ZFAX Modem/Fax Utility V1.23
Program Diskette

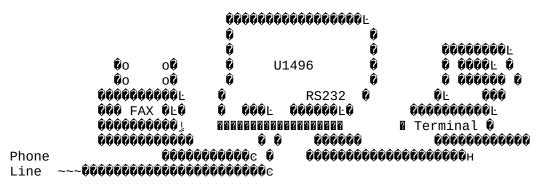Note for ZFAX version 1.23 :
1. Bug Corrected :

        * The page size report is incorrect when receiving a A3 or B4 fax.
        * Can not resend fax in 2-D, A3 mode
        * Can not send fax in 2-D with resize font (~W and ~Z command).
        * Does not turn on the DSR after executing SFAX.

2. Utility update :
        Zview has been updated, you can use LEFT or RIGHT key to move
                the screen.

3. Note for Users with FAX machine :
        If you have a fax machine already, you can use the U1496 to answer
                the incoming call and distinguish it from Data and Fax.
        1. Plug the phone cable from the wall jack into U1496's Line Jack.
        2. Plug the phone cable from the fax machine into U1496's Phone Jack.
        3. Power on the DTE terminal and set the S38 bit 4 of U1496 to be 1.
                Send the command "ATS38=16" to U1496.
        4. Set the U1496 ring number to be same as your fax machine. For
                example, if you have set your fax machine to answer an
                incoming call after 1 ring, then you need to set the U1496
                with the same ring number by sending the command "ATS0=1" to
                U1496.
        5. Now, you can use your fax line to answer both Fax and Data.

```
                          ████████████████████▙
                          █                    █
                          █                    █         ████████▙
            █o     o█      █        U1496       █        █ ████▙ █
            █o     o█      █                    █        █ ██████ █
        ███████████▙       █                    █        █▙    ███
        ███ FAX █▙█        █   ███▙  ██████▙█       ██████████▙
        ██████████▘        ███████████████████       █ Terminal █
        ██████████▛█            █ █   ██████          ████████████
   Phone              █████████▙c █   ████████████████████████▜ₕ
   Line  ~~~█████████████████████████c
```

                          █   RS232 █

4. Note for BBS SysOp ->
        To make your BBS receive the incoming FAX, you need to change the
                following setup :

                1. Add the string "#B1+FCLASS=6" into the init string. Be
                   sure that the "+FCLASS=6" must be the last command.
                2. change one of the connect message list to be "CONNECT FAX".
                3. For the firmware version V3.94 or earlier, set the external
                   mail string to be "13,10,27,27,13,10", where the number
                   represents the ascii number. That is, the string is :
                   "CR, LF, ESC, ESC, CR, LF".
                   For the firmware version of V3.95 or newer, the external
                   mail string need to be set as "ZyXEL".
                   Give this external an error level to shell out to dos.

```
                    3. in your BBS batch file, if the error level matches the
                       external mail, execute "rcvfax comport workpath".
                    4. Now, you can use U1496 to receive a fax in your BBS.

            The following is a sample setting in the frontdoor system :

                    Add in the init String : X7#B1+FCLASS=6

                        ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ Messages Û
                        Û 300             CONNECT|          Û
                        Û 1200            CONNECT 1200      Û
                        Û 1275            CONNECT FAX       Û
                        Û 2400            CONNECT 2400      Û
                        Û 4800            CONNECT 4800      Û
                        Û 9600            CONNECT 7200      Û
                        Û 19200           CONNECT 9600      Û
                        Û 38400           CONNECT 14400     Û
                        ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ

                ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ External Mail Û
                Û      String                      Error Level        Û
                Û 1     \r\nEscEsc\r\n or ZyXEL       100              Û
                Û 2                                                    Û
                Û .                                                    Û
                Û .                                                    Û
                Û .                                                    Û
                ÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛÛ

                ** Remark : To input the ascii code, press Alt and the key in
                            the ascii number then release the Alt key.
                            \r : ascii 13
                            \n : ascii 10
                            Esc : ascii 27

For the Binkley User with firmware version of V3.95 or newer, add the following
string into the file "binkley.cfg" :

                Init    AT&FX7s0=1#b1+fclass=6|
                ExtrnMail ZyXEL errorlevel


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Note for ZFAX version 1.22 :

    ************ !!!!!!!! IMPORTANT !!!!!!! **************
    V1.22 can be used on the firmware later than 3.89 only.
---------------------------------------------------------------------
1. Bug Corrected ->
        The install program can not work with DOS5.0 before V1.2 has
                been corrected.
        The "ZFAX.FON" has been updated.

2. Function Updated ->
        The command line program "SFAX.EXE" and "RCVFAX.EXE" can be used
                to send and receive fax in dos command.
        The program "RCVTIF.EXE" has the same feature as "RCVFAX.EXE" but
                it save the incoming FAX as a tiff file format. It can be
                read from WinFax and BitFax.

3. Note for SFAX.EXE ->
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SFAX.EXE is a command line program to send FAX using U1496. To use
      SFAX.EXE, please follow the install steps :

          step 1 : copy the program "sfax.exe" and "insfax.exe" into
                   the working directory. You can use the same directory
                   as zfax.
          step 2 : change to the working directory, and then execute
                   insfax.com.
          step 3 : set the configuration.
          step 4 : tpye "w" to enter the working directory path.
          step 5 : check the configurations, if they are ok, type "ESC"
                   to quit and save the configuration. Be sure that
                   the file "zfax.fon" is in the working directory.

          There is a help menu if you type sfax only. If you want to
                   send a fax, just tpye "sfax filename faxnumber".
                   sfax.exe will look the configuration file to set
                   the COM port, page size, resolution ...

4. Note for RCVFAX.EXE ->
      RCVFAX.EXE is a command line program to receive incoming FAX, it must
            be boundled with communication program to receive fax because
            this program does not initial the UART.
      The incoming FAX is seperated as one file for each page. For example,
            OCT31000.P01 is the first page of the fax OCT31000.

      1. To work with RCVFAX.EXE, you need to send the command
            "AT#B1+FCLASS=6" first.
      2. When an incoming FAX is detected and the "CONNECT FAX" has showed,
            execute "rcvfax.exe".
      4. The program can be used in the BBS and it can also be used
            as an external protocal in communication program.

6. Note for programmer ->
      To receive fax In the mode #B1+FCLASS=6, the U1496 responds FAX as
      follow :

            DTE   U1496
            COMMAND   PATH   RESPONSE

         AT#B1+FCLASS=6   ---->
                              <----   <CR><LF>OK<CR><LF>

            .   The incoming call is   .
            .   detected as a FAX   .

                              <----   <CR><LF>CONNECT FAX<CR><LF>

            .   delay for about 1   .
            .   second   .

                              <----   *Escape sequence

            .   U1496 is waiting for DC2 .
            .   to start connection   .

          **DC2   ---->
                              <----   ***connect message

<----   FAX DATA

        *Escape sequence : There are 6 chars in the escape sequence, they
                               are 13h,10h,1bh,1bh,13h,10h for V3.94 or
                               "ZyXEL" for V3.95.
                           The escape sequence is generated for the door
                               systems, because they ask users to press ESC
                               once or twice to shell to BBS system.

        **DC2 : This char is of ascii code 12h, U1496 will not send any data
                               to the DTE until it receive the DC2. This
                               mechanism is for flow control only.

        ***connect message : Connect message is used to tell the connect speed,
                               page size, resolution, remote faxnumber and
                               other configuration of this fax.
                           The format is
                               <CR><LF>S9600V1T1R1L1C1PXXXXXXXX<CR><LF>
                               please refer to the U1496 user's manual to see
                               the exact meaning of each parameters.
                           For V.17 fax, message will be S1440 or S1200 to
                               represent the connect speed 14400 or 12000.

        Be careful the the FAX data will follow the connect message without
                any delay.

This diskette should contain the following files:

README.123   - This file
RCVFAX.EXE   - Receive fax command line program for BBS. (Zfax format)
RCVTIF.EXE   - Receive fax command line program for BBS. (Tiff format)
SFAX.EXE   - The send fax command line program.
INSFAX.COM   - The SFAX Installation Program
EDITFONT.EXE   - The ZFAX Font editor utility.
ZFAX.EXE   - The ZFAX Executable Program
ZFAX.MNU   - The ZFAX USER'S MANUAL
ZINSTALL.COM   - The ZFAX Installation Program
ZMANUAL.COM   - The ZFAX Manual View program
ZFAX.FON   - The ZFAX Font file
ZVIEW.EXE   - The FAX file viewer program
ZFAX.SCP   - Sample script file
DEMO.TXT   - Sample file to demo the send fax utility
READ.ME   - Readme file for ZFAX V1.0
EAGLE.PCX   - a sample pcx file.
CP-06.TXT   - an updated U1496 user manual, chapter 6.
CP-07.TXT   - an updated U1496 user manual, chapter 7.
CP-13.TXT   - an updated U1496 user manual, chapter 13.
HYPERA5.ZIP   - Hyperaccess Configuration file Version 5
AWMODEM.CNF   - Configuration file for PC Anywhere III R3.11
MODEM.DSC   - Configuration file for Carbon Copy V5.1
MODEMS.DAT   - Configuration file for Procomm Plus V2.0
QMODEM.MDF   - Configuration file for Qmodem.
TELEGARD.TXT   - Configuration file for Telegard.
TELIX.MDM   - Configuration file for Telex.
TM.CFG   - Configuration file for Telemate.
VBBS.CFG   - Configuration file for VBBS.
XTALKWIN.TXT   - Configuration file for Xtalk.

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    ZYXEL.MDM        - Configuration file for Wildcat.
    ZYXEL.RAM        - Configuration file for Wildcat.


    -------------------------------------------------------------------
                            Q&A
    -------------------------------------------------------------------
    Q. Does ZFAX compatiable with EIA Class 2 Fax standard ?
    A. The official Class 2 standard is ready on firmware later then V3.89. U1496
       can work with the Class 2 software such as WinFax, Fax96, BitFax 3.0.

    Q. What is V.17 ??
    A. V.17 is the newest G3 fax protocal. The fax can speed up to 14,400 bps.
       The following table the speeds of G3 fax that U1496 support :

            Protocal           Speed
          -------------------------
            V.17               14,400
                               12,000

            V.29               9,600
                               7,200

            V.27ter            4,800
                               2,400

    Q. Can my BBS receive FAX ??
    A. Yes, because U1496 can seperate the incoming call between MODEM and FAX,
       you can use the program rcvfax.exe to receive fax in your BBS. Please
       refer to the "note for BBS SysOp" section in this file.

    Q. How can I install my own font for ZFAX ?
    A. In the ZFAX work path, execute the "install.com" and type 'O' to
       select the Fax Font configuration, you will have a sub menu to enter
       your font size. ZFAX accepts bitmap fonts only. For instance, you have a
       font file with 24X24 each char. Then the horizontal size is 24,
       vertical size 24, and 72 bytes for each char. Last, enter the file name
       of your font. The font file has to be put in the ZFAX work directory.

    Q. How much memory the does the resident ZFAX reserve ?
    A. After install ZFAX, it will reserve 64K bytes of the DOS memory.

    Q. Is it possible to combine the TEXT and IMAGE data into one fascimile ?
    A. You can use the "~F", "~P", "~W", "~Z" command in a text file to
       add or insert the image data between text data. please refer to the
       ZFAX User's manual to have more details of these in file command.

    Q. Is it nessary to convert the file before sending a fax in ZFAX ?
    A. No, when sending FAX, ZFAX converts the file on the fly. So you don't
       need to convert it first, just type the file name and send it.
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