ThinFax 1414-LX/LXM with MiniFax
For
HP 100/200LX

Revision 1.3
06-97

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INTRODUCTION

Thank you and welcome to our next generation of the ThinFax modem card for HP 100/200LX. This User's Manual explains in detail how to install, and how to operate the ThinFax modem cards. The following products are covered in this manual:

ThinFax 1414LX	(Modem + MiniFax)
ThinFax 1414LXM	(Modem + MiniFax + 2, 4 or 8 MB FLASH memory)

Both ThinFax cards come with MiniFax, an onboard fax program with the same user interface of the HP 100/200LX palmtop computer. The MiniFax is a full function fax program, which user can send, receive, view and print fax documents.
The ThinFax 1414LXM (Modem + Memory Combo card) has all the functions and features of the ThinFax 1414LX plus 2, 4 or 8 MB Flash Memory within the card setup as the F: drive. (typical)

ThinFax 1414-LX/LXM can be used as Fax/Data modem on any PC Card (PCMCIA 2.10) compatible computers as well. Users must install a PC Card (PCMCIA 2.10) device driver(s) with a DOS-Based or WINDOWS-Based software to utilize Fax/Data function.

FEATURES

- ❑ Low power consumption
- ❑ 2 MB, 4MB or 8 MB low power (5V) FLASH memory
  (ThinFax 1414LXM Only)
- ❑ PC Card (PCMCIA 2.10) Type II Card size, 54.0 mm x 85.6 mm x 5.0 mm
- ❑ Data speed up to 14,400 bps.
- ❑ Data mode protocols:

CCITT	V.32bis, V.32, V.22bis, V.22, and V.21
Bell	103 and 212A

- ❑ Error correction: V.42, MNP 2-4
- ❑ Data compression: V.42bis, MNP5
- ❑ Send and receive Fax speed up to 14,400 bps.
- ❑ Fax mode protocols:

CCITT	V.17, V.29, V.27ter, and V.21 Ch. 2
EIA/TIA 578	Class 1

Fax Group III compatible.
- ❑ Automatic power save mode
- ❑ MiniFax:

Resides in the card.
Log of Send/Receive fax
Previewing a fax on the screen before sending.
Viewing received faxes.
Fax Telephone Directory via the HP 100/200LX Phone Book application
User-friendly interface
Fax cover page
Multiple printer support

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INSTALLATION

This section contains information that you need to prepare the HP 100/200LX for ThinFax 1414-LX/LXM, including how to insert and remove the card and how to test the modem's installation with DataComm.

Note1: To prolong the HP 100/200LX's battery life, Hewlett-Packard recommends the following procedure should be observed:

If possible use an AC Adapter whenever the ThinFax modem card is plugged into the HP 100/200LX.

Note2: A reminder for ThinFax LXM user, the FLASH memory portion of the card will consume power from the palmtop when the card is inserted and the power switch is set to ON.

Keystrokes Convention

Sometimes you may need to press the keyboard in series or combination keystrokes. The following are the keystrokes convention used in this guide:

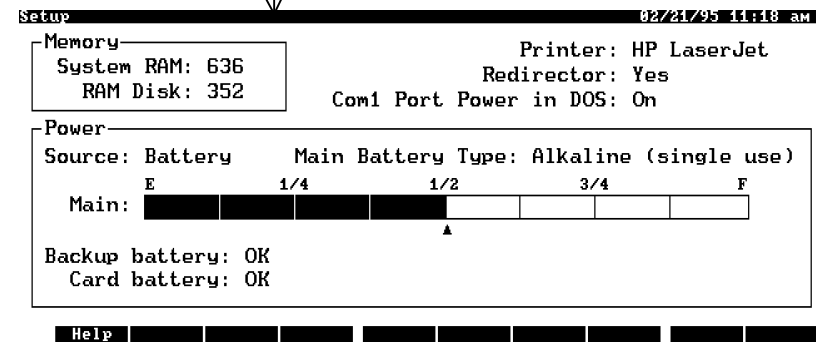**Sequential key**: **MENU, F, S** Press the keys shown in sequence. (without ,)

Hot-key: **Alt + F2** Press and hold down the key(s) shown then tap the last key. The last key can be any underline letter (DataComm) displayed on the screen or a Function key.

SYSTEM REQUIREMENT

Preparing the HP 100/200LX

Memory: You should reserve at least 400 KB of system memory for the MiniFax (70KB) and the HP System Manager. If you plan to use other built-in applications, consider increasing the size of the system memory accordingly. Press the **&…** and **S** key to start Setup.

**System RAM Memory
Need at least 400K**

```
Setup                                               02/21/95 11:18 am
 ┌Memory─────────                    Printer: HP LaserJet
 │ System RAM: 636                   Redirector: Yes
 │ RAM Disk: 352        Com1 Port Power in DOS: On
 └──────────────
 ┌Power──────────────────────────────────────────────────────┐
 │ Source: Battery      Main Battery Type: Alkaline (single use)│
 │              E      1/4        1/2        3/4          F     │
 │  Main: ███████████████████████                              │
 │                              ▲                              │
 │ Backup battery: OK                                         │
 │  Card battery: OK                                          │
 └────────────────────────────────────────────────────────────┘

  Help
```
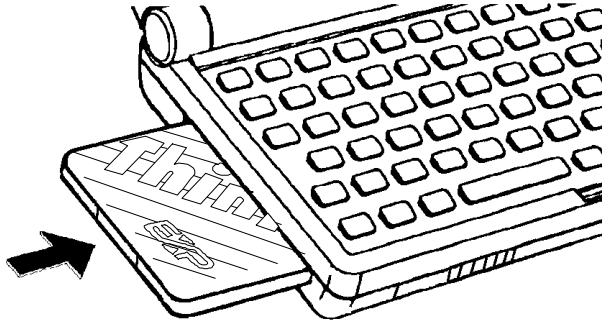
Hardware Installation

Note: HP does not recommend performing the insertion/removal of the PCMCIA card into/from the HP 100/200LX when its power is on. Turn the power to the computer **OFF** before attempting the following operation. This card is also sensitive to static electricity.
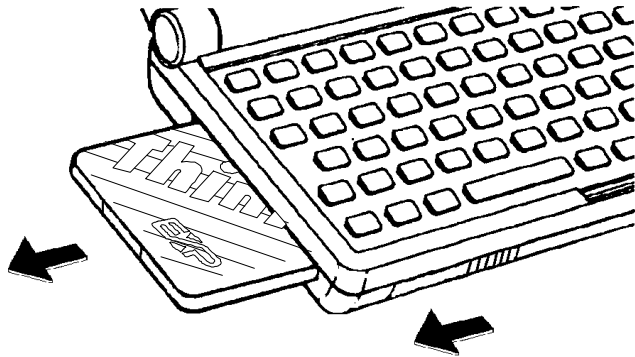
Hardware Installation *(Cont.)*

Inserting the Card
Hold the card with the EXP logo on the top. Slide the card into the slot located at the left side of the HP 100/200LX. Push the card in until the end of the card is flush with the case. (See Below)

Removing the card
Slide the ejection button to the left until the end of the card clears the case.

Software Installation

To install the ThinFax card:

* Press the **&… , MENU, A, L** key. To close all applications.

* Press **&… , D** to display DOS prompt C:\.

* Type A: and press **Enter**, Change to drive A: in the ThinFax 1414-LX/LXM card.

* Type INSTALL and then press **Enter.**

The installation program will check the existence of the c:\config.sys and c:\autoexec.bat file. If the files are not present, the install program will copy them from the D: drive to C: drive and/or activate the TSR program by erase the word 'REM' from the c:\autoexec.bat (HP 100LX only) line:

REM d:\bin\cic100 /gen1

If you have ThinFax 1414-LXM, beside performing the above procedures, the install program also sets up the FLASH memory as the F: drive (typical) in your HP 100/200LX palmtop computer by adding a statement into the C:\config.sys file:

Device=c:\tflxm\lxmdrv.sys

Along with the driver, a format utility is also included. These two files will be installed in the C:\tflxm directory:

lxmdrv.sys (device driver for HP Palmtop)
lxmfmt.exe (format utility)

The screen should display the following lines:

```
<<   EXP ThinFax LX, LXM card installer   v1.2*   >>

                Processing AUTOEXEC.BAT...
                Create C:\TFLXM
                Processing CONFIG.SYS.........
                Press any key to reboot....
```
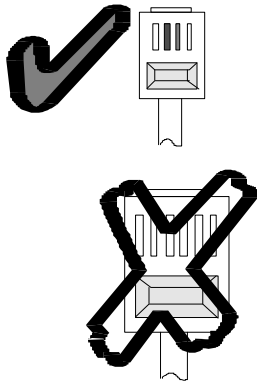
The card is now ready to use.

---

* The actual version may be different.
The Flash size displayed depends on your card type.

NOTICE:

What type of your telephone line ANALOG OR DIGITAL?

Check your telephone line, the Fax/Data can be connected to an **ANALOG Line ONLY !** (normal house hold line)

Testing the Modem

To verify that the modem has been installed and functions properly, please follow these steps:

1. Press **&… , C** to start the Data<u>C</u>omm program.

2. Press **MENU, C, S** to select the COM port setting in the **Interface** field for COM 2.
   Press **TAB** to move the highlight to OK and press **ENTER** to accept the information entered.

3. Type AT then press **ENTER**.
   The ThinFax modem should respond with an OK.
   If the modem does not respond, please verify that the COM port is set for COM 2 and redo the installation procedure.

4. Connect the slim connector to the modem card with the RJ-11 end to a working telephone jack.

5. Type ATDT *nnn nnnn* then press **ENTER,** where *nnn nnnn* is your telephone number. The modem will attempt to dial and later it should display BUSY result code.

User type in these lines

```
Datacomm                                              02/21/95  3:53 PM
at
OK
atdt5551212
BUSY█




          PF1     PF2     PF3     PF4    Capture         Script Linebrk         Connect
```

Modem's responses

After you have finished the above procedures, this is proof that the modem is installed properly and functioning well.

Accessing the Flash (F:) drive

ThinFax 1414-LXM user can access the Flash F:(typical) drive just like other DOS drives after the software installation is completed. All file operations such as Copy, Delete, Move are supported both within DOS prompt and any HP built-in application. The Flash F: drive is pre-formatted at our factory. (No fdisk or format procedures is required)

Note: If there are any other FLASH card installed in your HP palmtop prier to the ThinFax 1414 LXM card, the drive letter may change to G:. Also review to config.sys file and make sure the EXP's FLASH driver (lxmdrv.sys) load after the other FLASH card's driver.

Format the F: drive

In case user needs to reformat the FLASH drive, EXP includes the format utility file "lxmfmt.exe". To format follow the steps below:

1. Press **&…, D** to start the DOS Prompt program.
2. At the prompt type `c:\tflxm\lxmfmt` Press **ENTER**.
3. The screen will display:

```
<<  EXP ThinFax-LXM format utility V1.5*     >>

    Insert ThinFax LXM card
    and press ENTER when ready

    Checking card type .........
    4M* flash present
    Verifying the card ...
    Writing 00 to card ......
    .........................................
    Read back and check ...
    Writing FF to card ......
    .........................................
    Number of bad pages = 0000
    Writing BOOT area ......
    Prepare FAT table .......
    OK! Format complete
```

[*] *The actual version may be different.*
The Flash size displayed depends on your card type.

Getting Started

This section describes how to use the MiniFax program to send and receive a fax.

Starting MiniFax under System's Icons View and List View

During the installation, the System Manager will install the MiniFax icon into your HP100/200LX. You may start the MiniFax software as all the other built-in applications.

- Press the blue **&…** to display the More Application screen.
- From the Icon View press the Down Arrow key Or **Pdn** to locate the MiniFax icon.
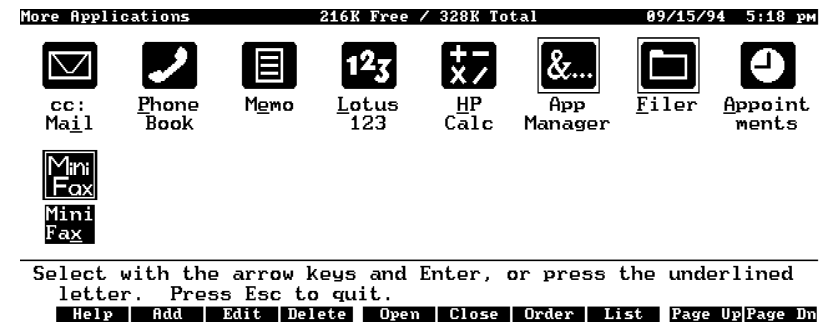
Use Arrow key to highlight the MiniFax Icon or press **X** key or you may use the hot-key (**Alt + F2** by default) to start MiniFax.

- From List View, highlight MiniFax and press **ENTER**, or use the hot-key **Alt + F2**

The initial screen after running MiniFax will be:

The screen will then change to the Send Menu after several seconds, or you may press any key to access the Send screen immediately.

Send fax with Cover Page

1. Connect the modem to a working telephone line.
2. At the sending screen fill in **To:** fax's recipient, **Fax#:** remote fax's telephone
3. **File name:** Enter the file name that you wish to send. *(Leave blank if you wish to send a cover page only)* You may highlight **Files…** and press **ENTER** or press **F7** to display the **Files** screen and select a file. If you choose the MEMO's file, it can be in either Memo's format or ASCII format. For all others built-in applications the file **must** be saved in ASCII format only. The **File Type:** ASCII's button is filled in.
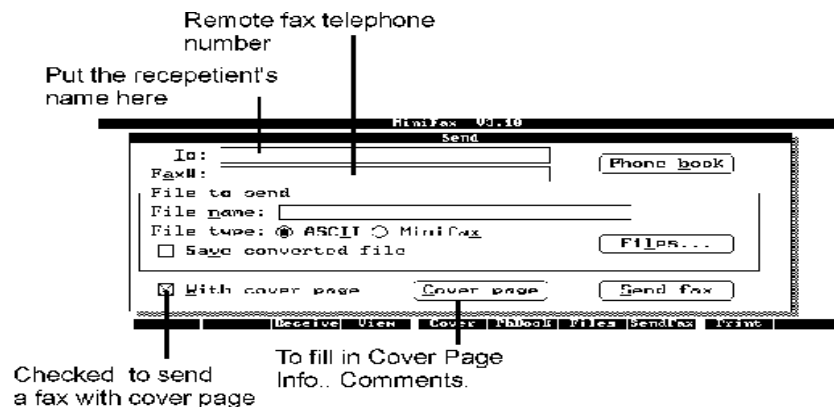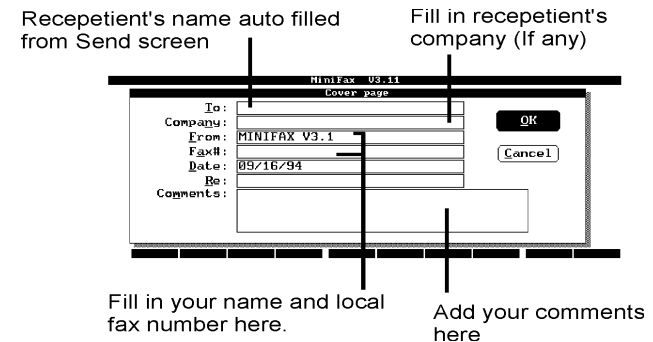

Remote fax telephone number

Put the recepetient's name here

Checked to send a fax with cover page

To fill in Cover Page Info.. Comments.

4. Make sure that the **X** is in the box "With cover page." If not, Press **TAB** to move the highlight to it, use Space bar or press **ENTER** to toggle it.

5. To edit a Cover page, press **TAB** to highlight the Cover Page box and press **ENTER**, or press **F6**.

Recepetient's name auto filled from Send screen

Fill in recepetient's company (If any)

Fill in your name and local fax number here.

Add your comments here

6. Fill in; **Company:** of the fax recipient (if any), **From:** Your name goes in here, **Fax#** for your local fax number. You may add the reference subject to the **Re:** field and any additional notes to the **Comment:** field. The comments field is limited to approximately 16 lines or 500 characters.
7. Press **TAB** to move the highlight to OK and press **ENTER**, or **Alt** + **O** to accept the information entered. To discard all the information press to move the highlight to Cancel and press **ENTER** , or **Alt** + **C**. In both cases, MiniFax will return to **Send** screen.
8. To start sending fax, at the **Send** screen press **TAB** to move the highlight to Send fax and press **ENTER**, or **Alt** + **S** or press **F8**.
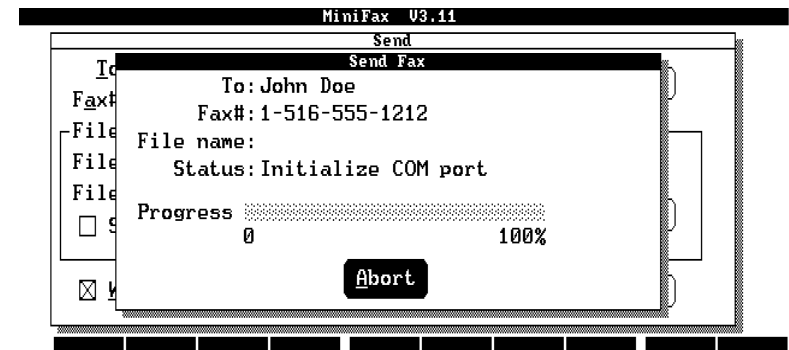
9. In the Send fax screen, the **Status:** field display current MiniFax's operation such as:
Converting cover page... => initialize COM port =>... Dialing.

10. The MiniFax will attempt to make a connection with the remote fax machine, the progress graph starts incrementing until it reaches 100%.

```
                       MiniFax  V3.20
                            Send
                          Send Fax
    To                 To:Test
   Fax#            Fax#:4962914
  ┌File        File name:
  │File            Status:CONNECT 9600: sending page 1
  │File
  │ ☐ S        Progress ████████▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒
                         0                100%
   ☒ W                   ┌─────────┐
                         │ Abort   │
                         └─────────┘
```
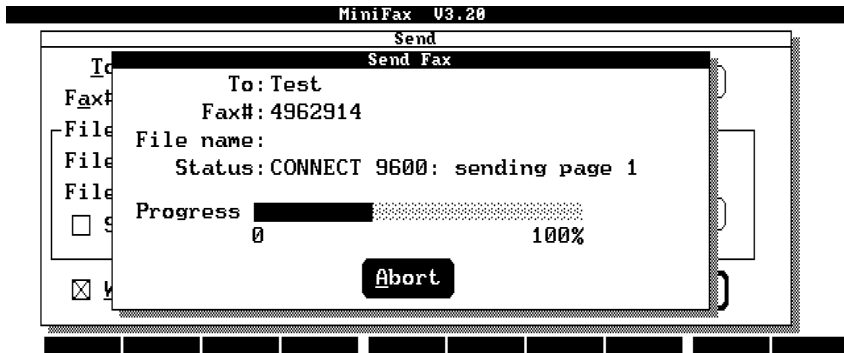
If there is any error, please consult APPENDIX C for more detail and possible cause of the error.

Receiving a Fax

Connect the ThinFax modem to a working telephone line and then to start MiniFax, After MiniFax is started, press **MENU, F, R** or **F3** from any of the other **MiniFax** menu to display the following screen

```
                   MiniFax  V3.02

                      Receive
     File Name :
     Operation : AT+FTM=?
     Response  : OK
     Status    : Waiting for call...
     Pages     :
                ┌─────────┐
                │ Abort   │
                └─────────┘
```
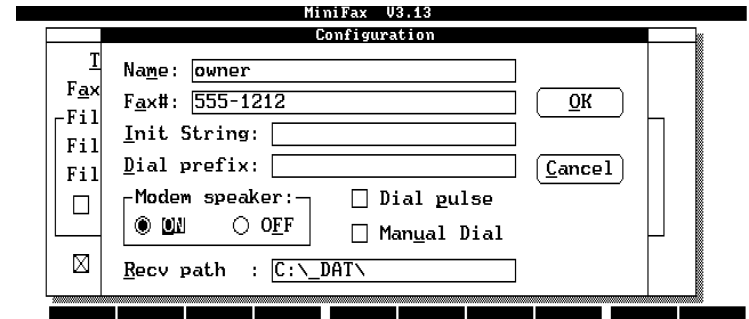
```
  ┃ Send ┃   ┃ View ┃                              ┃ Print ┃
```

1. Observe the **Operation:** (Command sending to the modem) and **Response:** (modem answering to MiniFax commands) during the initial setting of the ThinFax 1414-LX/LXM. The ThinFax should always respond with OK.
2. At the end of setting up the ThinFax for fax reception, the status will display '**Waiting For call**...' You are now ready to receive a fax.
3. The receiving fax will be stored at C:_DAT (Default path), to change the path user must use the MiniFax's Configuration utility.
   To access the Configuration screen press **MENU, U, C**.
   Change the **'Recv path:'** field to your choice. Including the FLASH drive if you have the ThinFax 1414-LXM card. (i.g. F:\faxrecv)

```
                   MiniFax  V3.13
                    Configuration
    T     Name: owner
   Fax    Fax#: 555-1212                    ┌────┐
  ┌Fil                                      │ OK │
  │Fil    Init String: [            ]       └────┘
  │Fil    Dial prefix: [            ]      ┌────────┐
  │ ☐     ┌Modem speaker:┐  ☐ Dial pulse  │ Cancel │
  │       │ ◉ ON   ○ OFF │                 └────────┘
  │ ☒     └──────────────┘  ☐ Manual Dial
          Recv path  : [C:\_DAT\      ]
```

Receiving fax's file name format consists of the current month, date, hour and minute setting in the palmtop.
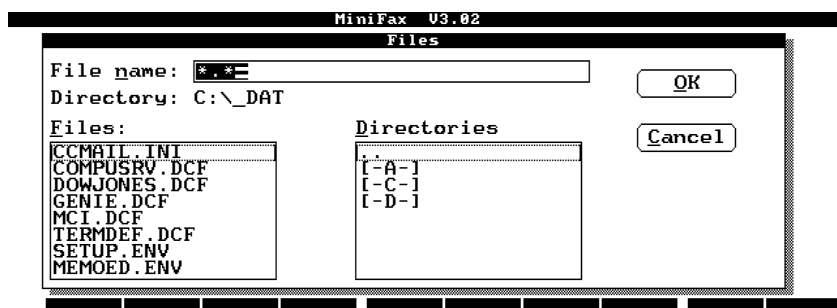
02220937.mfx   (mmddhhmm)

4

SENDING A FAX

This section contains all the detailed explanations of the MiniFax functions including the entries in each main function.

NOTE: During SEND, a temporary disk's space of approximately 35KB per page will be needed for file conversion.

■ Press **MENU, F, S** or **F2** from another **MiniFax** menu to display the following screen.

```
                            MiniFax  V3.02
                                Files
 File name: *.*
 Directory: C:\_DAT                              ┌─────────┐
                                                 │   OK    │
 Files:                Directories               └─────────┘
 ┌──────────────┐      ┌──────────────┐          ┌─────────┐
 │CCMAIL.INI    │      │ ..           │          │ Cancel  │
 │COMPUSRV.DCF  │      │[-A-]         │          └─────────┘
 │DOWJONES.DCF  │      │[-C-]         │
 │GENIE.DCF     │      │[-D-]         │
 │MCI.DCF       │      │              │
 │TERMDEF.DCF   │      │              │
 │SETUP.ENV     │      │              │
 │MEMOED.ENV    │      │              │
 └──────────────┘      └──────────────┘
```

To Send a Fax

1. Fill in the fax recipients name in the **To:** field and the fax number in the **Fax #:** field. You can highlight the **Phone book** and press **ENTER** or Hot-key to select previously entered fax recipient's names and numbers from the Phonebook screen.
2. Fill in **File to send** text box. **File name:** Enter file name you wish to send. The user may highlight the **Files…** button and press **ENTER** or use Hot-key and then select a file to send from the **Files** screen.
3. If you need to send the cover page, please check the box with a **X With cover**

page and highlight **Cover page** then press **ENTER** or use Hot-key. Fill in the text boxes such as number of pages, reference and comments. If the file name is omitted from the **File name** field then only the cover page will be sent.
4. Highlight **Send Fax** and press **ENTER** or press **F8** to start sending fax.

Send Fax Entry

■ **To:** This entry is for a fax recipient's name.

■ **Fax #:** The fax recipient's telephone number.

■ **File name:** Type the file name that you wish to send. You may highlight **Files…** and press **ENTER** or press **F7** to display the **Files** screen and select a file.

■ **File Type:** Select ASCII for text file. (Including MEMO 's file format) It will be converted to the fax format automatically before sending. Check the **X** Save converted file box to save the file converted (with .mfx extension). Select MiniFax for a previously converted fax format file (.mfx). This type of file can be sent without further conversion.

■ **With cover page:** Check this box to send the cover page along with any file or just the cover page only, if the file name is omitted from the **File name:** text box.

■ **File:** From the **Send** screen highlight **Files…** and press **ENTER**, or press **F7** to display **Files** screen.

```
                            MiniFax  V3.02
                                Send
   To: JACK                            ┌──────────────┐
 Fax#: 555-1212                        │ Phone book   │
 ┌─File to send─────────────────────┐  └──────────────┘
 │ File name: readme.doc            │
 │ File type: ● ASCII  ○ Minifax    │  ┌──────────────┐
 │ □ Save converted file            │  │   Files...   │
 └──────────────────────────────────┘  └──────────────┘

 ⊠ With cover page  ┌──────────┐  ┌──────────┐
                    │Cover page│  │ Send fax │
                    └──────────┘  └──────────┘
 ──── Receive│ View │ Cover │PhBook│ Files │SendFax│ Print ──
```

This screen operates as a file manager. The user can select a file from this **Files** screen. The file selected will be filled into the **File name:** text box in the **Send** screen. You can select Drives, or Directories as well. Press **TAB** to move the highlight among the field, button or List boxes. Use Up arrow or Down arrow key to move within a List box and press **ENTER** to accept the highlighted selection.

■ **Cover page:** From the **Send** screen highlight **Cover page** and press **ENTER**, or press **F5** to edit the Cover page.

```
                    MiniFax  V3.02
                      Cover page
         To: ALBERT
    Company: EXP Computer, Inc.            ┌──────────┐
       From: BOON                          │    OK    │
       Fax#: 516-555-1212                  └──────────┘
       Date: 01/07/94
# of pages: 2                              ┌──────────┐
         Re: ▪                             │  Cancel  │
   Comments:                               └──────────┘
```

Fill in the following information:

Company: The company name for the fax recipient if any.

# of pages: Number of pages including the cover page.

Re: Subject or reference matter.

Comments: You may add any notes or comments here.

Date: The default is the date on the HP 100LX.

To: Fax recipient name; it is automatically filled in from the **Send** screen

Fax #: If you enter your local telephone number in the **Configuration** screen the fax number will be filled in automatically. Otherwise, enter your local telephone number here.

From: The default is the name of the sender entered on the **Configuration** Screen.

Highlight **OK** button and press **ENTER**, or **ALT** + **O** to accept the information entered.

Highlight button and press **ENTER**, or **ALT** + **C** to discard the information entered.

In both cases, you will be returned to the **Send** screen.

- **Phone book:** From the **Send** screen highlight **Phone book** and press **ENTER**, or **ALT** + **b** to display the **Phone book** screen.

```
                    MiniFax  V3.20
                      Phone Book
File name: C:\_DAT\PHONE.PDB        Search: [        ]
Name                 Fax#
exp computers inc    496-2914         ┌──────────┐
exp computers inc    496-2914         │    OK    │
exp computers inc    496-2914         └──────────┘
exp computers inc    496-2914
exp computers inc    496-2914
exp computers inc    496-2914         ┌──────────┐
exp computers inc    496-2914         │  Cancel  │
exp computers inc    496-2914         └──────────┘
exp computers inc    496-2914
exp computers inc    496-2914         ┌──────────┐
                                      │ Change PB│
                                      └──────────┘
```

Press **TAB** to move the highlight among the field, button or List boxes. Use Up arrow or Down arrow to move within the **Name** and **Fax#** List box and then press **ENTER** to accept the highlighted selection. The name and fax number will be copied automatically to the fax recipient's **To:** and **Fax #:** field in the **Send** screen.

The telephone directory and the Phone book entry on this screen are identical to the entry from the built-in HP 100/200LX **Phone Book.**

Any modification of the Phone book records must be made through the **Phone Book** application program.

Search: The search criteria of MiniFax are the same as the last one used by Phone Book. If your last criteria of search in the Phone Book is by last name so will MiniFax.

Note: MiniFax can NOT access the phone.pdb that have a password protection. If you set a password in the Phone Book database file, you will need to undo it.

- **Send fax:** From the **Send** screen highlight **Send fax** button and press **ENTER**, or **ALT** + **S** or **F8** to start sending a fax and to display the **Send Fax** status.

```
                    MiniFax  V3.02
                       Send
    T┌─────────────── Send Fax ──────────────┐
     │         To: DAVID                      │
   Fax│       Fax#: 1-714-453-1319            │
   ┌Fil│  File name: README.DOC               │
   │Fil│     Status: Dialing...               │
   │Fil│                                      │
   │⊠ S│  Progress ▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒    │
   │   │           0                  100%    │
   │□ W│            ┌────────┐                 │
   └───│            │ Abort  │                 │
       └────────────└────────┘─────────────────┘
```
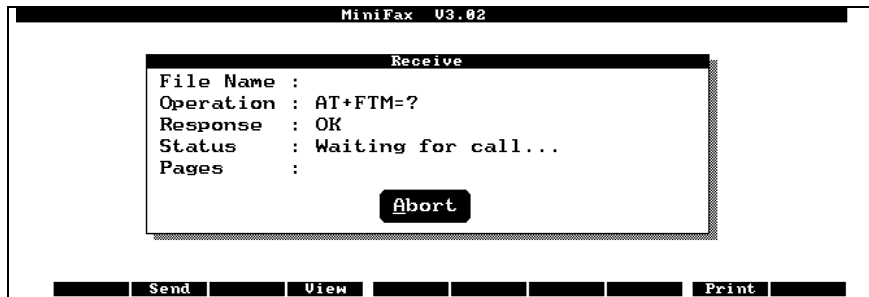
Send Fax Entry

- **Status:** Shows any action or commands sending from MiniFax to modem.
- **Progress:** Displays the sending operation via bar-graph indicating percentage of completion.

RECEIVING FAXES

This section explains in detail the steps required to receive faxes.

NOTE: The MiniFax requires space in the C: drive to store the received fax. Depending on the received fax's resolution, approximately 35KB (standard mode, 200 x 100/200 dpi) or as high as 95KB (fine mode 200 x 200 dpi) of the disk's space will be needed for a one page (letter size) fax.

■ Press **MENU, F, R** or **F3** or from any other **MiniFax** menu to display the

```
                    MiniFax  V3.02

                         Receive
      File Name :
      Operation : AT+FTM=?
      Response  : OK
      Status    : Waiting for call...
      Pages     :

                      Abort


       Send       View                          Print
```

following screen

To receive fax

1. Observe the **Operation:**, and **Response:** during the initial setting of the ThinFax. The ThinFax should always respond with OK.
2. At the end of setting up the ThinFax for reception, the status will display '**Waiting For call**...' You are now ready to receive a fax.
3. The receiving fax will be stored at C:_DAT (Default path). To change the path of the received fax, user must use the MiniFax's Configuration utility.

   Press **MENU, U, C**, to access the configuration screen.
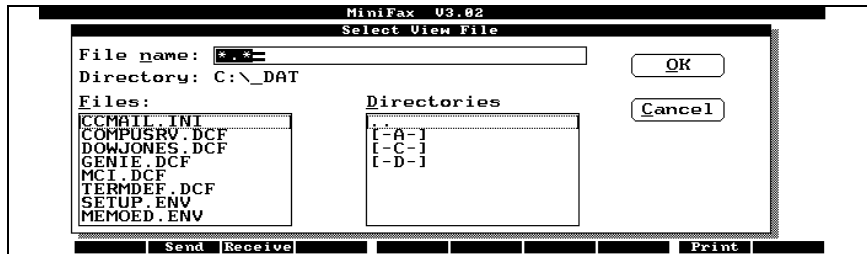   Change the Recv path to your choice.
   Receiving fax's file name format consists of the current month, date, hour and minute setting in the palmtop. 02220937.mfx (mmddhhmm)

Receive Fax Entry

■ **File Name:** This entry is the file name of the receiving fax. The file name will be created by MiniFax when a fax is received.
■ **Operation:** This entry shows various commands or activity being sent to the ThinFax 1414-LXM/LX.
■ **Response:** This entry is for the response from ThinFax 1414-LXM/LX
■ **Status:** The status shows the state of the receiving function.
■ **Pages:** This entry shows number of page(s) received.

VIEW FAX

■ Press **MENU, F, V** or press **F4** from within MiniFax operation.

```
                         MiniFax   V3.02
                        Select View File
 File name: *.*
 Directory: C:\_DAT                          OK

 Files:               Directories
 CCMAIL.INI
 COMPUSRV.DCF         [-A-]                   Cancel
 DOWJONES.DCF         [-C-]
 GENIE.DCF            [-D-]
 MCI.DCF
 TERMDEF.DCF
 SETUP.ENV
 MEMOED.ENV

            Send  Receive                       Print
```

To View Fax

1. Type in a file name or use **TAB** to move the highlight bar to **Files:** List box. Use Up arrow or Down arrow to move within the **Files:** box. Press **ENTER** or use the Hot-key to accept the highlighted selection.

Note: The View Fax function displays fax file format (.mfx extension) which are pre-converted or received file. All other files will be treated as ASCII files. The user can preview these files but the View Fax function will not convert them into a fax format.
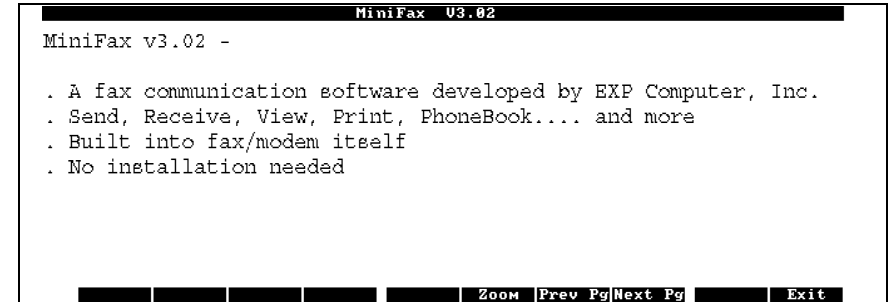
2. The file's contents will be displayed once you are in the View contents screen. Press **F6** for zoom and **F7** or **F8** to move among the pages.

Select View Files Entry
■ **File name:** Enter file name to view
■ **Directory:** Current directory.
■ **Files:** The file List box, displays all files in the current directory. Press Up arrow or Down arrow to move within the box. Press **ENTER** to accept the highlighted selection.
■ **Directories:** In the Directory List box, you can select directory or drive from this box. Press Up arrow or Down arrow to move within the box. Press **ENTER** to accept the highlighted selection.

View Contents
■ Select a file and press **ENTER**, or **ALT**+ **O** from the **Select View File** to display the following **View Contents screen.**

```
                    MiniFax   V3.02
 MiniFax v3.02 -

 . A fax communication software developed by EXP Computer, Inc.
 . Send, Receive, View, Print, PhoneBook.... and more
 . Built into fax/modem itself
 . No installation needed




                                     Zoom  Prev Pg Next Pg        Exit
```

Function key

■ Press **F6** to zoom-in (X 2), Press **F6** again for normal display.
■ Press **F7** or **F8** to move the display screen to the first ten lines of the Previous Page or Next Page, since the HP 100/200-LX can only display ten lines per screen.
■ Press **Fn** + PG UP or **Fn** + PG DN to display subsequent ten lines in both directions within a page.
■ Use Up arrow or Down arrow to move the display only one line at a time.
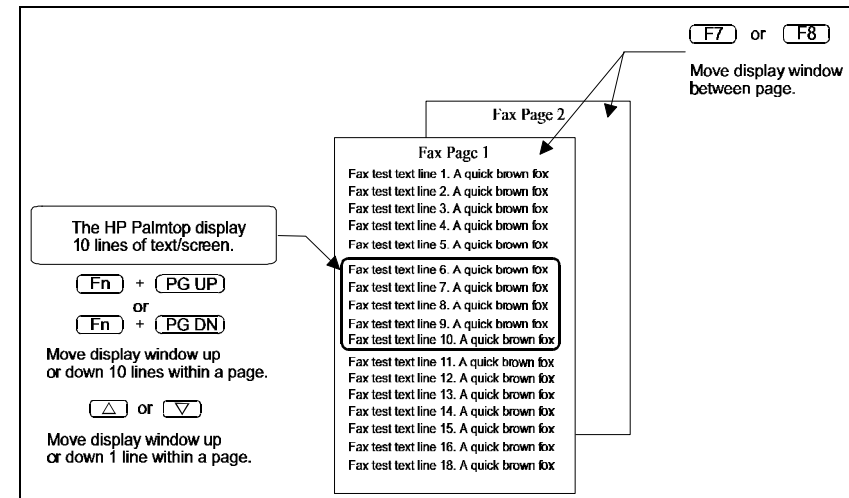
MINIFAX UTILITY

- Press **MENU, U** or press **F4** from any other **MiniFax** menu to display the following screen.
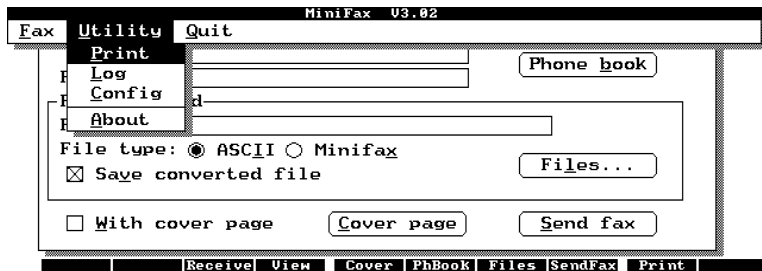
Switching Operations in Utility

- To Print a fax: Press **MENU, U, P**
- To display Sending and Receiving Log: Press **MENU, U, L**
- To Configure MiniFax: Press **MENU, U, C**
- To display information About MiniFax: Press **MENU, U, A**

Printing Fax

- Press **MENU, U, P** to display the **Select Print File** screen.


Printing a Fax file

1. Type file name in the **File Name:** field or select a file from the **File:** List box. File extension must be .mfx. (fax file format)
2. Press **ENTER**, or **ALT** + **P** to accept the highlighted selection and start the printing operation.

Selecting Print File Entry

- **File name:** Enter file name to print.
- **Directory:** Current directory.
- **Files:** The file List box, displays all files in current directory. Press Up arrow or Down arrow to move within the box. Press **ENTER** to accept the highlighted selection.
- **Directories:** In the Directory List box, you can select the directory or drive you want from this box. Press Up arrow or Down arrow to move within the box. Press **ENTER** to accept the highlighted selection.

Printing Fax Screen

- Select a file and press **ENTER**, or **ALT** + **O** from the **Select Print File** option to display the following **Print Fax** screen.
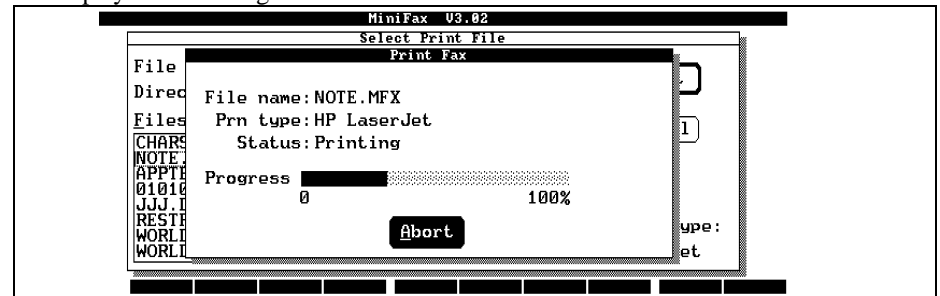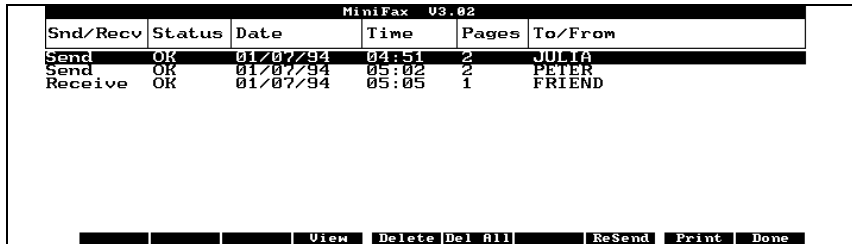

Print Fax Entry

- **File name:** Name of the file being printed.
- **Printer Type:** Type of the printer attached to the HP 100LX.
- **Status:** Shows any action or commands being sent from MiniFax software to the modem.
- **Progress:** Displays the printing operation via a bar-graph indicating percentage of completion.

Log

- Press **MENU, U, L** to display the **Log** screen.

```
                          MiniFax  V3.02
Snd/Recv Status Date        Time    Pages To/From
Send     OK     01/07/94    04:51   2     JULIA
Send     OK     01/07/94    05:02   2     PETER
Receive  OK     01/07/94    05:05   1     FRIEND




                  View  Delete Del All    ReSend Print  Done
```

Switching Operation in Log

- Press Arrow up or Arrow down key to move the highlighted bar to select a record.
- Press **F4** to View a fax file. *(Received Fax only)*
- Press **F5** to Delete a highlighted record.
- Press **F6** to Delete All records in the log.
- Press **F8** to Resend a highlighted file.
- Press **F9** to Print a highlighted file.
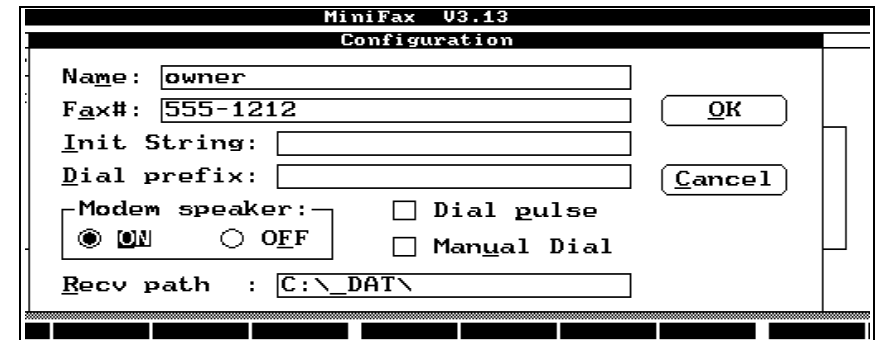
Fax Log Entry

- **Send/Receive:** Indicates the type of activity in the log file.
- **Status:** Indicates the following Fax indication:
  - OK   Fax operation complete.
  - Abort   User has aborted the fax operation.
  - Error   Fax operation encounters error(s).
  - Busy   The remote fax is busy.
  - NoAns   The remote fax is not answering the call.
- **Date and Time:** Date and time stamp when starting the fax operation.
- **Pages:** Number of page(s) sent or received.
- **To/From:** Name of the fax recipient or sender.

Configuring MiniFax

The configuration menu allows you to do the following operations: registers your name, local Fax number, changes modem characteristics (via Init String field), or for the credit card caller you can add ID number (via Dial Prefix field), Modem speaker control, Pulse and Manual dial selection.

- Press **MENU, U, C** to display the **Configuration** screen.

```
                      MiniFax  V3.13
                      Configuration
  Name:  owner
  Fax#:  555-1212                          OK
  Init String:
  Dial prefix:                             Cancel
  ┌Modem speaker:─┐    ☐ Dial pulse
  ◉ ON      ○ OFF     ☐ Manual Dial
  Recv path  : C:\_DAT\
```
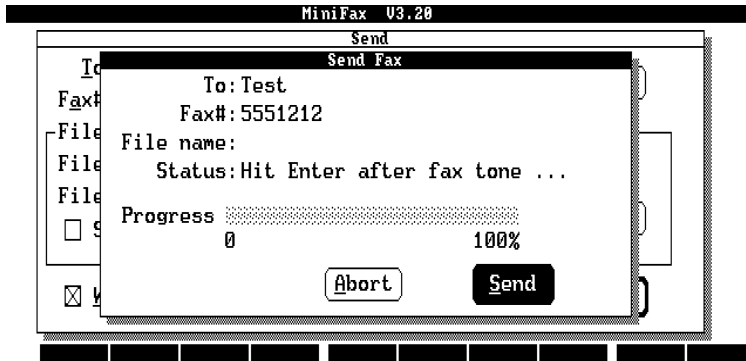
To configure the MiniFax

1. Fill in the **Name:** and **Fax#:** of the MiniFax user.
2. Select the **Modem speaker:** Set the modem's sound <u>ON</u> or <u>OFF</u>.
3. **Init String:** This entry is for advance users who need to change modem's operation parameter(s). For example, to set the CTS/RTS flow control and sensing the Carrier Detect (CD) the entry in this field would be 'AT\Q3&C1'. To disable the Dial tone detection this entry would be 'ATX3'. *(You may need this feature when the dial tone pitch is different from North American dial tone.)* Normally you should leave this entry blank.
4. **Dial prefix:** This field is for users who need to add prefix number to the telephone number. For example, to access the outside line from a hotel and in some areas user need to dial 1 before an Area Code: This entry would be 8,1
5. **Dial pulse:** If you are using pulse (rotary) phone line, check this box to enable pulse dialing. Leave the box unchecked if you use touch-tone line.

6. **Manual Dial:** If checked, the user will be prompted at the send fax screen.
   Status: Hit Enter after fax tone.

```
                     MiniFax  V3.20
                        Send
    ┌──────────────── Send Fax ────────────────┐
   To│       To: Test                          │
  Fax │      Fax#: 5551212                      │
  ┌Fil│  File name:                             │
  Fil │      Status: Hit Enter after fax tone ...│
  Fil │                                         │
    □ │  Progress ▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒▒        │
      │           0                  100%       │
    ⊠ │         (Abort)    Send                  │
      └──────────────────────────────────────┘
```

At This point user needs to pick up the handset and dial the number. After hearing the fax's high pitch tone, press **ENTER**, to start the fax sending, then place your handset on its cradle.

Note: For Manual Dial operation user will need the one line to two line (Not Included) or the 'Y' connector (Male-Female-Female.) in order to connect both the modem and telephone set to the same telephone line.

---

7. Highlight the **OK** button and press **ENTER**, or **ALT** + **O** to accept the information entered.
   Highlighted button and press **Cancel**, or **ALT** + **C** to discard the information entered.
   In both cases, you will be returned to the **Utility** screen.

About

■ To display information about the MiniFax programs itself such as revision, and copyright information.

Upgrade the MiniFax

From time to time EXP will release a maintenance upgrade MiniFax for additional features. The new revision file will be posted on our
BBS (516) 496-3753. The file name convention are:

For ThinFax 1414-LX

   Basic-XX.exe. where XX (e.g., 01)= revision number.

For ThinFax 1414-LXM

   LXM-XX.exe. where XX (e.g., 01)= revision number.

Your current revision number is displayed on the top of MiniFax's screens. As an owner of EXP's modem product you are invited to log-on our BBS and check for any new revision.
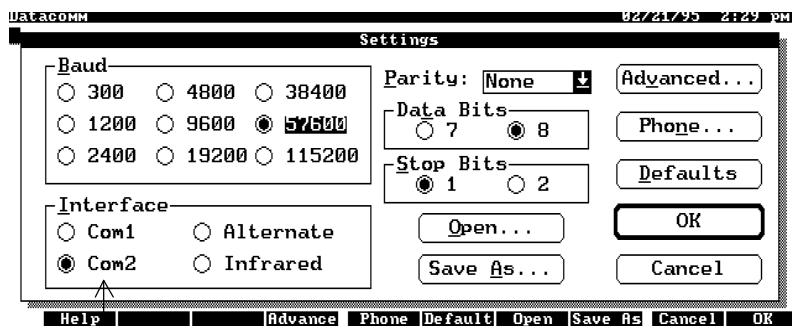
See APPENDIX B for detail on how to download and install the upgrade file from the BBS.

5

Using the ThinFax as a Data modem in the HP 100/200LX

This section assumes that you had completed the steps required to prepare the HP 100/200 LX for the card modem in the Section 2.

The ThinFax 1414-LX/LXM also functions as a data modem with speed up to 14,400 bps. User of the built-in application such as DataComm or CC:Mail or any data communication program should follow the setup procedures for each individual program. For the ThinFax 1414-LXM owner. You can download files or E-mail and store those data right on the ThinFax card. Just set the receiving path to the F: drive. The following parameters are recommended for the ThinFax 1414-LX/LXM:

1. Com 2: The Interface parameter of the application MUST be set to COM2.
2. Flow: The Flow control parameter of the application should be set to RTS-CTS or Hardware.
3. Baud: The Baud parameter may be set at 57600 for maximum speed.

```
DataComm                                        02/21/95  2:29 PM
                            Settings
  ┌Baud─────────────────┐  Parity: [None    ↓] [Advanced...]
  │ ○ 300  ○ 4800  ○ 38400 │  ┌Data Bits──┐
  │ ○ 1200 ○ 9600  ● 57600 │  │ ○ 7   ● 8 │    [Phone...]
  │ ○ 2400 ○ 19200 ○ 115200│  └───────────┘
  └────────────────────────┘  ┌Stop Bits──┐    [Defaults]
                              │ ● 1   ○ 2 │
  ┌Interface──────────┐       └───────────┘
  │ ○ Com1  ○ Alternate│       [ Open...  ]     [   OK   ]
  │ ● Com2  ○ Infrared │
  └───────────────────┘       [ Save As...]     [ Cancel ]

 █Help█        █Advance█ █Phone█Default█ Open █Save As█Cancel█ OK █
```

The interface must be set tot COM 2

For more information on specific application, please consult the 'HP 100LX User's Guide'.

Operating Consideration for ThinFax as a Data Modem

Operating Mode

Five operating modes can be chosen by the **\Nn** command, are supported to allow the HP 100/200LX to communicate with remote modems that may or may not support error correction and data compression. The five operating modes are Normal, Direct, MNP Reliable, V.42 Auto-reliable and V.42 Reliable. Speed buffering, which is used for all operating modes except **\N1**, allows the HP 100/200LX -to-modem data rate to be different from the modem-to-modem data rate. This is accomplished by using transmitter and receiver buffers in the modem. Thus, the HP 100/200LX -to-modem data rate can be set for 2400 bps when the modem-to-modem data rate is 300 bps, without causing any data errors. In all data modes except direct mode (\N1), the HP 100/200LX -to-modem data rate can be set for any valid speed between 300 bps to 57,600 bps. In direct mode, the HP 100/200LX -to-modem data rate can only be set to 300, 1200, 2400, 4800, 7200, 9600, 12000, and 14400 bps. Each operating mode is explained in more detail below.

Normal Mode (**\N0**)	-	No error correction/data compression, but speed buffering is supported.
Direct Mode (**\N1**)	–	No error correction/data compression or speed buffering.
MNP Reliable Mode (**\N2**)	–	MNP 2-5 connection only. The modem hangs up if an MNP connection cannot be established.
V.42 Auto-Reliable Mode (**\N3**)	–	V.42/V.42 bis with fallback to MNP 2-5 or normal mode.
V.42 Reliable Mode (**\N4**)	–	V.42, V.42 bis or MNP 2-5 only connection. The modem hangs up if a V.42/V.42 bis/MNP 2-5 connection cannot be established.

NOTES:
1) MNP 5 requires that the modem be configured for %C1.
2) V.42 bis requires that the modem be configured for "H3.
3) Refer to \Cn and %A commands for more information about auto-reliable mode.

Operating Mode *(Cont)*

The list of commands needed to enter a specific error correction or data compression mode are provided below:

Direct mode only:	&F \N1	*or*	\N1
V.42 bis with fallback to MNP 5, MNP 2-4 or V.42:	&F \N3	*or*	\N3 "H3 %C1
V.42 bis with fallback to V.42/MNP 2-4:	&F \N4 %C0	*or*	\N4 %C0 "H3 -J1
V.42 bis only: &F \N4 -J0		*or*	\N4 -J0 "H3
V.42 only:	&F \N4 -J0 "H0	*or*	\N4 -J0 "H0
MNP 5 with fallback to MNP 2-4:	&F \N2	*or*	\N2 %C1
MNP 2-4 only:	&F \N2 %C0	*or*	\N2 %C0

The above operation modes may be set in the DataComm's **Advanced Settings**
To display the following screen:
Press **MENU, C, S** and then **ALT** + **V**

To alter modem's operating mode
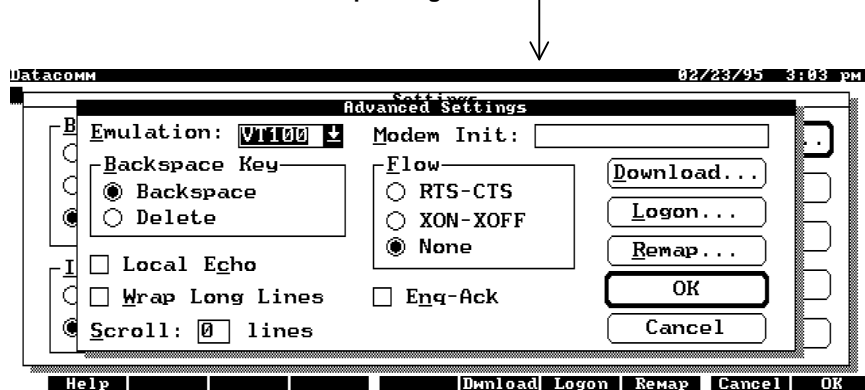
Flow Control

Usually, your computer can transmit data to the modem with a higher speed than the modem's maximum speed of connection. Setting the flow control between the computer and the modem can prevent data overrun during transmission. There are two common ways of setting the flow control. First is XON/XOFF or sometimes
being referred as Software Flow control. The other one is CTS/RTS or also known as Hardware Flow Control.
Examples of setting the flow control:

AT&K3   enables RTS/CTS flow control
AT&K4   enables XON/XOFF flow control

Using the ThinFax as a Data modem in PC Card Compatible Computers

SYSTEM REQUIREMENT

PC Card (PCMCIA 2.10) Device Driver:

Most of the notebook computer manufacturers supply their own device driver program to operate the PC Card (PCMCIA) slot on their computers. If your computer comes with the device driver to support PC Card (PCMCIA) slot (i.e., Socket Service, Card Service, Card Installation Client, CardID, Cardtalk etc.), you should always use the default device driver. However, if the default device driver cannot operate the ThinFax LX/LXM card, or if the computer did not come with any device driver, you can then install the EXP's device driver.

Note: The EXP's PC Card (PCMCIA) device driver is **NOT** included with your package. Please follow the instructions in the Appendix B to download the device driver from our bulletin board system (BBS) or our Internet address http://www.expnet.com

PC Card Type II or Type III slot(s)

The ThinFax LX/LXM is a Type II card (5 mm thickness). Check your computer PC Card slots.
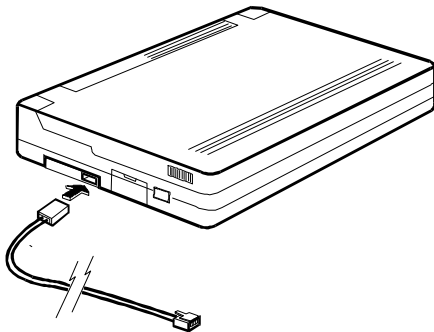
Hardware Installation

1. Locate the PC Card (PCMCIA) slot, which is usually on one side of the computer. Some PC Card (PCMCIA) systems allow "hot insertion" (inserting the card while PC power still on).

   Consult your computer User's manual for details.
   If you are in doubt, turn the power off.

2. Align the modem card with the arrow sign pointing toward the computer's slot. (Please note that the card is keyed to guide the proper installation.)

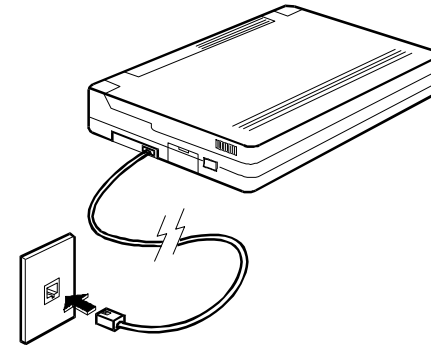3. Slowly insert the modem card into the slot and press firmly until the modem 's connector is seated.
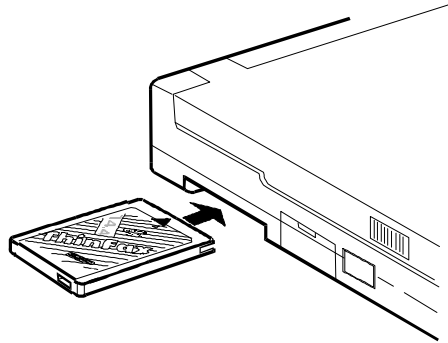
4. Insert the modem 's cable into the card.

Hardware Installation (Cont)

5. Connect RJ-11 connector to a working telephone line. (If you are not planing to use the modem at this time. You may skip this step.)

6. You are now ready to install either the computer manufacturer's Device Driver (If they are Not pre-loaded from the factory) or the EXP's ThinFax Device Driver. Please follow the Software Installation Guide procedures.
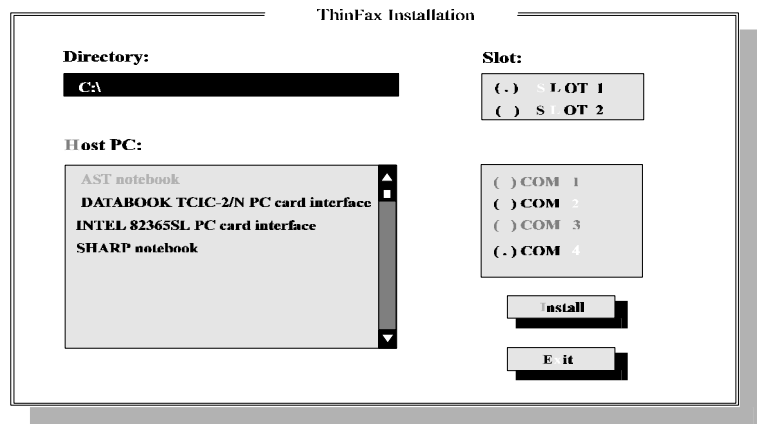
Software Installation Guide

Installing the device driver for DOS and Windows 3.X

The EXP Device Driver Installation programs are designed to help you install the device driver into the computer with ease. The programs present you with choices of specific manufacturers and models of the computers. EXP also has a generic driver available in case your specific computer is not on this list.

1. Insert the device driver diskette into the floppy drive.

2. Change the working directory to the floppy drive containing the device driver diskette by typing a: or b:, then the Enter key.

3. At the DOS prompt (A:\> or B:\>), type INSTALL followed by the Enter key. Press Enter again.

   A selection menu will appear.

```
┌─────────────────────────────────────────────────────┐
│ ══════ ThinFax Installation ══════                  │
│                                                       │
│ Directory:                    Slot:                   │
│ ┌─────────────────────────┐   ┌───────────────┐      │
│ │ C:\                     │   │ (.)  SLOT 1   │      │
│ └─────────────────────────┘   │ ( )  SLOT 2   │      │
│                               └───────────────┘      │
│ Host PC:                                             │
│ ┌──────────────────────────────┐ ┌───────────────┐  │
│ │ AST notebook              ▲ │ │ ( ) COM  1    │  │
│ │ DATABOOK TCIC-2/N PC card   │ │ ( ) COM  2    │  │
│ │ interface                   │ │ ( ) COM  3    │  │
│ │ INTEL 82365SL PC card       │ │ (.) COM  4    │  │
│ │ interface                   │ └───────────────┘  │
│ │ SHARP notebook              │                     │
│ │                           ▼ │   ┌──────────┐      │
│ └──────────────────────────────┘   │ Install  │      │
│                                    └──────────┘      │
│                                    ┌──────────┐      │
│                                    │ E it     │      │
│                                    └──────────┘      │
└─────────────────────────────────────────────────────┘
```

Alt-X **EXIT**

4. You can use either a mouse or the TAB key to switch between different fields of the menu. Use the mouse or the arrow keys to move the highlight bar to select among the items in each field.

Installing EXP's Device Driver on an unlisted Host PC

If the make and/or model of your computer is not listed in the list of the Host PC field, EXP also provides you with a GENERIC device driver:

INTEL 82365SL PC Card Interface

The device driver is used on a trial and error basis.
For computers that only come with one PCMCIA slot, choose slot 1. Otherwise, select the slot that you installed your ThinFax Modem

COM Port Configuration

Your ThinFax Modem can be configured to be COM1, COM2, COM3, or COM4. Some notebook computers may reserve a COM Port address for serial devices, e.g., Trackball, and on-board COM Port. Unless the COM port address is already occupied, we recommend you always configure your ThinFax Card to either COM2 or COM4. This will reduce the chance of IRQ(Interrupt Request) conflicting with other devices. In some cases you may need to disable one of the existing COM Ports and then configure the ThinFax to use that COM Port.

(Check the system configuration program or your computer User's manual for details on how to disable a COM Port)

5. After completing all of the selection, use the TAB key to advance the highlight bar to the INSTALL button. Press the Enter key to complete the installation process. You must reboot your computer for the new device driver to take effect.
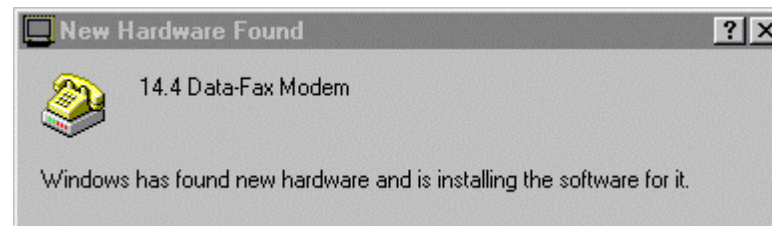
NOTE: For Windows User, The COM Ports I/O Address and IRQ of your choice should be set to the actual address; **NOT** the 'Default'.
Click on:
Main Group ⇒ Control Panel ⇒ Ports ⇒ COM X ⇒ Setting
⇒ Advanced (X = Com Ports 1 -4) to verify its setting.

WINDOWS 95 INSTALLATION FOR MODEM

The PCMCIA modem is a windows 95 compatible product. It is installed as Plug-N-Play peripheral. The device driver for the modem is not required.
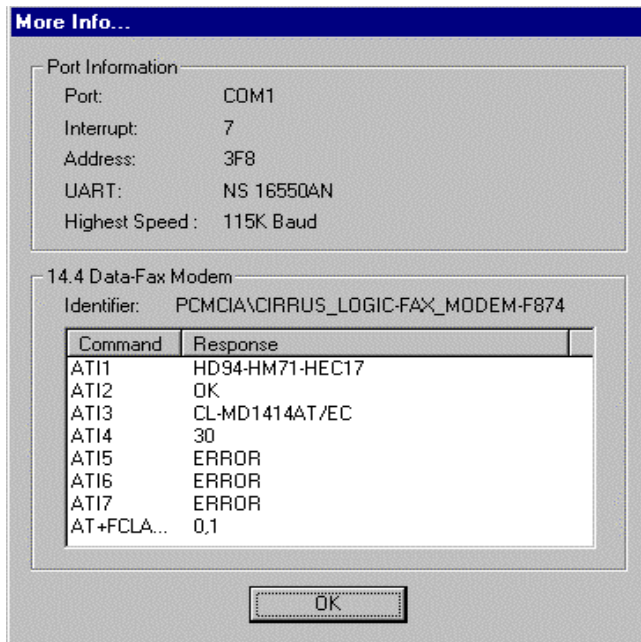
INSTALL THE MODEM CARD

1. Start Windows 95 and insert the modem into PC Card (PCMCIA) slot. Check your computer User s manual for the slot location.
2. The Windows 95 should respond with "New Hardware Found" window.

```
┌──────────────────────────────────────────────────┐
│ 🖥 New Hardware Found                    [?][X]  │
│                                                   │
│  ☎   14.4 Data-Fax Modem                         │
│                                                   │
│  Windows has found new hardware and is installing │
│  the software for it.                             │
└──────────────────────────────────────────────────┘
```

3. Windows 95 will install the modem's driver automatically. The system will beep when finishing installation procedures.

CHECKING YOUR MODEM INSTALLATION

After installation, you may wish to check if the computer recognized the modem and the assigned COM port.
Click on Start => Settings => Control Panel => Modem => Diagnostics tab.
Locate the modem's COM port then highlight it. Click on 'More Info... button.

The Windows 95 will try to communicate with the modem. The More Info... window appear with all the modem identification information.

The modem is now installed properly and ready. If you have a program that required modem, please check your COM port setting. Match the COM port and the IRQ (Interrupt Request) setting for the modem in the 'More Info.. window.

IF SOMETHING GOES WRONG

In case of difficulty such as after you inserted the card and there is NO "New Hardware Found" window pop-up or there is no information about the modem. Please check the PCMCIA Socket support, the 32-Bit Card support may not enable or working properly. Follow the instruction for enabling the Socket support.

ENABLING 32-BIT CARD SUPPORT OF WINDOWS 95

Your system should be ready for PCMCIA socket support prior to operating the ThinFax Modem. To check whether your computer is PCMCIA Socket supported, first, double-click on the "System" icon from "Control Panel" folder (you can select the "Control Panel" under "Settings" from the "Start" menu to open the "Control Panel" folder).
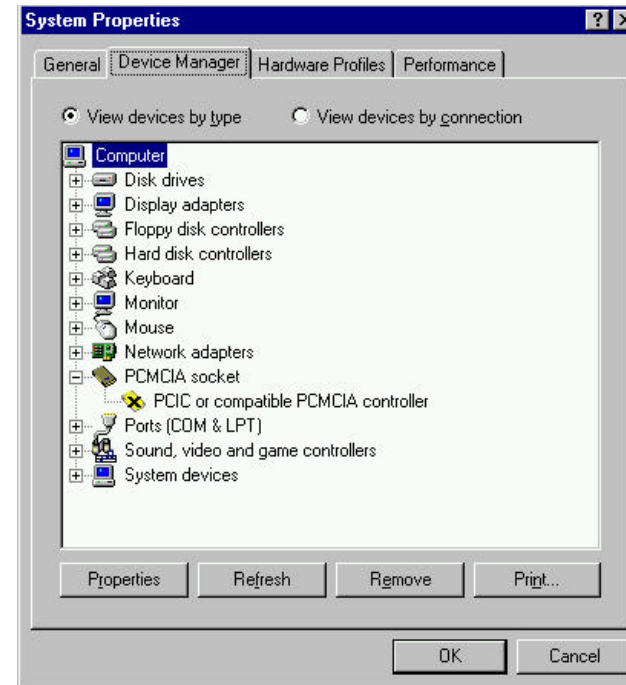

Click on the Device Manager Tab. If "PCMCIA Socket" is found with a cross (X) sign next to the PCMCIA Controller as show above, it means the PCMCIA device driver is not using 32-Bit Card Support. The socket(s) is not function properly. There should be only one such a line displayed.

In this case, double click on the PCMCIA Controller, and a dialog box will be displayed as below. Please place a check mark next to the current configuration of Device usage box, then select OK.
After the PCMCIA 32-Bit Card support is installed, Windows will ask you to reboot your computer. Then you should repeat the install procedures.
If the PCMCIA Socket is not found, then you must add a PCMCIA socket to your system. Please click on the "Add New Hardware" icon in the Control Panel folder and

select "PCMCIA socket". Select the appropriate type of PCMCIA Controller that matches with yours and follow the on-screen instructions.
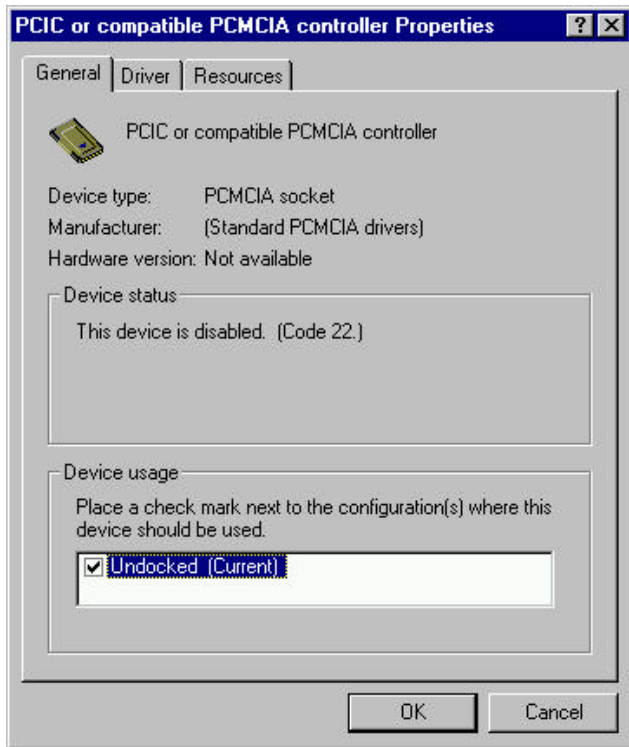
Using the ThinFax 1414-LXM as a FLASH card in PC Card Compatible Computer.

SYSTEM REQUIREMENT

PC Card (PCMCIA 2.10) Device Driver:

Most of the notebook computer manufacturers supply their own device driver program to operate the PC Card (PCMCIA) slot on their computers. If your computer comes with the device driver to support PC Card (PCMCIA) slot (i.e., Socket service, Card Service, Card Installation Client, CardID, Cardtalk etc.), you should always use the default device driver.

EXP FLASH Card Device Driver

The EXP's PC Card (PCMCIA) device driver is **NOT** included with your package. Please follow the instructions in the Appendix B to download the device driver from our bulletin board system (BBS). The file name is:
    LXMCSx.EXE (where X is a revision number)

PC Card Type II or Type III slot(s)

The ThinFax LX/LXM is a Type II card (5 mm thickness). Check your computer's PC Card slot.

INSTALLING THE EXP FLASH CARD DEVICE DRIVER

The EXP FLASH card device driver is compliance with PC Card specification. This mean the Socket Service and Card Service must be loaded prior to load the EXP FLASH card driver. Using any text editor Notepad or DOS Edit program to manually add an entry line after the PC Card Device Driver entries in the CONFIG.SYS file. For example:

```
Device=C:\cardsoft\sscirrus.exe
Device=C:\cardsoft\cs.exe
Device=C:\cardsoft\csalloc.exe C:\cardsoft\csalloc.ini
Device=C:\cardsoft\cardid.exe
Device=C:\cardsoft\lxmcs1.exe    <= Add by user
```
    Save the Config.sys file and reboot the computer. There should be additional drive in your computer when the ThinFax LXM card is inserted.

APPENDIX A

Basic Data Modem 'AT' Commands

Command		Default	Function
A/	**	none	Repeat last command
A		none	Answer
Bn	*	1	Select CCITT or Bell
Cn		1	Carrier control option
D		none	Dial command
En	*	1	Command echo
Fn		1	On-line echo
Hn		0	Switch hook control
In		0	Identification/checksum
Kn		none	SRAM buffer control
Ln	*	2	Speaker volume control
Mn	*	1	Speaker control
Nn	*	1	Connection data rate control
On		0	Go on line
P	*	none	Select pulse dialing
Qn	*	0	Result code display control
Sn		none	Select an S-register
Sn=x		none	Write to an S-register
Sn?		none	Read from an S-register
?		none	Read last accessed S-register
T	*	none	Select DTMF dialing
Vn	*	1	Result code form
Xn	*	4	Result code type
Yn	*	0	Long space disconnect
Zn		0	Recall stored profile
&Cn	*	1	DCD option
&Dn	*	2	DTR option
&F		none	Load factory defaults
&Gn	*	0	Guard tone option
&Jn	*	0	Auxiliary relay control
&M0	*	0	Communication mode option
&Pn	*	0	Dial pulse ratio
&Q0	*	0	Communication mode option
&Sn	*	0	DSR option
&Tn		0	Self test commands
&Vn		0	View active and stored configuration
&Un	*	0	Disable Trellis coding
&Wn		0	Stored active profile
&Yn	*	0	Select stored profile on power up
&Zn=x		none	Store telephone number
%En	*	1	Auto-retrain control
%G0	*	0	Rate Renegotiation
%Q		none	Line signal quality
-Cn	*	0	Generate data modem calling tone

* Value saved in NVRAM.
** Command not preceded by an 'AT'. – Patent pending.

Data Mode Error Detection and Data Compression

The EXP ThinFax LX/LXM supports two types of error correction (MNP 2-4 and V.42) and data compression (MNP 5 and V.42 bis). V.42 error correction uses LAPM as the primary error- control protocol, and uses MNP 2-4 as an alternative. V.42 bis data compression requires V.42 (LAPM only). MNP 5 requires MNP 2-4. The supported V.42/MNP 'AT' command set is listed below

V.42, MNP 'AT' Commands

Command	Default	Function
%An*	13	Set auto-reliable fallback character
%Cn*	1	MNP 5 data compression control
\An*	3	MNP block size
\Bn*	none	Transmit break
\Cn*	0	Set auto-reliable buffer
\Gn*	0	Set modem port flow control
\Jn*	0	Bps rate adjust control
\Kn*	5	Set break control
\Nn*	3	Set operating mode
\O*	none	Originate reliable link
\Q*	3	Set serial port flow control
\T*	0	Set inactivity timer
\U*	none	Accept reliable link
\V*	2	Modify result code form
\Xn*	0	Set XON/XOFF pass-through
\Y	none	Switch to reliable mode
\Z	none	Switch to normal mode
-Jn*	1	Set V.42 detect phase
"Hn*	3	V.42 bis compression control

"On   16   V.42 bis string length

Full description of the above 'AT' commands is available for downloads on EXP Bulletin Board System.

APPENDIX B

UPGRADE

This appendix contains the procedures to download the maintenance upgrade for the MiniFax, the PC Card (PCMCIA 2.01) device driver and the FLASH memory device driver with format utility program from EXP's Bulletin Board System (BBS).

EXP constantly works on perfecting the ThinFax LX/LXM products line. The new revision of MiniFax program and device drivers is available to existing customers for free upgrade. User have to download an upgrade program from the EXP Computer Inc.'s Bulletin Board System (BBS). Then use the install program to store the new MiniFax and/or device driver into appropriate drive or directory in the ThinFax 1414-LX/LXM card. The files name convention as the following:

For ThinFax 1414-LX

BASIC-XX.EXE   (where XX=revision number)

This self-extract file contain MiniFax program and its support files. It also include the installation utility program.

For ThinFax 1414-LXM

LXM-XX.EXE   (where XX=revision number)

This **self-extract** file contain MiniFax program and its support files. The file also include the FLASH memory device driver (lxmdrv.sys), the FLASH memory format utility (lxmfmt.exe) and the installation utility program.

Download the Upgrade Program using HP 100/200LX Palmtop

By using the Palmtop's built-in application DataComm with the ThinFax 1414-LX/LXM, you can download the upgrade program from the EXP Computer Inc.'s BBS at 516-496-3753.

1. Press **MENU**, **F** To use filer to view C:_DAT directory. If there is any file named MINIFnnn.EXE, where nnn are any numerical characters, delete those files from the directory, or at least rename them to a different name. This is to ensure no conflicts with the program to be downloaded and extracted later.

```
Filer                         File List              02/22/95  1:42 PM
C:\_dat\*.*                │ Local │ A:\*.*                    │ Local
  compusrv dcf                  628 │ ..                        │ ▲View Up▲
  dowjones dcf                  628 │ apname    lst                     31
  filer    env                  165 │ f16x17    dat                 13,056
  genie    dcf                  628 │ install   exe                  3,698
  mci      dcf                  628 │ logo      dat                  5,026
  memoed   env                  594 │ minifax   exm                 74,289
  minif313 exe              125,475 │ minifax   icn                    200
  minifax  cfg                  197 │ minifax1  cov                  4,289
  minifax  log                1,016 │ minifax2  cov                  8,560
  phone    env                   81 │
  phone    pdb               48,982 │
  setup    env                6,366 │
  sw       env                   82 │
Dirs: 1   Files: 24    Bytes: 206,636     Bytes Free on Disk: 119,296
      Help │ Copy │ Move │Filter │ Goto │Remote │ Full │ View │ Tree │Connect
```
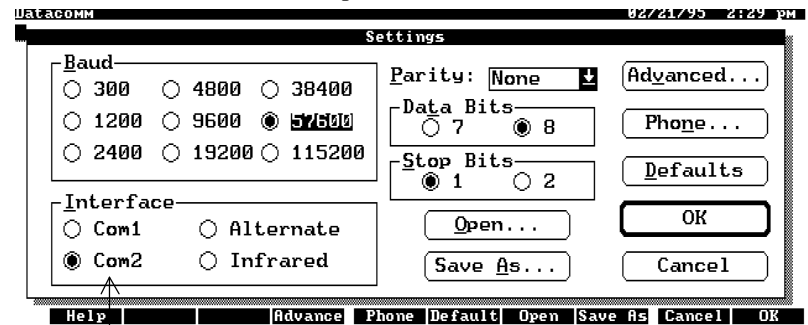
2. Quit the filer program by press **MENU**, **Q**
3. With the ThinFax 1414-LX/LXM card in the palmtop, Press **&...**, **C**   to enter the DataComm Application.
4. Press **MENU**, **C, S** to set the following parameters to the ThinFax 1414-LX/LXM for later data transmission:

Baud Rate	57600
Data Bit	8
No Parity	
Stop Bit	1
Com Port	2
Flow Control	CTS/RTS

Highlight the **OK** button and press **ENTER**, or **ALT** + **O**, or press **F10** to accept all the settings.

5. Press **MENU**, **F, P** to set the protocol to ZMODEM.

```
DataComm                                          02/24/95  2:29 PM
                          Settings
 ┌Baud──────────────────────┐  Parity: None  ▼   [Advanced...]
 │ ○ 300   ○ 4800  ○ 38400  │ ┌Data Bits──────┐
 │ ○ 1200  ○ 9600  ● 57600  │ │ ○ 7      ● 8  │  [Phone...]
 │ ○ 2400  ○ 19200 ○ 115200 │ └───────────────┘
 └──────────────────────────┘ ┌Stop Bits──────┐  [Defaults]
 ┌Interface─────────────────┐ │ ● 1      ○ 2  │
 │ ○ Com1   ○ Alternate     │ └───────────────┘  [  OK  ]
 │ ● Com2   ○ Infrared      │  [  Open...  ]
 └──────────────────────────┘  [ Save As... ]    [Cancel]
 Help │           │Advance│Phone │Default│ Open │Save As│ Cancel│ OK
```

The interface must be set tot COM 2

Highlight the OK button and press **ENTER**, or **ALT** + **O**, or press **F10** to accept the setting.

6. Connect a phone line to the ThinFax 1414-LX/LXM. In the DataComm, type in "ATDT15164963753", then press **ENTER** to dial up to the EXP's BBS. If you are dialing from a foreign country, please insert the country code for the United State into the proper position (before the Area Code e.g. 516) in the "ATDT..." line.
7. After the connection is established, the message displayed will prompt you to enter some information to log in as a new user. **Set up your own password**. Please answer all of the questions. If you have logged in previously, you may only need to enter your name and your password.
8. At the Main Menu, select the File menu by pressing **F** and then press **ENTER**. Select List file contents in the "Files for MiniFax" directory. When the file is listed on your display, you may flag the file(s) for later download by pressing **F** then type in the file(s) name LXM-nn.EXE. (where nn are any numerical characters) This self-extract file may have associate document(s) you can also type in the file name in this menu.
9. When returned to the Main menu, press **D** to download the selected file(s). Choose Zmodem as the protocol to download the program selected. The screen then will display a progress bar.
10. Start the receiving process on you palmtop by pressing **MENU**, **F, R** It may takes several minutes to receive the upgrade program. At the Main Menu, press **G** to logout. Quit the DataComm by pressing **MENU**, **Q** .

For more detail about using the DataComm Application, refer to your HP 100LX User's Manual under DataComm.

Upgrade the **MiniFax**

The upgrade program must be executed from DOS.

1. Press the **&…** to access More Applications screen. Press **MENU**, **A, L** key to close all applications. Press **&…**, **D** key to enter DOS environment.

2. After the screen displays the DOS prompt C:_DAT>,(default path) type INSTALL then Press **ENTER** to start the program. Follow the prompt message to complete the upgrade process.

3. Upon the completion of the upgrade procedures, you can delete the OLD MINIFnnn.EXE program to free more space for the C: drive.
Restart your palmtop and the new MiniFax is now ready.

Upgrade the FLASH (F:) driver file.

Follow the 'Download the upgrade program using HP 100/200 Palmtop. procedure.
The name of the Flash driver upgrade is LXM-XX.exe where XX is the version number of the upgrade program. The upgrade program must be executed from DOS.

1. Press the **&…** to access More Applications screen. Press **MENU**, **A, L** key to close all applications. Press **&…**, **D** to enter DOS environment.

2. After the screen displays the DOS prompt C:_DAT>,(default path) type INSTALL the upgrade program you just received from the BBS. Press to start the program.

Download ThinFax's PC Card (PCMCIA 2.10) Device driver.

You do not need this driver if the your notebook already has a PC Card (PCMCIA 2.10) device driver installed in your notebook computer. (Consult the User's manual or call the notebook manufacturer to confirm.)

The EXP's install program will check for the PC Card (PCMCIA 2.10) Socket Service, Card Service and Clint drivers, if these drivers are loaded in your notebook computer the install program will not install the ThinFax driver and attempt to identify the COM port for the ThinFax 1414-LX/LXM. If they are NOT loaded the ThinFax driver will function as a Direct Enabler support PCIC (Intel 82365SL compatible) controller chip.

Follow the same download procedures and change the file name in Step # 8, to TFDDXX.zip (XX=Version number i.e., 20). Download the file along with its document file (tfddxx.doc)

SYSTEM PREPARATION:

Transfer the downloaded device driver file to a notebook computer and decompress it. You may run the installation program directly from the hard disk or copy these files to floppy disk then follow the instruction in Section 6. 'Software Installation Guide'

Questions & Answers

The Technical Support staff of EXP are available to help you with any problem in regarding installation ThinFax-LX/LXM and operation of the MiniFax. For all other operations, it is requested that you refer to appropriate HP 100/200LX user's manual or the communication program user manual. Please read the following Question & Answer. You may find the answer here in this section before contacting Technical Support for help.

Technical Support
EXP Computer Inc.
141 Eileen Way
Syosset, NY 11791
(516-496-7629) Fax (516) 496-2914
Hours: 9 A.M. to 9.00 P.M., Eastern Time Monday through Friday
INTERNET:www.expnet.com

1)   **Can I send faxes in fine mode?**

No, you can only send in standard mode, but you can receive in either mode.

2)   **How much space does a fax page take up on the "C" drive?**

Standard mode requires approximate 35KB per page to send. Fine mode requires 70KB to 95KB per page to receive. Adding a cover page takes another ~15KB. (The more graphics on a page, the higher the space requirements will be.)

3)   **What printers can I use with MiniFax and how does the HP 100LX output to the printer?**
There are three printer types supported by the HP 100/200LX. They are:

a) Epson FX80,
b) HP LaserJet,
c) IBM Proprinter.

Your printer should either be one of these or emulate the functions. COM 1 is the printer port for which a special cable is used to connect to the printer. This is a serial connection which requires the baud rate to be set so that the printer and COM port are at the same rate.

4)   **Should I have the power hooked up when I use the modem?**

Yes, it is recommended that you use the AC adapter to power the HP 100/200LX while the modem card is inserted.

5)   **Can I insert or take out the modem with the power on?**

HP does not recommend or support hot swaps on the HP 100/200LX.

6)   **I see the MiniFax Icon, but I don't seem to be able to use the modem. What can be wrong?**

There are a number of possibilities:
a) Config.sys is missing or incorrect,
b) CIC100 not loaded by autoexec.bat, (100LX)
c) Modem is not in the slot,
d) Modem defective.

Refer to your HP 100/200LX user's manual on "Connecting to Card Modems" for more information or INSTALLATION Chapter in this manual.

7)   **Can I use the ThinFax 1414-LX/LXM in other computers?**

You can use the 1414-LX/LXM in any computer that has a PC Card (PCMCIA 2.0) standard slot. The device drivers for the PC Card slot will be needed to access the modem.
NOTE: The MiniFax functions will NOT be available.   It is designed for HP Palmtop only.

8)   **How would I dial out from my hotel room?**

Use the access number, 9 (or any number the hotel requires to get an outside line), plus a "W" to wait for the second dial tone, then the number in the fax number field. i.e. 9W5551212 or

Press **MENU, U, C** To access configuration menu and then press **TAB** key highlight Dial Prefix filed type in 9W.
Press **TAB** to highlight **OK** box and press **ENTER** or **Alt** to except the data.

9)   **What do I do when my palmtop locks up and I can't even turn it off?**

Use the key combination, CTRL + SHIFT + ON, to re-initialize the system. Do **not** initialize the RAM disk **or you will lose** everything in your "C" drive.

10)   **How much space does the MiniFax software take up on my "C" drive?**

None, it does not require any space on the "C" drive. It requires ~64KB of system memory.

11)   **How do I connect to a BBS?**

Use DataComm to dial out to the BBS. Make sure it is set to COM 2, because that is where the modem is. At the screen type "ATDT5551212", where "5551212" is your BBS number. Parity, data bits and stop bits are to match the settings of the BBS that you are calling. The most common settings are N,8,1.

12)   **Can I leave the modem card in the HP 100LX when not in use?**

Yes you can. It will use up your battery faster though.

13)   **Can I use the other ThinFax e.g. 14,400/14,400 with my HP 100LX?**

You can use it for data only. There is no fax software on the card. It may cause the HP 100LX to lock up if DataComm is started with the modem inserted. Just start DataComm first then turn off the HP 100LX and insert the modem. It should then be fine when you turn it back on to use DataComm. Remember to have the AC adapter power your HP 100LX.

14)   **An ERROR "Cannot find application to open"**

Make sure the ThinFax card is inserted.
MiniFax program reside in the A: drive. If you use any FLASH card, check its device driver is in the config.sys or autoexec.bat file and make sure that the FLASH card does not assign it to the A: drive.

15)   **I don't like the fonts on Cover Page. Can I change it?**

No, not at the current production of the ThinFax card.

16)   **ThinFax is not on the list of supported modem. What is the initialize string?**

AT&F &C1 &D2
For more advanced modem operation see Section 5 'Operating Mode'

17)   **I have a FLASH card from another manufacturer. How do I install the ThinFax LXM card?**

You need to load EXP FLASH card device driver (lxmdrv.sys) after the other FLASH card's device driver**.**

APPENDIX C

ERROR MESSAGE

V01, V04: File is not found!
Resolution: Check for the location of file. Match the path of the file to the location.

V02, V03, V05: Memory overflow!
Resolution: Check to see if you have any other applications open and close them. Make sure you have at least 400K of System RAM.

M01, M4: EXP ThinFax card not found!
Resolution: Check to see if the card is securely seated into the slot. Make sure the TSR, "D:\BIN\CIC100 /GEN 1", is being loaded by the autoexec.bat.

M02: Log file is old. Delete it? Y/N
Resolution: Older version of MiniFax log may be incompatible with newer version of MiniFax.

M03: File is not found!
Resolution: Check for the location of file. Match the path of the file location.

M05: Missing fax# or file name!
Resolution: Put in the fax number or file name.

M07, M08: Memory overflow!
Resolution: Check to see if you have any other applications open and close them. Make sure you have at least 400K of System RAM.

M09 : Printer error !
M10: Printer port is not responding!
Resolution: Check if the printer is power on and the printer's cable is connected properly.

M11: File is not in fax format!
Resolution: The file should have a "mfx" extension to the file name, i.e.

document.mfx.

M13: No resend for receives log!
M14: No view for send log!
M15: No print for send log!
Resolution: NONE. Function are not supported

M17: File Lock or Missing!
Resolution: Phone.pdb may have a password setting. Phone book application may not have saved the file correctly. Go to Phone book application undo the password and open and save Phone book.

C03: C drive is full!
Resolution: MiniFax requires about 35K per page of free disk space on your "C" drive in order to send a non converted file or to receive a fax.

C06: File is not in f
ax format !
Resolution: Check file name extension. Its should be .mfx

C08: ASCII file with .MFX extension!
Resolution: The extension is a MiniFax graphics file format. It is REAL ASCII file.

C09: MiniFax file with .MIX extension!
Resolution: Wrong extension for MiniFax. The file is MiniFax format.

C11: Font file not found!
Resolution: File named f16x17.dat can not be found.

C13: Can not create .MFX file!
Resolution: Check to see if you have enough space in your "C" drive.

C16: Disk may be full. Can not write!
Resolution: Disk write error during conversion. Check to see if you have enough space in your "C" drive.

E05 : No dial tone !
Resolution: Make sure that your modem is hooked up to an analog telephone line.

E06 : Line busy !
Resolution: Try the number again later or a different number.

E07 : No answer !
Resolution: Remote machine not on or connected. Try the number again.

E08 : Protocol exchange error !
E09 : Line condition may be bad !

Resolution: Protocol/ Speed negotiation error, line is noisy
                   Move to different location and try again.

E11 : COM port is not responding !
Resolution: Check COM port with DataComm. Reset the palmtop.
                   Restart MiniFax.

E12 : Memory overflow !
Resolution: Check to see if System RAM is 400K or more.

E13 : Long fax number without commas !
Resolution: Use commas in between phone, credit card, and access
                   numbers.

E16 : Failed to connect after answer !
Resolution: May not have been a fax call.

E17 : Error receiving page !
Resolution: Line noise or not a fax call.

E19 : Receive path is invalid !
Resolution: Check "menu" >"utility" > "config" for valid