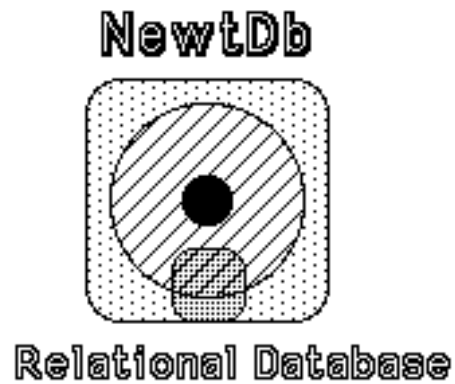


NewtonDb™ - Relational Database for Newton



NewtonDb™ - The Relational Database for Newton

by

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NewtonDb™ - Relational Database for Newton

Introduction

NewtonDb™ is a fully indexed, relational database for Newton. It supports multiple screens, independent databases and the Newton Connection Kit. NewtonDb takes only 139k of memory so it may be usable on an MP100 without a PCMCIA card for data gathering and customer survey type applications.

Feature Overview:

Databases:

- Up to 126 fields per database.
- Sixteen databases supported in the initial version.
- Three indexes for fast lookup.
- Field Insert, Delete and Add to existing databases.
- Named Databases, Fields and Indexes.
- Auto field fill option of Time and Date.
- Auto duplicate field option for a New Record.
- Auto Clear field option when Duplicating records.
- Record sequence numbers for exchanging data to Mac / PC.
- New / Modified Record Flag for exchanging data to Mac / PC.

Screens:

- No limit on the number of screens.*
- No limit on the number of fields displayed on each screen.**
- Databases are NOT tied to screens, allowing databases to exist for lookup only.
- Dynamic screen loading and unloading for good heap memory management.
- Fields can be read only.
- Editing of data can be done in place, half screen or full screen, with scrolling.
- Indirect data in another database may be displayed and edited.
- Fields can be single or multiple lines.
- Full control of Font, Style and Size for all fields.
- Indirect, relational lookup of any screen field.
- Screen Object fields may be edited, added and deleted at any time.

* Current releases have a maximum of 32 screens enabled.

** Only by heap memory.

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Screen Object types:

- Static Text
- Data from current record.
- Pop up list for entering list data to a field.
- Pop up list for entering non list data to a field
- Go To buttons for changing Screens.
- Go To a matching indirect record.
- Check Box fields.
- Calculate field.

Screen Navigating Tools:

- Pop up list of Screens.
- Pop up list of Indexes.
- New / Duplicate / Delete Dialog box.
- Record Query with full option list.

Other Features:

- Quick Find.
- Edit list box for quick selection of a database field for entry.
- Barcode / Serial data input.
- Screen Passwords.

Overview / List Mode:

- Up to four columns of fields.
- On the fly change of fields displayed in columns.
- Hidden columns.
- Indirect, relational (other database) columns.
- Change sort of data.
- Record Query with full option list.
- Starting record selector: A-Z and 0-9.

NewtDb Demo - Shareware version

You get to try out NewtDb before purchasing it. This is a fully functional version. There is nothing crippled. The one limitation is that only four Databases and eight Screens can be defined and used at any one time. There is a 45 day time limit. After 45 days, following installation, NewtDb will not function unless registered. Please make sure Newton's clock is correct before installing.

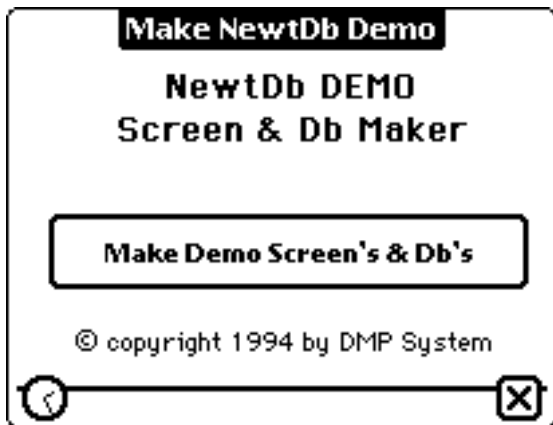
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Quick Start - Making Sample Screens and Databases

To start using NewtonDb without reading all the details, here's what to do to start examining NewtonDb's features:

Using either a Package Downloader or Newton Connection Kit, install the three Newton Applications: NewtonDb, UtilityDb and DemoDb. You'll need about 378k of free memory to install all three.

After installing, launch **DemoDb**. You'll see a button that says "Make Demo Screen's and Db's". Press it and two screens (#98 and #99) and two databases (#6 and #7) will be created for you. As it is making the demo, status messages will be displayed. A word of **caution** here: If you use DemoDb again, any changes that you made to the demo screens (#98 and #99) and databases (#6 and #7) will be undone, i.e., they will be recreated. Screens and Databases that use the same numbers as the Demo ones will be wiped out. It's best to use DemoDb only before you make your own screens and databases. Using it afterward is not advised. If Newton gives an error, reset Newton and run DemoDb again as you may have not had enough heap memory.



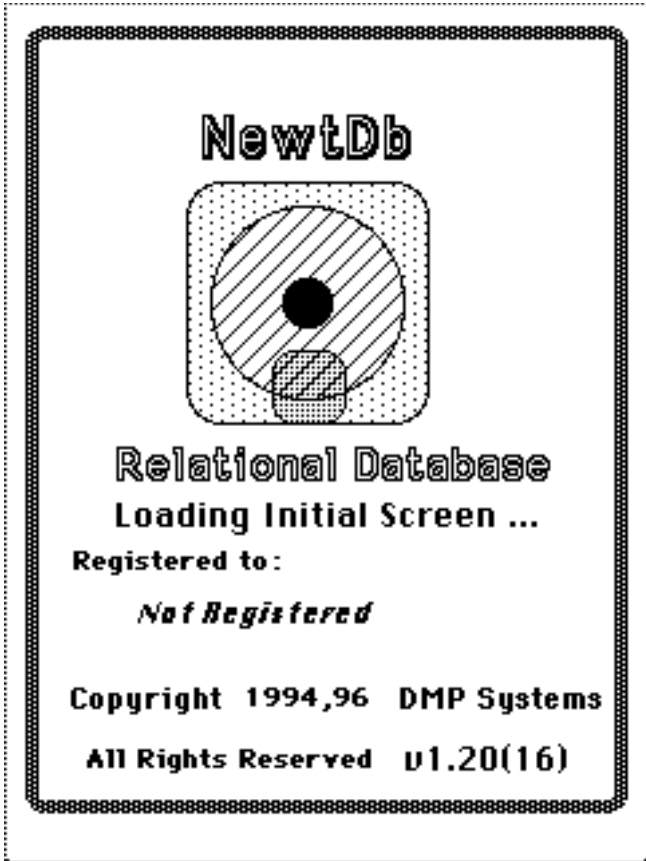
Now, after you've created the demo screens and databases, close DemoDb and launch NewtonDb. As it opens, it will display information as to its loading status.

Play around. The demo screens and databases show most every feature that can be configured. NewtonDb works just like any Newton application. You use the scroll arrows to move between records, the "belly button" is for List View.

You can look at how databases and screens are configured by using UtilityDb. Close NewtonDb and launch UtilityDb. It pretty easy to use but please read the section detailing the usage of it and its features as some are not readily apparent.

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Using NewtDb

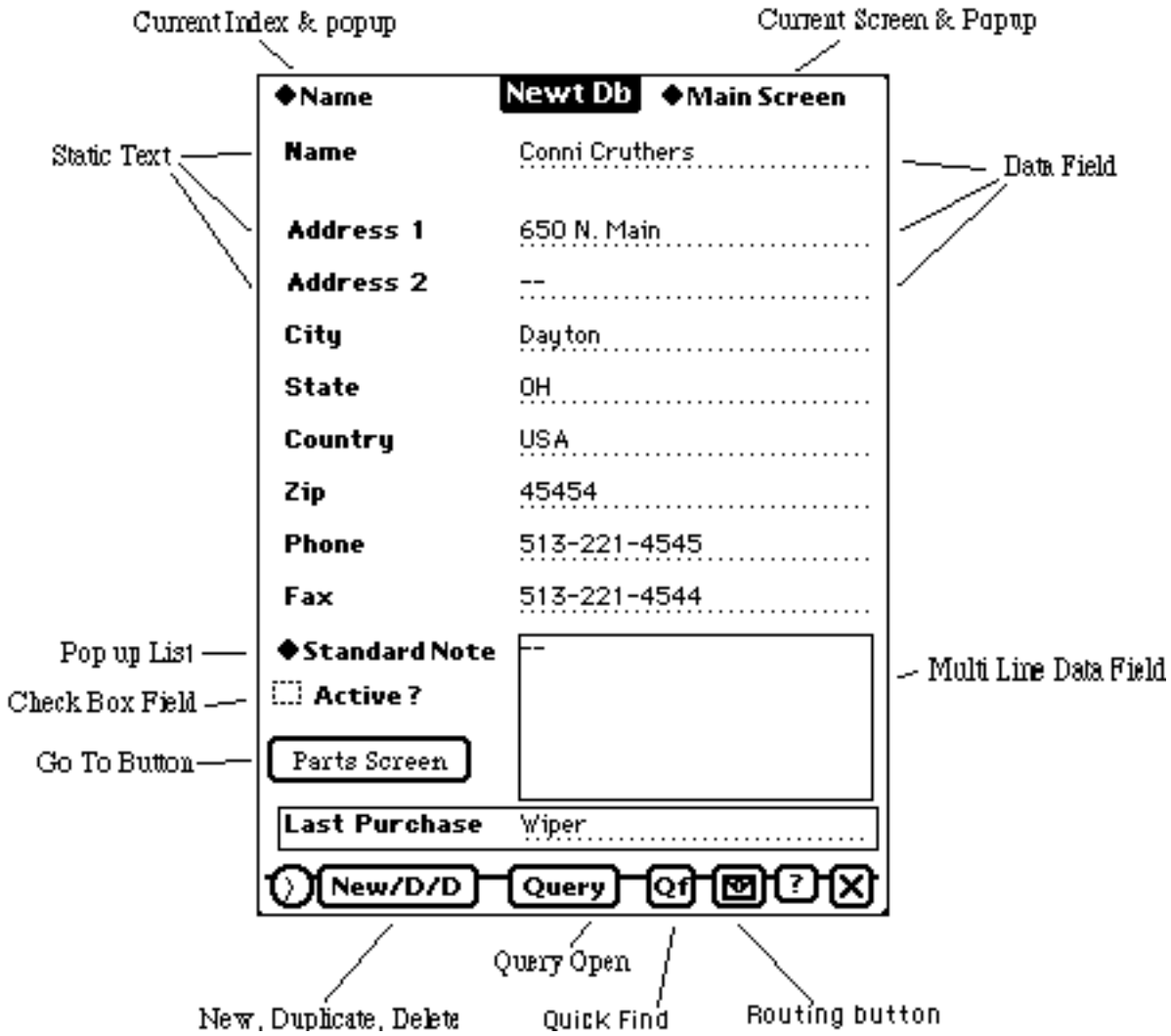


NewtDb Opening Screen

When you launch NewtDb, it will take a few seconds to load information about your screens, databases and other items. If you have registered NewtDb, your name will be shown.

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After loading, the current screen will be displayed.



Typical NewtDb Screen

Unless you have reset Newton, NewtDb will open to the last used screen and record. There is no need to freeze or archive NewtDb as it cleans up after itself upon closing and uses only a couple hundred bytes of heap to remember its place.

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Controls and Buttons

NewtonDb uses the following buttons and controls for its operation.

Current Screen

The Screen Name of the currently displayed screen is shown in the top right corner. It is also a Pop down list that will show all Screen Names. You may select any other screen to display by tapping on this and then selecting another screen from the list.

Current Index

The Index Name of the current Index in use is shown in the top left corner. This is a field in the currently displayed database. The index is how records are sorted. It is also a Pop down list that is used to select another Index.

New, Duplicate, Delete Button

This Button opens a window to select an action for the currently displayed record and any indirect record referenced by this screens database.

Query Open Button

This Button opens the Query window to define a selection query for limiting the records to be shown by user defined criteria.

Quick Find Button

This Button opens the Quick Find window. Quick Find will let you search on record indexes and is very fast.

Scroll Up and Down Buttons

They work as expected, retrieving the next or previous record for the displayed screen database.

Overview (Belly) Button

This will toggle the display between Detail or List View.

Find Button

Newton's "Find" will search in all databases that have a screen associated with them. "Find All" and "Look for Dates" are not supported at this time.

Routing Button

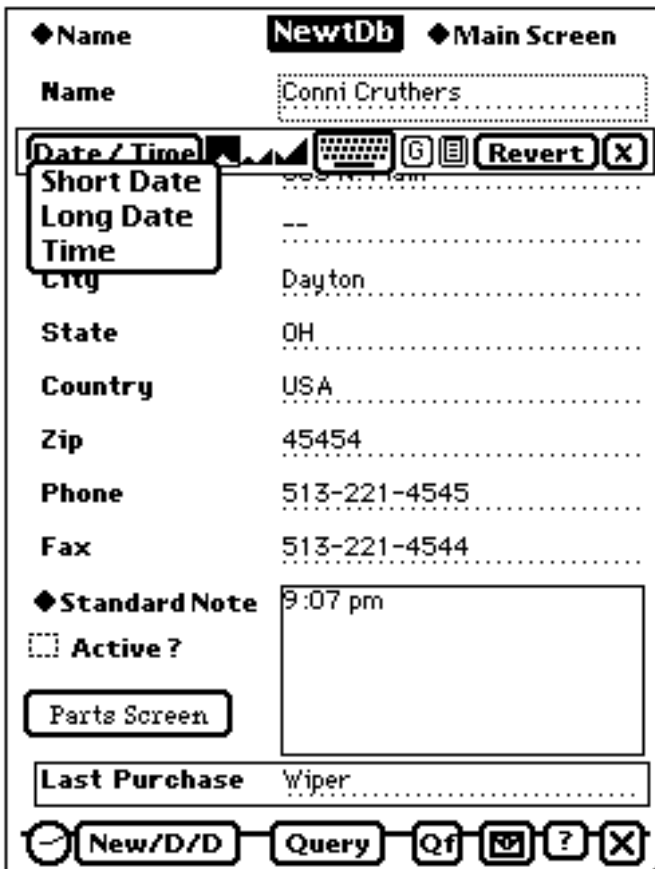
The routing button allows you to print, fax or email the current record. It also can be used to move the current record to and from a storage card. If the record is on a card, a little dot will show in the center.

NewtonDb is non-modal

You can do anything, anytime. It will close any windows that need to be closed when activating different options.

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Editing Fields in a Record



To edit a Field, just tap anywhere in it. An Edit window will open.

The Edit window has controls for:

Inserting the **Date and Time** **Date / Time** .


You can select three formats:

Short Date is like 01/09/1995.


Long Date is like January 1st, 1996.


Time is like 9:07 pm.

Change the window size with  for **inline** to **half** or **full** screen.

Use the **keyboard** icon  for opening and closing the keyboard.

A **Revert** button **Revert** will undo (after conformation) all changes and a close button.

A **Graffiti** button  is shown if Graffiti is installed Tap it to open **Graffiti**.

The **List Box** icon  will show if a List Box for this field has been defined. see List Box for more information

Use Newton's Up and Down buttons to scroll The Edit window to show more data than can fit in a window.

You don't have to close an open Edit window before editing another field, just tap on the other field and the edit window will save it's contents and then open to the field you tapped on.

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An Edit window will also close itself when you: Change screens, Open the New/Dup/Delete window, Open the Query window, change the Index, change to List View.

Data is always saved. There is no Save button.

Notes:


Fields on the screen can be made Read Only. You can copy data from a Read Only field with Newton's normal method of selecting data.

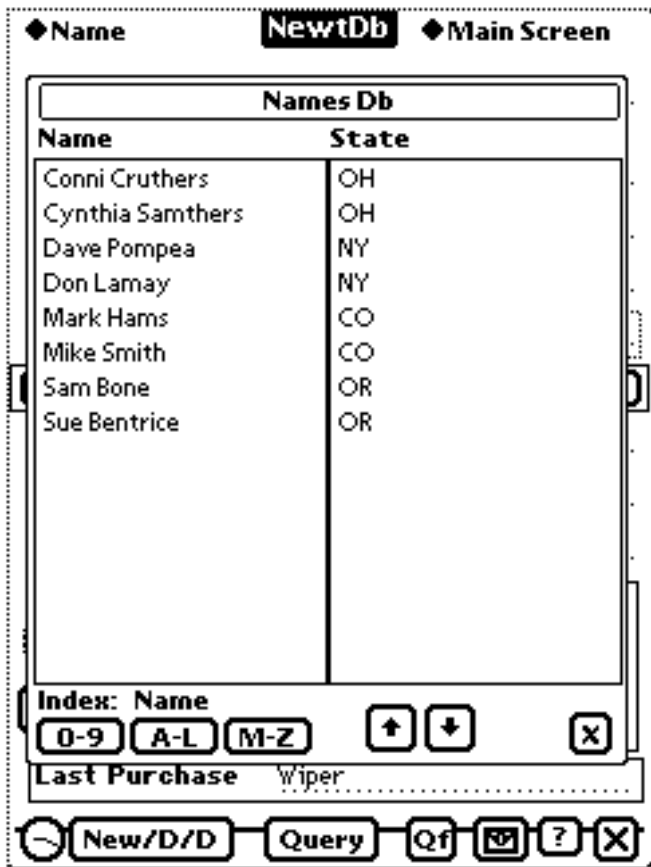
The date entered with the **Short Date** button will zero filled. i.e.. January 1st, 1991 will be entered as 01/01/1991, not 1/1/1991. All three fields of a date will be checked, so even January 1st, 2000 would be entered as 01/01/00.

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Edit List Box

If you need to select between many items to enter into an field, you can use a popup list for a small amount of items or and Edit List Box for a large number. An Edit List Box will show two fields of all records of a database. You define the fields, database and sort order when checking off the "Use Edit List" for the screen field in UtilityDb.

If you have an Edit List Box defined for a field, you will see a  button in the Edit Toolbar. Pressing it will bring up the Edit List Box.



This Edit List Box is showing fields from the Name database so that a State can be picked.

When you select an item in either column, that text is entered at the insertion point of text being edited and the Edit List Box will then close.

Use the up and down arrows for scrolling to see more records.

Use the 0-9, A-L and M-Z buttons to show a pick list of letters to select a starting record to view. The Index field shown will be the field used for positioning with the buttons. Exactly like the A-Z bar in List View

Hint: You don't have to use a separate database for each list you want to create. Since NewtDb supports three indexes per database, you can use one index per group of lists and therefore, have three unrelated lists in a database.

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New, Duplicate, Delete Options

Press the New/D/D button at the bottom of the screen to bring up a window detailing the choices for: Making a New record; Deleting a record and Duplicating a record. You can perform the operations for the main record shown on the screen or any indirect, related record with fields on the screen.

If the current Screen does not have any indirect links contained in it, you get a simple window:

The screenshot shows a window titled "New / Duplicate / Delete". On the left, there are three radio button options: "New" (selected), "Duplicate", and "Delete". In the center, there is a box labeled "Main Record Only". At the bottom, there are two buttons: "Do It" and a close button with an "X" icon.

Select the operation you desire for the currently displayed record and press "Do It" to invoke it. You may press the X button to dismiss the window if you change your mind. The window will close itself after performing the selected operation.

If the current Screen has indirect, related links on it, you have more options:

The first screenshot shows the "New / Duplicate / Delete" window with the "Indirect" radio button selected. A "Select Record Type:" box contains "Main" and "Indirect" options, with "Indirect" selected. Below this is a "Database" field containing "Aux Db | Name |". The "Do It" and "X" buttons are at the bottom.

The second screenshot shows the same window with a pop-up list of indirect records. The "Select Record Type:" box is still visible. The pop-up list has a header "Db | Main Db Field | Indirect Field" and a single entry "✓ Aux Db | Name | Name".

You now have a choice to work with an indirect, related record. Press the "Indirect" button and a pop up list of Indirect Database , Source Field and Indirect Match Field will be shown. Pick the database you want. You may see the same database in the list but it will showing a different Main or Indirect field thus pointing to different indirect, related records.

If you select New or Duplicate, the Main Database Source Field of the Screen database will be entered into the Indirect Database Match Field, thus making it a matching record.

Notes:

A Delete operation can be undone. Even for an indirect record.

If you select Duplicate or Delete Indirect and a match to the Indirect Database does not exist, you will be informed when you press the "Do It" button. The Database Popup list only shows the possible indirect records.

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Query:

A Query lets you select records that have common information in them. It is a filter. Only the records that pass the filter test will be displayed. This is a powerful means to show only records that have specific data in a field. Every database can have a Query associated with it. Queries are for Databases, not Screens.

To enter data for a Query, press the "Query" button. A window will open.

The screenshot shows a dialog box for setting a query. It has two rows of field selection. The first row has a button labeled "Name" and a button labeled "Conta". Below these is a dashed line and a button labeled "-no.2nd.-". The second row has a button labeled "Address 1" and a button labeled "Conta". Below these is another dashed line. At the bottom of the dialog, there is a label "Query:Off" followed by three buttons: "Off", "Set", and "X".

This Query will let you select two sets of criteria for limiting the records that are displayed. You select which Database field to look at, constrain data and how to compare the two. You may also specify a second filter to further select which records to show.

This screenshot shows the same dialog box as above, but with a field list pop-up open. The list contains the following items: "✓Name", "Address 1", "Address 2", "City", "State", "Country", "Zip", "Phone", "Fax", "Notes", and "Woop". The "Name" field is selected, indicated by a checkmark. The dialog box below the list shows the "Name" button and the "Conta" button in the first row, and the "Address 1" button and the "Conta" button in the second row. At the bottom, there is a label "Query:Off" followed by "Off", "Set", and "X" buttons.

Select a field from the Field pop up list. All Fields of the Screen Database are available, not just the ones displayed on the Screen.

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The image shows a graphical user interface for a database query editor. A dropdown menu is open, displaying the following options:

- ✓ Contains
- Starts with
- >
- <
- >=
- <=
- <>
- =

The main interface includes the following elements:

- A field labeled **Name**.
- A field containing the text **- no. 2nd -**.
- A field labeled **Address 1** with a value of **Conta**.
- A status indicator **Query: Off**.
- Three buttons: **Off**, **Set**, and **X**.

Select the condition that the data in the Field will match the Constrain data.
You can even use the Boolean conditions for text data.

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Constrain Data

The dialog box is titled "Constrain Data". It features a popup menu with the following options: "And", "Or", "And Not", "Or Not", and "√- no 2nd -". Below the popup, there are two input fields: "Name" containing "Start Day" and "Address 1" containing "Conta". At the bottom, the status is "Query:On" and there are three buttons: "Off", "Set", and "X".

Enter the data to Constrain against. Write it in or use a keyboard.

The above example will set the Query to show only records that have letters “Dav” as the first letters in the Name field.

The dialog box is titled "Constrain Data". The popup menu is open, showing the following options: "And", "Or", "And Not", "Or Not", and "√- no 2nd -". The "And Not" option is selected. Below the popup, the "Name" field is empty and the "Address 1" field contains "Conta". At the bottom, the status is "Query:Off" and there are three buttons: "Off", "Set", and "X".

If you want to have two sets of criteria, select how they are to be combined and enter the Field, Condition and Constrain data for the second one. If you don't have a second set, leave the middle Popup set to '-no 2nd-'.

To activate a Query, press the “Set” button and a search will commence. If your Query matches one or more records in the database, the “Query:Off” status will change to “Query: On”. Also, when you hide the Query window (by pressing the X button), the Query button will now display “Query !” to indicate that a Query is active. The Query is active until you turn it off.

To turn a Query off and have all records shown, press the “Off” button in the Query window. All of your selections will be kept but the Query will now be inactive. You may reactivate it by pressing the “Set” button. There is no need to reenter the criteria.

On the Detail View press the close box to hide the query window. On the List View it will take you back to the Detail View.

Notes:

If you are editing a record, have a Query On, and you change the data record so that it no longer matches the Query criteria, upon closing the Edit window, the Query will be turned off and a beep will sound. The current record will remain on the screen.

If you have a Query set and then change the criteria, press Set, and the new query does not find any matching records, in List View, all records will be shown.

You will get a faster match of the first record, when pressing Set if:

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The Field selected is an index field of the database.

The Match is a "Starts With" or "=".

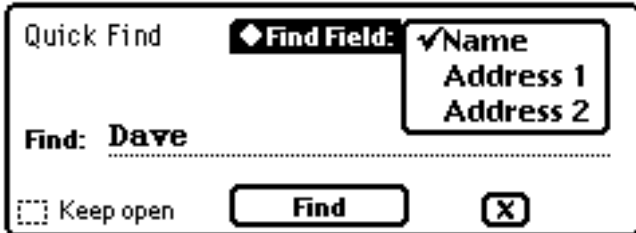
"No 2nd" is selected. i.e. only one field to match.

This will let NewtDb do an indexed search rather than a record by record search.

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Quick Find

When you press the **Quick Find** button in **Detail View**  or **List View** , the Quick Find window is shown.



Quick Find will rapidly (1000's of records a second) search an index field of a database.

The search is a "Starts With" type search. The text you enter must match the first letters in the data field.

Enter the **text** to find. Use the **Find Field** picker to select which field to search. Then press **Find**. If a record has the text you entered at the beginning of the field, it will be displayed and the Quick Find window will close.

Check **Keep open box** to leave the window open after a successful find.

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List View

To invoke the List View by pressing Newton's "Belly" button. A message will be displayed while forming the initial list and when you request more data.

◆Name	◆City	◆Part	◆Cost
Conni Cruthers	Dayton	Wiper	4.23
Cynthia Samthers	Dayton	Sproc...	14.95
Dave Pompea	Rochester	W/W F...	.99
Don Lamay	Rochester	Bearin...	1023...
Mark Hams	Denver	Muffler	19.95
Mike Smith	Denver	Muffler	19.95
Sam Bone	Beaverton	Sproc...	14.95
Sue Benrice	Beaverton	Filter	19.05

0123456789 AB CDEFGHIJKLMNOPQRSTUVWXYZ Q

Name Conta
- no. 2nd -
Address 1 Conta
Query:Off Off Set X

List View allows you to see many records at once. It allows you to have up to four columns of data on the screen. Any column, except the first, can be hidden or show data from an other database. You can change the data field shown at any time. All changes to the layout are saved.

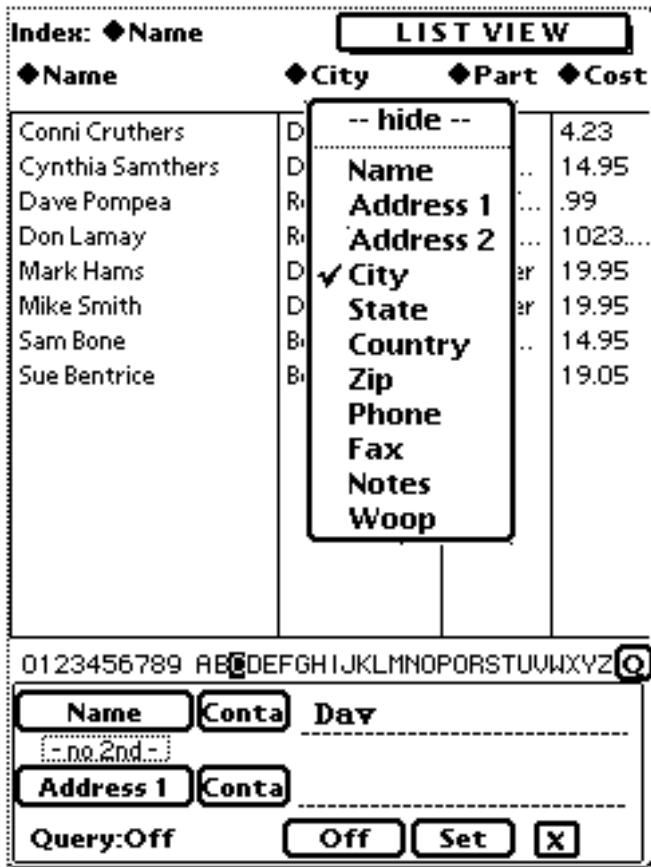
Notice the Query window is opened in the List View. To go back to the Detail View, press the "Belly" button again or the X button in the Query window.

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When you want to go to the Detail View of a specific record, tap on its field in column #1. Tapping in columns 2-4 won't have any effect. This is because many people use the pen as their finger and drag it down the list as they are looking for a specific entry.

Use Newton's Up and Down buttons to scroll the list.


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You may “Hide” any column for faster updating of data when scrolling. A check mark will remain in the field list to show what field was previously selected.

You can select a different Index to use for display by using the Pop up in the top left corner of the display. When you select a different index, the list will update using the index field of the top record data field as the beginning record to display.

You can also tap on A-Z or 0-9 to scroll the display to the first record of the current Index Field. The index field used is not necessarily the field displayed in the first column.

Press the  button to bring up the Quick Find window.

Note:

If you change the Query and then return to Detail View without selecting a new record, you may return to a different record if the original record does not match the current Query. This is normal.

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Password Protection of Screens

When you have a password set for a screen:

Use Password:
Secret Word

◆Part# **NewtDb** ◆Parts File

**This Screen is Protected.
Enter the Password
or select another screen.**

Screen: Parts File

Password:

.....

Quit **OK**

You will get a Password Entry screen when you try to view it. You must enter the password for this screen to be able to view it.

Your other options are to select another screen with the Screen Picker in the top right corner or Quit NewtDb.

Enter the correct password and press the OK button to clear the Password Protection.

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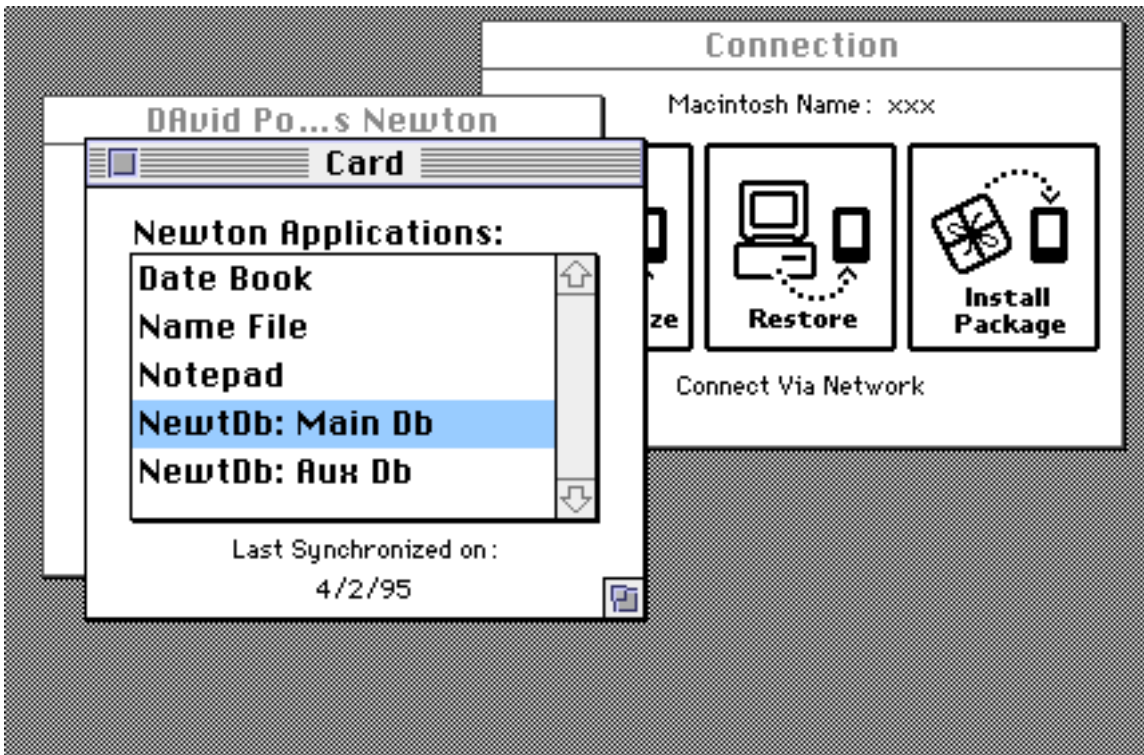
Exchanging Data with Mac / PC

NewtDb can use the Newton (Mac or Windows) Connection Kit or Slurpee v1.7, to exchange data when your Newton is running NOS v1.x. At this time for NOS v2.x you must use Slurpee v1.7 or greater. A direct data exchange for all Newton's is in the works.

Using NCK

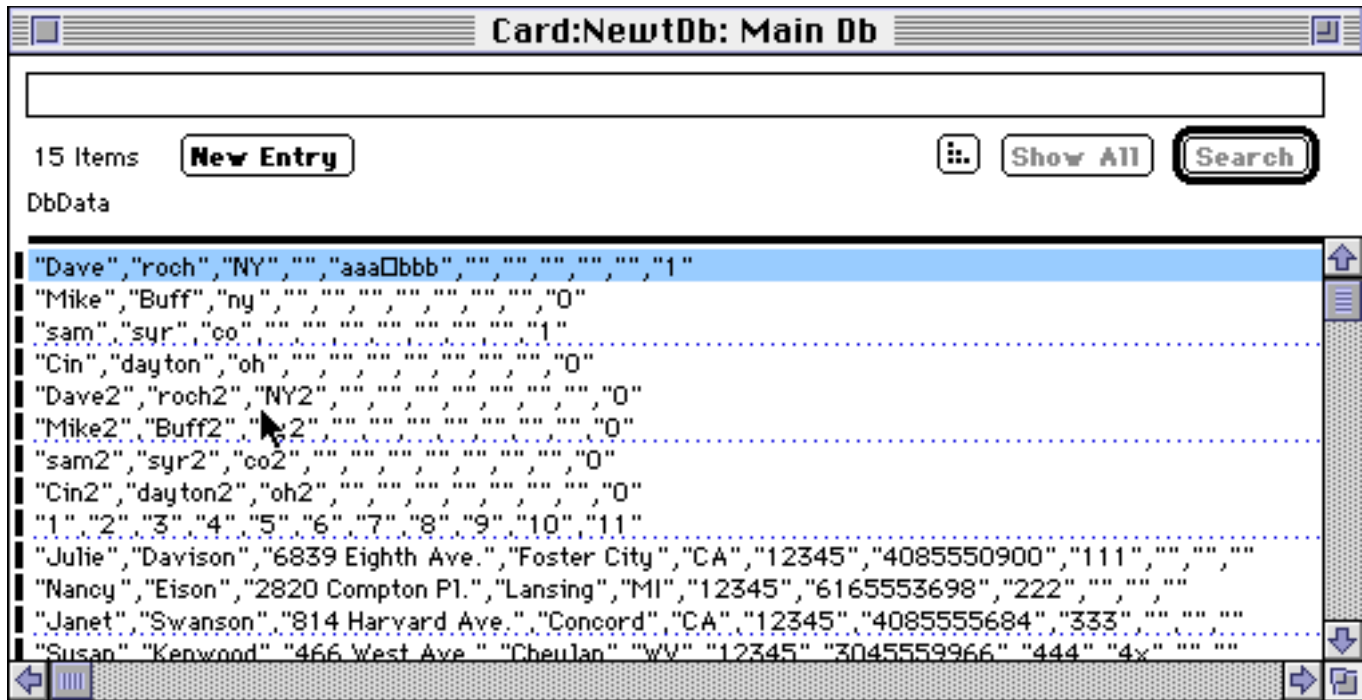
The pictures below show the Macintosh version of the NCK, the Windows NCK has slightly different screens.

Start by doing a normal Synchronize of your Newton. Now, you can Export or Import NewtDb data. After a good sync, you will see your databases in the windows that show what Newton has stored in it.



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Using the Detail Browser in NCK



You can look at, change and add new records in NCK's detail windows. You'll see each field with quotes around it. This is necessary due to NCK limitations only showing of a maximum of 31 field per record.

Just remember to keep every field quoted and separated with a comma. NewtDb will help. After editing, look in the Browser and you'll see any extra fields you may have deleted as blank ones.

Cautions:

Make sure that both Card and Newton sync files are open. The Database Definitions are stored in a separate soup. If the database definition soup is not in an open sync file, only three fields will be imported as NCK has no idea of how many fields are in the database.

Do not use NCK's copy and paste in the Browser window. NewtDb uses an internal record number to keep track of records for importing and exporting records to other databases. Using the NCK copy and paste commands bypass the internal record numbers.

To copy and paste a record, open the Detail View by double clicking on a line, then, copy the record, make a New one (using the New Button) and then paste the information.

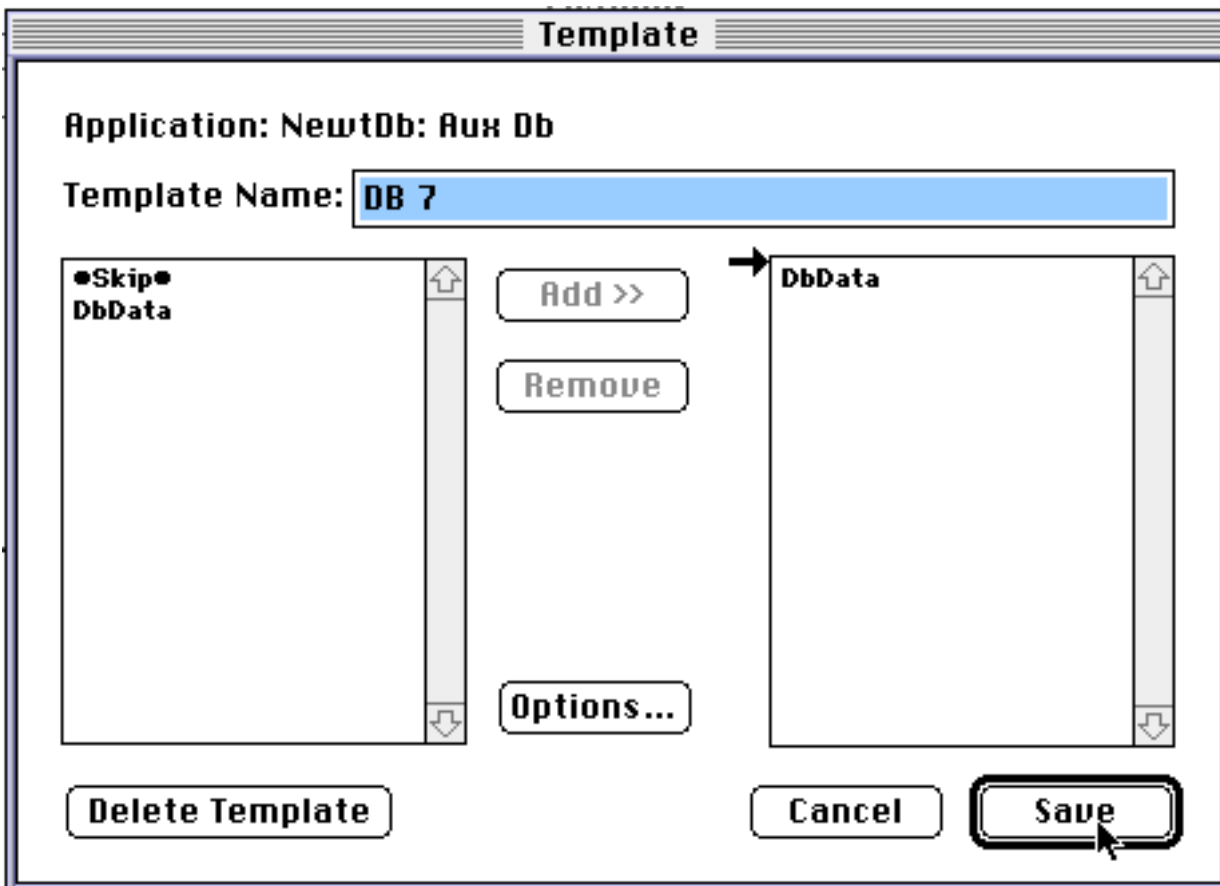
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Importing and Exporting Data from NCK

NCK has no idea of how your data is to imported or exported. You must make a template. Then you will be able to use the import and export functions.

Defining an Import / Export Template

First, in the Newton or Card window, select a NewtDb database. Then from the NCK File menu, select "Create Template for ..." for a NewtDb database.



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You will see “DbData” in the left side field list. Add it to the right side list.

Press the “Options” button.

Application: NewtDb: Aux Db
Template Name: DB 7

Field separator
 Tab CR

Record separator
 Tab CR

Number of leading lines to ignore:

Column Headings

For “Field separator” select **TAB** or **DELETE (bs)**. **Do Not Use a Comma.**

For “Record separator” select **CR**.

Make sure “Number of leading lines to ignore” is 0.

Make sure “Column Headings” is unchecked.

Press the OK button for Options.

Press the Save button for Template.

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Importing Data to Newton

Open your database program and define a comma delimited export filter. Select the fields in the correct order, as you defined in UtilityDb, for export. If you have the option of quoting each field, select it.

Now do the Export function in your database to make a text file.

Open a NCK sync file if you don't have one open.

From the NCK File menu, select "Import..." and the Template.

NCK will now import the data from a file and place in into the sync file.

NewtDb expects each field to be separated by a comma. Quotes are optional, but if present, the must be balanced.

Do Not Use a Comma for a field separator in the Template.

Never mind that the Template in the NCK uses a <tab> for a field separator, NewtDb considers the whole line as one field and parses it. NCK cannot do either variable length records or records with more than 30 fields for display so I've bypassed these limitations by using this method.

Exporting Data from Newton

Open a NCK sync file if you don't have one open.

From the NCK File menu, select "Export..." and the Template you previously made.

NCK will now export the data to a file and tell you how many records it exported.

NewtDb's export function will export the data as:

"field_1_data" , "field_2_data" , "field_3Data" <cr> for each record.

If you have the Export Sequence Numbers or Export New / Modified options enabled (in UtilityDb) , they will be exported also.

Open your database program and Import it from a text file. You may have to define an import filter for your program.

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What about Multiple Line fields and Tabs?

Glad you asked. Two things:

In many Mac database programs, you can't have multi-line fields (i.e. imbedded <cr>'s) and Tabs. But Newton can, so a means to fix this is needed.

For NCK export, NewtDb's NCK code translates <cr>'s to <lf> (line feeds) and tabs to spaces.

For NCK import, a <lf> is translated to a <cr>.

This should take care of the problem. This won't be a problem with Native, "Newton Connection Format" or direct imports and exports.

Using File Maker Databases:

In File Maker you can have multiple lines of data inside a field. However, the lines are not separated with a <cr> or <lf> as would be expected. They are separated with a <vt> (vertical tab) character. Newton has no idea about <vt> characters and what to do with them. NewtDb's Import / Export code in NCK can change a <vt> to a <cr>. To have a translate done, check the "FM I/E rules" option for that database.

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Things about NewtonDb that you should know (but I didn't know where to put them)

NewtonDb *wants* 40k of free heap space to startup with. Any less and NewtonDb will refuse to run. With many databases and screens, for best performance, you should have at least 50k.

NewtonDb will unload screens and databases if heap falls below 30k. Don't worry, NewtonDb will reload them as needed. NewtonDb implements a least frequently used algorithm to keep track of what you use.

You should limit each record of a database to a absolute maximum of 4k. NewtonDb does not implement a limit but performance will suffer if records are greater than 4k. If heap space is very low, Newton will inform you.

Remember, NewtonDb may be accessing 3 records at once: one for the main screen, one indirect record in another database and one being held for a possible undo. If all of them are 4k, then 24k of heap (Newton uses unicode for text, therefore each character takes two bytes in heap) is being used just for them.

Use a field that is an index in an indirect database for a Match field. If not, the lookup will be 25 to 50 times slower.

If you get an error when switching to List View, go back into UtilityDb and check if the column fields are defined. Especially for indirect columns.

When using Newton's "Find" button, the Query will be set Off for a found record. You must set it back on.

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NewtDb's Soups

NewtDb keeps a separate soup for each database. They are named "NewtDb0:dmp" ... "NewtDb15:dmp".

All Screen definitions are held in one soup. It is "NewtDb:DMP". Each soup entry defines one screen. This is also where the List View column information is held.

All Database definitions are in another soup. It is "NewtDbDB:dmp". Each soup entry defines one database. Each entry also holds the Query information for its database and a few other things

NewtDb places entries in the Directory soup for NCK use.

Future NewtDb Additions*

A program to synchronize a Mac / PC database to Newton. Currently, you should do a full import / export to maintain sync with your database.

Other Screen Objects for data display and entry.

Be able to shrink to a button.

Multiple records for printing.

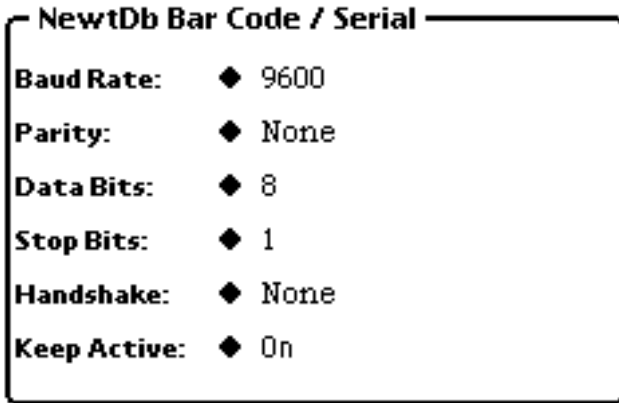
More Print / Fax / Email formats.

* No date has yet been set for future additions. The above additions are planned but not promised and should not be taken as such. A small charge may be set for them.

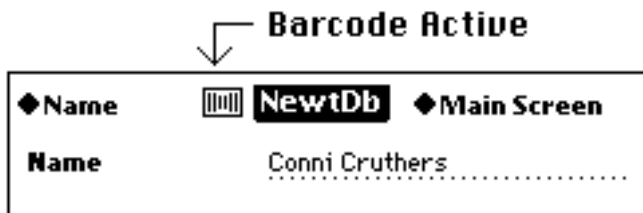
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Barcodes

To use Barcode or Serial input, you need to load the DbBarCode app. It is the module that gets the actual serial input and passes it to NewtDb. This was done for a couple of reasons. First, it takes 30k of memory so if you're not using that feature, you don't need to use the memory for it. Second, parts of it (communications configuration) needs to be added to the preference roll. That uses heap. To overcome the 5k of heap needed, load the DbBarCode app to internal memory, otherwise you'll have Grip-O-Death.



After loading, go to extras->preference->NewtDb Bar Code / Serial. Select the Baud rate, Parity, Data Bits, Stop Bits and Handshake for your input device. Your device must send a CR (ASCII 13, hex 0x0d) at the of the data.



When NewtDb detects a screen that has barcode objects, it will display the barcode icon  at the top of the screen, to the left of the title.

The Screen field order will determine the order of data going into multiple Serial input fields on the same screen. Use the 'Bring to Front' and 'Sent to Back' button (in UtilityDb) to alter the order.

Using Serial input

When data comes in, if an Edit Window is open and that field has been marked for Serial Input, the data will be placed in it and the Edit Window closed. Any data there is overwritten.

If a Non Serial Input, Edit Window is open, the incoming data will be thrown away.

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If no Edit Window is open, NewtDb will scan the fields on the screen to look for the first empty Serial field and place the data in it.

A regular 'bell' sound will be heard for a Serial field being filled. In reality, the Edit Window will be opened just as if you clicked on it, the data placed in it and the window closed. But you won't see all that happen.

If all Serial fields have entries, or no Serial field exist, the data will be thrown away and you'll get a sound indicating it.

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You can make Serial fields Read Only if you like. That way the data will be placed in it, but the user won't be able to alter it.

The DbBarCode app will open and close the serial port depending if the current screen has any Barcode fields in it. When ready for Serial input, there will be a Barcode Icon to the left of the 'NewtDb' title at the top of the screen. If you're switching screens between Barcode / non Barcode, don't switch too fast back to a Serial screen as the serial routines in Newton needs time to close the port before reopening it. If this gets to be a problem, set On for the Keep Active configuration option to keep the port active until NewtDb quits. You'll know it's a problem by an error message that says the Serial Port is in Use. If that happened (and the port is NOT in use by another application), it's best to quit NewtDb and restart.

To activate a field for Serial input, there is a checkbox in the Db Text Field Object that your have defined in UtilityDb. Just check it.

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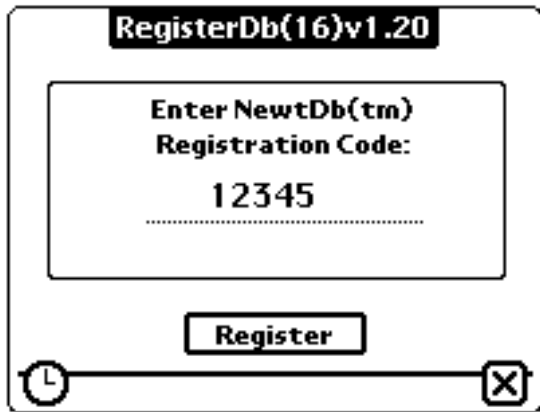
Registering NewtonDb

NewtonDb will work for 45 days after you first install it. To continue using it, you must register. The registration cost is \$29.95US for the four Database / eight Screen version. You may send cash, check or foreign cash equivalent and DMP Systems will send or email you the unlock code. Use the registered application to enter the code. You may also register NewtonDb on Compuserve in the SWREG area. NewtonDb is SWREG #7012 for .sit and #7013 for .zip.

Besides the 4/8 version, you may order a sixteen database / thirty two screen version for \$59.95.

See the ReadMe file for more information on registration.

When you receive the registration number, launch the RegisterDb application.



You can now enter your registration number. After entering it, press the Register button. If the correct number has been entered, you will get confirmation of it. You may remove the RegisterDb application after registering. NewtonDb will check the code against your Newton's Name every time it starts up.