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Forward

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COPYCAT was conceived out of desperation. After reading manuals, learning page numbers, instructions, reading, flipping pages, re-eading, re-remembering, forgetting and re-learning all the intricacies of the M-7000, I decided there must be a better way than punching buttons that had no name, and I didn't remember what they were anymore two minutes after I used them, and spending half my time figuring out the MACHINE, instead of what I REALLY wanted to do.

'Nuff said ?

Special thanks goes to John Shidler who talked me into it, and all the beta testers who helped me develop and debug COPYCAT.

FIRST, HERE'S THE "NEW STUFF" IN COPYCAT 2.1

****** *COPYCAT-PRO ONLY* ******

The most dramatic CHANGE between COPYCAT 1.02 and COPYCAT-PRO is the addition of SCANCAT's file structure. This gives you the ability to not only control the TNC of your choice, but also at the same time control the radio. It was suggested by one of our BETA testers as an "improvement". The idea was originally supposed to simply give the ability to READ a SCANCAT file (since he already owned the program),but by the time it was pulled off the drawing board, well, we got a bit carried away.

The SECOND most dramatic change is the addition of MACROS within these frequency files to control the TNC. These macros are instructons to the TNC to change mode, baud rate and shift. These instructions along with the frequency are all sent simultaneusly to the TNC and the Radio.

****** *COPYCAT-PRO ONLY* ******

Last, but not least, is the newly improved Viewer Pull-Down Menu System. The Version 5.0 was rather "cludgy" with viewing help or text files. The new system

FORWARD

in Ver 2.1 lets you have up to THREE simultaneous pull downs accessable, in addition to the normal 32K buffer for incoming text from the TNC. A simple Key press will access any of these three screens. We presume you will read the manual and the parts pertaining to the "TOP MENU BAR", that pull down the menus for FILES, MODE etc. So pardon US if we get right to the NEW stuff. If you are already an owner of COPYCAT- 1.02 then the basic concept and user interface has not changed, merely improved. The interaction between frequency files and the terminal portion of the program should not be that difficult to get used to. The fact IS you are REALLY going to enjoy using our new frequency and macro combination!

FORWARD

Beta Testers

_____

John Trolinger

Ed Deasy

Ed Lentz

Bill Beauchamp

Ted Beauchamp

Dale Dyson

J.D. Alexander

Phil Potts

First things first. Lets us say that it is not the INTENT of this program to teach the owner HOW to decode and operate the TNC. It is assumed that you already have a working knowledge of the many different modes of transmission and are capable of determining their modes etc. There are plenty of books on the subject, and refer to THEM for the nuances of the decoding hobby. It IS our intent to make it as easy as possible to put the "mechanics" of the machine aside and enable you to concentrate on the actual tasks of decoding.

TNC SERIAL ADAPTORS

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The manual that came with your M-7000 or M-8000 TNC explains how to wire a special cable that enables data flow to a terminal program. In order to operate the M-7000 and M-8000 with computer control it is necessary to use either this modified serial cable OR have our special CAT-7000 or CAT-8000 adaptors. While the M-7000 has a standard DB-25 port connector, it is not wired to the RS-232 standard. If you did not order this adaptor with COPYCAT, and you do not feel capable of building one yourself, call us at our order desk. The wiring instructions ARE in each of their manuals, but we cannot guarantee success with our program without knowing if they indeed are wired properly. A standard, off the shelf, serial cable is NOT wired correctly for use with the Universal TNC's, and without either a modified cable or adaptor you cannot receive ANYTHING but an empty screen.

INSTALLING THE ADAPTOR

_____

If you purchased our adaptor, install it by placing the end marked for the Universal on the TNC's port and then plug the standard serial cable on the other end. (Essentially putting the adaptor in series with the TNC and the serial cable). Once the communications cable is installed, you are ready to install COPYCAT to your Hard Drive. If you do not have a hard drive, COPYCAT will also operate from a floppy. COPYCAT is not copy protected, but the system files are installed with a supplied installation program that will uncompress all the files and place

them into the directory of your choice. Simply typing "INSTALL" will invoke a page of instructions for copying the contents of the floppy to the hard drive or floppy

1. "INSTALL" will create a directory on your hard drive,

2. Uncompress the files to that directory and

3. Make a "bat file" that will enable you to access COPYCAT effortlessly.
     Once COPYCAT is installed, you must first set up the TNC.

> 1. **M-7000** - It is STRONGLY advised to use a monitor for the M-7000, at least until the baud rate of the terminal is set.
>
> 2. **M-8000** - The M-8000, REQUIRES a VGA monitor for many of the features such as grey level fax and signal tuning, and should be left connected to the TNC.
>
> 3. **MFJ-1278 -** The MFJ-1278 has the ability to "auto-baud" detect. FIRST set your baud in the devices menu, (suggest 9600), and then open the COMM port and first TURN OFF THE MFJ-1278. Then again turn it ON and continually press ENTER a few times until you get the "sign on message".
>
> 4. **PK-232** - Unless you have already set your tnc for "auto baud detect", FIRST set the devices baud AND the TNC to 1200 baud. At least until you get a transfer of text from the tnc. Choose the HIGHEST baud rate available in order to facilitate quicker response to the reception of incoming text, and for the TNC to receive commands more quickly. Consult your owners manual for the procedure for accessing the menu on the tnc to make the proper settings if you have difficulty in receiving text from the tnc.

The suggested DEFAULT TNC settings are:

- M-7000 4800,N,8,1 *
- M-8000 4800,N,8,1 *
- MFJ-1278 9600,N,8,1
- PK-232 1200,E,7,1
- * TURN OFF handshaking

TERMINAL PROGRAM
_____

MAIN SCREEN
_____

Now you are ready to run COPYCAT. At the DOS prompt type "COPYCAT" and press enter. As the program initializes, you are brought to the Main Program Screen, depicting a Universal Model TNC. COPYCAT uses a "windows like" environment. The buttons at the bottom of the TNC Graphic can be clicked on with the left mouse button OR actuated by pressing ALT+ the letter on the graphic button that is highlighted. For instance the "Terminal" button has the "T" highlighted. Clicking on this button OR pressing the ALT+T keys (holding both down at once will have the same effect (going to the terminal screen). This convention is basically the same as you would experience in many other Windows programs, and is used throughout COPYCAT'S menu systems.

TERMINAL SCREEN
_____

The terminal screen has basically three parts.

1. The top menu:

   This menu system contains all the commands that are sent to the tnc. These commands are available by a pull down menu system, and have one, two or more "levels" of menus such as Modes, Baud Rates, Shifts and etc. Also contained in the top menu are the pull down menus for files, and utilities for changing the screen's physical appearance.

2. The "Label buttons" and "Command buttons" (at the bottom of terminal screen):
   The command buttons have the 3-D appearance of buttons, "poking out" from the terminal's chassis. The label buttons are buttons that appear to be "inset" from the chassis. These are feed back windows and contain the current modes, shift, current time clock and size of the terminal's screen

buffer, etc. Only the Command Buttons can be clicked on. Clicking on any other non-command "button" will have simply no effect.

3. The Terminal Screen: The Terminal Screen contains the output from the TNC. This screen is also the "buffer" or holding area for all incoming data. This buffer holds a maximum of 32K bytes (32,000 characters) and if the data flow exceeds the 32K limit, the first part of the buffer is automatically deleted to make room for incoming data. Throughout this manual we will refer to this area either as the "screen buffer" or the "text screen".

CONVENTIONS OR STYLE

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Throughout this manual, the above type menu / displays will be referred to:

   1. MENU (The TOP of the screen menu selections.
   2. BUTTONS (The BOTTOM selections or functions
   3. TEXT SCREEN (The Middle incoming text area and BUFFER)
   4. TERMINAL (refers to the OVERALL area of upper, lower and text screen
      buffer)

   5. Since this manual contains instructions for COPYCAT 2.1 as well as
      *COPYCAT-PRO, all COPYCAT-PRO instructions will appear in **bold***
italics, and will be bordered by the "HEADER"
         ******* **COPYCAT-PRO ONLY** *******

Throughout this manual the term "CLICKING" refers to either the method of positioning the MOUSE over an item and CLICKING the left button Orusing the appropriate or pressing "ALT+ " (highlighted) KEY combination:

It is our intent to as closely emulate the MICROSOFT WINDOWING and MENU STYLE as possible, and almost ALL menu selections and functions reflect this style.

GETTING STARTED

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****** *COPYCAT-PRO ONLY* ******

SCANCAT FILES

_____

First just a short explanation for you on SCANCAT.

SCANCAT is a Computer Control Program produced by Computer AidedTechnologies (us), to enable SCANNING of radios that have a RS-232 interface for computers. You may already own SCANCAT. If you do not, you can create your own files from within this program, or purchase a disk from us that has over 3 1/2 MEG of files pertaining to everything from 100 KHZ to 1300 MHZ. There are a few such files included with this program to get you started.

TWO things are necessary in order to start reception of incoming text AND be able to select frequencies to your radio.
A. In order to FIRST use the frequency files and operate your radio with COPYCAT you must first select the TNC AND a frequency file.

1. If you have a computer controllable radio, first click on the top menu bar selection for DEVICES.
   A. Select the first item, TNC & RADIO selection.
      If you do not choose to use a radio, be sure and pick the LAST selection, "NO RADIO" in order to prevent conflicts with the TNC commports.
   B. Then choose the proper:
      1. Comm Port
      2. BAUD of the Radio
      3. The Communications Parameters (Example: N,8,1)

EXCEPT FOR THE COMM PORT NUMBER, these settings need only be picked ONCE for each radio you want to use. COPYCAT will remember the setups for each radio once picked, so if you use more than one rig, simply choose the Radio, and the comm settings you used the last time will be defaulted.

2. Press F2, (or click) on the FILES menu bar and select the option to load a SCANCAT frequency file. The Default directory extension for these files is ".CCF". You can also use the other SCANCAT file extensions "*.SCN" (Random files), or "*.FRQ". The file extenstion used for SAVING any file read in from a "*.FRQ or *SCN file will always be "*.CCF".*

3. Select a file, and wait until the file is loaded into memory. After it is loaded, the "Frequency Menu" menu will pop up showing your file

4. PRESS F3 to "Pop Down" the frequency menu momentarily.

****** COPYCAT-PRO ONLY ******

B. In order to FIRST operate COPYCAT, you must first select the TNC
    1. Go to the "DEVICES" and select your TNC. Select the pull down menu item "Devices".
    2. Click on the menu selection and then click on the proper TNC.
    3. Select the COMM port. ONLY COMM 1 or 2 are supported.
    4. Then, again pull down the "Devices" menu and also click on the proper BAUD and Parameter settings. Each time you make a change, the changes are reflected in the Main Heading at the top of the screen. You can choose the DEFAULT settings for the TNC you have selected. These are the basic defaults that your TNC was set for as factory defaults, but, may not necessarily match what you actually have your tnc set for.
C. Next, but not as critical to the initial operation of your TNC are the Menu Items under the listing of Screen. These set the foreground and background colors of the TEXT SCREEN as well as the SIZE of the text screen in rows.
    1. If you have an EGA or VGA monitor, you can increase the size to beyond 25 lines depending on the type of VGA you have installed. There is "auto-

checking" of the graphics card to make sure you cannot go beyond it's capabilities. Each time you click on the "lines" per page option, you cycle to the next level OR return to the lowest resolution screen.

2. Setting the colors is just as simple. Clicking on the foreground or background will pop a color swatch box and clicking on the appropriate color will immediately be reflected with you choice on the text screen.

It is important to remember that these and many other configurations constantly used in COPYCAT are saved each time you exit to the "MAIN MENU" screen.

D. Next , in order to start reception, you must open the communications port. Click on the Top Menu item "Port Cl(o)sed. When this menu item is "clicked on", the status will change, and you will then see Port (O)pen as the new menu prompt. This reflects the status of the communications port. This is only required one time when you first enter COPYCAT. Even if you exit to the MAIN MENU, the comm port remains open.

Opening the "PORTS" will open both the RADIO and the TNC port simutaneously.

E. FIRST time initialization

Some TNC's require an initialization or "hello key" from the computer to let the TNC know that it is now in commuications with a computer port.

For the some, hitting ENTER a few times (MFJ-1278)
    OR
"****" + <ENTER>" (PK-232)

will sign on the TNC. Keep pressing that key until the normal "sign on" message appears, and then you are all set. You should now start seeing incoming text on the text screen if there is a signal being decoded. Pressing ENTER a few times will usually evoke the "CMD" prompt from the tnc. If you are using a M-7000/8000, as you click on modes, baud etc. you will see the TNC respond with a status line if STATUS is on. This will

at least give you some indication that the TNC is properly connected and data can be received.

BASIC OPERATIONS OF COPYCAT

_____

Before we progress to sending the Frequencies to your radio let us first get the TNC working. If you recall, we just set up the RADIO, and there is a frequency file loaded, so in a moment we will get back to how to integrate your COPYCAT-PRO to do BOTH jobs.

It has always been our programming "style" to create a application that enhances the features of a piece of hardware, not necessarily emulate each and every keystroke of the original equipment. Some things, frankly are still better and easier to do "manually". So, if in reading your TNC owners manual, you find commands that are not supported by COPYCAT, think first if it would "enhance" the overall program or not before calling us for "comments". We DO welcome comments, and many improvements to our Software is made from just this form of feedback.

(You CAN program up to 20 Macro keys... more on that later).

MENU OPTIONS
_____

To start with, we will go through the MENU items at the top of the screen, from left to right, and give a more detailed explanation of each basic level. Depending on your selected TNC, some menu items pertaining to Mode, Baud and Shift may not appear on your particular setup. Clicking on a menu item will automatically reveal its secondary layer of menu items. If you notice a "->" to the right of a sub menu item, that indicates a further layer/s of menu selections. This menu system is consistent for all the top menu selections. It should also be remembered that while COPYCAT may "think" it is set to one set of modes/shift, many of the functions of the TNC are NOT fed back to the terminal program. Consequently, if you change or punch buttons on the TNC, COPYCAT'S screen prompts may not necessarily show the correct settings. This is particularly true of the M-8000, which COPYCAT depends on periodic feedback from the TNC on MODE and SHIFT in order to "cycle" the TNC to the next selected operation. This can easily cause the MODE selected from COPYCAT to be invalid.

FILES PULL DOWN MENU

_____

This menu item has 4 basic selections in the sub-menu. Clicking on this menu item will reveal the sub menu.

1. LOAD a text file into the text screen buffer. If you have previously saved a text screen buffer to a file, all the files ending in ".TXT" will be shown in the selection box. Use the TAB key to cycle through the different parts of the selection box, and then arrow down to pick a file, OR click on the filename selection with the mouse. PATHS can be change as well as disk drives, and then the selection made. If the text file is larger than 32K bytes, it will be truncated and only the LAST 32K will be loaded.

2. SAVE the text screen buffer to a file. Basically the same as above, EXCEPT you can also type in a filename to assign to the file to be saved to disk. You CAN overwrite an existing file.

3. VIEW a diskfile. This loads a file from the disk into the TEXT SCREEN buffer. The text that is already IN the text buffer is "saved" in memory. You can then scroll, edit or otherwise manipulate the screen buffer, and even re-save it. The main difference between VIEW and LOAD a diskfile is ONCE YOU PRESS THE KEY, the previous screen buffer memory is RESTORED and the diskfile's text is discarded.

4. PRINT (Three options) (ONLY SENT TO LPT1:)
   A. Print a diskfile. Loads a file from the disk, prints it in it's entirety and then returns you to the text previously in the TEXT SCREEN   buffer.

   B. Print the file in memory in the TEXT SCREEN buffer in it's entirety.

   C. Print SELECTED TEXT in the TEXT SCREEN buffer.
      Pressing SHIFT plus an arrow key will "highlight" the text in the buffer. ONLY this selected text will be printed.

BASICS OF COPYCAT
FILES MENU

The varied choices of the loading of files combined with printing modes gives you almost unlimited flexibility..

Several of these file functions ALSO can be directly invoked without first pulling down the FILES menu. You should note the FUNCTION KEY DESIGNATED to the right of each of these choices. These keys can be pressed anytime the Text Screen is visible and active.

F1. HELP

Help is available from the "FILES" menu. Click on the files, pull-down menu and choose "HELP". Another way is to simply press "F1". The help instructions will be shown in its own text viewer window. You can use the search functions showing at the bottom of the window to instantly locate HELP keywords. By preceeding the word with a "?", For instance, "?MODE", will look for the TOPIC for the modes. You can also press F9 to search for ANY keyword or phrase (see F9 below).

Pressing <ESC>.EXITS the help menu and the previous incoming terminal text will be restored. As COPYCAT first initializes for the First time, the help files are automatically loaded. you will notice a RED spinning clock. This clock always indicates that a file is being loaded.

F2 Selecting a file
Use the TAB key to move the highlight bar to a file on the menu, OR simply type in the filename.

F3 Pop up whatever viewer window was LAST active
If you were last in the Frequency window, then THIS one will come up. OR, if you were last using the TEXT viewer window, F3 puts you back to THAT window. ETC.

F8 BIT MASKING (Also know as Bit inversion)
TWO criteria must be set up before this option will work.
1. You must have highlighted text in the text buffer screen
2. You can only press F8 while in the text buffer (Main Buffer)
EXAMPLE: Let some incoming text appear in your TEXT BUFFER (Main text screen), and then using the SHIFT + ARROWS, highlight several lines. THEN - FIRST press F8, The text that

was highlighted in the text buffer is NOW on screen in your
VIEWER screen.
    Pressing F-7 increments through 32 possible combinations
    Pressing F-6 Decrements through 32 possible combinations
     of the bit pattern inversions possible for ALL the text at one
     time.Watch the top of your screen to see the counter
     number as you view the results.

F9 - Type in Search Keywords
    Type in any keyword and the highlight bar will indicated the occurance
    of the search criteria.
F10   SEARCH AGAIN for the previously assigned search keyword. If you
    have chosen a search criteria in the Frequency file, this ability can be
    used EVEN IF THE MENU IS NOT PULLED DOWN, in order to access
    more than ONE record with the search string. If you did not choose a
    search criteria, each successive F10 press will go to next record (cycle
    1 to xx)

MODES

_____

Depending on your TNC, these selections may vary somewhat. So for demonstration, we will choose the M-7000 as the default TNC for explanation of MODES.

1. CW has basically only ONE function, and repeated clicking of the CW mode selection , if appropriate for your TNC, will cycle the built in selections at the TNC.

2. RTTY/BAUDOT

    A. Move the highlight bar to RTTY/BAUDOT and click. This procedure enables the secondary menu with several choices. COPYCAT'S convention is set up so that the FIRST choice in a sub menu initially SELECTS that mode. You must usually choose this first function in order to change from the mode you are presently using to the one on the menu.

    B. Depending on the choice, you may find that there are several CYCLED options for the same choice. One example would be the two-cycled choice of "Normal/Reverse", and another would be "Bit Inversion", where several variations would be cycled.

Watch your monitor to observe these changes.

Remember, COPYCAT is an **accessory** for the TNC. In most cases you have the identical response from COPYCAT sending the commands as if the KEYPAD button was pressed. If a button press on the TNC CYCLES a function you can also count on the same CYCLED response from COPYCAT, It is simply much easier and quicker our way.

3A. SITOR

A. Move the highlight bar to SITOR and click. This procedure enables the secondary menu with several choices. Again, you will notice that the FIRST

choice initially selects the changing to this mode, but also notice that subsequent clicks will cycle through the mode listed on the menu.

B. Once you choose the AUTOR mode you can then select options from the below items on the secondary menu. While   they are visible at all times, commands that are sent to the TNC, that are not valid for a given mode, will be ignored.

3B. TDM For your appropriate tnc, you can cycle between 0-3
   channels per your manual's selections.

4. FEC

   Move the highlight bar to FEC and click. This procedure enables the secondary menu with several choices. Again, you will notice that the FIRST choice initially selects the changing to this mode.SOME TNC'S REGARD THIS COMMAND AS THE COMMAND TO GO TO TRANSMIT. If this is the case, your tnc may not accept any other commands until you either press CTRL-C or   BREAK, to put it back in the receive mode.

5. FAX M-7000 / M-8000

   A. Move the highlight bar to FAX and click. This procedure enables the secondary menu with several choices. Again, you will notice that the FIRST choice initially selects the changing to this mode. Depending on if you own the M-7000 or M-8000, you will be placed in the FAX Mode.

   (The M-7000 and M-8000 do not supply FAX information to the computer.)

       1. YOU MUST HAVE A MONITOR ATTACHED TO YOUR UNIVERSAL TNC IN ORDER TO VIEW FAX PICTURES.

       2. YOU MUST HAVE A PRINTER ATTACHED TO YOUR UNIVERSAL TNC IN ORDER TO RECEIVE A PRINTOUT OF THE FAX PICTURES.

A. The M-7000's monitor will only display two tone or black and white Fax pictures with no gray levels.

B. The M-8000's VGA monitor2.1can display up to 16 gray levels.

C. There are several other options that can be clicked on to move The picture once reception is being displayed on your monitor. You can move the picture right or left in order to align the start of the scan to be on the edge of the display screen. Also reverse black to white pictures areas.

D. FAX - MFJ-1278 Click on the highlight area for the MFJ-1278. This will remove you2.1from the normal "windowing" environment and place you at a black and white screen with a box requesting the mode of fax you wish to use. Since the MFJ-1278 supplies data to the computer that can be converted into either B&W (2 tone) or MULTI-GREY (16 levels), you must choose the appropriate mode before entering into the FAX module. There are several choices available for different reception modes of fax. Consult your manual for the proper TYPE of fax mode. However these choices can be divided into two basic categories:

1. COMM (reception input received from the TNC). The most common are FAXMODE=3 for WEFAX of weather pictures, And FAXMODE=1 for NEWSfax pictures. Consult your TNC manual for frequencies and "IOC" (drum speed).

2. DISK files. (read files previously saved to disk). If you choose a disk letter (A: B: C: D: etc), you will be presented with a file directory. Choosing a valid fax picture file will load that picture to the screen. The file is automatically configured as to the grey level when it is loaded. please refer to a later chapter dedicated exclusively to FAX for further details.

FAX - PK-232

1. Click on the highlight area for the PK-232. This will remove you from the normal "windowing" environment and place you at a black and white screen with a box requesting the mode of fax you wish to use. Since the PK-232 supplies data to the computer that can be converted into only B&W (two tone) fax, your main choices are either the FAXMODE or the diskfile of saved fax pictures.

2. Please refer to a later chapter dedicated exclusively to FAX for further details.

MODE MACROS

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These macros are progammable and are in addition to the 20 "generic" macros in a seperate pull down menu. We feel there are many multiple commands necessary to select some modes such as packet, where several parameters are needed to be sent to the TNC at one time to facilitate initializing the unit for packet. The macros in this section are identical to the method for programming macros in the main pull down menu. Please refer to that section for further instructions.

BAUD

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Clicking on this menu option should only be done after the MODE has been selected. If a baud selection does not seem to take effect, be sure the TNC you are using is capable of using it. Not all tnc's can accept all the baud rates listed in the menus.

    A. AUTO BAUD DETECT

       This top option selects the TNC's ability to select a BAUD itself. This option is only available on Universal M-7000/8000 units.

    B. AUTO TUNE ALL

       This next option selects the TNC's ability to tune both the BAUD and the SHIFT in one operation. This is probably the preferred method on signals that you cannot determine the exact transmission characteristics. This option while, shown on both the BAUD and SHIFT menus, is identical in operation.

    C. PROGRAMMABLE BAUD

       This enables you to MANUALLY type in a baud that is not present on the Baud sub-menu. Remember, some TNCS such as the MFJ or PK-232 will only accept "standard" rates, and while no harm is done, they will usually reply wi**th "what?" or something similar if an invalid baud is sent.**

BASICS OF COPYCAT
SHIFT MENUS

D. SHIFT

_____

Clicking on this menu option should only be done after the MODE has been selected.

A. tune the Filters, and essentially tunes the radio/tnc to give you the proper center frequency of the shift by automatic tuning compensation of the TNC.

B. AUTO TUNE ALL - This next option selects the TNC's ability to tune both the BAUD and the SHIFT in one operation. This is probably the preferred method on signals that you cannot determine the exact transmission characteristics. This option while, shown on both the BAUD and SHIFT menus, is identical in operation.

C. PROGRAMMABLE (SHIFT) - This enables you to MANUALLY type in a shift that is not present on the Baud sub-menu. Remember, some TNCS such as the MFJ or PK-232 will only accept "standard" shifts, and while no harm is done, they will usually reply with "what?" or something similar if an invalid shift is sent.

MACROS

_____

There are bound to be commands that you use frequently that may not be on the menu's we have set up. These macros let you program your own command features effortlessly to more fully automate your decoding process.

Setting up MACROs is a three step process.

1. Selecting the MACRO (1-20) that you wish to program
2. Naming the macro (try to keep it to 15 characters of less)
3. Actually programming the MACRO.

SELECTING A MACRO TO PROGRAM/EDIT

Each time you select to program a macro, a square input box will appear. For selection, simply enter the number of the macro (from 1 to 10).

NAMING A MACRO

Pick a short name that is descriptive of what the macro operation does. Try to keep the description to 15 letters of less.

PROGRAMMING THE MACRO

There are four "built in" features to a MACRO:

1. Typing "<CR>" at any place in the MACRO, at run time, will send a carriage return to the tnc.

2. Typing "^" (also called control or "tilde") at any place in the MACRO, at run time, will send to the tnc the NEXT character as a control PLUS that following letter.

EXAMPLE: "^C" would send the tnc a ASCII character (3), which is the standard accepted (CTRL-C) "BREAK" code.

"^]" would send a ASCII character (27) which is the <ESC>key.

3. Typing "," (comma) will PAUSE the macro for 1 second. Several commas would pause the macro several seconds.

4.Typing <DEC> followed by a number will send that character to
the terminal. If you want to send a DECIMAL 27 (The ESC character), you
would type in <DEC27>.

If you are editing a macro previously created, you will notice the FIRST
character in the NAME of the macro is a "&", followed by the number and a "-
". This is to tell COPYCAT to "highlight" the following letter for letting you
simply press the key highlighted instead of having to move the cursor bar to
that selection. COPYCAT WILL ADD THESE LETTERS FOR YOU on each
naming of the macro, so you do not have to do it yourself.

EXAMPLE MACRO: (PK-232) "^C AMTOR <CR> ,,, ALIST <R>

Send Control"C" to initialize receive, set it for AMTOR, and pause 3 seconds,
and then set tnc for LISTEN mode of AMTOR

<CR><CR>*<CR>*<CR>"

will send 4 "*'s" followed by a carriage return for each one.

PORT CLOSED/OPEN

_____

This is a toggled option, that is, each time you click on this selection, it will cycle between ON and OFF. You will also find with some TNCS, that the port is automatically opened IF a MODE is clicked on before opening the port for reception.

DEVICES

_____

Click on this item and a sub menu will enable you to select your TNC, COMM PORT, BAUD RATE, and other parameters. It is wise to consult the TNC's manual concerning the parameters to insure proper communications between COPYCAT and the TNC. There is a DEFAULT choice that will choose the factory set parameters for the particular TNC you are using, however this may not necessarily be the parameters that are in existence in the TNC at the moment. These settings are saved each time you exit COPYCAT.

SCREEN

_____

Click on this item and a sub menu will enable you to select colors for the text screen's foreground and background colors, PLUS the number of lines available to the text screen's visible buffer. You cannot access a resolution beyond the capabilities of your Graphics Card. Setting the colors is simple. Clicking on the foreground or background will pop up a color swatch box. Clicking on the appropriate color will immediately be reflected with your choice on the text screen.

SETTINGS

_____

This menu item is a collection of things that don't fit into any of the other categories. As we improve COPYCAT, this selection list will grow. These settings, as well as many other operations that involve the COPYCAT environment are saved to the COPYCAT configuration file each time you exit to the MAIN MENU.

TIMESTAMP ON/OFF

Clicking this option toggles ON/OFF the automatic timestamp option. With the option ON, every 15 minutes the date and time will be automatically sent to the terminal text screen, and become part of the text. This is handy for unattended monitoring, where you would like to have an idea of the time incoming text was received.

CR Filter.

 We have noticed with SOME TNC's, that in the TERMINAL COPYCAT) mode, many times there are several repetitive CARRIAGE returns, that make the text screen much too open and empty. This occurs a lot with packet reception. This will cancel repetitive line feeds beyond the first one, and therefore make the text file more compact and easy to read

INITIALIZE TNC

This will send the initialization sequence required by some TNC's for "Auto sign on" and auto baud detect, upon power up of the TNC.

TERMINAL BUFFER LENGTH

The default setting is 100 characters. This is to enable the terminal text screen to "catch up" when data is coming in too fast to be handled. A good example of this is in the fax mode for the PK-232, where the data is streaming in at 900 characters per second. This will essentially set the lower limit, and if the buffer fills up beyond that figure it, the program will immediately grab the entire buffer instead of a single character and place it at the end of the incoming text on the screen. This may cause some "screen flashing".

BUTTONS

_____

The lower part of the screen contains all the command and label buttons that either give feedback to the operator of decoding status, or enable functions most often used that do not pertain directly to the actual decoding selections of the top menu. LABEL buttons appear to be "inset" and do not respond to "clicking". they are for feedback only. COMMAND buttons, appear to be "outset" or pushing out. Clicking these buttons will immediately invoke the named response. We will proceed from left to right covering both FIRST AND SECOND ROW buttons in sequence.

MODE BUTTON (Label)

_____

When you first enter the terminal, this button will NOT have any information as to selected MODE. Once the MODE is selected by clicking on the menu item, this box will change to reflect the current operating MODE.

BAUD BUTTON (Label)

_____

When you first enter the terminal, this button will NOT have any information as to selected BAUD. Once the BAUD is selected by clicking on the menu item, this box will change to reflect the current operating BAUD.

ERASE BUFFER (Command)

_____

If you wish to completely erase the text screen buffer, this will immediately and permanently erase all contents of the text terminal AND incoming buffer. If you want to save this as a file, you must do so BEFORE choosing this option.

STATUS ON/OFF (Command)

_____

This is a function essentially for the M-7000 and M-8000. It also works with the PK-232 by sending the "OPMODE" command. The M-8000 must be "Cycled" through all the modes to get to the one that is chosen. COPYCAT is dependant on this response from the M-8000 to determine the proper cycling of modes on the next pull down entry. It suggested to leave this status ON with the M-8000 to reduce errors in changing modes.

Basically this option has two functions:

1. It will automatically send a "polling" command to the TNC at 15 minute intervals. This will cause the TNC to respond with a one or two line text message containing various parameters that the TNC is presently set at. ALSO, each time a mode, baud, shift etc is changed, the prompt will be generated by the "polling" command.

2. Each 1-2 minutes, the incoming text is examined to see if it contains "key words" such as the MODE or BAUD etc. and these parameters are then updated in the MODE and BAUD buttons.

If you do not want this type AUTOMATIC operation to take place, click the STATUS option to OFF.

3. The MFJ and PK-232 will respond when this button is clicked with a one time response as to the mode in operation.

TYPE AHEAD BUFFER (label window)

_____

This is a very primitive keyboard/word processor. Any keystrokes you wish sent to the TNC will show up in this FIRST ROW MIDDLE window. Pressing <ENTER>sends the command and clears the buffer. Backspace is also recognized to enable the user to erase mistakes. The type ahead buffer employs the indentical "syntax" as the macro's. Please refer to the macro menu section for full instructions. Also, IF YOU PRESS the CTRL key, the word "CTRL" will appear. THE NEXT letter you type, will be sent to the TNC as a control character. THIS IS CASE SENSITIVE, so if the wrong command is sent make sure you send it in the PROPER CASE.

EXAMPLE: <CTRL> C would send a CONTROL C (ASCII 3) to the TNC. This is a character commonly used to emulate the "break key". This would be helpful in certain situations if the TNC required a control character to enable or disable a function.The window of 25 characters "scrolls" to the left as you reach the limit of the view window. You can continue typing for as long as you wish. Pressing ENTER will "send" that string of characters to the TNC, and clears the window for the next input. Although this keystrokes are "mirrored" in the visual text on the TEXT SCREEN buffer, they do not take effect until the string in the type ahead window is sent.

****** *COPYCAT-PRO ONLY* ******

Copycat-Pro owners also have the ability in this "type ahead buffer" to send radio frequency commands and TNC mode commands direectly to the appropriate devices. This uses the exact same convention as if you were placing these commands into the comments field of a frequency record.

For Example:

To send a frequency and reception mode to the radio you simply type in:

"/F 12.345 USB" to send 12.345 MHZ to the radio and change the reception mode to USB

****** *COPYCAT-PRO ONLY* ******

In either COPYCAT 2.1 OR COPYCAT-PRO To send a command directly to the TNC, you can simply type in:.

/M RTTY /B 75 /S 840 to sent the TNC for RTTY mode and change baud to 75 and shift to 840 HZ

NUMBER OF BYTES IN TERMINAL TEXT SCREEN (Label)

_____

This is the button to the left of the CLOCK and is simply that. If the terminal text screen buffer is approaching 32K, you might want to save the existing text, so as to not lose the first part. As the buffer exceeds 32K, the first part of the buffer is deleted, about 2K at a time, to make room for incoming data.

CLOCK

_____

Just a clock, everybody wants one.

PRINTER ON/OFF

_____

Enables/disables immediate printing to a printer connected to printer port ONE, commonly noted as LPT1: This operation is independent of any other printer operations.SPOOLER ON/OFF (Command) APPENDS the incoming text to a file named "SPOOLER.TXT". There is NO practical limit to the file's size, beyond the disk space of course, and each subsequent ON/OFF will continue to "SPOOL" to this file. There IS a limit of 32K if you wish to load it into the TEXT SCREEN BUFFER, so keep this in mind.

LAST CMD (Command)

_____

Whatever you selected as your last MODE, BAUD or SHIFT is stored as a "echo command" in this button, and clicking it will repeat that command. This is real handy for multiple "cycling" commands such as CW speed and or SITOR modes, and enables you to not have to CLICK, CLICK on the menu options to get to the right layer to issue a simple command. This button only stores commands send

from a pull down menu, and will not "echo" commands sent directly from the type ahead buffer or macros.

BRK (Command)

_____

This button sends the CTRL-C or Break. This command is usually used with a TNC to break out of transmit or listen modes.

QUIT (Command)

_____

Takes you to the MAIN MENU, but does NOT close the comm port. CAUTION, unless you save your Text Screen Buffer before exiting completely to DOS..........
            it will ALL BE LOST.

TEXT SCREEN

_____

IT IS IMPORTANT TO NOTE THAT THE CURSOR MUST BE AT THE END OF THE TEXT SCREEN'S BUFFER IN ORDER FOR INCOMING DATA TO BE RECORDED INTO THE TEXT SCREEN BUFFER/VIEW SCREEN.

So... if you decide to "Browse" around in the text screen with your cursor controls, be sure to always RETURN the CURSOR to the end of the file to re-enable the data input from the TNC. Once the cursor is moved away from the END of the buffer, an auxiliary buffer takes over until you resume, but it cannot hold the same size content as the text screen buffer. We have placed a timer into the program that checks to see if the cursor is at the end of the text, and every 4 minutes, if no keystrokes have occurred, will automatically send the cursor to the end of the text so further reception can be logged.

TEXT SCREEN FUNCTIONS/ABILITIES

_____

This is the most visual part of COPYCAT, and also may be the least understood. There are several "special" features of the text screen, view port that need to be mentioned FIRST in order to understand just what is presented to the user.The text screen is not simply a scrolling viewport for the incoming data. It is a full featured, text editor, with all the abilities of a full blown word processor. As data is sent to COPYCAT, each character is added to the end of a text file that can be as big as 32,000 bytes. In addition full WORDWRAP is automatic. FULL cut and paste, delete, type over, insert and etc are all possible WHILE incoming data is still being received. Because of the way COPYCAT treats the "EVENTS" that may be going on simultaneously, such as spooling, printing, auto-mode detection, and etc, the screen's input from the TNC may not always appear to be instantaneous, and in fact a "semi slow motion" scrolling. Be assured this is normal, and all incoming text is put into the buffer. The basic features of the editor built into the text screen buffer are as follows.

BASICS OF COPYCAT
TEXT SCREEN / BUFFER

1.EDITING
You can edit the contents of the text screen in one of two ways.

    A. Pressing the ARROW keys IF the blinking cursor is present on the text screen will move the cursor to a position where editing or type over can take place.

    B. Move mouse to the area you wish to edit and then click to place the cursor on the starting place.

2. HIGHLIGHTING TEXT
    A. Hold down the SHIFT key and move the arrow keys to highlight.
    B. Hold down the left mouse button and "slide" the cursor to highlight.

3. DELETE TEXT
    A. Press the <L> key and highlighted text will disappear.

    B .If no text is highlighted, the right most character will be deleted.

4. INSERT TEXT
Press the key and each keystroke you make will be inserted OR typed over into the text. THIS IS A TOGGLED feature.

5. PASTE TEXT

Holding down the SHIFT key and pressing the <DEL> key will delete the highlighted text, and place it into a clipboard buffer. Move the cursor to the place for the insert, and THEN, hold down the SHIFT key and press <INS>. This will paste the text into the area where the cursor is positioned.

6. GO TO TOP of TEXT SCREEN
Simultaneously hold down first the CTRL key and the HOME key

7. GO TO BOTTOM of TEXT SCREEN

Simultaneously hold down first the CTRL key and the END key

8. MICROSOFT SIMULATION

Without going into EVERY additional keystroke and commandof COPYCAT'S unique word processor, suffice it to say that almost   EVERY feature available in a quality word processor is available to you while editing, and if you have EVER used a Microsoft word processor you already know how to use the one in COPYCAT.

Once you are finished EDITING you MUST then place the cursor at the end of the entire text in order to RESUME receiving data from the TNC. Once the cursor is at the end of the text (another way is to Press CTRL+END), the text stored in the receive "auxiliary" buffer will be dumped immediately to the main text screen.

AGAIN, IT IS IMPORTANT TO NOTE THAT THE CURSOR must BE AT THE END OF THE TEXT SCREEN'S BUFFER IN ORDER FOR INCOMING DATA TO BE RECORDED INTO THE TEXT SCREEN BUFFER/VIEW SCREEN. AND.....

There IS some limit as to how much time/data can be held while all the editing or browsing operations are being made, however you should not have that much difficulty and should not lose anything if you take under 4-5 minutes. It all depends on the intensity of the incoming data.

BASICS OF COPYCAT
COMMAND KEYS FOR FREQUENCY USAGE

****** *COPYCAT-PRO ONLY* ******

USING THE FREQUENCY FILES WITH COPYCAT
_____

First, a little overview of the new COPYCAT-PRO's interaction between the COPYCAT tnc control and the FREQUENCY radio control.

SCANCAT is a computer control / scanning program, for most popular shortwave and VHF radios that have a RS232 serial port interface. While this program has a simplified terminal program to enable you to toggle back and forth between scanning, and decoding digital signals, it is a compromise at best.

YOU MUST HAVE A RS232 COMPUTER INTERFACE for your radio (unless internally supplied) ICOM, YAESU, and KENWOOD use an external "box" that converts the radio's TTL level to RS232 serial requriements. AOR, NRD and Watkins Johnson do not need this level convertor. SOME radios such as the NRD-535, need an adaptor similiar to the M-7000's adaptor to reconfigure the non standard pin-out of the radio serial port. W/J needs a NULL MODEM adaptor on the back of the radio.

COPYCAT 1.02 was our first effort at automating the control of the M7000 and M8000 Universal decoders. While excellant decoders, these machines are essentially difficult to use as a stand alone decoder, because all control has to be done through manually pressing UN-NAMED buttons on the front panel. That is where COPYCAT came into being. Plus, there is no internal facility for storing but a couple of pages of incoming text. There is NO facility for storing to a disk file.

COPYCAT-PRO takes BOTH of these two programs and integrates the most usefull features of EACH in order to give you complete automated control on not only the TNC but the frequency control of the receiver. This means that with just ONE keypress, you can change the receiver to a frequency, AND at the same time, change your TNC to the proper modes for that reception. COPYCAT-PRO is not intended as complete receiver control program any more than SCANCAT is supposed to be a complete TNC control program. Eacn has it's own strengths that makes it a valuable

stand alone program. But when combined together for decoder usage, COPYCAT-PRO is the ONLY program of its kind in existence.

So, with COPYCAT-PRO, you can import files from SCANCAT's file structure, edit the frequencies to reflect the TNC "macro commands". and without much extra typing, have a complete monitoring station at your fingertips. We can also supply a 3 1/2 meg Disk of frequencies, "Disk Full of Frequencies". that have been gleaned from BBS's and frequency disks from all over the world.

A. If you followed the initial setup instructions in the front of the manual, you have already set up a frequency file into the file menu.
   If this is so, press F3 to instantly POP you back up with the records of frequencies still showing in the frequency viewer window.
B. If you need to load a file FIRST, press F2
   This will load a frequency file into memory. Depending on the EXTENSION used, loading determines the type of file structure to read in and what menu window to place the file into. *.FRQ, *.SCN and *.CCF files will be loaded into the FREQUENCY viewer REGARDLESS OF YOUR CHOICE OF LOADING METHODS.

   If you have edited the existing file, you can save it before loading another. ALL saved frequency files are save to "*.CCF" regarless of the file extension that was used when initially read in from a "*.FRQ" or "*.SCN" file.

   SO, LET'S TURN THE PAGE and get started with using the frequency files to control your receiver
   .

BASICS OF COPYCAT
COMMAND KEYS FOR FREQUENCY USAGE

***** *COPYCAT-PRO ONLY* ******

FREQUENCY WINDOW COMMAND KEYS

_____

These command keys are active once a frequency file
is loaded and the records are showing in the window
DON'T FORGET, YOUR COMM PORTS MUST BE OPEN.

ENTER
   Pressing ENTER when the highlight is over a frequency will
   immediately send the frequency and mode (am,fm,rtty etc) to the radio.
   This is the mode for the RADIO.
   At the same time, if there are "macro's" within the right hand comments
   field, they will also be sent to the TNC. (see below for TNC macros)

F1 Pops up the Help file menu

F3 Pops UP/DOWN the VIEWER MENUS.
   Once ANY viewer is popped up, Pressing either F1 - F2 or F3 will
   access any of the THREE viewer menus. Look at the botttom menu bar
   for the keys active in the particular window of choice.PRESSING <ESC>
   successively removes the menus and returns you to the text input
   screen buffer.

F4 ADD a record to the database. (Freq.Files only)
   You are cycled through each of the four fields. (see F5) and the record
   is "tacked on the end" of the file.
F5 EDIT the highlighted line (Freq.Files only)
   There are 4 fields in each line consisting of
   1. Description
   2. Frequency
   3. Mode of reception of radio (USB, LSB etc.)
   4. Comments, and/or MACRO's to be sent to the TNC
   You are cycled through each of the four fields to change the currently
    selected record.

F7 PRINT - You can send to the printer the ENTIRE Frequency list

F8 SORT - (FREQUENCY POP UP MENU ONLY)
You can sort by any of the four fields, (IE:
1.Description
2.Frequency
3.Mode
4.Comments
*   And also you can sort in ASCending or DEScending order. Just follow*
*   the prompts. This sort is only possible in the Frequency Files Menu.*

F9   SEARCH for a phrase or keyword. ANY presence of the search word
within the entire line will put the highlight bar to that line, AND, also
change the radio AND TNC if present. (device changes in Freq.Files only)

F10   SEARCH AGAIN for the previously assigned search keyword, AND,
also change the radio AND TNC if present. (device changes in Freq.Files
only). If you have chosen a search criteria in the Frequency file, this ability
can be used EVEN IF THE MENU IS NOT PULLED DOWN, in order to access
more than ONE record with the search string. If you did not choose a
search criteria, each successive F-10 press will go to next record (cycle 1
to xx)

BASICS OF COPYCAT
TNC MACROS IN FREQUENCY FILES

TNC MACRO'S in Frequency files
_____

These are quite simple. There are only 3 different TNC MACRO selections.

1. /M Selects mode of reception for the TNC
2. /B Selects BAUD rate for the MODE Selected for the TNC
3. /S Selects SHIFT of the reception mode for the TNC

EDIT a record, and at the prompt for COMMENTS/MACRO'S, enter the appropriate "/X" command followed by a SPACE and then COMMAND and then ANOTHER SPACE if followed by another macro command. Unless the TNC has particular requirements, there is no set order in which the macros need to be placed into the comments field. As long as the conventions of "/" space "command" space "value" is adheard to you will have not difficulty However, it would be best to stick with the below order to make sure the MODE is set first and then other values.

EXAMPLE "/M RTTY /B 75 /S 850"
Selects SHIFT of 850
Selects BAUD of 75
Selects MODE of RTTY

If you choose a MODE, SHIFT or BAUD that is not supported by your TNC it will probably be ignored. If you experience a particular MODE that you know is supported but it does not work, check our LIST of MODE KEYWORDS to be sure you are using one supported. These are based on the spelling convention used by our COPYCAT program, and may not be the same as you are used to. Modes are NOT case sensitive. ALSO, anything in the comments field not preceeded by the "/" command will be considered TEXT and ignored.

*LIST OF TNC MODES RECOGNIZED BY COPYCAT FREQUENCY FILES
(SPELLING MUST BE EXACT TO BE ACCEPTED AS VALID MODE)*

ARQ	ARQE3	ARQM4	ARQS
ARQE	ARQM2	ARQSWED	ARQT

BASICS OF COPYCAT
TNC MACROS IN FREQUENCY FILES

ASCII	FECS	PACTOR	SITORB
AUTOR	GOLAY	POCSAG	SWED
BAUDOT	MORSE	PICCOLO	SYNC
CW	NAVTEX	RTTY	
FAX	PACKET300	SITOR	
FECA	PACKET1200	SITORA	

LIST OF RADIO MODES RECOGNIZED BY COPYCAT FREQUENCY FILES
(SPELLING MUST BE EXACT TO BE ACCEPTED AS VALID MODE)

LSB	FM-Narrow	AM	CW-WIDE
USB	FM-Wide	RTTY	CW-NARROW
SSB	FSK	FAX	SYNC-AM
AM-Narrow	CW	EC-USB	
AM-Wide	FM	EC-LSB	

That is really all there is to it!. COPYCAT-PRO's ability to control your TNC and the RADIO simultaneously is extremely powerfull, yet quite simple in operation. You should not have any difficulty with this as long as you remember to have BOTH devices selected before you turn on your comm ports. Most of our problems with the program not working as expected has been because we didn't set up COPYCAT'S COMM PORTS correctly.

****** COPYCAT-PRO ONLY ******

FAX RECEPTION MODULE

_____

This module only applies to the MFJ-1278 or PK-232. Since these units supply a data stream that contains fax information, a picture can be placed on your screen in real time. The MFJ-1278 supplies EITHER 2- level B&W or 16-level (grey level). The PK-232 will only supply 2- level (B&W).

Once you enter the FAX Module, the screen will present three choices of either:

1. FAX - to receive incoming faxes from the TNC
2. DISKFILES - the ability to view previously saved fax files from the disk.
<Q>uit.

A. Entering (1) will select the TNC input.
B. Entering (2) will present the next prompt which asks for you to enter a valid drive letter and/or path. You can then select a previously saved diskfile for immediate viewing.

 EXAMPLE: "C:\copycat" will select drive C: and the path "\COPYCAT" Use the input prompt to select a file for viewing.After either of the above choices, you are taken to the fax screen. The operations are the same, whether viewing a diskfile,

 or TNC reception.

 The fax screen will first appear as blank, with a menu bar at the top and bottom of the screen. The bottom menu bar will initially have a "counter" that says "loading xxxx". This shows the size of the waiting buffer from the TNC. This number will count upward until it exceeds 2500 and then the FAX picture will start printing. IF THIS NUMBER DOES NOT COUNT UPWARD AFTER 20-30 SECONDS, press " K ". This will tell the TNC to immediately start sending fax information. Sometimes the TNC stops sending if the terminal link is closed, OR if a "WHITE SPACE IDLE TONE" is being received by the receiver. This tone is a constant high pitched tone, unlike the clock type tones of the incoming fax.

FAX RECEPTION COMMAND KEYS

_____

<ESC>=EXIT

   This is a Universal Exit Key

<B>=BACKWARD

   Reverses printing Direction (right to left)

<C>=CLEAR SCREEN

   Clears screen and restarts printing at top

<F>=DATE/TIME

   Set system clock and date

<F>=FORWARD

   Standard printing direction of (left to right)

<G>=GRAPHICS CARD

   Cycles between CGA EGA or VGA (will only cycle to highest card in system)

<J>=JUSTIFY

   Adjusts beginning of frame to the Leftmost side . A small2.1up-arrow will appear. use the left or right arrows to place it under the place where the picture frame starts, and press ENTER. From that point on, the picture will start scanning at the left side of the screen. <K or L> START SYNC If picture is being held by TNC until sync signal indicates beginning of fax, these keys will start immediate printing.<M>=SELECT MENUBAR Rotates between several Menu's (for help) <P>=PRINTER ON/OFF

Choose between Regular or High density

<Q>=QUALITY/DENSITY

   While printing toggles density of dot's

<R>=REVERSE

   Reverses Black on White to WHITE on BLACK printing. This applies to the SCREEN as well as the printer.

<S>POOL

Toggles SPOOLING / Save of Graphic ON/OFF. You are prompted for a filename to save the file to. If you choose the same filename, it will be overwritten. You can also "cutout" a new file while printing from an existing disk file. Just enter a NEW filename while viewing a diskfile and the "cut out" will be written as a completly new file.

<T> =TIMED SPOOL

Allows up to 5 preset unattended on/off's

<V>=VIDEO MODE

Cycles between CGA - EGA - VGA <-> or + CONTRAST Cycles the contrast of the screen's picture. Will not go beyond the Graphics card's capabilities.

<L/R>ARROWS

Frames larger than screen are compressed (Wefax). This varies the UNcompressed frame sizing<U/D > ARWS (When viewing from the Disk) Enables you to MOVE FWD/BKWD 1/6TH PAGE <U/D> PAGE (When viewing from the Disk) Enables you to MOVE FWD/BKWD FULL PAGE

<F1 THRU F7>

SELECTS FAXMODE 1-7 if in TNC receive mode   (MFJ-1278 ONLY)

<SPACE BAR >

Pauses screen operations NOTE** This can lock up some TNC 's if in Multigray mode, if too long, as TNC Buffer fills up. Once in the "PAUSE" mode, you can:
  1. Press <SPACE> to restart
  2. <+ or -> to - Change contrast,
  3. or <C> to Continue

There are sometimes difficulties encountered, when first entering the video screen area, in that the video will not start printing. Whenever you first enter the video area the bottom of the screen has a prompt that states "loading ####". If this number does not start counting upward within a short space of time, it is advised to press "K" a couple of times to unlock the "sync". OR press <ESC> TWICE to go back to the selection menu and restart everything by pressing <1>

for TNC receive. This difficulty is caused by the TNC's buffer filling up and not initiating "start sending data". The MFJ has a habit of locking up if it's buffer becomes completely full when in the multi-level grey mode. If you pause a picture too long, the buffer can fill up and lock out any further data transmission. Restarting at the main fax selection prompt seems to be the only efficient way of getting a good start.

ABOUT PRINTING FAX'S AND PRINTERS

At this version, COPYCAT only supports a dot-matrix printer, with graphics capabilities, with this version. Most dot-matrix 9 pin printers will emulate the IBM standard, also known as the EPSON standard. If your printer is IBM graphics or EPSON compatible it should work. Printing a fax with mostly a DARK background will use up your ribbons in a very short space of time. Use the reverse key to print a white background with black dots on WEFAX.

HINTS AND QUIRKS and PROBLEMS

M-7000

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If the M-7000 cannot be accessed, check that your serial adaptor is secure in the rear of the tnc. ALSO, if you have made your own adaptor, some necessary wires that need to be connected could be miswired. Check your manual for correct wiring or purchase our guaranteed serial adaptor.

M-8000

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1. TNC WON'T TAKE COMMANDS or changes to wrong mode

There are several versions of the M-8000. Since each has it's own unique look up table for the modes, and each has it's own assigned number, choosing the WRONG version will result in improper modes being sent to the unit.

ALSO, we have noticed that some of the older models that were the first to be manufactured (version 1) will not accept MODE commands even though the shift and baud will be accepted. We recommend you contact Universal and install a upgrade ROM. Once this is done, all will function properly.

SCREEN SCROLLS UP A MENU EACH TIME MODES CHANGED

There are two methods of addressing the mode changes on the M-8000. The "default method" will scroll up the menu on the M-8000 monitor, pause, and then change the mode while this menu is still on the screen. Some users have expressed the desire to use the "non-menu" method, which changes modes without the visual monitor menu scrolling on screen. If you wish to use this alternate method, execute COPYCAT-PRO from the command line in the following manner:

"COPYCAT ALTERNATE" (follow the COPYCAT with a space followed by the word ALTERNATE

The problem with the second method is that in order for the command to "take", the monitor screen must be in the "graphic" mode. In other words you must see the spectral display at the bottom of the monitor's screen. Since there is no way through software to be sure this screen is "up", sometimes the commands sent to the M-8000 will not take. you must MANUALLY change to the GRAPHIC SCREEN" mode.

PK-232

_____

We have noticed at times that the PK-232 has difficulty in "logging on" if not already initialized. If you cannot get the PK-232 to sign on with the initial screen and copyright, FIRST turn OFF and ON again the unit, and then enter "*" several times and press enter to get the tnc to recognize that a terminal program is trying to address it. This will usually log on the TNC and you should experience no further problems

PROGRAM LOCKS UP AND WILL NOT RESPOND

_____

The most common reason for this is if you have assigned a wrong comm port to either the radio or the tnc. YOU CANNOT USE THE SAME COMM PORT FOR BOTH TNC AND RADIO.

If you are not using either the RADIO or the TNC, then disable the comm port assignments by choosing "NO RADIO" or "NO TNC" from the "Devices" menu. This problem can surface suddenly, especially if you forget to turn on your radio or accidentally disconnect the serial cables.

FINAL COMMENTS

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We hope you enjoy the COPYCAT concept. We welcome comments and criticism. We beleive in listening to the customer. After all, YOU are the one that uses the software daily, and YOU are the real feedback to enable us to improve and make our product more valuable for the listening hobby.You may address comments to:

COMPUTER AIDED TECHNOLOGIES

P.O. BOX 18285

SHREVEPORT, LA 71138

Technical assistance is available 9am to 2pm M-F (Central time):

318-687-2555

We also have a 24 hour FAX line 318-686-0449

THANK YOU FOR YOUR SUPPORT

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