Mark/Space

Fax
for PalmOS

User's Guide

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Mark/Space Softworks

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And especially...
Our many beta testers, clients, and customers. Thanks!

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Introduction

The purpose of this application is to send faxes or receive faxes directly from your handheld, "On the road". The current version features the following :

- Generation of the fax image either before transmission (saves connect time) or during (provides for unlimited page size).
- Preview of fax images before sending, or viewing of fax received or previously sent.
- Reception of faxes. Received faxes can be viewed and saved.
- Management of received and created fax in a dedicated database.
- Insertion of bitmaps from DOODLE or PalmOS Resource Databases in fax documents.
- Editable Header and Footer.
- Easy configuration of the modem, with full access to advanced parameters if needed.
- Easy to use on the road with a calling card.

This program is currently under development, so your ideas and comments are welcome.

Requirements

Any PalmOS device running OS 2.0 or later. This includes Palm Personal/Professional, Palm III, V and VII series, Handspring Visor, TRG Pro, IBM Workpad, etc.

Fax should work with any CLASS 2 or CLASS 2.0 modem, including the Palm snap-on modem.

The CLASS 1 protocol has not been implemented because it requires more things to be done by the handheld device itself.

Installation

YOU MUST DELETE ANY DATABASE CREATED BY PREVIOUS VERSIONS OF DBFAX BEFORE INSTALLING THIS VERSION.

Registration

If you use this product, please register at PalmGear <http://www.palmgear.com>, Handango <http://www.handango.com>, or at Mark/Space <http://www.markspace.com/order.html>. The cost associated with this product is $29.95. Owners of the previous version by David Bertrand can upgrade for $14.95. If you like this product and want to support its development, please register.

You may evaluate the unregistered version for a period of 30 days. The unregistered version prints a line of text at the bottom (footer) of each fax saying "This version of Fax is unregistered". Once you get the registered version, this line will not be printed anymore, and you will also be able to edit the footer. You will also be eligible to receive all minor updates (from 1.0 to 1.1, 1.1 to 1.2, etc). to the software for free.

Configuration

Before sending your first fax, you must configure the program so that it knows your name and number, modem settings, and page settings.

User Settings

From the main screen, choose User Settings from the Options Menu. The following dialog appears:
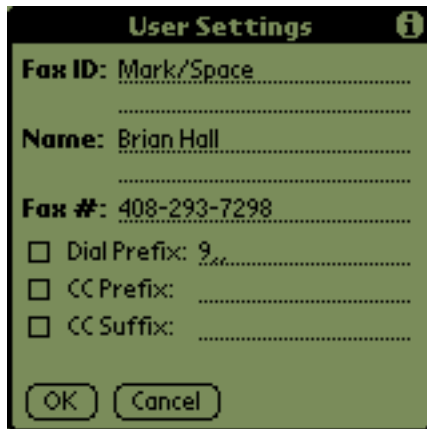
Fax ID: This is the identification string which will be sent to the remote fax machine. This text is usually recorded in a reception journal by the distant fax machine. As specified by the standard, this ID string has a maximum length of 40 characters. (The content of this field can be printed with the tag &ID)

Name: This is the place to put your name. This string will be printed in the header of the fax. Also 40 characters max. (The content of this field can be printed with the tag &SNAME)

Fax #: Write your fax number here. It will be printed in the header. 20 characters max. (The content of this field can be printed with the tag &SPHONE)

The content of the following fields is inserted before or after the number you want to dial if the corresponding check box is on.

Dial Prefix Use this field to put any numbers required to reach the public network.

CC Prefix (Calling Card Prefix) The content of this field will be inserted before the phone number.

CC Suffix (Calling Card Suffix) The content of this field will be appended at the end of the number.

To summarize, the modem will dial the following number, assuming the corresponding check box is on.
<Dial Prefix><CC Prefix>Number<CC Suffix>

Page Configuration

From the main screen, choose Page Setup from the Options menu. The dialog shown below appears:

This dialog controls the generation of the fax image which will be sent. Using the different controls, you can change various aspects of your fax. Some of the parameters set here can be overridden by tags placed in the header, footer, or body of the text.

Margins (Left and Right)

> These fields contain, in cm, the size of the margins which will be left blank on the left and right sides of the fax. (The fax is sent as a single continous page, so no top or bottom margins are used or needed).

Font

> Select one of the fonts available (Standard, Bold or Large)

Char Size

> Typically, the fonts used by PalmOS are about 11 points high. Given the resolution of most current fax machines, this leads to very small characters. You can specify here how many times you want to enlarge the characters. (can be overridden by the &1..&5 tags)

Resolution

> Select normal or fine (gives double the vertical) resolution.

Pre-Build

> If this checkbox is off (Default), the fax image will be generated during the sending process. This has two major advantages: 1) We don't have to store the image, so it's size is virtually unlimited and 2) we don't add any time to the sending process. This is the prefered choice. When using this option, use hardware flow control (adv modem settings), as XON/XOFF is not yet implemented in the OS (as of 3.5). If this setting doesn't work, use the pre-build configuration.
>
> If this checkbox is on (it was always the case in the previous version, DBFax), the fax image is generated before sending. This option is still available because this procedure has been more thoroughly tested and will work with any modem. The drawback to this is that we have to store the image. The maximum size of the image is currently 32 Kbytes (even if you have more free on your handheld).

Add a Header/Footer

> If those choices are checked, the program will add a header and/or a footer to your fax. A default header and a default footer are provided - edit the header or footer by tapping on the small icon on the right to the labels.

Editing the header or footer

If you tap on the small document icon on the right of the Add Header or Add Footer checkbox, you will enter the editor shown below:
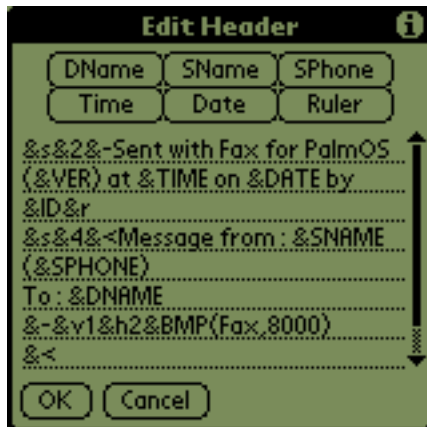
In the field, you can type the text you want. In the text, you can insert some tags in order to print some information or format the output.

The most common tags can be added with buttons at the top of the editor. Position the insertion point in your text, then tap on one of the buttons:

DName   Dest Name. This is the name of the person you're sending to
SName   Sender Name. This is your name as you configured it in the User settings
SPhone   Sender Phone. The fax or phone number you set in the User Settings
Time   The current time
Date   The current Date
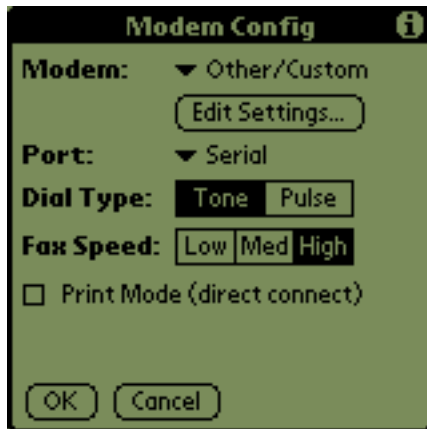Ruler   A horizontal line

The two triangles at the bottom right corner of the screen are some scrollers which enable you to navigate in the field

You can also use any of the other tags, as in the text of your fax.

Modem Configuration

Before using Fax, you must configure it for the type of modem you are using. This dialog will help you to do it by choosing some modem profiles among the most usual ones.

Choose the Modem Config from the Options menu. The following screen appears:

```
┌─────────────────────────────────┐
│   Modem Config        ⓘ          │
│ Modem:    ▼ Other/Custom         │
│        ( Edit Settings... )       │
│ Port:     ▼ Serial               │
│ Dial Type:  [ Tone │ Pulse ]     │
│ Fax Speed: [ Low │Med│ High ]    │
│ ☐ Print Mode (direct connect)    │
│                                  │
│                                  │
│ ( OK ) ( Cancel )                │
└─────────────────────────────────┘
```

Modem: Select a modem or phone type from the popup menu. If your modem is not listed and the program doesn't work with any of the modems listed, you should select other and tap "Edit settings" to configure it.

Port: Select the port that the phone or modem is connected to. If running OS 3.3 or later, one of the choices will be IRComm, which should be used for phones with an integrated IR modem (such as Ericsson DI27, etc). If you need to use IR and "IRComm" does not appear, you will need to upgrade to OS 3.3 or later (for devices with upgradable OS), or use a 3rd party utility such as "IR Link" to add that feature to your device (such as Handspring Visor, which has OS 3.1H).

Dial Type: Select Tone or Pulse (rotary) dialing.

Fax Speed: These buttons enable you to set the transmission speed between your modem and the distant fax machine.

                Low corresponds to a speed of 4800 Bps
                Med corresponds to a speed of 7200 Bps
   High corresponds to a speed of 9600 Bps

If you experience some line error problems when sending faxes built during the transmission, try lowering the speed of the communication between your modem and the distant fax machine.

The Print Mode check box enables you to use any fax machine as a printer. When this box is checked, no number is dialed (the modem just receives the ATD command).Your modem should be connected directly to the line plug of your fax machine.

WARNING : The hardware is not designed for this purpose and even if I never experienced any problem doing that, try it at your own risk. Also some modems (USR Sportster for example) won't work for that as they expect a dial tone.

Advanced Modem configuration

If your modem is not listed in the list of modem supported or requires some special configuration, you can probably still use it. Use the Advanced button in the Modem configuration screen and the dialog below will be displayed.
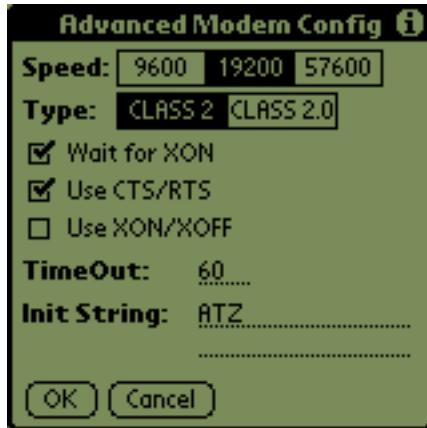
With this dialog, you can adapt Fax to most of the CLASS 2 and CLASS 2.0 modems. (The hang up procedure with CLASS 2.0 probably has some problems, but the fax should be sent)

Speed: Select 9600, 19200 or 57600. Always use the highest communication speed available between your handheld and your phone/modem.

Type: Most modems, including the Pilot Snap On modem work with CLASS 2. However, some others as the Sportster USR require CLASS 2.0

Wait for XON: When checked, the program will wait for a XON character to be sent by the modem before actually sending the data. This is required by some modems, not all.

Use CTS/RTS: This enables you to select the hardware flow control between the modem and the Pilot. This should be selected when generating the fax during the transmission.

Use XON/XOFF: This enables you to select software flow control between the pilot and the modem. You shouldn't use this setting when you generate the fax during the transmission as no software control is implemented in that version in that case. (Use hardware control instead)

Time Out: This is in seconds the delay that the program will wait for the modem to be connected, after the beginning of the dialing.

Init String: This string is sent to the modem before any operation. This should turn on the full messages, configure the modem to either hardware or software flow control according to the settings you specified

Description of the tags

The tags are special commands that you can insert in the text of your Header, Message or Footer to include special information (such as the current date or time) or format your fax message.

All the tags begin with the character '&'. You can use '&&' to insert a single '&' character.The tags are case sensitive. If a tag is not recognized, it is inserted into the text. ie, "&ZZZZ" would insert "&ZZZZ" since the tag is not recognized.

Tags displaying some information:

&DATE   Prints the current date
&TIME   Prints the current time
&SNAME   Prints the sender name as defined in the User settings dialog
&SPHONE   Prints the sender phone or fax number as defined in the User settings dialog
&DNAME   Prints the name of the destination person entered in the main screen
&DPHONE   Prints the phone number which was dialed to send the fax as entered in the man screen
&ID   Prints the ID String defined in the user settings dialog
&VER   Prints the version of Fax

Tags changing the format of the text or the bitmaps:
These tags format the current text line. The last one on a line overrides any previous tags for that line.

&<   The text or bitmap is left justified
&-   The text or bitmap is centered
&>   The text or bitmap is right justified
&s   Select the standard Font (overrides the Page Setting value)
&b   Select the bold Font (overrides the Page Setting value)
&l   Select the large Font (overrides the Page Setting value)
&1,&2,&3,&4,&5
           Change the size of the characters or bitmaps in both horizontal and vertical directions. This overrides the setting in the Page Config dialog
&h1,&h2,&h3,&h4,&h5
           Change the horizontal size of the characters or bitmaps. This is useful to maintain the aspect ratio of bitmaps
&v1,&v2,&v3,&v4,&v5
           Change the vertical size of the characters or bitmaps. This is useful to maintain the aspect ratio of bitmaps
&r   Prints a horizontal line

Tags used to insert bitmaps:
The bitmap will be displayed on a new line. All the size and justification formats also apply to bitmaps

&DOODLE.<number>
           Insert the corresponding doodle page. <number> ranges from 0 to 9. 0 corresponds to the page called 1 in doodle.

           Ex:
           &DOODLE.0
            will print the first page of Doodle.
&BMP(Database,ResourceID)
           This tag is used to print a bitmap resource contained in any of the databases loaded in the Pilot. This is a good way of adding a company logo for example. You can create a database

containing different bitmaps

Ex :
  &BMP(Fax,8000) will print the Fax logo (used in the default footer)
  &BMP(Fax,10000) will print the PalmPilot logo stored in the ROM of your pilot

Name/Number look up

The lookup feature enables you to easily access from Fax the name and number of a record you have entered in the address application of your handheld.

When you press the lookup button on the main screen, the feature is activated. The current contents of the "To" field is used as a search string
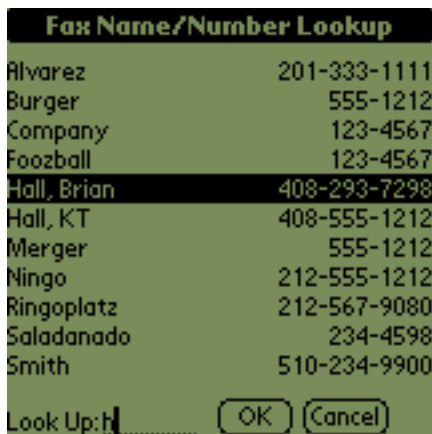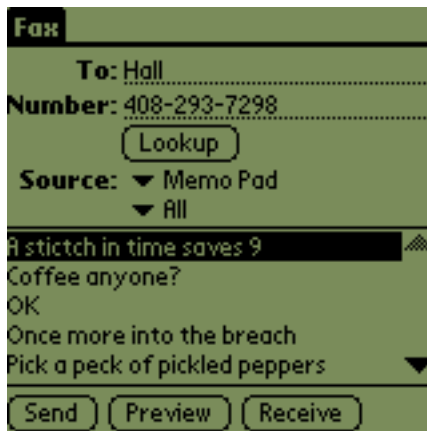

Select an entry by tapping on it, or use the "Look Up" field and enter the first few letters of the record you are looking for.

Once you have selected the entry you wish to use, tap OK to return to the main screen.

Sending a fax

Sending a fax is very easy and quick. Once Fax is configured, everything is done from the main screen.

Fax

To: Hall

Number: 408-293-7298

(Lookup)

Source: ▼ Memo Pad
      ▼ All

A stictch in time saves 9
Coffee anyone?
OK
Once more into the breach
Pick a peck of pickled peppers

(Send) (Preview) (Receive)

First step

Fill in the name of the person you want to send to and enter the phone number you want to dial. If this person appears in your address database, you can use the lookup feature to retrieve the
full name and the phone number.

Second step

Choose the source for the fax text.

Fax

To: Hall

Number: 408-293-7298

(Lookup)

Source: Clipboard
        Memo Pad
OK   Fax
This is a sample memo which I plan t

(Send) (Preview) (Receive)

This source can be:

- Memopad Record. (records may contain formatting tags, as documented previously)
- Clipboard
- Fax Database of received and pre-built fax images.

Once the source type is selected, you can browse through the available data. For memopad texts, you can even use the category filter located at the top of the screen.

Third step

Once everything is ready, you can press the send button to send the fax right away or press the preview button to have a good idea of the page which will be printed on the remote fax
machine.

Previewing a fax

Once you pressed the Preview button on the main screen, the program prepares the data strutures necessary to decode the fax. In the current version, no bitmap of the fax is saved. The picture you see on the screen is decoded on the fly which explains why it's a bit slow.

You can navigate using the 4 arrows on the bottom of the screen and zoom in or out thanks to the + and - buttons.

The top line of the screen displays the coordinates (in dots) of the upper left corner of the window you display as well as an indication of the zoom factor.
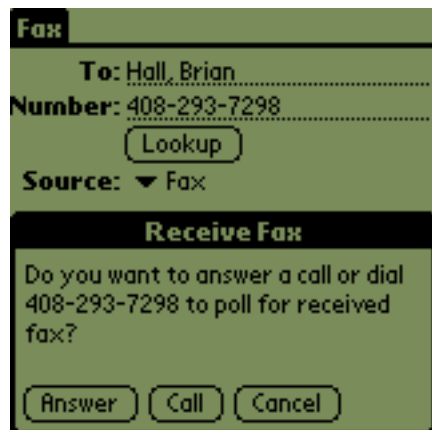
Once you're done previewing the fax, you can choose to send it with the send button or to go back to the main screen with the Send button.

You can also save the fax to the database and make it available to be sent or viewed later. This is done with the save button. When viewing a fax from the database, the save button is not displayed.

Receiving a fax

This version enables you to receive faxes on your PalmOS device (Yes it's possible ...)

To prepare to receive a fax, press the receive button. Then choose between two reception modes :

Fax

To: Hall, Brian
Number: 408-293-7298
Lookup
Source: ▼ Fax

Receive Fax

Do you want to answer a call or dial 408-293-7298 to poll for received fax?

Answer   Call   Cancel

- Answer: Immediately pick up the phone and accept an incoming call from a fax machine. An incoming call/fax must be detected within the specified amount of time (see the timeout value under modem settings).

- You can poll a fax machine. In that case, the number currently in the Number field will be dialed and Fax will try to get a fax from the remote machine. This capability has not been tested but should work.

Once the fax is received, it is displayed in the fax view screen and you can choose to save it to the fax database.

Creating Bitmap databases

Fax can use any bitmap stored in a PalmOS resource database.

We've not written any sofware yet to create those databases, but playing with some development tools for the Pilot, you can create a bitmap database.

Lets call Bitmap<n>.BMP the files containing your bitmaps.

    Convert your bitmaps to 2 colors bitmaps
     Create a resource description file containing bitmap resources. Lets call it FaxBMP.rcp
        BITMAP 1500 "Bitmap1.bmp"
        BITMAP 1501 "Bitmap2.bmp"
      ...
      ..
      .

        The 1500,1501 ... are the resource IDs you want to associate with your bitmaps. You can use the range 1500 to 1999 for those IDs.

     Then run pilrc

    PILRC FaxBMP.rcp

     You should get some files with the Bin extension. They are the binary resources containing your bitmaps.
     Run build-prc

     BUILD-PRC FAXBMP.PRC "FAXBMP" fbmp *.bin   (an icon will appear in the application launch screen)
     or
     BUILD-PRC -l FAXBMP.PRC "FAXBMP" fbmp *.bin   (the type is set to GLib so no icon will appear in the application launch screen)

     This will generate a file called FAXBMP.PRC that you can install on your Pilot.

To use one bitmap in the header, for example you can call your bitmap using the tag

&BMP(FAXBMP,1500)

I'm aware that this process may be complicated but it is very room effective (for the memory required on the Pilot) and can be simplified by a simple program. If anybody wants to write
something to make this easier, he is welcome.

Troubleshooting

Display Log

If you have trouble with Fax, you can always select "Display Log" to see detailed information related to the last command performed. You can use the log to see in greater detail why the command failed. You can also copy the text to the clipboard - allowing you to paste the text into a memo pad record or e-mail message which you can send in to Mark/Space with your trouble report.