

HATTrax™ TraxLink™

Cattle information for the HATTrax™ Database can be collected, uploaded, and downloaded by using a PDA and the TraxLink™ software.

The steps to using the PDA are:



1. Install Palm Desktop

- Must have Palm Desktop installed prior to installing TraxLink™ PDA software

2. Install the TraxLink™ PDA software

- Run Install Software
- HotSync PDA
- Unlock TraxLink™ Software

3. Synchronize PDA and Central Database

- Configure Dialup (PDA Modem Only) and HotSync PDA again to download any data from the centralized database
or
- HotSync PDA again (PC with Internet connection) to download any data from the centralized database.

4. Collect & Store Data

- Collect & Store Physical Records
- Collect & Store Health Records
- Collect & Store Breeding Records

5. Upload/Download Data

- Use HotSync or
- Use PDA Modem Sync

Quick Start

Run Install

Insert the TraxLink™ CD into your computer and follow the instructions to automatically install the TraxLink™ Software on your computer.

Note: the Palm Desktop software should be installed before you install the TraxLink™ software.

HotSync your PDA to automatically install the TraxLink™ software on to your PDA.

YOU MUST restart your computer after the install is complete.



Start the Program

Tap the TraxLink™ icon in the Palm Application Launcher.

First-time only - Enter your Owner ID and the unlock code provided with your software. Also provide an **Entered by** name. This name will be associated with any data entry on this PDA. It can be changed later if needed. See **General Settings** at the end of this document.

Note: Consult the documentation that came with your PDA for detailed help on how to enter data using Graffiti or the onscreen keyboard. See the section Entering Data into the PDA at the end of this document for a quick review. You can also get help on the PDA by tapping

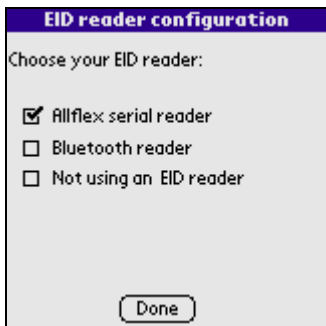
the Graffiti icon  in the Palm Application Launcher on most Handsprings or through the Welcome Application .

Tap the **[Unlock]** button to proceed after you have entered the necessary information.



Select an EID Scanner

Choose the EID reader you will be using from the list (this list varies based on the readers your PDA is capable of supporting) and <TAP> the **[Done]** button.





Discover Bluetooth Devices (Skip this step if you aren't using Bluetooth)

If your PDA supports Bluetooth, the Bluetooth settings screen will appear. This screen allows you to discover Bluetooth devices and associate them with an input type (scale or reader).

(See **Bluetooth Configuration** on page 13 of this document for more information.)



A number of screens have a help dialog. You can access this help by tapping on the **i** in the upper right corner of screens that have help available.

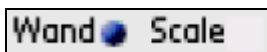


To discover devices, ensure the devices you would like to connect to are turned on and then <TAP> the **[(Re)Discover Devices]** button. Your PDA will begin looking for other Bluetooth capable devices. The discovery process usually takes a few seconds. When discovery is done, you will be presented with a screen that lists the devices that were found. Check the devices you will be using and <TAP> the **[OK]** button. Next, <TAP> the down arrow underneath the EID reader label and select the device you will be using to read EIDs (screen above). Now do the same for the device connected to your scale head. Finally, <TAP> the **[Done]** button to proceed.

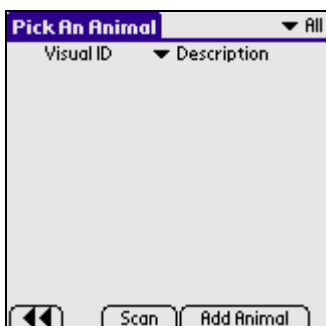


You are now at the **Main Menu** screen – **TraxLink**.

HotSync your PDA using the cradle or PDA Modem Sync your PDA to synchronize your PDA with the centralized database.



If you have a Bluetooth enabled PDA you will see the Bluetooth device indicators at the top right of your screen. No indicator light means that a Bluetooth device is not connected and a blue indicator light symbolizes an active connection to a Bluetooth device. For example, in the picture to the left, the Wand is connected and the Scale is not connected.

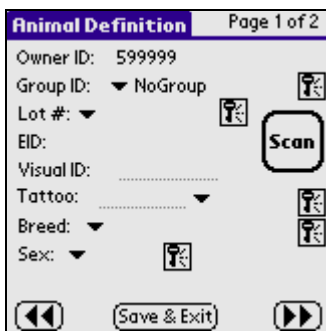


Next, tap the **[Edit/View Records]** button. You are now looking at the **Animal Picker** screen - **Pick An Animal**. After animals have been stored in TraxLink™ this screen will display a list of those animals.

Add an Animal

Either scan an EID tag by tapping the **[Scan]** button or tap the **[Add Animal]** button.

Note: An EID scanner has to be attached to the PDA to scan an animal.



You should now be looking at the **Animal Definition** screen. This section consists of 2 pages of information that defines characteristics of the animal such as breed, sex, etc. An EID tag number is not required to enter data on animals but if you choose not to enter an EID number you will see a warning telling you the animal will not be synchronized with the external system. The centralized database requires every animal to have an EID, so any animals without an EID will not be uploaded to the centralized database when you sync the PDA.

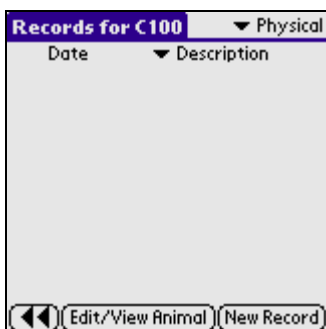
Enter information on your animal and tap the **Save & Exit** button. A Visual ID is required for all animals. They must be unique within the same group. By default an animal will be part of the **NoGroup** group. You can add, delete, and rename groups by selecting the **Edit Groups...** from the drop-down list.



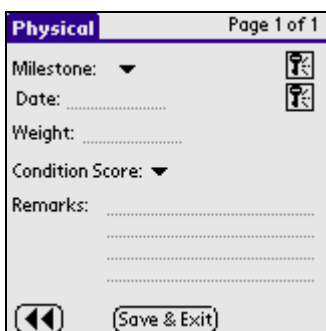
You are again looking at the **Pick An Animal** screen and the Visual ID you assigned to your new animal is now in the animal list.

Add a record for an Animal

Pick the animal you just added to the system from the **Pick An Animal** screen by tapping on the Visual ID you assigned.



This brings you to the **History Picker** screen – **Records for (VID)** where VID is the Visual ID of the animal selected. This screen will display the records you have stored for an animal. Click in the upper right hand portion of the screen on the text labeled **Physical**. The **Record Type** dropdown list will open. Select the type of record you would like to create for your animal by tapping on one of the three categories: **Physical**, **Health**, or **Breeding**. The Breeding category will only show up in the drop-down list if the animal is defined a female. Now tap the **New Record** button in the lower right hand of the screen.



Enter any information for the animal record and <TAP> **Save & Exit**.

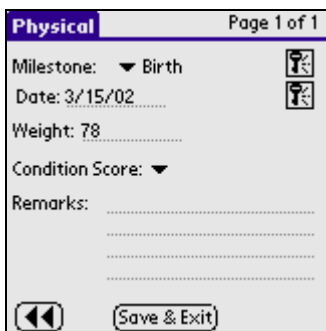


You are now back at the **History Picker** screen and you can see the record you just added in the list. Notice that if you select a different type of record from the **Record Type** drop-down the record you entered will disappear. This is because the **Record Type** drop-down filters records based on the information that was stored: physical, health, or breeding. The **Record Type** drop-down also determines which record entry form you see when you tap the **New Record** button. The **Record Type** of a record is not always the same as the **Record Type** of the entry form used to store that record. See the section labeled **Record Type** for more discussion of this subject.

Record Type

The **Record Type** drop-down controls both the type of records displayed in the **History Picker** and which form will be used to enter records when the **New Record** button is tapped. The record (and form) types are **Physical**, **Health**, and **Breeding**.

The type of form you enter data into will not always be equivalent to the **Record Type**. The reason for this discrepancy is that there are fields that are shared between the data entry forms, the **Remarks** field for example. To be considered a **Health** record, information specific to the **Health** form must be stored. And to be considered a **Breeding** record, information specific to the **Breeding** form must be stored. The **Physical** type is a catch all, if a record has nothing specific to either the **Breeding** or **Health** forms it is considered **Physical**. So if a record consists of only a remark it is considered **Physical** even if you entered the data in one of the other forms. Or if a record consists of a **Milestone**, **Date** and **Weight** but no **Temperature** or **Procedures**, it is considered **Physical** even if you entered the data in the **Health** form. The purpose of having a record's content determine its type rather than the type of form it was entered into is due to design optimization considerations.





Viewing Animal Records

Select the type of record you would like to view (in this case, the type of the record you just entered) from the **Record Type** drop-down list. Click the date of the record.

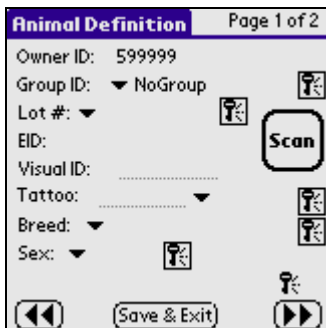
You will now be viewing the record in a record entry form. The date displayed in the **History Picker** for a given record is the date you entered for the activity saved. If no date was entered then it is the date that record was stored – these being signified by an * at the end of the date.



Lock Values

If you are recording the same information for a large number of animals, it may be helpful to “Lock-In” your values. For example, if you were giving 100 animals the same vaccination it would be tedious to have to pick the same vaccine from a list for each and every one. Of course you cannot lock in fields that vary from one animal to the next, but locks provide an enormous timesavings for fields that remain constant for nearly every animal. To enter a lock: Navigate to a field with a key lock button  to the right of it. Enter the desired value for the field. Press the key lock button . The value is now locked. After a value is locked, it will be automatically set for every new record of the current type that you create. You can change this value on a record-by-record basis without unlocking the value simply by setting the field to a new value.



For example, the majority of your cattle are red but you have a few cattle that are black. You can lock in **Red** for an animal’s color and then **Red** will be the default color. You can switch the value to **Black** when you need to for an individual animal and save the record. The next time you enter the animal definition form the **Color** setting will still default to **Red**.



On forms with multiple pages, lock values on all pages will be saved whether you view those pages or not. To remind you that there are lock values set on a successive page, this symbol  will appear at the lower right hand side of the display area above the next page button .



Animal and Record Descriptions

Because of the limited screen space on PDA devices it is hard to display large quantities of information. The animal and record descriptions feature is designed to give you as much information as possible, at a glance. Both the **Animal Picker** and **History Picker** screens have this feature. Basically, the second column of the picker screens display three user chosen fields of information on each record. These comma separated values help to describe the contents of a record at a glance.

Editing the Description



Navigate to the desired picker screen (**Animal** or **History**). Click on the **Description Checker** drop-down (It has a down arrow with the text “**Description**” to the right). Click on the box and the **Description Editor** form - **Edit Animal Description** opens. Pick the fields you want displayed and the order in which they will be displayed. A check in the first column of checkboxes will place a field’s value at the start of the description, a check in the second column will make the field second in the description and a check in the third will show it last. Tap **Done** and your selections take effect on the records / animals in the respective picker screen.



Checking the Description Settings

Sometimes the fields displayed in the description will not be obvious by their value. This is especially true in the case of numeric values like weights and temperatures. If you have forgotten what your description settings are, you can easily check them with the **Description Checker** drop-down box. To see the description headings click on the **Description Checker** drop-down (has a down arrow with the text **Description** to the right). The **Description Checker** drop-down displays the three values for the description setting separated by commas.

Groups

Group editing in TraxLink™ is modeled after the category mechanism used by the built in Palm applications (Memo, To Do List, Address, and the Application Launcher).

To edit groups select the Group drop-down in the top right hand of the **Animal Picker** screen or on the first page of the **Animal Definition** form. Select **Edit Groups...** from the bottom of the list.


You can add, rename, and delete groups with the **New**, **Rename**, and **Delete** buttons.

Like the applications that come preinstalled with your Palm, if you delete a group the records filed under that group will be transferred to the **NoGroup** group. Also, you can copy all of the records in one group to another group by renaming the group name to the name of the group you want the records transferred to.

The only inconsistency between the Palm OS category mechanism and the TraxLink™ group feature is that the **NoGroup** group shows up in the **Group Editing** form’s **Edit Groups** list (the built in applications have an **Unfiled** category which is equivalent to the TraxLink™ **NoGroup** group). This is because TraxLink™ allows you to rename the **NoGroup** group so that you can bulk copy records to another group by renaming the **NoGroup** group. Unlike the normal rename, the **NoGroup** group will not be deleted after the copy.

Find



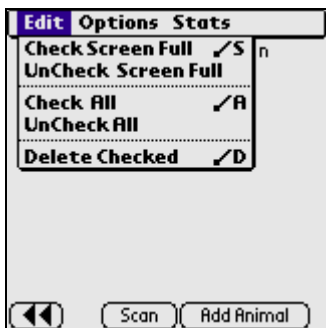
If you have a large herd you may want to use the **Find Animal** function of the software. Tap the **Find** silkscreen button in the very lower right hand corner of the screen.  Enter in a VID.

Note: the silkscreen is the portion of the screen below the display area.



The find is not case sensitive so you can enter caps or not. If the find matches the VID with an animal in the records then it brings up that animal in the History Picker. If results match multiple animals, they will be listed by their VID and GroupID.

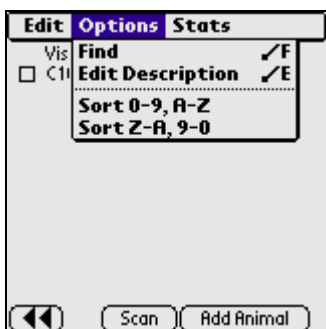
The Picker Screens

Both the **Animal Picker** and **History Picker** screens show three columns of information. The first column has checkboxes for both pickers, the second column has identifiers (**Visual ID** for the **Animal Picker** and **Date** for the **History Picker**), and the last column is a description. The last column displays three user-selected fields of information as explained earlier.




Delete Animals or Records

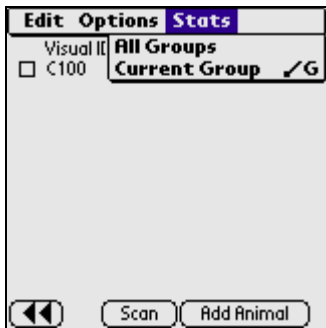
The checkboxes are used for selecting individual animals or individual records of history for a given animal or groups of animals or history depending on which picker screen you use. Once selected items can be deleted by tapping the **Menu** silkscreen button in the lower left corner of the screen  and then select **Edit** from the **Menu Bar** (if needed). Delete the selected items by picking the **Delete Checked** from the drop-down list. You can also use the shortcut command graffiti character  and the letter D.





Sort Animals or Records

You can sort animals or animal history by tapping the **Menu** silkscreen button in the lower left corner of the screen  and then select **Options** from the **Menu Bar** (if needed) and select the sort order from the drop-down list.

Stats



You can see the stats on your herd (number of animals in one group or in all groups in your herd) by tapping the **Menu** silkscreen button  in the lower left corner of the screen and then select **Stats** from the **Menu Bar** (if needed). Then select **All Groups** or **Current Group** from the drop-down list. You can also use the shortcut command graffiti character  and the letter G.

If **All Groups** is selected from the drop-down then you will see the **Group Stats** screen with the number of animals for each group and the total number of animals in the database. Otherwise, you will see the number of animals in the current group if you selected **Current Group** from the drop-down list.

Synchronize Records



You can synchronize records using one of two methods – PDA Modem Sync or HotSync. To PDA Modem Sync your records go to the TraxLink™ **Main Menu** screen and tap the **[PDA Modem Sync]** button. You need to have a modem in the PDA with it attached to a phone line before you use this method. See **Configuring Your PDA Modem** at the end of this documentation for more information.

Warning: You should synchronize your PDA with the centralized database BEFORE you change the time or date on the PDA. Failure to do so may result in data not being synchronized or corrupt data. The date and time are used by the system to determine the most recent records.

You should be at the **Synchronize Records** screen. You have three choices: Synchronize, Get Records, and Get EIDs.

Synchronize (default setting) – send all records on the PDA that have changed since the last synchronization and get all records that have changed since last synchronization from the centralized database. What records you send and get will depend on what has changed.

Get Records – get records you have defined for download from the centralized database.

Note: You need to use the web interface to define records to download before you use this option. Use this option to populate the PDA with your animal records for first-time use or if lost all your records due to a hard-reset on the PDA or your batteries went dead.

Get EIDs – get from the centralized database all EIDs that have been added since the last synchronization. Use this option when you purchase EIDs and want to get them on the PDA for use.



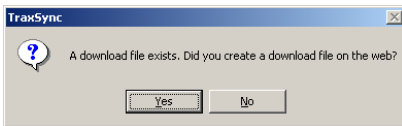
The process and time of synchronization will vary depending on what options are selected. For a full synchronization of sending and getting records the process consists of:

- Sending (send records from PDA to centralized database)
- Waiting for Records to Download (waiting for centralized database to generate download records)
- Getting Records (download records from centralized database to PDA)

Note: If there are no animal records to download when you do a full synchronization the program still shows a Getting Records message. This is because the program records the time and date of synchronization and this is considered a record.

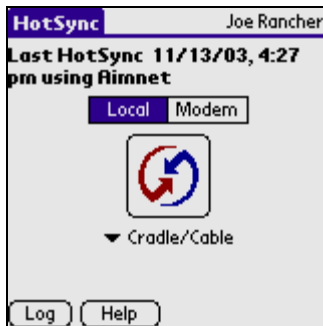
- Arranging Records (merge and arrange records downloaded)

TraxSync™ looks to see if a download file exists prior to sending the upload file. (Unless you configure the HotSync so TraxSync™ does a Download only. See discussion below under HotSync configuration.) If a download file does exist it will popup a dialog box. Press the Yes button if you created the download file on the web. (You would do this the first time to populate the PDA with records or if you lost the data on the PDA and wanted to restore it.) You can get this message at other times if the previous sync was disrupted or cancelled. In general, answer No unless you created a download file on the web just prior to syncing the PDA.



To HotSync your records place your PDA in the cradle and push the HotSync button on the cradle.

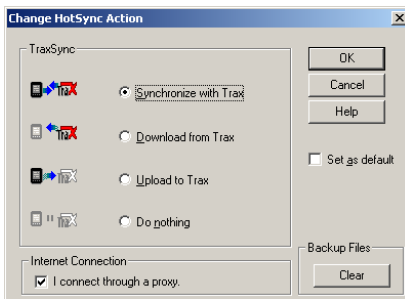
Warning: You should synchronize your PDA with the centralized database BEFORE you change the time or date on the PDA. Failure to do so may result in data not being synchronized or corrupt data. The date and time are used by the system to determine the most recent records.



HotSync Configuration

HotSync has 4 options that can be set. Get to the options by Right-Clicking on the HotSync Manager Icon in the system tray. Then choose Custom from the pop-up list. Then Select Trax from the conduit list. Then Change from the selection. You should be at the Trax Configuration window.

Synchronize with Trax (default setting) – send all records on the PDA that have changed since the last synchronization and get all records from the centralized database that have changed since last synchronization. What records you send and get will depend on what has changed.



Download Records from Trax – get records you have defined for download from the centralized database.

Note: Use this option to populate the PDA with your animal records for first-time use or if you lost all your records due to a hard-reset on the PDA or your batteries went dead. You need to use the web interface to define records to download before you use this option.

Upload Records to Trax – send all records on the PDA that have changed since the last synchronization.

Do Nothing – Do not send or get any records. Use this option if you want to sync your PDA but don't want to sync the Trax program. This is useful when you want to sync your other PDA applications but are not on the Internet and don't want the TraxSync™ conduit to remind you of this fact.

Internet Connection – If you connect to the Internet through a proxy server then you should check this setting. This will allow TraxSync™ to use the proxy server to sync records between the PDA and the centralized database.

Backup Files – TraxSync™ creates a backup of all records that are sent up to the centralized database. They take up little space on your hard drive but they can be deleted by pressing the Clear button if needed.

Program Shortcuts

A number of shortcuts have been defined to speed use of the program. They are:

Shortcut	Command	Description	Screen
✓ s	Check Screen Full	Select (check) all animals or all records showing on the screen.	Animal Picker, History Picker
✓ a	Check All	Select (check) all animals or all records in the current group or current record type.	Animal Picker, History Picker
✓ d	Delete Checked	Delete all animals or all records that have been selected (checked).	Animal Picker, History Picker
✓ f	Find	Find an animal or animals that match the Visual ID search criteria.	Animal Picker, History Picker
✓ e	Edit Description	Select the 3 fields of data to show in the picker screens.	Animal Picker, History Picker
✓ g	Group Stats	Show the group statistics for the current animal group.	Animal Picker
✓ n	Save & New	Save information on the current animal and create a new animal definition.	Animal Definition
✓ h	Save & Exit to Health	Save information on the current animal and go to Health Screen.	Animal Definition, Physical, Breeding
✓ b	Save & Exit to Breeding	Save information on the current animal and go to Breeding Screen.	Animal Definition, Physical, Health
✓ p	Save & Exit to Physical	Save information on the current animal and go to Physical Screen.	Animal Definition, Health, Breeding
✓ a	Save & Exit to Animals	Save information on the current animal and go to Animal Picker Screen.	Animal Definition



Configuring Your PDA Modem

From the Application launcher screen tap the Prefs icon, then tap Network in the drop-down list, if needed.

Configure the connection to use **PalmModem**. Enter a name for the **Service** (use TraxSync or any descriptive name you want), your user name, password, and the phone number to dial. This is the same information used to make your dialup Internet connection with your computer.

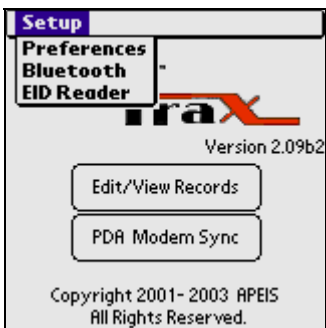


If you prefer that your password is not stored on the PDA then don't enter it. You will then be asked for it whenever you make a connection.


You should not need to change anything in the **Details...** section unless you need to use a script to connect to the Internet. You can write over a **Service** that is not in use or add a blank **Service** (Untitled) by tapping on the **Menu** icon (lower left hand of silkscreen) and then select **New** from the **Service** dropdown list.

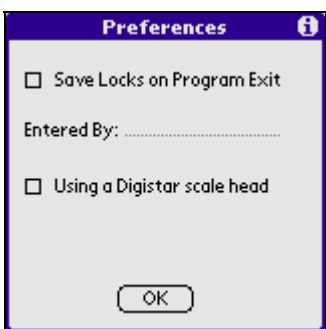
You can test your connection by tapping on the **Connect** button. Be sure to have the modem connected to the phone line first.

After you are done you can go back to the home screen to work with TraxLink™ or to synchronize with the PDA modem.




Setup Settings

There are three **Setup** settings **Preferences**, **Bluetooth**, and **EID Reader**. You can get to these by navigating to the main TraxLink™ screen then tap the **Menu** silkscreen button  in the lower left corner of the screen.



Preferences

The **Save Locks on Program Exit** setting allows you to prevent locks from being cleared when you exit the TraxLink™ application. This feature can be handy if you want to set up locks before a data entry session and don't want to lose them when you use other Palm applications. Also, it can be helpful if you are in the middle of a data entry session and need to visit another application like the calculator or date book, simply turn this setting on before exiting the application and your locks will be saved. Special care must be taken when using this feature

to remember that locks have been set. It is easy to forget that you have set a lock on screens with multiple forms. Remember if you see  on the lower right of a screen it means that Locks are on in the next page.

The **Entered By** setting allows a 10-character identifier to be tacked on to each record. This may be helpful in large operations with multiple employees doing data entry. A person's name could be recorded here if it is helpful to know who created a record.

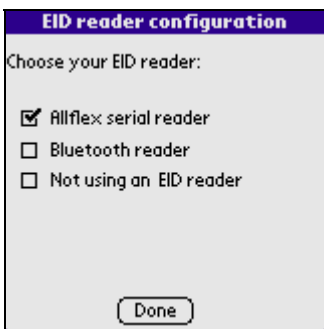
Using a Digistar scale head setting lets you tell TraxLink™ if you are using a Digistar scale head. Check it if you have a Digistar scale head, don't check it if you don't.



Discover Bluetooth Devices (Skip this step if you aren't using Bluetooth)

If your PDA supports Bluetooth, the Bluetooth settings screen will appear. This screen allows you to discover Bluetooth devices and associate them with an input type.

(See **Bluetooth Configuration** on page 13 of this document for more information.)



EID Reader

Choose the EID reader you will be using from the list (this list varies based on the readers your PDA is capable of supporting) and <TAP> the **Done** button.

Bluetooth Configuration

EID Reader

If your scale head is a Digistar then you must select the Digistar option in the Preferences section to configure your device to work with this brand of scale heads. All other scale heads should work with the default setting.

RS232 Requirements

Because of the diversity of scale head equipment communication with any untested scale head cannot be guaranteed. Confirmed compatible scale heads include:

- Weightronix 615
- Digistar EZ II Stock Weigh
- Digistar Stock Weigh 550 EID (appropriate configuration necessary)
- Tru-Test XR3000
- Tru-Test SR3000

All scale heads that have a RS232 connection in the following lines should work but all have not been tested.

Digistar line
Weightronix line
Tru-Test line

Setting Up the BrainBoxes or Free2move Converters

To enable the converter to work with your scale head, you have to match the converter's serial settings with those of your scale head. Consult the BrainBoxes or Free2Move documentation that came with your converter on how to configure the Bluetooth device. Talk to your scale head manufacturer on the serial settings your scale head uses.

Converter Configurations For Tested Scales

Scale Head	Baud Rate	Parity	Stop Bits
WeighTronix 615**	1200	None	1
Digistar EZ II StockWeigh Option 1**	1200	None*	1
Digistar EZ II StockWeigh Option 2	9600	None*	1
Digistar StockWeigh 550 EID	9600	None*	1
Tru-Test XR3000	9600	None	1
Tru-Test SR3000	9600	None	1

*NOTE: The BrainBoxes converter WILL NOT work with the parity setting listed in the Digistar documentation. Please specify "None" for the parity when communicating with Digistar scales that communicate at 7 data bits.

**NOTE: The Free2Move converter WILL NOT work at 1200 baud rate.

Bluetooth Tips

Reconnecting to a Bluetooth Device

If you need to reconnect to a Bluetooth device, you can either exit TraxLink™ and reenter the program or you can go to the Bluetooth Device Settings screen and then exit it. Also, you can connect by tapping on the Bluetooth device name (Wand or Scale) in the upper right corner of the main program screen.

Exiting TraxLink™

When the application is exited using the PDA's home button or one of the hard keys (date book/memo pad/address book), the Bluetooth connection to peripheral devices (the scale or RFID reader) is terminated gracefully. However, if the power button on the PDA is pressed, the Bluetooth connection is terminated immediately without notifying the peripherals. As a result of the hard Bluetooth termination, the peripherals won't know the connection has been closed until a timeout period has elapsed. In other words, if you try to reconnect shortly after turning off the PDA while TraxLink™ is running, the connection may fail. This situation only occurs if you temporarily turn off the PDA.

Don't use the backlight

If you have a device that has a backlight, disable it if you will be leaving your PDA on for long periods of time. The backlight reduces battery life at a considerable rate.

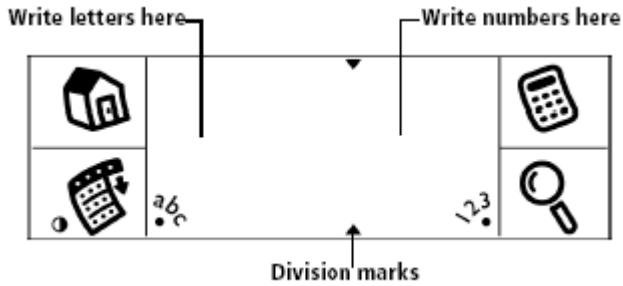
Trouble Shooting

Application appears to hang

If an attempt to exit TraxLink™ is made while a peripheral Bluetooth device (the scale or RFID wand) is incapable of responding (too far away or lost power), the application will appear to hang. The temporary hang results because TraxLink™ attempts to notify the peripheral device that the Bluetooth connection is being closed before an exit. If the peripheral is incapable of responding to a request to close the connection, TraxLink™ will wait a few seconds before giving up and exiting. You can force an exit in this situation by tapping the button you were exiting with (home/date book/memo pad/address book) again.

Entering Data into the PDA

The Graffiti writing area



The Graffiti alphabet

Letter	Strokes	Letter	Strokes
A		N	
B		O	
C		P	
D		Q	
E		R	
F		S	
G		T	
H		U	
I		V	
J		W	
K		X	
L		Y	
M		Z	
Space		Back Space	
Carriage Return		Period	<i>tap twice</i>

With a few exceptions, Graffiti alphabet strokes are uppercase, written in a single stroke.

Writing capital letters

Caps Shift		Caps Lock	
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Graffiti numbers

Number	Strokes	Number	Strokes
0		5	
1		6	
2		7	
3		8	
4		9	

Graffiti ShortCuts

ShortCut	
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To use a ShortCut, draw the ShortCut stroke followed by the ShortCut character.

Graffiti tips

- Enter letters on the left, numbers on the right.
- You should draw large characters – nearly fill the drawing space.
- Start characters at the dot.
- Use a single stroke.
- Write at a natural speed.
- Do not write on a slant.
- Press firmly.
- To delete characters, simply set the insertion point to the right of the character you want to delete and make the backspace stroke in the Graffiti writing area.

Using the onscreen keyboard

