

# GETTING STARTED

The distribution disk will autoboot when you turn on your drive with the disk loaded. You will be presented with a menu which will allow you to enter PROTERM128 or TEXT-RIGHT. When in PROTERM128, you can get to the help screen by pressing the C= (Commodore key) and the help key simultaneously.

You can exit to TEXT-RIGHT from the help screen by pressing B for buffer options, and then pressing E for edit the buffer. TEXT-RIGHT will overlay PROTERM128, however if you have any text in the PROTERM buffer, it will remain intact ready for editing when TEXT-RIGHT loads. When you have edited your text with TEXT-RIGHT, and wish to transmit it, you may re-enter PROTERM128 by pressing the C= key and then the T (for terminal). PROTERM128 will overlay TEXT-RIGHT, again leaving your buffer intact ready for transmission.

# PRO-TERM128

TERMINAL SOFTWARE FOR YOUR 128

6 19**86 E.** Anderson & G. Farmaner

WITH

# TEXT-RIGHT

FULLY INTEGRATED WORD PROCESSOR

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Emulates VT-100, VT-52
Punter-C1
XModem (CRC), (Checksum), (CIS)
Informative Status Line
Works with Smart Modems
Extensive Auto-Dial / Auto-Logon Commands
Upload / Download
Definable Function Keys
Complete Disk Support
Transparent Stream to Printer
Receive Direct to Disk
64 K Buffer

# PRO-TERM 128

# INTELLIBENT TERNINAL PACKAGE

# Including TEXT-RIGHT

# FULLY INTEGRATED WORD PROCESSOR

PRO-TERM is a powerful, 100% machine language terminal package that is easy to use, yet powerful enough to meet the needs of both beginners and professionals alike. Welcome to the exciting field of telecommunications.

PRO-TERM includes the following excellent features:

- 1. -40/80 column display.
- 2. -Informative status line.
- -Extensive Auto-Dial/Auto-logon commands
- 4. -Upload/Download:

# CHAPTER 1

# INTRODUCTION

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- (Punter) (X/ON X/OFF) (.IMG FILES).
- 6. -Ram Buffer options.
- 7. -Complete Disk support, DOS commands.
- 8. dual drive, or two single drives.
- 9. -Complete Printer support.
- 10. -Transparent stream to Printer.
- 11. -VT100/VT52 Emulation.
- 12. -Full screen editor (40/80 columns).
- 13. -Xmodem protocol.
- 14. -Steve Punter's new C1 protocol.
- 15. -Streaming directly to disk.

PRO-TERM can be used for connecting into the computer at work or at school, providing two of the most popular emulations. With three methods of Uploading and Downloading, PRO-TERM allows you to easily send or receive BASIC or machine language programs files between your friends, or larger systems.

## 1.1 HARDWARE

PRO-TERM requires a Commodore128, disk drive and a Commodore or, Commodore compatible, 1650 or 1600 modem.

PRO-TERM has additional commands for two 1541 disk drives. It will also support IEEE drives such as the 2031, 4040, or the new MSD drives, when used with a transparent IEEE card. PRO-TERM allows you to use every feature of the 1650 auto modem, and in addition PRO-TERM works with the Hayes Smartmodem 1200, or any other RS-232 type modem.

supports either a Commodore printer, or any, properly interfaced, parallel printer.

## 1.2 LOADING PRO-TERM

Before loading in PRO-TERM make sure that your modem is properly connected. Never attach your modem, when your computer is turned on.

To load PRO-TERM, place the program diskette in you disk drive. Type, LOAD"PRO-TERM",8,1 and press RETURN. The computer will print the following message:

## SEARCHING FOR PRO-TERM LOADING

The screen will then go blank for a few seconds, and then the Copyright message will appear on the screen as the program is loading in. After about a minute the following message will appear:

Insert user diskette

Hit RETURN to load defaults

Hit any other key to continue

If you are using PRO-TERM for the first time, or if you have not created any defaults, hit any key besides RETURN. This will bring you right to terminal mode. You can now take out the Distribution Diskette and put it safely away until your next session. See the section on DEFAULTS for more information on how to create different terminal setups.

## 1.3 GETTING STARTED

Although many of the phrases in telecommunications may sound complicated, it is actually quite easy to connect your Commodore128 to the outside world. PRO-TERM uses concise, easy to use menus for most of its options, making PRO-TERM commands simple to use. Since each key sequence corresponds to the first letter of each operation, PRO-TERM commands are also easy to remember. The following section, is a short tutorial on how to use PRO-TERM.

First of all, you should load in PRO-TERM so that you can follow any examples given in this section. If you encounter any problems loading the program in, re-read the section on LOADING PRO-TERM.

#### 1.4 (T) ERMINAL MODE

Once you have loaded in the program, you will enter Terminal mode. Terminal mode is where you will be most often, as this screen is

where data received over the Modem is displayed. PRO-TERM commands can be accessed from the Terminal screen either, O n-Line (During transmission), or Off-line. The Terminal screen appears with the status line and the copyright message

The display on the very top of the screen is the Status line, and just below the Copyright notice, is a message which informs you whether a connection has been made with your Commodore and another Computer.

To access PRO-TERM commands from the Terminal screen, simply hold down the Commodore key (C=), and then press the appropriate key for the desired operation. For example, try holding down the (C=) key and pressing (H), for the Help screen.

## 1.5 (H) ELP#SCREEN

The Help screen serves as a quick reference to each PRO-TERM command. Commands can also be accessed from the help screen by either holding down the (C=) key and pressing the first character of the command you wish to execute, or by pressing the first character of the command by itself.

Press RETURN to get back to Terminal mode. Notice that the text that was on the Terminal screen, is still there. Leaving Terminal mode does not destroy the contents of the screen.

## CHAPTER 2

## COMMAND DESCRIPTION

The following section gives a brief description of each PRO-TERM command. A full explanation of each command can be found under PRO-TERM USER COMMANDS.

## 2.1 (A) UTO DIAL

The Auto dial command gives you the following basic options:

- 1. Dial a number from the directory
- 2. Dial from the keyboard
- 3. Cycle numbers from the directory
- 4. Execute Auto-logon
- 5. Save numbers

- 6. Load numbers
- 7. Review logon time

Up to thirty telephone numbers can be stored in the telephone directory.

# 2.2 (B) UFFER OPTIONS

This brings you to the Buffer options senu:

BYTES FREE : XXXXX BYTES USED : XXXXX

# BUFFER OPTIONS

(B) uffer to disk.....
(D) isk file transmit..
(E) dit buffer.....
(L) oad file from disk.
(P) rint-out buffer....
(R) ead/spool disk file
(S) ave buffer to disk.
(T) ransmit buffer....
set laft
Len laft
PRESS KEY OF CHOICE

Press RETURN to go to TERMINAL mode.

(B) uffer to disk.

Use this command to send the contents of your buffer to a disk file.

(D) isk file transmit

This command will allow you to upload directly from a file on disk.

#### (E)dit Buffer

For your convenience, the TEXT-RIGHT word processor has been provided on the PRO-TERM 128 distribution diskette. When the PRO-TERM diskette first boots you are presented with a menu, which allows you, to go either to TEXT-RIGHT or PRO-TERM. This editor is integrated with PRO-TERM so as to conveniently allow you to edit the buffer and enter PRO-TERM with the buffer intact, ready for transmission. You can capture information in the buffer when in terminal mode. press C= B to enter the buffer options and press E to edit the buffer. TEXT-RIGHT will then overlay PRO-TERM leaving the text intact and ready for editing. In this case you should always disconnect your terminal if you are on-line, and save your buffer to a file for safety. REFER to Appendix D for a full listing of the TEXT-RIGHT commands. listing of the TEXT-RIGHT commands.

#### (L)oad file from disk

Loading the buffer retrieves text from a sequential file. When the load occurs, data will be appended to the contents of the buffer unless it is cleared first. This data can be previously saved text, or text generated with a word processor. Sequentialized basic programs or .IMG files can be loaded in for tramsmission. High level language source code such as Pascal and Fortran can be loaded into the buffer for transmission line by line with a Transmit a line command.

(P) rint Buffer.

The Print Buffer command prints the entire buffer space. If you are using a printer that has additional commands, such as the EPSON or GEMINI printers, then Printer commands, such as pitch and perforation skip can be sent. (SEE PRINTER COMMANDS). The Print Buffer command can be aborted by pressing (RUN/STOP). If the printer does not seem to respond right away, continue pressing (RUN/STOP), as some printers cause a hold off until they empty their line buffer.

(R)ead/Spool Disk.

Use this command to send a file directly from your disk to your printer.

(S) ave Buffer.

The Save Buffer command saves the buffer as a sequential file. If (RUN/STOP) or (CTRL-C) is pressed during a save, the routine will be aborted, but the text will be saved up to that point.

(T)ransmit Buffer.

The Transmit command is used for sending text files, sequentialized basic programs, and .IMG files. The contents of the buffer are sent line by line. If the receiver requests a halt (CTRL-S), transmission is stopped until the continue code (CTRL-Q) is transmitted. Transmission can be aborted at anytime by pressing (RUN/STOP) or (CTRL-C).

If the receiving computer is running

PRO-TERM or a VIDETEXT compatible program the buffer of the receiving computer will be opened when transmission begins and closed when transmission is completed. This insures that no characters are lost, or errone ous characters are entered when transmission is completed.

## (C)lose buffer

Also note that the close buffer command stops incoming data from being stored in the Buffer (terminal mode)

# 2.3 (>) DEVICE OPERATIONS OPERATIONS

The device command allows you to perform all of the standard DOS functions, like scratching files, or formating diskettes. It also allows you to send commands to your printer.

## 2.4 (E) MPTY BUFFER

The empty buffer command empties the Buffer of text and frees up the Buffer space.

## 2.5 (HELP) SCREEN

The Help screen command, as mentioned above, serves as a quick reference to each PRO-TERM command.

## 2.6 (L) INE TRANSMIT

The line transmit command allows lines of text to be sent. 80 characters or until a carriage return is incountered. Once the end of the buffer is reached, Line transmit starts from the begining of the buffer.

#### 2.7 (M) ODEM ON/OFF

The Modem On/Off command toggles the modem on and off the telephone line.

# (O)pen Buffer

The Open buffer command causes incoming data to be stored in the Buffer.

#### (P)rinter Stream

When Printer Streaming is turned on, all data that is received in Terminal mod e, will also be sent to the printer. If the printer is not connected, or it is off-line, the message No printer will appear.

# (S)ystem setup

The system setup Command allows you to personalize PRO-TERM for your own particular configuration. System setup has the following options:

1.	Screen size	40/80
2.	Wordwrap	OFF/ON 1-15 10
3.	Linefeed w/cr	OFF/ON 1+3 17
4.	Screen colour	0-15
5.	Border colour	0-15
6.	Character colour	0-15
7.	Printer device	4-7
8.	Secondary address	2-8
9.	Printer linefeed	OFF/ON
10.	Modem type CBM128/RS232/MITYMO	/SMART
11.	Baud Rate	110-2400
12.	Parity ODD/EVEN/MARK/SPACE	/NONE
13.	Word Length 5	/6/7/8
14.	Duplex	Full/Half
15.	Delete Code 8	/127 me 8)
16.	Key click	n proper delete On/Off
17.	User Baud 3	00-450
18.	Name Key settings	

These options can be changed, and then saved to a disk.

#### (T)erminal Reset

This will reset the VT100 terminal back to VT100 mode full scroll, Numeric keypad, text mode.

(U) pload The Uploading command allows you to easily send program and sequential files from another Commodore 128 or Commodore BBS. These files can be of any size, and are stored directly to disk.

### (V) iew buffer

The View buffer command allows you to display the data stored in the buffer to the screen.

(W) ait for call option The Wait for call option allows the auto-answer mode to become operational.

#### (X)Exit to basic

The Exit to basic command is used to exit the program.

## (\*) Set Clock/Alara

The Set Clock/Alarm command is used to set the time of day clock. It also allo ws you to set the buzzer alarm for the time of day clock and the timer.

#### ()Status line

The status line displays the following information:

- Bytes free (Buffer)
- Bytes used (Buffer)

- 3. Timer
- 4. Time of day
- 5. Modem status

# (4/\$)Directory

The Directory command allows you to call up the directory of your disk from Terminal mode.

## (+- )Timer controls

The timer controls give you the following options:

- 1. Start timer.
- 2. Freeze timer.
- 3. Clear timer.

The Buzzer alarm can also be set to the timer.

#### (CLR) Screen

The Clear screen command clears the Terminal screen.

## 2.8 CONTROL CODES

Control codes are sent from Terminal mode, by holding down the CTRL key, and pressing the

appropriate key. See the APPENDIX for a list of CTRL and ESCAPE codes.

# (F)unction keys

To define the eight function keys hold down the (C=) key and press (F). This will bring you to the Function key menu screen: E>C + 289 C + 280 C + 2

୍ର କ୍ PRESENT FUNCTION KEY DEFINITIONS

41- 1C

f3- 15

15- PQ

f7-

f2-

f4-

f6-

f8-

PRESS KEY TO BE RE-DEFINED

(L)oad function keys

(S) ave function keys

Press RETURN to go to TERMINAL mode.

The Function key area allows you to prepare strings of text of up to 30 characters in length. When the appropriate function key is pressed in terminal mode, the string will be sent followed by a (RETURN). To define a function key hit the function key you wish to define, and you will be prompted for the new definition. The previous definition is printed on top of the screen. If you do not change the definition, the previous definition will not be changed. Function keys can be used to hold passwords, your User name, or commands for manipulating the system you are logging on to.

Carriage returns can be embedded in a line by using a shifted return. A shifted RETURN is displayed as a graphic symbol. CTRL characters as well as escape characters can be sent using the functions keys. To do this simply use the Up arrow followed, by the CTRL character you wish to send. For example to define a function key as a CTRL-C you would type, the Up arrow symbol followed by the letter C. Escape sequences can be sent in a similar manner, using the Left arrow to represent the Escape code. For example to send and [ESC]-A you would type, the Left arrow symbol, followed by the letter A. Function keys can also contain dialing sequences for Smartmodems. (SEE SMARTMODEM)

Function key definitions can be loaded or saved. To load in the Function key definitions, press (L). Type "/", to load in a Default file, or the filename and press (RETURN). When the file is found and loaded in you will return to the Function key menu screen.

To save the Function keys, press (S) and you will be prompted for the filename. When

saving the function keys, you have the option of saving them as a DEFAULT file, so that they can be loaded in at the end of the normal program load. (SEE DEFAULTS)

# CHAPTER 3

## **GETTING ON-LINE**

If you wish to get On-line right way, this section will show you how to do it quickly. First you must check to see if the RS-232 setup is correct for the system you wish to log on to. When PRO-TERM loads in to memory, the RS-232 parameters are set with the following defaults:

- 1) Parity = None
- 2) Word length = 8
- 3) Duplex = Full
- 4) Stop bits = 1
- 5) Baud rate = 300

These RS-232 parameters are used for many systems, including Compuserve, and most Bulletin Board systems. Otherwise you can change each option for the system you are about to call. If you are hooking up to another Commodore128, you will have to change to Half Duplex operation. To do this leave, the Duplex switch on your 1650 modem on Full, and change the option in the program. To make adjustments to the RS-232 Setups, hold down the (C=) key and press (S). This will bring you to the System setup menu screen. The cursor up and cursor down keys move to each different option, and the space bar toggles you through the different

choices for each option. Make any changes, if necessary, and then hit the RETURN key to get back to terminal mode. All that is left to do now, is to dial the number.

#### CHAPTER 4

## MANUAL DIAL

If your modem is not capable of Auto-dialing, then you will have to dial manually. Also, before Auto-dialing a number for the first time, it is a good idea to call the number manually first, to make sure that what your reaching is indeed another computer. To manual dial take the following steps:

- Make sure that you are on terminal screen, and the status line is on.
- if a colon ":" does not appear as the last character on the Status line, ho ld down the (C=) key down and press (M).
- Set the DATA/TALK switch on your modem to TALK.
- 4. Pick up the phone receiver.
- 5. Dial the number you wish to connect to.

- When you hear the high pitched sound of the carrier, place the DATA/TALK sw itch to DATA.
- 7. Hang up the phone.

You should now be on line with the other computer. PRO-TERM will report this with the message:

HOST NOW ON LINE

To initiate contact with the Host computer normally requires some sort of sign al, usually the RETURN character. Hit the RETURN key a couple times to signal to the Host that you want to log on. If that does not work, check the documentation of the system you wish to connect to. Compuserve for example, waits for a CTRL-C to initiate a connection. If you are calling another Commodore128 then you can start sending and receiving, as soon as the HOST ON LINE message appears.

## CHAPTER 5

# PRO TERM USER COMMANDS

The following section gives a explanation of each PRO-TERM command. Whenever you leave the Terminal mode, to access a menu screen, PRO-TERM will send a CTRL-S, and then a CTRL-Q when you return. When using PRO-TERM, any place where a disk access occurs, you can call up a directory of your disk, by typing dollar sign RETURN.

## 5.1 (A) UTO-DIAL/AUTO-LOGON

One of the most useful features of PRO-TERM is its deluxe auto dial/logon capabilities. some of its notable features are:

- 4. 30 number phone directory
- 5. Fast auto dialing with auto redial option
- Useful and powerful auto logon capabilities.
- Easy auto logon creation.

8. The option of cycling through 2-9 numbers or all 20.

If you are using a Commodore128 compatible modem with auto dial capabilities, you will no doubt be using the auto dial features of PRO-TERM extensively. (Owners of Smartmodems SEE USING PRO-TERM WITH A SMARTMODEM)

To access the main auto dial/logon menu screen, hold down the (C=) key and press (A). This will bring you to auto dial menu screen.

# (D) efine phone

Before the dialing and logon features can be used, the telephone numbers you will be reaching must first be stored in one of the two pages in the phone number directory. To define a phone number press (D) at the main auto dial/logon screen. You will now be asked to press the menu number which represents the entry number for that phone number. The menu numbers appear on the far left of the auto dial/logon screen. They number (1-0), and are arranged in order of appearance of the numbers on the keyboard.

When you press a menu number the present name and phone number is displayed. You now can now enter a new name up to 14 characters in length. Enter the new name and press return. You will be then prompted for the phone number.

The telephone number can be up to 16 characters, including the "-" symbol as a separator. If you require a delay between certain digits you may enter "d" which will give a delay of 2 seconds when Pro-Term is

dialing. This could be used to provide a delay when going through a PBX where a 9 must be entered to get an outside line or when dialing long distance.

After supplying the telephone number, you will be asked to enter the RS-232 se tup of the system which you are defining. (SEE (S) ystem setup). Most of the time the RS-232 values will be the Default and you will only have to press RETURN.

Pressing RETURN alone on any of the above three definition screens will leave the previous definition unchanged.

(N)ext page

Twenty numbers can be stored in the PRO-TERM phone number directory. 10 entries are placed on two separate pages. To toggle between the pages press (N).

(E)mpty page

The empty number page allows the directory to be cleared for new entries. The Empty command clears only the visible page.

Loading and saving numbers. PRO-TERM allows phone numbers to be loaded and saved for future sessions.

(S) ave numbers. To save the numbers that are stored in the directory, press (S). You will be then asked for the filename. Phone numbers can be saved as a Default file, which allows the phone numbers to be loaded in with other Default setups, after the normal program load. (SEE DEFAULTS)

(L)oad numbers

Phone numbers that have been previously saved can be loaded in by pressing (L) from the Auto-dial screen. If the file you wish to load has been saved as a Default file, it can be loaded in by typing a "/".

Individual files can be loaded by entering the filename.

Dialing with Pro-Term:

Simple dialing of a number is performed by pressing the menu number (far left) of the phone number you wish to dial. Pro-Term will respond by clearing the bottom half of the screen and displaying:

\*\* Press RUN/STOP to abort \*\*
Pro-Term Dialing >XXX-XXXX

Pro-Term will now dial the number and wait about 15 seconds for a carrier. (25 seconds if the first number is a "1" indicating long distance.) If a carrier is detected then the program will return to the terminal screen, the bell sound will occur 5 times, and the following message will appear.

Connected to >>> "NAME"

You are now on line with the party you chose on the menu screen and are back in Terminal mode. If however, the number dialed does not respond with a carrier then Pro-Term will give the message:

Number busy or no answer

If you press the "Y" key the the dialing process is repeated. If you press "N" then the program returns to the main auto dial/logon menu screen.

## Automatic redial:

It is possible to have one number auto redialed if no connection is made. To i mplement the single auto redial feature simply hold down the shift key and pres s the menu number of your choice. If a carrier is detected the same procedure occurs as in regular dialing. If no carrier is detected, then you are briefly informed and the dialing procedure is repeated. PRO-TERM will continue to redial until either a connection is made or you abort by pressing the RUN/STOP key.

# (C) ycle numbers

PRO-TERM offers the ability to cycle through the numbers stored in the number directory. This is especially useful, when calling bulletin boards, which are often busy. If there are say, 8 BBS numbers in your phone directory you can have each number dialed, in any order, and if a connection is not made, the next number will be dialed.

To use this command, press (C) for Cycle numbers. You will be first asked for the number of entries from the directory you want to have dialed. If you want a ll of the numbers dialed, then press (A). If A is chosen the numbers will be dialed in the order that they appear on the menu screen.

You will now be asked to choose the menu number (far left) of the phone number you wish to dial. This sequence can be entered in order of preference. Selecti ons can be made from either number page by pressing (N). Auto logon sequences can be executed in the cycle command by pressing (A). (SEE AUTO-LOGON) Once the cycle sequence has been entered PRO-TERM will respond by clearing the bottom half of the screen and displaying:

## Press RUN/STOP to abort \*\*
Pro-Term Dialing >XXX-XXXX

Pro-Term will now dial the number and wait about 15 seconds for a carrier. (25 seconds if the first number is a "1" indicating long distance.) If a carrier is detected, then the program will return to the terminal screen, the bell soun d will occur 5 times, and the following message will appear.

Connected to >>> "NAME"

You are now on line with the party you chose on the menu screen and will on the Terminal screen.

If the first number dialed does not return a carrier, then the next number that was chosen in the cycle command, will be dialed. If a connection is not made after trying all of the entries you have chosen, PRO-TERM will start the cycle again with the first number. PRO-TERM will continue to redial until either a connection is made or, you abort by pressing the RUN/STOP key.

# (+) keyboard dial

A number can be quickly dialed, if it has not already been stored in the phone number

directory, by pressing (+). You will then be asked for the phone number. Once the number has been entered it will be treated as if it had been chosen from the Directory menu.

# 5.1.1 (F)orm New Logon

A logon is simply a series of responses to certain prompts issued by the host. Usually you would use it to give your password and/or other information needed to get into a system. However, you may expand it to give repetitious commands like opening a stock quote form an information service. To use an Auto-Logon requires some knowledge of the system you wish to connect to. A prompt is a series of words or characters which a system sends when it requires information from the user. "Name: "Command ==>" "Press C hoice"

Above are three examples of prompts, of course there are many others, which vary rom system to system A response is simply the information you supply when you see the prompt. Before you can create a logon you must first connect with the system, you wis h to form a logon for. Now carefully write down the prompts the system supplies and you intended response(s) to these prompts. Continue until you are at the point you wish the logon to end and control to be passed back to you.

It is very important that the prompts you choose, are not duplicated in the text sent before the actual prompt is supplied. For example, if you decide to use ":" as the prompt to match and the system sends:

# Please enter Name:City ==>:

Pro-Term will match the first colon and thus the logon will not work correctly In the above example your prompt could have been, >: When you have all the required information you can now enter it with the (F)orm New Logon, this is accessed pressing the "F" key from the main auto-logon screen. Then press the menu number of the system you wish to form a logon for. You will now be requested to begin entering information. The first response is for systems which require something to be entered before a beginning logon pro cedure (such as a carriage return or a CTRL-C). If you don't need an initial response press only a carriage return. The program will then begin to request prompts and subsequent responses. Caref ully enter the information you wrote down before. When finished enter /x at the next prompt. The file will now be saved. If for any reason you wish to exit enter /a (a for abort) the file will not be saved, and you may begin again. There are three special characters that can be put in a response line, they are returns, CTRL codes and Escape codes.

The Shifted return allows you to put multiple responses on a single line or to send multiple carriage returns. This can also be used to match to a carriage return in a prompt line. The shifted return is displayed as a graphic symbol. The Up arrow represents the control code (CTRL key) and is used to send control codes. To respond with a CTRL-C for example, you would type: up arrow and the letter C The left arrow is used as the Escape code to send a [ESC]-P for example, you would type: left arrow P

# 5.1.2 (A)uto Logon:

Before you can perform an auto logon you must have formed one, see (F)orm New Logon if you have not already done so. To implement an auto logon, from the main auto dial/logon screen press the 'A' key. The program will now request the menu of the system you wish to logon to. When you press your choice the logon file will be loaded and the program will begin to dial the phone number of the choice (with auto redial). The program will continue to dial until a connection is made.

When a carrier is detected two bells will sound and this message will appear:

Connected to >>> "NAME"

Logon Begins....

The program will now use the data in the logon file to respond to the prompts you designated. When the logon file is finished three bells will sound and Pro- Term will print:

Logged Onto >>> "NAME"

Control is now given back to you. If a problem occurs during a logon press the RUN/STOP# key. This will result in the message:

Logon Aborted

You now will connected to the number but will still have to logon. Usually the problem will be either an incorrect logon procedure

or a change in the systems logon method. Immediate Executing Auto Logon The second method of an auto logon is the immediate execution mode. It is available for use for systems which can not be auto dialed, modems which do not auto dial, and Smartmodems.

For immediate execution of a logon, press "A" at main auto dial/logon screen. Press the shift and the menu number of your choice. The logon will load and the modem put online. Now dial the number manually. When you hear a carrier put your Data/Talk switch to Data. Note: You should make sure that the disk containing the auto logon file of your choice is in drive number 8 for all logon procedures.

### Cycling Auto-Logons:

Auto-logons can be executed during a cycle, just like a regular number. To do this press A when you are supplying the menu numbers for the cycle sequence. If an Auto-logon has been created for that menu number, it will be loaded in.

#### CHAPTER 6

### (D) EVICE OPERATIONS.

### 6.1 DISK COMMANDS

To send commands to your disk drive hold down the (C=) key and press (>). This will bring you to the Device command menu screen.

You can now enter the DOS command you wish to send to your drive. Disk commands are sent to perform all of the standard DOS functions. For example, to scratch a file type:

s0:filename

To re-name a file type:

r0:newtest=oldtest

If you find the error light blinking after a disk operation, or you want to se e if a file was properly scratched, you can read the error channel by pressing the (@) key and (RETURN). If you are having difficulty loading or saving files, consult the user guide that comes with your drive.

### 6.2 PRINTER COMMANDS

Printer commands can be send by using 'p' as the first letter.

Printer commands can be accessed from the System setup menu screen. This command can be used with printers like the EPSON and GEMINI, that are capable of producing Different character fonts. To access the Printer command menu screen press P. Commands can be sent to your printer in the following manner.

The left arrow symbol is used to designate the escape code, CHR\$(27), which is used by most printers to distinguish between text and printer commands. Following the left arrow is the command to be sent to the printer. This command can be either an ASCII value or a numeric value. ASCII codes must be enclosed in quotations to differentiate between numeric values. For example, to send the command to go into elite on an EPSON printer, you would type:

left arrow"M"

To send the command to go into enlarged mode you would type:

left arrow"W"1

Consult the manual that came with your printer to obtain the printer codes that you need to use.

#### CHAPTER 7

### (S) YSTEM SETUP.

To go to the the System setup menu screen, hold down the (C=) key and press (S). Any of the above parameters can be modified and saved on a user diskette and then loaded in with the program. Normally you would only need one System setup, so when this file is saved it is automatically given the filename "systemdef". The "Systemdef" file can only be loaded in at the end of the normal program load.

The System parameters can have the following attributes:

### 7.1 SCREEN SIZE:

The screen size can be either 40 columns in width by 25 lines, or 80 columns by 25 lines. The default is 40.

#### 7.2 WORDWRAP:

Wordwrap causes each line of text to be formatted. Words are never broken at the end of a line, but are wrapped around to the line below. The default is set with Wordwrap off. Wordwrap can be turned on so that text received in Terminal mode, and text displayed when viewing the Buffer is properly formatted.

Wordwrap is usually needed with terminal systems which send data in a 132 column format.

### 7.3 LINEFEED W/CR:

Linefeed w/cr, which stands for linefeed with carriage return, is used for sys tems that do not send a linefeed after a carriage return. The Linefeed w/cr def ault is set to OFF, but should always be set to ON when communicating between two Commodores.

#### 7.4 PRINTER DEVICE

Printer device allows you to change the device number of your printer. Legal device numbers are 4,5,6 and 7. The default is set to 4.

### 7.5 SECONDARY ADDRESS:

The secondary address can be used with some parallel printer interfaces to turn on and off the linefeed following a carriage return.

You should consult your interface manual for this option. The default is set to 7, which will set your printer into upper/lower case mode.

#### 7.6 AUTO LINEFEED:

If your printer sends a linefeed after a carriage return, (all Commodore printers), then Auto Linefeed should be set to OFF. This will cause any linefeeds following carriage returns, to be stripped. The default is set to OFF. It can be turned ON for parallel printers that need a linefeed character, or to produce double spacing.

### 7.7 MODEM TYPE:

Modem type allows you to make adjustments for the difference between Commodore type modems, and RS-232 type modems. The default for Modem type is set for CBM128. If your modem is an RS-232 type modem, then change this attribute to RS-232 and save it as a default to load in with the program. (SEE DEFAULT)

#### 7.8 SAVE DEFAULTS.

If you wish to save any changes to the system screen press S. You will not be prompted for a filename, as the System setups will be saved under the name "SYS DEF". The system file can only be loaded in with the defaults. (SEE DEFAULTS)

#### CHAPTER 8

#### UPLOAD/DOWNLOAD

Upload is accessed by pressing (C=) U Download is accessed by pressing (C=) D

Uploading and Downloading allows file transfer with error checking, between mmodore computers or BBS'S, who are Punter protocol. Program or sequential files of any size can be transferred, and are stored directly to disk. To use this feature you must be connected to another Commodore running PRO-TERM, or program that uses a Punter C1 Protocol. If you want to file to someone who is running a program that does not h ave Punter Protocol, read section on UTILITIES.

-File transfer to 128. (U)ploading (Transmit)

When transmitting a file to another 128, the computer that is transmitting the file, should always enter the Upload mode first, because the Filename, of the program to be transferred, is sent to the receiving computer, so that it can be entered as the filename. To enter the Upload section hold

down the (C=) key and press (U). If the file is not found on the disk the Upload operation will abort. Return to the Upload section and enter the proper file name. If the file present, the filename, and the message: Waiting for start signal!!! are sent, the program now waits for the appropriate start signals from the receiving 128. soon as the receiver enters into the Download section and initiates receiving , your disk drive will start to turn and the data that is being transmitted will be displayed on screen. If the receiving computer detects an error in the checksum due to noise on the telephone line, the message: Transmission error!!!, will be displayed, and the data block will be retransmitted. If you wish to abort, press the (RUN/STOP) key and you will return to terminal mode.

(D)ownload

(Transmit)

To receive a file from another 128, let the transmitting computer enter into the Download section first. When the transmitting computer has entered into The Up load mode and initiated Uploading, you will receive the message:

Filename: "XXXXXXX"

Waiting for start signal!!!

You should then go to the Download section, by holding down the (C=) key and pressing (D). Enter the filename that you received in terminal mode. If you need to call up a directory of your disk, you can do so, by typing a dollar sign and pressing RETURN.

As soon as the filename is entered, the START codes for receiving are sent to the

transmitter. When the file type is received PRO-TERM will a open the file on the disk. If the filename that you gave, already exits on the disk, The message:

### 63, FILE EXITS,00,00

will be displayed and you will be asked if you wish to replace the file. If you do not want to replace the file then press N and the file transfer operation will be aborted and you will return to Terminal mode. If you want to replace the file, then press Y and the file will be replaced and the file transfer will continue. If no other errors occur during the opening of the file, then the data that is being transmitted will begin to appear on the screen.

If an "\*" is seen in the data being displayed on the screen, then a transmission error has occurred and the data block will be resent. If the last block is not complete, the underline character, will displayed. The counter on the top right hand corner of the screen, indicates the number of disk blocks that have been sent. When all of the data has been received, or if the transmission is interrupted for more then three seconds, the file will be closed and you will return to Terminal mode. You can make sure that the transmission was completed correctly. comparing the number of blocks the file occupies on your disk, with the number of blocks on the transmitter's disk.

### -File transfer to BBS

When sending or receiving a program files to a Punter BBS, you must first supply the BBS with the information that it needs about the file. The system will then prompt you with

### the message:

Waiting for start signal!!! Press A to abort!

You can then leave terminal mode to enter the Up/Down section by holding down the (C=) key and pressing (U) or (D).

#### CHAPTER 9

### () STATUS LINE

PRO-TERM provides an informative status line, which can be turned on, at the very top of the screen. The status line appears as follows: The first set of digits are the bytes free in the buffer. The second set of digits is the bytes used.

The next group of digits represent the timer value. The timer is normally used to indicate the amount of time that has elapsed, since connection was made to another computer.

the connection is first (a carrier is detected) the timer is set to zero and then started. When the carrier is lost, the timer is frozen, thus retaining the exact time of the connection. The timer can be set to sound an alarm after it reaches a certain time. (SEE Clock/Alarm) The timer can also be manually set and started for user applications. (SEE TIMER CONTROLS)

#### 11:43:18 am

The next group of digits represent the realtime clock. It can be set by accessing

the Clock/Alarm command. (SEE CLOCK/ALARM).

The last item on the Status line is the modem status, which is displayed as a colon ":". The colon will appear if, the modem is occupying the telephone line. If the colon is not displayed on the Status line, you can still use your phone normally even if the Modem is set to DATA. The colon will always appear when you are on-line with another computer.

The Status line can be displayed completely, or with just the timer and clock or with the clock only. If the Status line is off, you can turn all of the functions on, by holding down the (C=) key and pressing the Up arrow key.

Pressing this sequence again, will turn off the Buffer counter displays, pressing it again will turn off the timer display, pressing it a third time will turn off the Status line completely.

#### CHAPTER 10

### (\*)CLOCK/ALARM

PRO-TERM offers an on-line Clock/Alarm system that is displayed on the Status line. (SEE STATUS LINE).

To set the Clock or the Alarm, hold down the (C=) key and press (\*). This will bring you to the following menu screen:

# Clock/Alarm Setup

- (1) Set Clock
- (2) Set Clock Alarm 00:00:00
- (3) Set Timer Alarm 0:00:00

Please Press Choice

Enter only RETURN to go

to Terminal mode

### 10.1 (1) SET CLOCK:

If you want to set the clock, press (1) and you will be prompted for the new time. The time must be entered with the following syntax: HH:MM:SS(a/p), where, HH stands for the hours, MM stands for the minutes, SS stands for the seconds, and (a) for Am or (p) Pm. To set the Clock to seven thirty in the morning, you would type:

07:30:00a

This would then be displayed on the Status line as: 7:30:00 as

### 10.2 (2) SET CLOCK ALARM:

Once the clock has been set, you may wish to have the alarm sound at a certain time. To do this press (2), and you will be prompted for the time that you wan t the alarm to occur. The syntax for entering the time for he clock alarm is identical to setting the clock, except that it is not necessary to indicate Am or Pm as it is assumed that the alarm will occur during the same twelve hour period. When The alarm sounds, it can be turned off by pressing the (C=) key.

### 10.3 (3) SET TIMER ALARM:

The timer is used to indicate the amount of

time elapsed since connection was made with another computer. Whenever connection is first established, (a carrier is detected), the timer is set to zero, and then started. The timer alarm can be useful when you are being charged for services, such as the Compuserve network, and you want to be reminded when you have been on for a certain amount of time. To set the timer alarm press (3), and you will be prompted for the amount of time before the alarm should occur. To set the timer for eight minutes and six seconds, you would type:

0:08:06

When the alarm sounds it can be turned off by pressing the (C=) key. The timer is displayed on the Status line (SEE STATUS LINE), and can also be manually set, for user applications. (SEE Timer controls)

#### CHAPTER 11

#### MISC. COMMANDS.

### 11.1 (M) ODEM ON/OFF

The Modem On/Off command allows users of the 1650 Commodore Auto-modem, or a 1650 compatible, to put the modem on and off-line, without having to change the DATA/TALK switch on the modem itself. (This command is not available on the Vicmodem).

Holding down the (C=) key and pressing (M) will toggle the modem On and Off-line. When the modem is off-line, calls can still be received, even though the modem is in Data mode. You can determine whether the modem is occupying the telephone line by turning the status line on, and checking to see if a colon appears as the last character on the Status line (SEE STATUS LINE). If you connected to another computer the colon will always appear on the Status line. you wish to disconnect a call, hold down the (C=) key and press (M). The colon will disappear from the Status line and the modem will no longer be occupying the line.

The Modem On/Off command can also be used to turn the modem on when manually dialing.

### 11.2 (P)RINTER STREAM ON/OFF

The printer streaming command allows you to get a hard copy on your printer, as the data is being received. Holding down the (C=) key and pressing (P), will toggle the printer streaming on or off. When the message:

# PRINTER STREAMING ON

is displayed, data will be dumped to the printer every time 80 characters are received. There can therefore, be a delay before the printer starts to dump the data its receiving to the printer. The Printer streaming command sends two linefeeds to the printer, when it is turned on. If your printer does not respond when you turn printer streaming on, you must check to see if it is connected properly.

You can send commands to your printer, to change the pitch etc, by accessing the System setup menu screen. (SEE PRINTER COMMANDS)

### 11.3 (CLR) CLEAR SCREEN

The Clear screen command can be used in

terminal mode to clear the screen. This command is useful for homing the cursor when writing into the buffer off-line, or to clear a Password or User code off the screen. To clear the screen, hold down the (C=) and press (CLR/HOME). The screen should not be cleared when connected to a VT52 or Televideo system, instead the escape code for that system should be used.

#### 11.4 (4/\$) DIRECTORY

A directory of your disk, can be printed on the Terminal screen, by holding down the (C=) key and pressing (4).

This will print the directory to the Terminal screen. Hit any key to re-start transmission if you were on-line. Otherwise the directory will still be on the Terminal screen, and can be printed, by using the Print screen command.

### 11.5 (X) EXIT TO BASIC

To exit the program, hold down the (C=) key and press (X). This will bring you to the following screen:

\*\*\* EXIT TO BASIC \*\*\*

Are you sure? Y/N

If you do not want to exit the program yet, then press N, and you will return to Terminal mode. If you are sure that you want to return to BASIC, then press Y. The following message will appear:

PLEASE REMEMBER TO SET YOUR DATA/TALK

SWITCH TO TALK !!!

This is to remind you that the DATA switch on your modem must be switched back to TALK. It is extremely important that you do this, otherwise the modem will still be occupying the line after you have left the program.

### 11.6 (+- )TIMER CONTROLS

Normally the timer is used to keep track of the amount of time logged on to an other system but the timer controls allow you to manipulate the timer displayed on the status line, for off-line usage.

11.6.1 (+)

To start to the timer, hold down the (C=) key and press (+).

MISC. COMMANDS.

11.6.2 (-)

To freeze the timer, hold down the (C=) key and press (-).

11.6.3 ()

The timer can be set to zero by holding down the (C=) key and pressing the Pou nd key.

The timer can also be used as an alarm. You can do this by accessing the Clock /Alarm menu screen. (SEE CLOCK ALARM)

### APPENDIX A

### USING PRO-TERM WITH MULTIPLE DRIVES.

PRO-TERM supports double drives, as well as two single drives. When accessing a dual drives, the syntax is the same as when normally accessin g dual drives. When saving a file to drive one the drive number must be specifi ed in the file name. For example:

#### 1: filename

When using two single drives the second drive must be configured as drive 9. A ll disk access defaults to device 8. To specify the second drive, append a comm a and the device number at the end of the string. Some examples are:

O:filename, 9 load or save

\$,9 directory

s0:filename,9 Scratch a file

0,9 read error channel

### APPENDIX B

### USING PRO-TERM WITH A SMARTMODEM

Auto-dialing and Auto-logon can still be done with a Hayes compatible Smartmod em. To use a Smartmodem, you should first change the Modem type, on the System menu screen to RS-232 type.

To auto-dial with a smartmodem can be done several different ways. One way is to use the Auto-logon command in immediate mode to dial the number. To do this Form an Auto-logon with the Hayes command, and the phone number as the first response. For example the first response could be:

response > AT DT878-0450

The next prompt to match for would be your modems connect response, for example:

### Prompt > CONNECT

You could then continue the Auto-logon to give your password, or use it just to dial the number. To execute the Auto-logon, use the immediate mode, but rather then dialing the number first, simply hit any key.

Another way to dial with a Smartmodem is to stay in Terminal mode, and use the regular commands available in your modem for dialing numbers. You can also define the numbers on the function keys, and Save them as defaults. That way when the program loads in, you will have up to eight numbers that can be dialed with one key stroke.

ESC < 27.60

enter UTIOU Run T100

ESC E ? 22

enter UT 58

27,91,63,50,108 pec.

### APPENDIX C

### VT100 EMULATION

Pro-term Emulates VT52/100 All VT100 commands are available except 132 columns, double height and double width. The numeric keypad functions as the application keypad when the appropriate sequence is sent. VT52 emulation is available, only when the host sends the command to go into this mode. The sequence to enter VT52 mode is esc,"[?21" You must turn off the Status line for VT emulation to work correctly. Both sets of arrow keys send out the VT100 sequences. The function keys F1,F3,F5,F7 are mapped as PF1,PF2,PF3,PF4 in the file entitled VT100.FNK on your distribution disk.

#### APPENDIX D

#### GETTING STARTED WITH TEXT-RIGHT

You can load either TEXT-RIGHT or PRO-TERM from the menu which appears on your screen upon boot-up. Or, if you are in Pro-Term, press C= B for the buffer options, and press E to edit the buffer. Text-Right will boot, and any text which may have been in the buffer will remain intact ready for editing. Furthermore, you may set up text in Text-Right. Press C= T and Pro-Term will boot around your text, ready for transmission. It should be noted that Pro-Term 12B allows a 64K buffer, while you may edit only 32K at a time with Text-Right. This should be ample for most work.

### SETTING UP#FOR YOUR PRINTER

To determine if you have to change the setup, type:

OPEN 4,4,0 PRINT#4,CHR\$(17);"aaaaAAAA" PRINT#4,CHR\$(17);"bbbbBBBB" CLOSE 4

If your printer printed:

aaaaAAAA bbbbBBBB

then you can skip past the next section and immediately proceed to the COMMAND SUMMARY.

If your printer has a device number of "2" (i.e. open 4,2,0,"????" is used to communicate with your printer) then this program will not directly print to your printer and you must get a proper interface for your printer.

### CHANGING THE DEFAULT FORMAT

First, you must load and run the SETUP program from the disk. You will then be required to answer a series of questions about your system.

### **COMMODORE PRINTER?**

If you have a Commodore printer, or a printer with which an interface (such as the CARD? with the right printer) which behaves like a Commodore printer, then answer this question with yes. [NOTE: with some printers (such as the EPSON printers) it is better to "turn off" the Commodore emulation mode of your interface and set up for a non-Commodore printer; otherwise you will be unable to access the special functions that your printer has the capability of performing.

### OLD ROM SET?

This question is only asked is you have a Commodore printer. If your printer is a 2022, 2023, 4022, or a 4023 it has a bug in its character set which the program will work around if you tell it to. (The bug is that the characters between ASCII 91 and 96 are exchanged for their shift values and vice-versa when using the lower/uppercase character set in the printer).

#### ASCI12

If your printer is an ascii printer (read your printer manual to determine if it is or is not) answer yes.

### LINEFEEDS?

If your printer does not print linefeeds answer yes. (If, when you typed in the

OPEN 4,4,...CLOSE4 example only one line was printed, then your printer does not print linefeeds).

### DEFAULT PRINTER # (3/4/5) ?

Type the appropriate number (usually 4 - NOTE: 3 is the screen: this is the video output option.)

#### SECONDARY ADDRESS ?

Usually zero. This is the third number after the BASIC open statement (e.g. OPEN4,4,0).

#### SINGLE SHEETS ?

If your printer is not printing on fanfold or roll paper answer yes.

After you are done answering the questions, the file ".format" is scratched off the disk and a copy with the new setup in it is saved.

### COMMAND SUMMARY

The Command Line consists of "A" (area 1 or 2), "L" (line number), "C" (column number), and "D" (drive no.), "P" (printer no.) and "OVR" for overwrite mode. By pressing shift/C=, "OVR" will change to "INS", for insert mode. To return to "OVR" (overwrite) mode, press shift/CTRL.

### PRINTER FILE SET-UP

TEXT-RIGHT comes set up to print-out on most printers connected with a Commodore 1525 compatible interface for regular printing,

however, if you wish to use the full capabilities of your printer, you must change the default file. The distribution diskette is set up with the Epson FX80 printer file. Other files on the disk are available for the Commodore 4023, MPS 802 (1525), MPS 802 (1526) and Star Gemini. For any other printers you may substitute the ascii codes for a given function in any of the printer files on the disk with those in your printer manual. Or, you may choose to use the TY commands and ascii codes. in a command line.

#### LOADING A PRINTER FILE

Load a printer file of your choice into TEXT-RIGHT - press C=/L - you will be then asked what type of file, type R for restart. This will clear your buffer. You will then be asked for a file name. Type in the printer file of your choice. (e.g. type EPSON <return>) Once the file has been loaded, type C=/V to print the file to the screen. The screen will momentarily blank. You then type C=/B and you will then be asked if you wish to save the default format (Yes/No?). Type Yes <return> and your printer file will be saved.

#### OUTPUT FORMATTING CONTROL

The checkmark character is used to format text for output to printer. You must set up an output command line, utilizing the checkmark character which is obtained by typing shift/e, followed with the output formatting control characters listed below. The checkmark characters may be followed with any number of output formatting control characters; however, each must be followed

by a colon.

For example, if you wish to set a left margin of 15 columns and a right margin of 75 columns which would give you a line length of 60 columns and have your text right-justified, you would set up a command line as follows:

### ✓ lm15:rm75:ju1

Furthermore, if you wish to set up a command line to give you special printing output using your printer's ascii characters as per the manual, you would use the "TY" control characters. For example to have your text output elite-doublestrike with the Epson FX80 printer you would set up a command line as follows:

### √ ty27:199:27:205

Your printer manual will tell you which codes to use for what effect. You must end each command line with an up-arrow and a return. It should be noted that a command line preceded by a checkmark will not print out only its effect will print out. In the listing of output formatting control characters numbers shown beside each character are examples, and the numbers in brackets are the range.

### REFERENCE CARD

KEY(S)

**FUNCTION** 

### HELP, DIRECTORY

HELP display help screens

ESC display directory (non destructive)

load directories from both drives C=\*

load directory for drive O C = 0

### CURSOR MOVEMENT

cursor up (go up one line) CURSOR UP

CNTL CURSOR UP fast cursor up

cursor down (go down one line) CURSOR DOWN

fast cursor down CNTL CURSOR DOWN

cursor left (go left one character) CURSOR LEFT

CNTL CURSOR LEFT page up

cursor right (go right one character)

CURSOR RIGHT

CNTL CURSOR RIGHT page down

paragraph end/blank line indicator RETURN

go to start of next line SHIFT RETURN

start of next word F1

start of previous word F2

start of next sentence F3

start of previous sentence F 4

end of current line F5

start of current line F6

move to top left of screen HOME

move to top left of text area HOME HOME

move to bottom right of screen CLR (SHIFT HOME)

move to bottom of text area CLR CLR

# SCREEN FORMATTING, SCREEN COLORS, SWAP TEXT AREAS

C = 3change # columns and # lines

C= SHIFT + modify bordor color (40 columns only) C= SHIFT modify screen color (40 columns only)

modify character color C= SHIFT [POUND]

CNTL S swap to other text area

### TEXT MANIPULATION

SHIFT C= INS (insert) mode DVR (overwrite) mode SHIFT CNTL

DEL

delete character to left of cursor SHIFT DEL delete character to under cursor

CNTL E erase (forward/backward/all/range) ? set up hunt and replace phrases CNTL R

hunt and replace next occurence CNTL SHIFT R

hunt and replace all occurances CNTL A

define user phrase C=SHIFT P

bring back user phrase C=P

kill user and file name phrases C=K

CNTL I insert a line above cursor

CNTL D delete line at cursor

SHIFT SPACE forced space

wordwrap text area CNTL W

CNTL TAB set/unset tabs on tab line

CNTL SHIFT D set default tab settings

perform tab function TAB

sets all capitals CAPS LOCK

(also slows video output)

indent 5 columns SHIFT STOP

### REFERENCE CARD

Page R-3

### LOADING, SAVING, QUIT

C= Q quit to basic

C= T quit to proterm (if installed)

C= S save(compressed/unchanged/seq/b

[for proterm])

\* use @:(filename) to save & replace when asked for filename

### OUTPUT

C= 0 output to current printer

C= V video output(print text to screen

caps lock key - will slow down

input

C= B backup printer file to disk

### WORD & LINE COUNT

CNTL 3 count # of words in current text area

CNTL SHIFT 3-count # of lines remaining C= 3 change # of columns and # of lines

### DRIVE COMMANDS

C= @ send command to disk drive CNTL @ read disk error status

# DEVICE SETUP

C =	4	change output device to	nrinter#4
C =	5	change output device to	nrinter#5
C =	8	change load/save device	to diev#0
C =	9	change load/save device	to disk#0

# FRENCH CHARACTER SET

ALT	Q	ë
ALT	W	è
ALT	Ε	ė
ALT	R	é
ALT	Α	ä
ALT	S	à
ALT	D	ŧ
ALT	C	ç
ALT	N	Ť
ALT	U	Q
ALT	J	ü
ALT	I	1
ALT	K	. <b>i</b>
ALT	0	Ó
ALT	L	ö

### OUTPUT FORMATTING CONTROL

### PRINTER COMMAND FUNCTION

start printer command line
set up line spacing
centering on/off
force page if within ??? lines of end
set up left margin
set up header left margin
set up right margin
set up header right margin
right alignment on/off
type chr\$(???) into text
paragraph indent
set up default format
justify on/off
# lines printed per page
# lines per page
current printer page number
next text file is in other area
next text file is "filename"
print chr\$(???) directly to printer
single sheet feature on/off
underline character is chr\$(???)

### ENHANCED PRINTING

hd?:header

CO

C M

Use the following codes to start and end the text you wish to either underline or enhance. You must have the correct printer file loaded in order for the commands to function properly.

rest of command line is a comment rest of command line is a comment

set up header

ALT SHIFT	A	printer definable command character
ALT SHIFT	S	printer definable command character
ALT SHIFT	D	printer definable command character
ALT SHIFT	F	printer definable command character
ALT SHIFT	2	turn on underline
ALT SHIFT	X	turn off underline
ALT SHIFT	C	turn on enhanced/expanded characters
ALT SHIFT	٧	turn off enhanced/expanded characters

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