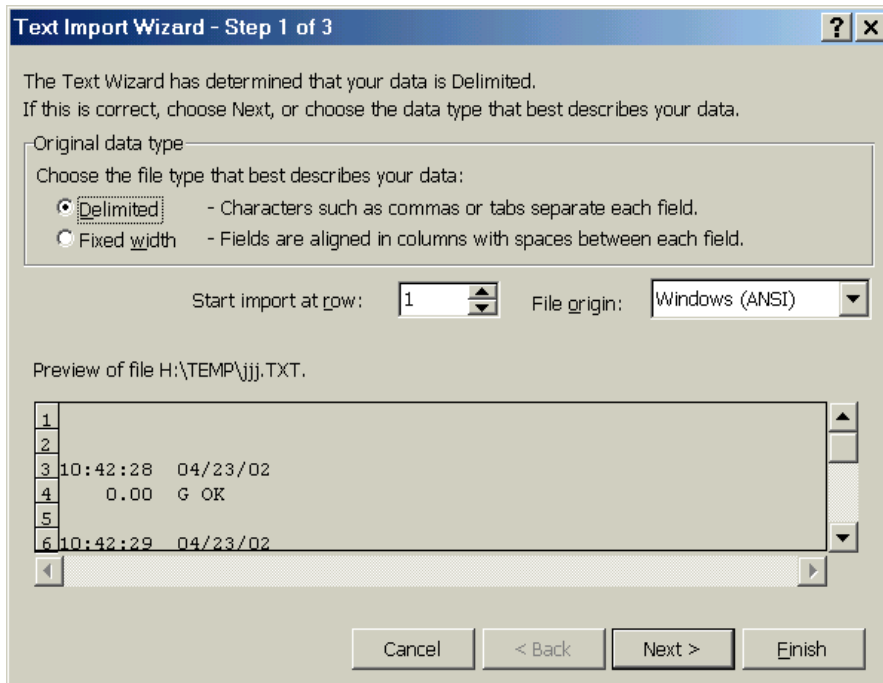
When done collecting data from the transfer menu, select Capture Text, select Stop.



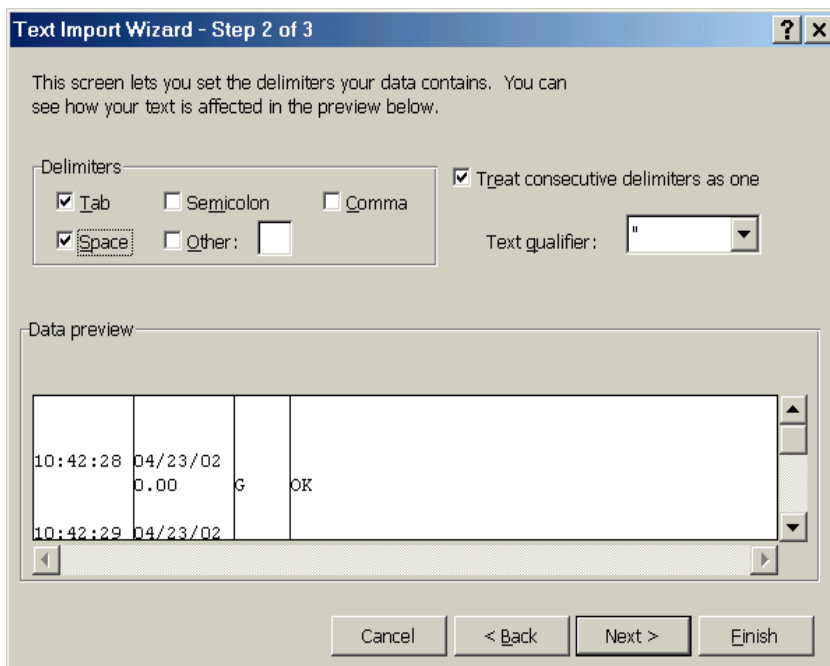
The text extension file can now be imported to Excel or into Word. For example, to import into Excel, on Excel's toolbar, select Data, select Get External Data, select Import Text File (this will be where you saved the HyperTerminal text file).



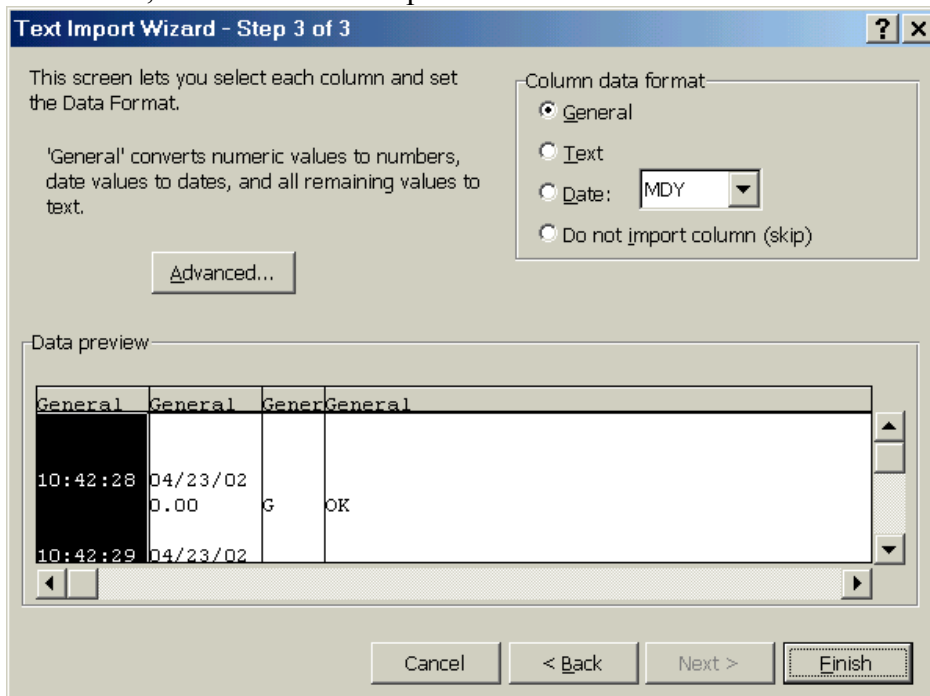
The Text Import Wizard will appear. In Text Import Wizard - Step 1 of 3 screen, select Delimited only and press Next.



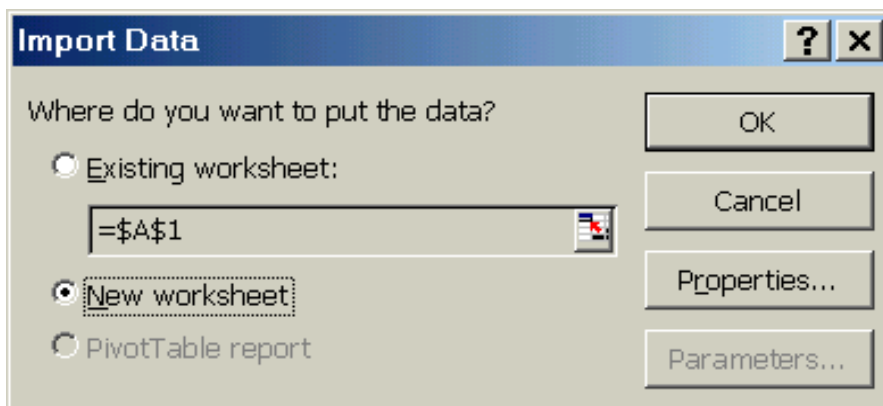
In screen 2, select Tab, Space, and Treat Consecutive Delimiters As One and then press Next.



In screen 3, select General and press Finish.



Then the wizard will ask where you want to put the data.



## **RETURNED GOODS PROCEDURE**

Should it become necessary to return any item to Scientech for any reason, please contact our Product Service Department at (800) 525-0522 or (303) 444-1361 or Fax (303) 444-9229 or E-mail INST@SCIENTECH-INC.COM. When you call, please be ready to provide the model number, serial number and a description of the problem. Frequently we can provide self-help information that will eliminate the need for returning the unit(s).

If equipment return is required, please pack the items in the original box and packing material. As an alternate, place equipment in a snug fitting box, then pack that box in a larger box with at least four inches of packing material between the two boxes. Scientech does not assume responsibility for under packed items.

Please include the name and phone number of the person we should contact regarding repair question(s).

Normally, products are repaired and shipped within 5 working days after their arrival at the product service facility. This is an average time and could vary depending on the workload.

Shipping Address:   Scientech, Inc.  
                          5649 Arapahoe Avenue  
                          Boulder, CO 80303  
                          U.S.A.

## **LIMITED WARRANTY**

All Scientech accessories are warranted against defects in materials and workmanship within North America for three (3) years and all other areas for two (2) years from date of shipment. During the warranty period, Scientech will repair, or at its option, replace at no charge, components that prove to be defective. The equipment must be returned, shipping prepaid, to Scientech's product service facility. This limited warranty does not apply if the equipment is damaged by accident or misuse or as a result of Service or modification by other than a Scientech service facility. The foregoing warranty is in lieu of all other warranties expressed or implied including but not limited to any implied warranty of merchantability, fitness, or adequacy for any particular purpose or use. Scientech, Inc., shall not be liable for any special incidental or consequential damages whether in contract, tort, or otherwise.

If you received a PDA from Scientech, the warranty for the specific PDA rests with the manufacturer of the PDA.