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FilePro 64

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INTRODUCTION

FilePro Capabilities

FilePro is a simple to use, but sophisticated, data management program approaching a full fledged data base in capability. The operations and uses of FilePro will be explained in detail for the novice computer user.

FilePro allows the easy entry, retrieval and organization of a variety of data. Mailing labels, club lists, employee records, business information, record collection lists, Ham radio lists - all are natural applications of FilePro.

Name and address Files from FilePro may be used to fill in Wordpro form letters automatically. Conversely, Wordpro name and address files, or similar sequential files from any other source, can be used to create or update FilePro Files.

Data File Structure

In order to follow the structure of FilePro (or any data base), the understanding of certain terms is necessary. These terms are explained below.

Character: The smallest piece of data that FilePro handles is called a character. A character is simply a letter, number, or symbol.

Field: A group of characters designated to mean something, such as characters that spell out a name, or an address, is called a Field.

Record: A group of Fields makes up a Record. Such a Record is just a collection of information containing all material desired about a particular person, place, or thing.

File: A group of Records makes up what is known as a File. A File contains information about related persons, places, or things.

Take, for example, a Library's Card Catalog. The "File" here is the whole Card Catalog. If we started to look through the Card Catalog, we would find a number of Cards, each containing information on a certain book. These are like "Records". Now, if we pick a Card and examine it, we will find various information on a particular book, such as the book's name, author, publisher, contents, etc. These pieces of information can be considered as "Fields". If we were to examine a single Field, we would find that it is composed of various "characters", such as those characters that make up the author's name.

Equipment Required

FilePro is used with:

- Commodore 64 computer
- One or two of the following Disk Drives:
     Commodore 1541 Single Disk Drive
     MSD SD-1 Single Disk Drive
     Indus GT Single Disk Drive
   or, one:
     MSD SD-2 Dual Disk Drive[1]
     Commodore 4040[1] Dual Disk Drive
     Commodore 8050[1] Dual Disk Drive
     Commodore 8250[1] Dual Disk Drive
     Commodore 9060[1] or 9090[1] Hard Disk Drive
- CBM dot matrix printer or a suitably interfaced ASCII printer

If using an MSD Disk Drive in IEEE mode, or any of the above drives marked with a "[1]" (as in "4040[1]"), an IEEE interface is also required. The FilePro program diskette is in 1541/MSD/Indus GT/4040 disk format; thus, if using an 8050/8250/9060/9090 disk drive, a 1541/MSD/Indus GT/4040 disk drive is required in order to load FilePro into the Commodore 64's memory. Once FilePro has been loaded, FilePro data Files may be stored on any of the above disk drives.

Up to 4000 Records can be stored per File on any disk drive. The number of Records possible is determined by the size of each Record of the File, and the type of disk drive used.

Using the FilePro User's Guide

This guide has been divided into several convenient sections. Step-by-step procedures are outlined explaining how to create and update Files, how to establish print formats and how to print reports. Review the entire manual briefly before working with FilePro. A few minutes of orientation can save hours of confusion.

Commodore 64 Keyboard Symbols

The chart below shows what this manual will use to represent certain keys found on the Commodore 64 keyboard.

⟨SHIFT⟩	Is the	shift key, SHIFT (there are two of these)
⟨CTRL⟩	"	control key, CTRL
⟨LOGO⟩	"	Commodore logo key
⟨RETURN⟩	"	return key, RETURN
⟨DOWN⟩	"	cursor down key
⟨UP⟩	"	cursor up key; ⟨SHIFT⟩ ⟨DOWN⟩
⟨FWD⟩	"	cursor forward key
⟨BACK⟩	"	cursor back key; ⟨SHIFT⟩ ⟨FWD⟩
⟨HOME⟩	"	home key, HOME
⟨CLR⟩	"	clear key, CLR; ⟨SHIFT⟩ ⟨HOME⟩
⟨DEL⟩	"	delete key, DEL
⟨INST⟩	"	insert key, INST; ⟨SHIFT⟩ ⟨DEL⟩
⟨RESTORE⟩	"	RESTORE key
⟨R/S⟩	"	RUN/STOP key
⟨POUND⟩	"	English pound sign key
⟨F1⟩	"	F1 function key
⟨F3⟩	"	F3 function key
⟨F5⟩	"	F5 function key
⟨F7⟩	"	F7 function key
⟨F2⟩	"	F2 function key; ⟨SHIFT⟩ ⟨F1⟩
⟨F4⟩	"	F4 function key; ⟨SHIFT⟩ ⟨F3⟩
⟨F6⟩	"	F6 function key; ⟨SHIFT⟩ ⟨F5⟩
⟨F8⟩	"	F8 function key; ⟨SHIFT⟩ ⟨F7⟩
⟨ARR LEFT⟩	"	arrow left key
⟨ARR UP⟩	"	arrow up key

Input Format

Throughout this manual, certain conventions will be used to represent required key press sequences. These conventions and what they represent will be outlined now.

Underlined characters should just be typed in, as input to FilePro.

⟨SHIFT⟩, ⟨LOGO⟩, or ⟨CTRL⟩, followed by an underlined character, means hold ⟨SHIFT⟩, ⟨LOGO⟩, or ⟨CTRL⟩ down, press the key corresponding to the underlined character, then release ⟨SHIFT⟩, ⟨LOGO⟩, or ⟨CTRL⟩. These three keys all work just like the shift keys found on ordinary typewriters.

For example:

>filename

Means type in the letters f,i,l,e,n,a,m, then e.

><SHIFT> f

Means hold down the <SHIFT> key, type an "f", then release the <SHIFT> key (this is just an upper case "f").

><LOGO> a

Means hold down the <LOGO> key, type an "a", then release the <LOGO> key (this is NOT an upper case "a"; it's the command that starts adding Records to a disk File).

><SHIFT> <R/S>

Means hold down the <SHIFT> key, press the <R/S> key once, then release the <SHIFT> key.

Defaults

When you RUN FilePro, the colors that appear on the screen; the printer type, device number, and secondary address; the disk device and drive numbers; bus type; and drive type; will default to:

Character Color	White
Status Line Color	Cyan
Background Color	Grey2
Border Color	Grey2
Default Printer Type	ASCII
Default Printer Device #	4
Default Drive Device #	8
Output Disk Device #	8
Output Disk Drive #	0
Bus Type	Serial
Drive Type	0
Printer SA (Secondary Address)	4

These defaults may be changed easily. See "Changing Defaults", page 57, for instructions on how to change any of them.

Following is a description of the default items above.

Screen Colors

When using a Commodore 1701 or 1702 video monitor, the default colors will give very clear, easy to read text. To adjust the monitor for maximum clarity, use the "BRIGHT" and "CONTRAST" controls. The best picture is obtained by turning "BRIGHT" counter clockwise until the background appears black, then adjusting the "CONTRAST".

Default Printer Type

Either a Commodore printer, or an ASCII printer with a suitable interface, may be used with FilePro. A Commodore serial printer will plug directly into the Commodore 64's serial port. Parallel (IEEE) Commodore printers will require an interface, as will almost any ASCII printer.

Default Printer Device

The Device Number of a printer is determined by either the printer, or the interface card (if used). Check those manuals for the correct printer Device Number; unmodified Commodore printers should be Device Number 4.

Default Drive Device

This is the Device Number of the Disk Drive which all FilePro data files will be stored and recalled from. If using an unmodified single disk drive, this should be set to Device 8.

Output Disk Device and Drive #'s

Sequential (SEQ) files created by FilePro will be sent to this particular Disk Drive. Also, any SEQ files to be read into FilePro will need to be placed on this Drive. If using an unmodified single disk drive, this should be set to Device 8, Drive 0.

Bus Type

Commodore 1541 disk drives, Indus GT disk drives, and MSD disk drives (running in serial mode) all use the Serial bus. MSD drives running in IEEE mode, and all other Commodore drives, use the Parallel (IEEE) bus. If the disk drive used plugs directly into the serial port of the Commodore 64, with no interface card required, it will be on the Serial bus.

Drive Type

Type 0 drives are:	Commodore 1541
	Indus GT
	MSD SD-1 and SD-2
	Commodore 4040
A type 1 drive is:	Commodore 8050
Type 2 drives are:	Commodore 8250, Commodore 9060 or 9090

Type 0 drives have the least available disk space. If working with a large FilePro file on a Type 0 drive, it is a good idea to dedicate an entire diskette to it.

Due to an error on Commodore's part, the Type 1 drive (8050) has the same FilePro data file size limit as Type 0 drives. However, as it has more disk space, multiple FilePro files may be stored on a single 8050 diskette.

Type 2 drives have large amounts of disk space, and can store larger, and more, FilePro data files than the other type drives.

For a detailed description of exactly what the limitations and advantages of each type of drive are, see "Creating a File", page 15.

Printer SA (Secondary Address)

Some printers need special Secondary Addresses sent to them in order to lock them in UPPER/lower case (as opposed to graphics mode). Most ASCII printers require a Secondary Address of 4 for UPPER/lower case, while most Commodore printers require a Secondary Address of 7.

Getting Started

Connect and turn on the Commodore system according to the specific operating manuals for the equipment being used.

To load FilePro, insert the FilePro program diskette into the drive (drive 0 of device 8, if "Defaults", page 5, are not changed), then type:

LOAD"0:*",8 〈RETURN〉

After the "READY" prompt appears, type:

RUN 〈RETURN〉

The entire screen will clear, with the word LOADING appearing at it's top left hand corner. FilePro will load, then read the default values from the file "P.INSTALL", and set itself up accordingly. See "Defaults", page 5, and "Changing Defaults", page 57, for further information on default status (including default screen colors, disk drive device and drive numbers, and printer device number and secondary address).

After the above has been completed, a title screen will appear. Display of this title screen may be aborted immediately by pressing 〈F1〉; otherwise, it will stay on for about two seconds. FilePro's Status Line and Main Menu will then appear on the screen:

File :	F= R=
Create a New File	Index of Files
Edit Field Names	[Backup Disk]
Add New Records	[File Copy]
WordPro Data Entry	
Merged Data Entry	
Recall a Record	
Load an Existing File	
Setup Editor	
Output to Printer	
Disk Output	
Quit (Shifted)	

At this point, remove the FilePro program diskette from the disk drive. FilePro is completely self-contained in the Commodore 64's memory and nothing else will need to be loaded from the program diskette.

The Status Line

At the top of the screen, FilePro displays a Status Line. This will keep a user informed of operations underway and the status of the File currently being manipulated. When FilePro is first loaded, the Status Line will display:

File   :   F=   R=   _

The far left hand side of the Status Line changes to display different operating messages. The name of the File currently in memory will appear beside the word **File** when no such operations are underway.

The F= will show the number of Fields in each Record; the R= will show the number of Records currently in the File.

The Main Menu

Displayed on the screen below the Status Line is the Main Menu, which lists all available "Main" functions. Note that the functions enclosed by [square brackets] may not be present. These two functions, discussed on page 60, are only available to users of Parallel bus (IEEE) **dual** disk drives (if using a single parallel drive, they will not work).

All of the Main Functions of FilePro are accessed from the Main Menu by pressing the key which corresponds to the letter underlined (with the exception of Q, for Quit, see below). The uses of the various Main Menu functions will be described under the appropriate manual entries.

⟨F1⟩: Abort

While working with FilePro, the Main Menu may be displayed at most times by pressing ⟨F1⟩ to cancel the current function. Whenever this cannot be done, the procedure to cancel the current function will be given.

Number

The Number function does not appear in the Main Menu, however, pressing N from the Main Menu will active it. On the Status Line, two items of information will appear. The first is simply the version number of the FilePro program currently being used. The second appears only if there is a File Loaded in memory, and will give the File's maximum number of Records. For detailed File size information, see "Creating a File", page 17.

Quit

To exit from FilePro, press ⟨SHIFT⟩ Q from the Main Menu. The Commodore 64 will perform a cold start. Be careful, any information currently in memory, but not saved on disk, will be lost.

Changing Screen Colors

The current screen colors may be changed whenever the Main Menu is on the screen.   Use the appropriate key:

Color	Press
Character (text)	<F3>
Background	<F5>
Border	<F7>

To move back to the immediately previous color, press <SHIFT> and the Function key last used.

The Parenthesis Editor

During many FilePro operations, Parenthesis Sets, ( ), will be displayed on the screen. At these times, the "Parenthesis Editor" is available for use.

The Parenthesis Editor is a powerful, yet easy to use, direct screen editor. It is a "direct screen" editor in the sense that a "cursor" (solid block) is simply moved to a position on the screen, where data may then be directly manipulated.

The Parenthesis Sets themselves, ( ), indicate areas within which data manipulation may be carried out. Using the Parenthesis Editor, a user may move the cursor anywhere between Parenthesis Sets in order to accomplish this.

Following is a description of operations available from within the Parenthesis Editor. Note that the cursor will only move to positions between Parenthesis Sets.

Forward: <FWD>

Pressing <FWD> will move the cursor forward (to the right) one position. If the cursor is located at the end of a Parenthesis Set, it will move to the beginning of the next set. If the cursor is at the end of the last Parenthesis Set, it will move to the beginning of the first set.

Backward: <BACK> (or <SHIFT> <FWD>)

Pressing <BACK> will move the cursor backward (to the left) one position. If the cursor is located at the beginning of a Parenthesis Set, it will move to the end of the previous set. If the cursor is at the beginning of the first Parenthesis Set, it will move to the end of the last set.

Down: <DOWN>

Pressing <DOWN> will move the cursor to the beginning of the next Parenthesis Set. If the cursor is in the last Parenthesis Set, it will move to the beginning of the first set.

Up: <UP> (or <SHIFT> <DOWN>)

Pressing <UP> will move the cursor to the beginning of the preceding Parenthesis Set. If the cursor is in the first Parenthesis Set, it will move to the beginning of the last set.

Home: <HOME>

Pressing <HOME> will move the cursor to the beginning of the first Parenthesis Set.

Delete: ⟨DEL⟩

Pressing ⟨DEL⟩ will delete the character just to the left of the cursor. This will only affect characters in the Parenthesis Set containing the cursor.

Insert: ⟨INST⟩ (or ⟨SHIFT⟩ ⟨DEL⟩)

Pressing ⟨INST⟩ will insert a space under the cursor. This will affect only the Parenthesis Set containing the cursor.

Return: ⟨RETURN⟩ (alone or with ⟨SHIFT⟩)

Pressing ⟨RETURN⟩ alone will delete all characters in a Parenthesis Set beyond the cursor, then will move the cursor to the beginning of the next set. Pressing ⟨SHIFT⟩ ⟨RETURN⟩ will move the cursor to the beginning of the next set without deleting any characters.

Accept: ⟨ARR LEFT⟩

Pressing ⟨ARR LEFT⟩ will cause the current FilePro operation to accept the data in the Parenthesis Sets. This function is explained throughout the manual where appropriate.

Abort: ⟨F1⟩

Pressing ⟨F1⟩ will cause FilePro to abort the current operation. Most of the time, this will return a user to the Main Menu (exceptions are explained where appropriate). If ⟨F1⟩ is pressed before any current data has been stored, that data **will be lost.**

Control Mode: ⟨LOGO⟩

Pressing ⟨LOGO⟩ along with another key will cause certain "Control Functions" to be executed. Available Control Functions will be discussed where appropriate. If Control Mode is not available, then pressing ⟨LOGO⟩ will have the same effect as pressing ⟨F1⟩ (abort). This difference will also be pointed out where appropriate.

Clear: ⟨F3⟩

⟨F3⟩ may be used to clear either all of the Parenthesis Sets, or only the Parenthesis Set containing the cursor. Pressing ⟨F3⟩ will cause the Status Line to display:

<div align="center">Clear All or This Set?   F=   R=   _</div>

Pressing A (for All) will clear all of the Parenthesis Sets currently shown on the screen. Pressing T (for This Set) clears only the set containing the cursor. Pressing ⟨F1⟩ will cancel the Clear function, without clearing any Parenthesis Sets.

In addition to the above, the Parenthesis Editor has various special functions. These functions will be explained wherever appropriate.

Sideways Scrolling with the Parenthesis Editor

In a program such as FilePro, the limitations of a 40 column screen become quickly apparent, whenever the length of Parenthesis Sets used is greater than 40 characters. To enable a user to view the entirety of such Parenthesis Sets, sideways scrolling has been incorporated.

Basically, a work area, up to 160 characters wide, is set up by FilePro's Parenthesis Editor. Then a "window", 40 characters wide, shows a portion of this work area on the Commodore 64's screen. This window can move right and left across the entire FilePro work area. This movement, or "sideways scrolling", is carried out **automatically** at all times so that the cursor always remains visible.

Once the cursor gets within five characters of the right side of the window, the window will move to the right, following movement of the cursor. Should the cursor approach the left side of the window, the window will move to the left.

Cursor movements such as those caused by pressing ⟨HOME⟩, ⟨RETURN⟩, ⟨SHIFT⟩ ⟨RETURN⟩, or ⟨F3⟩ (clear), will usually cause the window to jump back to it's leftmost position.

It is not necessary to fully understand the "rules" of the sideways scrolling system; it will prove easy to follow, once actual use of the Parenthesis Editor begins.

Printing Screen Contents

Screen contents may be printed whenever the Parenthesis Editor is active (ie; any time that Parenthesis Sets are displayed on the screen). Pressing ⟨F5⟩ will cause the Status Line to display:

Print Screen?   F=   R=   _

Press Y (for Yes) or N (for No). Pressing Y will print everything **below** the Status Line on the printer. With this function, a copy of the Parenthesis Sets and their contents may be printed for future reference.

Be careful: If the Parenthesis Sets on the screen are longer than will fit on the printer used, the printed copy may not be quite what was expected. For example, a screen line of 100 characters sent to an 80 column printer would not print correctly.

Sorting and Searching

FilePro stores every Record of a File on disk, but not in a sorted order. If they were sorted, every time a Record was added, changed, or deleted, the entire File would have to be written to disk all over again, in a new order. Instead, FilePro keeps various "Sort Files", which enable FilePro to find certain Records very quickly.

Each Field of a Record may be sorted or unsorted. For each sorted Field, FilePro will create a Sort File. This way, searching for Records containing particular information in a certain sorted Field may be done very quickly. It is very important to note that unsorted Fields **can not** be searched alone.

For example, if a Field called "Client Name" were specified as sorted, FilePro could search the File for a specific client name such as "Brown Brothers Painting Company". If "Client Name" was unsorted, no search for that specific company could be done using only the "Client Name" Field.

Consider the following guide points when deciding which Fields should be sorted, or not sorted:

1. At least one Field in a Record must be sorted. Otherwise, FilePro could never search for anything!

2. Every Field that might be used in a search should be made a sorted Field.

3. Every Field that might be used to determine the sequence of a report (printout) should be made a sorted Field. For example, a "Name" Field should be made a sorted Field because it is probable that a list or report will some day be printed in alphabetical name sequence.

4. The more sorted Fields there are, the longer File Updates will take. If extra time spent waiting for Records to add into a File is not too important, then, fine, sort all the Fields. However, if it is very unlikely that a specific Field will ever be used to generate a report or to find Records, it should be made unsorted.

Data Diskettes

FilePro data files and associated information files must be stored on a data diskette. Do not use the FilePro program diskette as a data diskette.

Before using a new blank diskette, it must be formatted. See the appropriate operating manual for instructions on how to format the diskette.

Backup (make copies of) important data diskettes. Store them in a safe place away from dust, electric motors, and magnetic fields (like those created by a ringing telephone). Even if the data diskettes' storage location seems perfectly safe, back them up anyway. Diskettes may fail due to no external causes.

Do not store backup data diskettes in the same place as the original data diskettes.

If using a single disk drive, there are copy programs available that will make a backup copy of your data diskette. For further assistance, contact your local Commodore dealer.

Index of FilePro Files

An index of all FilePro Files, and **only** FilePro Files, on a data diskette may be displayed at any time. Press I (for Index) from the Main Menu. The following will appear on the screen just after the Main Menu:

> * **Available Files** *
>
> [file name1]
> [file name2]
> [file name3]
>
> **Blocks Free = #**

The existing FilePro File names will be listed, followed by the number of blocks free on the diskette. The blocks free should be checked before creating new Files to be sure there is room for more Files. If using a type 0 disk drive (see "Drive Type", page 6), storing more than one File on a diskette is not suggested, unless the File is very small and is unlikely to expand very much.

The FilePro File Index should be checked for existing File names before creating a new File, so that the name of an existing File is not inadvertantly used. If a File is created with the same name as one already in existance, all the information in the old File will be lost; the new File will replace it. This Index may also be checked to recall the exact name of an existing File, in order to load the File into the Commodore 64's memory.

Creating a File

FilePro requires certain information about a File before it may be created. The information needed is:

- A unique name for the File.
- The number of Fields in each Record of the File.
- The name of each Field.
- The maximum number of characters allowed in each Field.
- The type of characters allowed in each Field.
- Which Fields are to be sorted and which are to be unsorted.

If a formatted diskette, or a data diskette containing Files, is available, insert it into the default drive (see "Defaults", page 5).

Press C, for Create a New File, from the Main Menu.   The Status Line will display:

<p style="text-align:center;">Create: F=   R=   _</p>

Type in the unique name (to a maximum of 15 characters) by which the File is to be known, then press <RETURN>.   Remember that if a new File is created with the **same name** as an existing File, the old File will be replaced immediately, permanently erasing all information in the old File! **Be Careful!!**

The Status Line will now display:

<p style="text-align:center;">Number of Fields?   F=   R=   _</p>

Each Record of the File can contain one to twenty Fields of data.   For example, Records of an "Address Book" type File could contain Fields for First Name, Last Name, Street Address, City, State, Postal Code, Residence Phone Number, and Business Phone Number; in this case, a total of eight Fields.   Type in the number of Fields wanted in each Record, then press <RETURN>.   The Main Menu will be replaced by a display similar to the following:

```
Edit  Fields                        F=      R=      _

#    Name                    Size    Sort    Type
-    ----                    ----    ----    ----
A    (               )       (   )   (   )   (   )
B    (               )       (   )   (   )   (   )
C    (               )       (   )   (   )   (   )
D    (               )       (   )   (   )   (   )
E    (               )       (   )   (   )   (   )
```

Effectively, four Parenthesis Sets for each Field will be displayed. Note that each Field has been assigned an "Index" letter.   As soon as the Parenthesis Sets are displayed, the Parenthesis Editor (see page 10), is available.   To abort this function, press <F1> or <LOGO>.

The cursor will be located in the first Parenthesis Set, titled **Name**, indicating that the **Name** of the first Field may be entered. The **Name** assigned is normally a meaningful description of the data to be stored in this particular Field; such as "Address", "Phone Number", or some other meaningful prompt.

Type in the **Name** selected for that Field (up to twelve characters), then press <RETURN> to move to the next Parenthesis Set. If the name entered is exactly twelve characters long, the cursor will automatically move to the next Parenthesis Set.

For **Size**, type in the maximum number of characters (up to 99) that may ever appear in this Field. **Note that the maximum Record size is 254 characters**; or, the sum of all of the Field sizes in a Record must not exceed 254 characters. Press <RETURN> to move to the next Parenthesis Set. If the **Size** entered is two digits and fills the entire Parenthesis Set, the cursor will automatically move to the next set.

For **Sort**, enter Y (for Yes), or N (for No). A Y entry tells FilePro that the Field will be a sorted Field. An N entry tells FilePro that the Field will be unsorted. See "Sorting and Searching", page 13, for more detailed information about Sorting.

Type determines the type of characters that FilePro will allow in the Field. Enter one of the following:

Enter   Type of Field

    L   Literal - all characters, letters and numbers, except parentheses, may be entered.

    S   Shifted Literal - as above, but all letters will be capitalized automatically.

    #   Numeric - only numbers, the minus sign "-", and the decimal point ".", may be entered.

    Y   Yes/No - only Y or N may be entered. Later, when adding or editing data, pressing Y, or <RETURN>, will enter a Y into this Field; pressing N will enter an N.

    N   No/Yes - only Y or N may be entered. This is the same as the above type, except that when adding or editing data, pressing <RETURN> will enter an N into this Field.

Repeat the above process for each Field. The Fields may be edited (with the Parenthesis Editor, now in use), until the information for each Field is acceptable.

Once absolutely satisfied with the information, press <ARR LEFT>. If the information is hoplessly incorrect, this function may be aborted by pressing <F1> or <LOGO>. The abort will clear the screen and return to the Main Menu. Any information entered will be lost.

If <ARR LEFT> is pressed, the Status Line will request the number of Records to allocate for this File:

For type 0 drives:

Size (XXXX - XXXX)?   F=   R=   _

For type 1 and 2 drives:

Size (XXXX)?   F=   R=   _

The numbers shown for type 0 drives represent a range of maximum numbers of Records the File could contain. Choosing the smaller number will leave approximately 150 to 160 blocks free on the type 0 diskette; choosing the larger number will leave approximately 15 to 25 blocks free. These free blocks are used for "Output Setups" (discussed starting on page 35).

If the File will be large, and it is unlikely that information from the File will be printed in more than one format, then choose the higher number. For smaller Files, or large Files which will require many different Output Setups, choose the lower number. A number between the maximums may also be chosen as a compromise. Finally, for small Files, any number (usually lower than the lower maximum) may be chosen.

With a type 0 drive, using a single diskette for more than one large File is not recommended (most likely, there will not be enough room for more than one File anyway).

For type 1 and type 2 drives, the single number represents the maximum number of Records the File could contain. Type 1 drives are limited to (relative) Files of 664 blocks (due to an error in Commodore's design), therefore the number shown will be lower than numbers for a type 2 drive. Type 2 drives' Files are limited to 4000 Records, the maximum number of Records that FilePro can handle.

Answer with an estimate of the maximum number of Records the File could ever contain. With a Type 1 or 2 drive, the maximum number shown is usually chosen, to allow for future expansion of the File.

After entering the estimated number of Records for the File, press <RETURN>. FilePro will then write the Main File, along with one Sort File for each sorted Field, on the data diskette. The size of the Sort Files is automatically taken into consideration in the maximum number of Records given previously; thus they did not need to be taken into account when estimating the number of Records.

While the File is being created, it is quite normal to see the disk drive's error light flash on and off. Once the creation is complete, the Main Menu will appear on the screen. The newly created File is now in the Commodore 64's memory, waiting for further action.

As explained previously, if a File is created with the same name as an existing File, the old File is replaced with the new File. If a File has just been created and is unsatisfactory, simply create the File again using the same File name. The new File will completely replace the old File.

File Creation Errors

When <ARR LEFT> is pressed to create a File, FilePro checks the information specified for each Field. If any errors are found, they must be corrected before FilePro can create the File.

The errors that the Status Line may display, and respective corrective actions are as follows:

Record Size > 254: The cursor will return to the beginning of the Field which caused the Record size to exceed 254 characters. Shorten one or more of the Fields so that the total size of all the Fields does not exceed 254 characters, then press <ARR LEFT> again.

No Sorted Fields: The cursor will return to the first Parenthesis Set. At least one Field must be a sorted Field; i.e., contain a Y in the **Sort** Parenthesis Set. Enter a Y in the **Sort** Parenthesis Set of at least one Field, then press <ARR LEFT> again.

Blank Parenthesis: The cursor will return to the blank Parenthesis Set. The Parenthesis Sets for each Field **must** contain an entry. Enter data into any blank parentheses, then press <ARR LEFT> again.

Only when no errors are found will FilePro create the File.

Changing Field Information

Once a File has been created on to a data diskette, it is still possible to change the information about each Field, with a few restrictions. These restrictions will be detailed shortly.

The created File may be in one of two possible states:

1. The File has been created, but no Records have yet been added to it.

2. The File contains one or more Records.

Following are the changes possible:

Name of Field: The name of a Field may be changed at any time.

Size of Field: The size of a Field may never be changed.

Sorted or Not Sorted: The sort parameter of a Field may never be changed.

Type of Field: The Field type parameter may be changed only when there are no Records in the File, as in situation 1 above.

Press E from the Main Menu, for Edit Field Names. The Field information will appear on the screen, and the Parenthesis Editor will be activated. Changes may be made now.

Changes to any Field must follow the restrictions as given under "Creating a File", page 15. FilePro will ignore any changes which violate these restrictions.

Once any changes have been made, press <ARR LEFT> to send the changes to the data diskette. Pressing <F1> will return to the Main Menu without altering the data diskette.

Loading a File

Once a File has been created, it remains active in the Commodore 64's memory until another File is created or loaded, or until the computer is turned off. The name of the active File is always displayed on the Status Line beside **File.**

To load a File into the computer, press L, for Load Existing File, from the Main Menu. The Status Line will display:

       Load File :   F=   R=   _

Enter the name of the FilePro File to be loaded, then press <RETURN>. After a few seconds the Status Line will display:

       Loaded: [filename]   F=   R=   _

The name of the File loaded will appear on the Status Line. The Main Menu is still displayed on the screen.

If an attempt was made to load a File that does not exist, or a disk error occured, the Status Line will display one of several messages. For example:

       62,FILE NOT FOUND,00,00   F=   R=   _

Should this occur, check the Index of available FilePro Files (I from the Main Menu). Other errors may be caused by problems with the disk drive, forgetting to put the correct data diskette in the disk drive, leaving the disk drive's door open, etc.

If finished working with a File, another File may be Loaded right over top of the old one. It is never necessary to "save" a FilePro File since all operations in FilePro change the data right on the data diskette.

Unlike some Data Management Systems, it is necessary to give the File's name only once, when the File is loaded or created. From then on, FilePro is aware of which particular File is being worked on, and shall direct all disk operations to that File only.

Adding Records

Records may be added to a File in three ways:

- Manually, by typing in each Record from the keyboard.

- Automatically, by filling each Record from a data contained in a sequential (SEQ) disk file.

- Semi-automatically, by using a combination of keyboard entry and SEQ file entry.

A few of FilePro's features should be understood before going into detail about adding Records. Explanations of them follow.

Batch Processing

Rather than waste time adding each Record to disk immediately after its entry, FilePro uses "Batch Processing". This means that as Records are added, they are not stored on disk immediately, but are saved into the Commodore 64's memory. Once all the new Records have been added, FilePro will begin adding them to the data diskette.

This process minimizes the "wait" time required for disk access. Also, instead of having to wait after the addition of each Record, the wait takes place after all Record entry is finished (providing a good excuse for a coffee break; or other work, should you be into that sort of thing).

There is one limitation of this system; only 127 new Records may be entered at one time. After entry of 127 Records, the buffer in the Commodore 64 will be full, so the Records will need to be sent to the data diskette. Then more Records may be added; again, up to 127, at which point they must be sent to the data diskette. This process can be repeated over and over, if need be.

The Record Editor

The Record Editor is merely a name given to a specific application of the Parenthesis Editor, used when Records are being added or edited. When the Record Editor is in use, the screen will appear in this form:

```
Name:                          F=    R=      _

A First Name       (       )
B Last Name        (           )
*C Address         (              )
E Phone Number     (     )
```

Each Field will be shown with it's Index, Name, and a Parenthesis Set containing the exact number of characters specified as it's size. The asterisk "*" beside Field C, in this case, means that Field C is an unsorted Field. All other Fields were sorted.

Default Strings

For each Parenthesis Set shown while in the Record Editor, a Default String may be defined. Later on, this Default String may be entered into it's corresponding Parenthesis Set simply by pressing ⟨ARR UP⟩.

The Default String may be used to fill part of a Field, typing in the remainder manually; or, a Default String can be used to fill an entire Field. Only **one** Default String may be used for each Field, but the Default String may be changed easily.

For example, if entering addresses in Florida, "Florida" could be made a Default String for a "City/State" Field. The city could be manually typed in; after which "Florida" could be entered automatically by pressing ⟨ARR UP⟩. Thus it is not necessary to type in the state "Florida" for every Florida address. Should a different state be required, it can be typed in manually; the Default String does not have to be used.

Default Strings are accessed from the Record Editor with ⟨SHIFT⟩ ⟨R/S⟩. The Status Line will display:

Modify Defaults   F=   R=   _

All Records displayed on the screen will disappear temporarily. If any Default Strings were previously entered, they will be displayed within Parenthesis Sets. If there were no previous Default Strings, the Parenthesis Sets will be blank.

Using the Record Editor, the defaults may be added or changed. Once satisfied with them, press ⟨SHIFT⟩ ⟨R/S⟩ once more, to return to the Record at hand. The Status Line will display:

Defaults Changed   F=   R=   _

To leave the Default Strings the way they were, press ⟨F1⟩ instead of ⟨SHIFT⟩ ⟨R/S⟩. The Status Line will display:

Defaults NOT Changed   F=   R=   _

FilePro will then return to the Record at hand.

Manual Entry of Records

Load the File to which Records are to be added. Instructions on "Loading a File" may be found on page 19.

From the Main Menu, press A for Add New Records. The Status Line will display:

<div align="center">

Add a Record   F=   R=   _

</div>

The Record Editor display will appear below the Status Line, with the cursor at the beginning of the first Parenthesis Set.

Type in the data for the first Field, then press ⟨RETURN⟩. The cursor will move to the next Parenthesis Set. Continue to type in data until the Record is complete. "Default Strings", page 22, may be used here to speed entry of data. Edit any mistakes.

When the data is correct and complete, press ⟨ARR LEFT⟩. This will move the data into the buffer and clear the display so that the next Record may be typed in. The cursor may be located anywhere inside any Parenthesis Set when ⟨ARR LEFT⟩ is pressed. Note that FilePro will not reject duplicate Records as the user may require duplicates for specific reasons.

To abort adding information, press ⟨F1⟩. The Status Line will display:

<div align="center">

Abort - Verify: F=   R=   _

</div>

Verify by pressing Y, or ⟨RETURN⟩, for Yes. This will clear **all** Records from the buffer **before** they have been memorized on the diskette. **Be careful!** To keep adding records, press N for No.

Once all the Records have been entered into the buffer, press ⟨LOGO⟩ A. The Status Line will display:

<div align="center">

Adding New Records   F=   R=   _

</div>

The process of adding Records to the data diskette File then begins. The disk drive error light will flash on and off; this is normal. When the process is completed, all Records will have been added to the File on the data diskette, at which point the Main Menu will reappear. The Status Line will display:

<div align="center">

File: [filename]   F=   R=   _

</div>

If, while entering data, 127 Records have been entered, the Status Line will display:

<div align="center">

Buffer Full   F=   R=   _

</div>

Should this occur, simply use ⟨LOGO⟩ A to add the Records in the buffer to the File on the data diskette, then re-select A, for Add New Records, and continue.

Automatic Entry from Wordpro

Data from any Wordpro file may be transferred directly into FilePro, without having to re-type all of it. The following will outline the proper procedure.

If in FilePro, press <SHIFT> Q, from the Main Menu, to exit. Insert the Wordpro program diskette into the drive, then load Wordpro according to the Wordpro User Guide.

Place the Wordpro data diskette which contains the file to be merged with FilePro into the drive. Recall this "List Data" file into Extra Text.

FilePro requires that it's data be entered in a very specific order. Thus the sequential (SEQ) file created by Wordpro must be in this order.

Return to Main Text, then create a Form Letter consisting only of single Variable Blocks. Each Variable Block should be on its own line, followed by a " ", in the order required by FilePro.

For example, assume a FilePro File requires Phone Number, First Name, and Last Name; in that exact order. However, the List Data created in Wordpro contains data in the following order:

> — Steve — Punter — 416-555-5431 ←
> — John— Smith — 416-555-1212 ←
> — Jane — Doe — 519-555-8865 ←

This order must be changed to the same order required by FilePro. It is not necessary to make these alterations to the List Data file on disk. A much easier way would be to use Wordpro to create an SEQ file in the proper order.

Wordpro allows data to be retrieved from Extra Text in any order, therefore it is easy to just arrange Variable Blocks in the order that the data is to be sent to disk.

Thus, in our example, the Variable Blocks would be arranged in this order:

> — 3 —
> — 1 —
> — 2 —

The numbers in each Variable Block above represent their Data Number; these numbers will not appear on the screen.

Note that the above example puts Phone Number at the beginning, followed by First Name, then Last Name; exactly as the example FilePro File requires it.

Next, from the Wordpro program diskette, load in the CBM Output to Disk printer module, "disk.cbm", with <CTRL> P disk.cbm. Then enter the following sequence of keystrokes:

<F5>, L, <RETURN>, 0, filename, <RETURN>

This will cause all of the List Data to be sent to a file called "filename", on the Wordpro disk in drive 0. If desired, another output drive may be specified.

Once the SEQ file has been created, re-load FilePro. Insert the diskette containing the FilePro File into the default drive, and the one containing the Wordpro SEQ file into the Output/Input disk drive (see "Defaults", page 5). If the defaults have not been altered, they will both be drive 0 of device 8; thus the SEQ file, **and** the FilePro File to which it will be merged, must be on the same FilePro data diskette.

Load the desired FilePro File and press W for WordPro Data Entry from the Main Menu. The Status Line will display:

SEQ File: F=   R=   _

Enter the name of the Wordpro SEQ file, then press <RETURN>.

Below the Status Line the screen will display the FilePro File's Record structure. Data from the Wordpro SEQ file will merge into the Fields very quickly. This merge may be aborted by pressing <F1>.

Check that the data is merging properly. If not, there is a problem with the SEQ file. Turn off the Commodore 64, reload Wordpro (after turning the computer back on of course) and check the SEQ file for proper data order. Also, make sure that the number of pieces of data matches the number of Fields in the FilePro Record. When the problem has been resolved, re-create the SEQ file and start again.

Once all of the Wordpro SEQ file has been merged, FilePro will send all of the newly created Records to the File on the data diskette. The Status Line will display:

Adding New Records   F=   R=   _

After all the Records have been added, FilePro will return to the Main Menu.

If, when merging the SEQ file, FilePro's buffer becomes filled with the maximum of 127 records, FilePro will automatically add the 127 Records to the File on the data diskette. Once they have been added, FilePro will re-start where it left off, taking further data from the Wordpro SEQ file, merging it, until the SEQ file is finished, or the buffer fills again and needs to be sent to disk.

This process will continue until all the new Records have been added in.

Semi-Automatic Entry

Semi-Automatic Entry allows FilePro Records to be entered partly from an SEQ file, and partly from the keyboard.

For example, consider a Wordpro SEQ file containing only Name, Address, City, and State data. Assume that this data is to be merged into Records of a FilePro File, but Phone Number data is wished included as well. In this case, the Wordpro SEQ file data can be read in automatically; then each Phone Number can be typed in from the keyboard. The procedure to carry this out follows.

Create an SEQ file with Wordpro, following the same rules and formats outline in "Automatic Entry from Wordpro", previous pages. Load FilePro, then insert the diskette containing the FilePro File into the default drive, and the one containing the Wordpro SEQ file into the Input/Output drive. If the defaults (see page 5) have not been changed, both the SEQ file and the FilePro File should be on the FilePro data diskette, in device 8, drive 0. Load the FilePro File into the computer. Press M from the Main Menu, for Merged Data Entry. The Status Line will display:

      SEQ File: F=   R=   _

Type in the name of the Wordpro SEQ file to be merged with FilePro, then press ⟨RETURN⟩. Below the Status Line, the Record Editor will appear. The Status Line will display:

      Modify Defaults   F=   R=   _

The Fields into which the SEQ file's information will be sent must be left blank; all other Fields **must** contain a Default String (see "Default Strings", page 22). The Default String need not be related to the information that the Field will contain; it is only needed to inform FilePro that this Field will have it's data entered manually. Once any Default Strings have been entered, press ⟨ARR LEFT⟩ to begin the Merge.

Information from the Wordpro SEQ file will fill into the all Fields for which no Default String was specified. The cursor will appear in the first Field designated for manual entry. Type in the data desired, or press ⟨ARR UP⟩ to enter the Default String.

If there is more than one Field to be entered manually, continue filling Fields until the Record is complete. Make any changes to any of the Fields shown, until satisfied with the Record.

Press ⟨ARR LEFT⟩. The Record will be moved into the buffer, and the next Record will be brought forth. Complete and Edit this Record until it is satisfactory, then press ⟨ARR LEFT⟩ to move it into the buffer. Repeat this process until all of the SEQ file's data has been used.

The Status Line will then display:

      File Complete   F=   R=   _

At this point, the Records in the buffer may be sent to the FilePro data diskette with <LOGO> A; or the Manual Entry mode may be entered by simply beginning to fill all Fields in manually (see "Manual Entry", page 23, for detailed instructions). Once all additional records have been entered, press <LOGO> A to send **all** Records in the buffer to the data diskette.

The Status Line will display:

<u>A</u>dding New Records   F=   R=   _

When all the Records have been added to the File, the Main Menu will be displayed.

If there are more than 127 Records to be merged from an SEQ file, only 127 may be done at one time. Once 127 have been entered into the buffer, FilePro will automatically send them to disk, then return to Semi-Automatic Entry mode.

Time Requirements: Addition of Records

FilePro will take varying amounts of time to send newly entered Records to the data diskette. The total amount of time depends upon the sum of the following three items:

- Number of Sorted Fields in a Record
- Number of new Records added
- Number of Records currently in the File

The higher this sum, the longer the time taken will be.

In some instances, this time may approach as long as two hours. This may appear an unseemingly long period of time, but bear in mind that it only occurs once. All subsequent accesses of the data will be **fast!**

Recalling a Record

There are two methods of recalling a Record from a File. One method is the Single Item Search; the other is the Multi Item Search. Both methods provide a means of finding a specific Record or Records.

Before going into detail on either of these methods, an understanding of a couple of terms is necessary. These terms are explained below.

Search Priorities

There are two main types of Searches, Alphabetic (Literal), and Numeric. In an Alphabetic Search, Searches take place in alphabetical (ASCII) order; Numeric Searches are conducted by numeric order. Consider the following Fields of data:

Literal Fields	Numeric Fields
Albuquerque	14.9
Toronto	-1230.23
Champaigne	34515
Victoria	234017

FilePro would sort them into this order:

Albuquerque	234017
Champaigne	34515
Toronto	14.9
Victoria	-1230.23

Search Strings

A Search String is a piece of data used to find certain Records. For example, to Recall Records that contain addresses in the State of Florida, the Search String "Florida" would be used.

Search Strings, when Recalling Records, are entred into the field area corresponding to the location that the desired data will be found in. In the above example, "Florida" would be entered into a "State", or "City/State", etc., Field's location. This process will be described in detail under "Single Item Search", following pages.

Single Item Search

A Single Item Search is used to find Records that match, or approximate, a specified Search String. If a Record that contains a match to the Search String is found, it will be displayed on the screen. If not, the next highest Record will be displayed.

FilePro uses a "Binary" method for Single Item Searches. Using this method ensures that the search time is fast, and remains basically the same regardless of the Record's position in the corresponding Sort File. It also means that search time does not increase as rapidly as File size increases.

Alphabetic (Literal) Search

If "Steve" is specified as a Search String for a "Name" Field, FilePro will search all Records of the currently loaded File for:

- a Record containing "Steve" in that Field
or: - the first Record containing the letters "Steve" at the beginning of that Field, such as "Steven"
or: - the first Record containing an entry alphabetically higher than "Steve" in that Field, such as "Sylvia" or "Tom".

If there is a Record containing an exact match to the Search String entered, the Record will be displayed. If there is a Record containing part of the Search String, such as "Steven", the Record will be displayed. If there no match to the Search String the next alphabetically higher Record will be displayed, and the Status Line will show:

No Exact Match   F=   R=   _

If there are no Records alphabetically higher than the Search String, no Record will be displayed, and the Status Line will show:

No Match   F=   R=   _

Numeric Search

Numeric Fields are searched slightly differently. For example, if a Search String of "200" is given, FilePro will search to:

- find the first Record containing exactly 200
or: - find the first Record with an entry higher than 200

If there is a Record that contains a match, the Record will be displayed on the screen. If no match is found, the next numerically higher Record will be displayed. The Status Line will show:

No Exact Match   F=   R=   _

If there are no numerically higher Records, no Record will be displayed, and the Status Line will show:

No Match   F=   R=   _

Method: Single Item Search

Single Item Searches may only be carried out with Search Strings specified for sorted Fields. Unsorted Fields may not be searched with this method.

To start a Single Item Search, load the File into FilePro (see page 19, "Loading a File" for instructions), then press R, for Recall a Record, from the Main Menu. The Status Line will display:

<u>R</u>ecall a Record   F=   R=   _

Below the Status Line, the Parenthesis Sets representing each Field of a Record are displayed. Move the cursor to the **sorted** Field to be searched. Enter the Search String wished to be found.

The Search String need not be complete. For example, to search for "George", any of the Search Strings "G", "Ge", "Geo", "Geor", "Georg", or "George", may be used. Take into account that if a very general Search String such as just "G" is used, **all** Records with Fields beginning with "G", such as "Gary", "Greg", etc., will be found.

To begin the search, press <ARR LEFT>. The Status Line will display:

<u>S</u>earching   F=   R=   _

Once the search has finished, the match, partial match, or next highest Record will be displayed. FilePro will then be in "Record Display Mode" (for features of this mode, see page 33). Records are available for scanning, in sorted order according to the Field used to conduct the search.

If the general Search String "G" mentioned in the example was used, all Records with a Name Field beginning with "G" would be available, in alphabetical order. They may then be scanned through, until "George" is found.

If there was "No Match" to the Search String used, <ARR LEFT> may be used to clear all Fields in order to enter a new Search String; or <F1> will abort the Search and return to the Main Menu.

Multi Item Search

A Multi Item Search is similar to a Single Item Search except that Search Strings are specified for **two or more** Fields. The Search String entered into one of the Fields is specified as a "Preferred Field".

A Multi Item Search is carried out using both a Binary Search, and a Linear Search. The Binary Search is used to quickly locate Records with matches for the Preferred Field, then the Linear Search is used to locate Records with matches for all other Search Strings specified. As a Linear Search is much slower than a Binary Search, it is important to leave it the least number of choices whenever possible. Thus, the Binary Search should be carried out on the Field that would produce the larger number of matching Records.

* * * * *

For example, consider a Library's Card Catalog. Assume that a specific book, such as "I, Robot", by Isaac Asimov, is to be located. Also assume that the correct title of the book is not remembered; the only part remembered is that the title began with "I, [word]".

There are two places where reference to the book may be found in the Card Catalog. One is under the title "I, [word]"; the other is under author's name, "Asimov, Isaac". For the purpose of this example, consider the title and author entries as "Fields", each Card in the Card Catalog as a "Record", and the entire Card Catalog itself as a "File".

To select the Preferred Field in this case, consider which of the two "Fields" would have the most matching Cards or "Records". Isaac Asimov is a prolific author, he has written literally hundreds of books; however, there are not many books with titles that begin with "I, [word]". Thus, the Field that would produce the larger number of matching Records is the "Asimov, Isaac" author Field, and should be selected as the Preferred Field. "Asimov, Isaac" would be entered as the Preferred Field's Search String, with "I," entered as the other Search String.

Note that it is not a problem to specify a title Field Search String for "I, [word]"; just the "I" and the "," need be used. "I, Robot" would then match this Search String.

* * * * *

Unlike a Single Item Search, the Multi Item Search will search alphabetic Fields only for an exact match, or a partial match; i.e., in a search for Smith, entries such as "Smith", "Smithe", "Smithers", etc. The Multi Item Search will ignore alphabetically higher entries. For a numeric Field, only Records with **exact** matches to the Search String (number) will be found.

Method: Multi Item Search

To begin a Multi Item Search, press R, for Recall a Record, from the Main Menu. The Status Line will display:

Recall a Record   F=   R=   _

Below the Status Line the Record Editor will be active. Enter the Search Strings in the desired Fields. Indicate the preferred Field by placing the cursor anywhere in it's corresponding Parenthesis Set. Only sorted Fields may be selected as a Preferred Field; however, unsorted Fields may be used for other Search Strings.

To start the search, press <ARR LEFT>. The Status Line will display:

Searching   F=   R=   _

FilePro will begin the Multi Item Search. First the Binary method will be used to search for Records with Fields that match, or partially match, the Preferred Field. Then the slower Linear Search will be used to go through all of those Records, and find all other matches specified.

If the cursor is left in an unsorted Field, or one where no search data was specified, FilePro will select the first **sorted** Field containing a Search String, as the Preferred Field. This guarantees that the search will be performed, though not necessarily the fastest way. The Preferred Field chosen by FilePro may leave the Linear Search many more Records to look through than if a proper Preferred Field was chosen.

Once matching Records, if any, are found, FilePro will enter Record Display Mode, just as it does after a Single Item Search. Record Display Mode will be discussed next.

The Record Display Mode: Locating, Changing, Deleting Records

The final result of a successful Single or Multi Item Search is entry into the Record Display Mode. This Mode provides numerous functions for "Stepping" through the Records of a File. These are:

- Step forward to the next Record in the File.
- Step backward to the previous Record in the File.
- Find the next Multi Item Match Record in the File.
- Change the "Step Field".
- Update the displayed Record.
- Delete the displayed Record.

The "Step Field" starts out as either the Search Field of a Single Item Search, or the Preferred Field of a Multi Item Search. It is this Field that determines the order by which Records will be "Stepped".

A description of each Record Display Mode function follows.

Step Forward to the Next Record: ⟨LOGO⟩ F

⟨LOGO⟩ F will move to the next alphabetically, or numerically, ordered Record, according to the Step Field.

If the Record displayed is the last Record in the File, the display will not change, and the Status Line will show:

Last Record   F=   R=   _

Step Backward to Previous Record: ⟨LOGO⟩ B

⟨LOGO⟩ B will retrieve the previous alphabetically, or numerically, ordered Record, according to the Step Field.

If the first Record is already displayed on the screen, the display will not change, and the Status Line will show:

First Record   F=   R=   _

Find the Next Multi Item Match: ⟨LOGO⟩ N

⟨LOGO⟩ N retrieves the next alphabetically or numerically ordered Record which satisfies all the specifications of a Multi Item Search. If used after a Single Item Search, this will work exactly the same as ⟨LOGO⟩ F.

If no more matches can be found, the Status Line will display:

No Match   F=   R=   _

Change Step Field: ⟨LOGO⟩ C

The Step Field used by ⟨LOGO⟩ F, ⟨LOGO⟩ B, and ⟨LOGO⟩ N may be changed with this function.

Place the cursor inside the Field which is to be Changed. Press ⟨LOGO⟩ C. The Status Line will display:

Change Field   F=   R=   _

In a few moments, the Status Line will change to display:

Change Field - Done   F=   R=   _

If trying to Change to an unsorted Fields, the Status Line will display:

Not a Sorted Field   F=   R=   _

Update Displayed Record: ⟨LOGO⟩ U

To change the displayed Record, move the cursor to each Field to be changed and re-type the data. After the Record has been changed, press ⟨LOGO⟩ U. The Status Line will display:

Editing in Progress   F=   R=   _

The changes will be memorized on the data diskette. FilePro knows which Fields have been changed, and will update only their corresponding Sort Files (if they were sorted Fields), thus speeding up operation of this function. Upon completion, the Status Line will briefly display:

Record Edited   F=   R=   _

Then the Status Line will return to:

Recall a Record   F=   R=   _

Delete the Displayed Record: ⟨LOGO⟩ D

To delete the currently displayed Record from the File, press ⟨LOGO⟩ D. The Status Line will display:

Delete Record?   F=   R=   _

Press Y, or ⟨RETURN⟩, for Yes; or press N, for No, to abort. If it was chosen to delete the Record, the Status Line will display:

File   : [filename]   F=   R=   _

Followed shortly by:

Record Deleted   F=   R=   _

OUTPUT SETUP

Introduction

FilePro is not restricted to just one method of printing Records. FilePro allows complete flexibility in printing Record information.

The "Setup Editor" allows a combination of Fixed Data, manually entered from the keyboard, and Variable Data, extracted from the Records of the File, to be established in a "Print Format". A Print Format is created to determine how the information will be printed.

Setup Editor

To enter the Setup Editor, press S from the Main Menu. Below the Status Line, the screen will have cleared (or changed to display any information previously entered when the function was last called). The cursor will appear in the top left hand corner of the screen, below the Status Line.

Print Format Development

FilePro Print Formats can be up to 160 columns wide, by 23 lines long (printer output is **not** restricted to only 23 lines). Each line may contain any combination of Fixed and Variable Data.

Each line of a Print Format represents an actual line on paper. Everything displayed on a screen line will be printed in exactly the same position on paper. Unlike Wordpro, FilePro will not format.

When developing a Print Format, it is usually helpful to have a print out of the File's Record structure. As described under "Printing Screen Contents", page 12, pressing <F5> whenever a Record is displayed on the screen will print it.

The most simple way to obtain a printout of Record structure is to press E, for Edit Field Names, from the Main Menu (the File to be worked on should be loaded). The Index letter of each Field, the Field's name, and the Field's size, will be displayed, at which point <F5> may be used to print this information.

To just observe Record structure, press <F1> while in the Setup Editor to return to the Main Menu (without the loss of any Print Format information already entered), then, press E, for Edit Field Names. The Record structure can then be checked, after which <F1> will return to the Main Menu, then S will return to the Setup Editor.

Entering a Print Format

A Print Format may contain both Fixed, and Variable, Data.

Fixed Data is typed in straight from the keyboard, and will be printed exactly as it was entered. To have all **letters** capitalized on entry, press <POUND>. The :S: in the Status Line will light, indicating Shift Lock Mode. Characters other than letters will not be affected. Pressing <POUND> again will exit Shift Lock Mode.

Variable Data will be taken from specified Fields of a Record. To enter a Field of Variable Data (from the Records of the File), first position the cursor at where the Field is to start. Press <LOGO> F, for Field Mode. The Status Line will display:

<div align="center">

Field: Type: :S:F: C=   _

</div>

The :F: will light, indicating that Field Mode has been entered. The C= will show the current Character (column) position of the cursor. Field Mode will be active any time that the cursor rests within a Field.

A flashing cursor will be shown beside **Field.** Enter the Index letter that represents the Field to be displayed. The Index letter chosen will be shown, and the Field itself will appear on the screen.

To distinguish between Variable and Fixed Data, Fields are shown as a string of highlighted letters. The letter used corresponds to the Index letter of the chosen Field; this letter will appear as many times as there are positions in the Field. Characters may **not** be typed over a Field.

For example, if Field "A", a "Name" Field with a Field size of ten characters, was entered, along with some Fixed Data, the screen would display:

<div align="center">

Dear AAAAAAAAAA, you owe me $5!

</div>

For example purposes, underlined Field displays in this manual will represent highlighting.

Next, the Field Type will have to be entered. There are three different Field Types possible:

L: Left

Entering L will Left justify the Field when it is output to the printer. This means that the contents of the Field will be printed as far to the left as possible. If any spaces in the Field were blank, they will be "printed" on the right side of the Field entry.

In our previous example, if the name "Steve" was to be printed as Left justified, it would appear:

<div align="center">

Dear Steve   , you owe me $5!

</div>

R: Right

Fields may also be Right justified, by entering R. The contents of the Field will then be printed as far to the right as possible, with any blank spaces appearing before the Field entry.

Using the same example, Right justification would produce:

Dear   Steve, you owe me $5!

C: Compressed

If C is entered, for Compressed, only the Field's contents will be printed, all extra spaces will be removed.

For example,

Dear Steve, you owe me $5!

To exit Field mode at any time, press ⟨F1⟩.

Any Field may be used as many times as desired throughout the Print Format, though it is not necessary to use **all** of the Fields.

The Setup Editor may refuse to accept a Field's Index letter for any of the following reasons:

- There is no Field with that Index. If there are only five Fields, Indexed A through E, then any letter other than A, B, C, D, or E, will be refused.

- There is not enough space left on the current screen line, after the cursor, for the entire Field. If there are ten character spaces left after the cursor, only Fields with ten or fewer characters will be allowed.

- The new Field would "cover up" an existing Field. If a Field already exists to the right of the cursor, another Field may not overlap it.

Should one of the above situations occur, press ⟨F1⟩ to exit Field mode.

Setup Editor Functions

The following editing functions are available while using the Setup Editor:

Cursor Control

Full cursor control is available with ⟨DOWN⟩, ⟨UP⟩, ⟨FWD⟩, ⟨BACK⟩, and ⟨HOME⟩.

Insert

A single space may be inserted underneath the cursor by pressing <INST> (<SHIFT> <DEL>). Insert will only work on the line on which the cursor is located. If all positions on a line are full, insert will have no effect. Insert will also have no effect if attempting to break up a Field.

Delete

Pressing <DEL> will delete a single character immediately to the left of the current cursor position. Delete will only work on the line on which the cursor is located. Delete will not work if attempting to break up a Field.

Line Insert

To insert a full line, underneath the cursor, press <LOGO> <F5>. Line Insert will have no effect if there is anything on the 23rd line.

Line Delete

A full line may be deleted by moving the cursor on to the line, then pressing <LOGO> <F3>.

Delete Field

To delete a Field, position the cursor anywhere within the Field, then press <LOGO> D. The Field will be removed.

Erase

An entire screen or everything beyond the cursor may be erased with this function. Press <LOGO> E. To erase the entire screen, press A, for Erase All. To erase everything beyond the cursor, press R, for Erase Remainder. If the cursor was located in a Field, the entire Field will be erased.
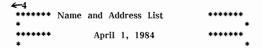
Change Field Type

A Field's type, (Left, Right or Compressed), may be changed at any time. Locate the cursor within the Field to be changed; the Field's current type will be displayed on the Status Line. Press <LOGO> C, then depending on the desired Field type, press L, R or C. The new Field type will then be displayed on the Status Line.

Page Headers

When creating a Print Format, a Header may be specified to appear at the top of each Printed Page, though a Header does not have to be used. Fixed and/or Variable Data may be contained in a Header.

To enter a Header: On the first line of the Print Format, enter a left arrow symbol by pressing ⟨ARR LEFT⟩. Immediately beside the arrow symbol, enter the Number of screen lines to be reserved for the Header, then press ⟨RETURN⟩. For each Header line, enter any data to be Printed, using the same processes as for entering the main body of a Print Format. Variable Data specified for a Header will **not** be taken from Records of a File. Instead, it will be specified seperately upon Output.

Following is an example of a Header that uses only fixed data:

```
←4
******* Name and Address List          *******
*                                             *
*******           April 1, 1984         *******
*                                             *
```

To demonstrate an example of a Header that uses both Fixed and Variable Data, consider a FilePro File with the following Record structure:

```
A Name          (                    )
B Address       (                         )
C City          (              )
D Province      (                    )
```

A Header in a Print Format using both Fixed and Variable Data could be:

```
←4
**** People Who Live in CCCCCCCCCC       ****
*                                           *
****           April 1, 1983.            ****
*                                           *
```

The Fixed Data, manually typed in, is "People Who Live in", the asterisks, "*", and the date. Variable Data is the **C** Field, which, in the sample Record above, represents the "City" Field.

As mentioned previously, the information to fill a Field appearing in a Header is not taken from Records of the File, but will be specified seperately before Output. This information will be taken from the "First Data Set" (see "Data Sets", page 49). See "Variable Data within Headers", page 52, for further details.

Be sure that any data entered for the main body of the Print Format does not appear on lines designated as Header lines. Header lines may be left blank; they will then print as blank lines.

Page Numbers/Sequence Numbers

Page Numbers may only be used within a Header. If a Header is not used, Page Numbers may not be used.

To specify a Page Number, move the cursor to the desired location within the Header. Page Numbers may appear anywhere within a Header. Press <LOGO> F, as if a Field of Variable Data was to be entered. The Status Line will display:

      Field: Type: :S:F: C=   _

Instead of typing in a Field Index letter, enter #. The display, ####, will appear on the screen immediately after the cursor. The Status Line will display:

      Field: # Type: :S:F: C=   _

The **Type**, as with any Field, may be specified as L (Left justified), R (Right justified), or C (Compressed).

Page Numbers always start at one and always increment by one. An example of a Header containing a Page Number Field is:

```
←4
**** People Who Live in Willowdale        ****
*                                            *
**** April 1, 1983 ** Page ####           ****
*                                            *
```

In this example, the word "Page" is Fixed Data and was manually typed in as part of the heading.

A Sequence Number refers to the number of Records printed. Sequence Numbers may be specified only within a Print Format; they may not appear within a Header. To enter a Sequence Number, follow the same procedure as for entering a Page Number.

Sequence Numbers always start at one, and increment by one each time a Record is printed. They may be used to number data output in columns.

This example shows a Sequence Number Field located within a Print Format:

      ####.   First Name: AAAAAAAAAAAAAAA
             Last Name: BBBBBBBBBBBBBBB
             Address: CCCCCCCCCCCCCCC
                       DDDDDDDDDDDDDDDD, EEEEEEEEE
             Postal Code: FFFFFFF

Absolute Position Indicator

Data following a Compressed Type Field may print in different positions, depending on the total number of characters printed for the Field. To force data to "line up" in columns, the Absolute Position Indicator should be used.

An Absolute Position Indicator is entered into a Print Format by pressing <ARR UP>. These Indicators may be placed anywhere, even in Headers, and may be used as many times as required.

When Output, the <ARR UP> will print as a blank space, in the same column as it appears in on the screen. Any data after it will be printed right after the space.

For example, if printing a list of Names and Telephone Numbers, using Compressed Fields for First Name, Last Name, and Telephone Number, a Print Format could look like this:

AAAAAAAAAAA BBBBBBBBBBBB CCCCCCCC

The Records would be printed as follows:

    John Smith 123-4567
    Sue Jones 456-7890
    Jane Baker 678-9012
    Jim Stephens 345-6859

The telephone Numbers may be positioned in a straight line by placing an <ARR UP> before the C Field. The Print Format would then be:

AAAAAAAAAAA BBBBBBBBBBBB   CCCCCCCC

The Records would then print like this:

    John Smith   123-4567
    Sue Jones   456-7890
    Jane Baker   678-9012
    Jim Stephens   345-6789

In the above example, Compressed Fields were necessary, because if Left or Right Field Types had been used, extraneous spaces would have been printed between the First Name and Last Name Fields. Thus, to get the Phone Numbers lined up, the use of an Absolute Position Indicator was necessary.

Print Format Examples

Following are two Print Format examples, and the printouts that they would produce.

Columnized Data, with Sequence and Page Numbering

The Field Index letters refer to Fields containing the following data (Field size in brackets):

    A: First Name (10)
    B: Last Name (10)
    D: Phone Number (12)

It was not necessary to use Field C in this particular Output. The final Print Format was of the following form:

        ←4
                          Page ####

    No.   Name   Phone Number
    ---   ----   ------------
    ####) AAAAAAAAAA BBBBBBBBBB   DDDDDDDDDDDD

Note that the number symbols after "Page" are Page Numbers because they appear within the four line Header, and the number symbols under the "No." column are Sequence Numbers because they appear in the main body of the Print Format. Also note the two Absolute Position Indicators added, which will maintain definite starting positions for Fields A and D.

If all Fields were specified as Compressed, this Print Format would create this type of a printer Output:

                          Page 1

    No.   Name   Phone Number
    ---   ----   ------------
    1)   Steve Punter   416-555-5431
    2)   Stewart Martin   416-555-6811
    3)   Jane Doe   704-555-1212
    4)   John Smith   519-555-1213

Each Record of such a File would produce one Name/Phone Number set.

Mailing Labels

Fields and their corresponding Index letters apply to this data, with Field size given in brackets:

    A: First Name (10)
    B: Last Name (10)
    C: Address (40)
    D: City, State (30)
    E: Zip Code (7)

The Print Format created was of this form:

    AAAAAAAAAA BBBBBBBBBB
    CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC CC,
    DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD,
    EEEEEEE
    [blank line here]

All Fields were Compressed, giving printer Output of this form:

    Steve Punter
    17 Rosethorn Street,
    Bedford, Massachusetts,
    01730P

    Stewart Martin
    755 The Queensway East,
    Westwood, Massachusetts
    02090

    Jane Doe
    999 Queen Street,
    Cambridge, Massachusetts
    02138

    John Smith
    435 Liverpool Road,
    Boston, Massachusetts
    02215

In this case, each Record of the File produces one "mailing label". These could be printed straight onto blank labels, to be affixed to an envelope, if desired.

Output Specifications

Once a satisfactory Print Format has been created on the screen, the final Output Setup step is the definition of certain "Output Specifications".

Press <SHIFT> <R/S> from the Setup Editor (**not** from the Main Menu). The screen will display:

Output Specifications   :S:F: C=   _

Setup Width   (80)

Setup Height   (0)

Number Wide   (1)

Printer Page   (0)

Paging   (0)

Decimal Places   (0)

The cursor will be inside the first Parenthesis Set. The Parenthesis Editor will be active; it may be used to alter any of the various Output Specifications described below.

Setup Width and Number Wide

FilePro allows Print Formats to be printed side by side, across the page. The number of Formats that may be printed this way is determined by the width of each Format, and the number of columns the printer used is capable of printing.

Number Wide specifies the number of Formats that will fit across the paper. Setup Width specifies the width of each Format, plus the number of blank spaces to be left after each Format.

For example, consider the use of an 80 column printer. If the Print Format was (at it's longest line) 15 characters wide, and five blank spaces were to appear after each Format printed, four Formats could be printed across the page. In this case, Number Wide would be four, and Setup Width would be twenty.

Setup Height

The Setup Height specifies the number of lines in the Print Format, plus the number of blank lines to be left after each Format printed. The number of Header lines should **not** be included in this specification.

For example, if the Print Format was fifteen lines long, and five blank lines were wished after each Format, the Setup Height would be set at twenty.

Printer Page

Printer Page specifies how many lines long each page will be. Standard 8 1/2" x 11" paper is 66 lines long.

Note: A Printer Page of "0" will produce continuous printouts with no break at the end of each page.

Paging

Paging specifies the maximum number of lines that will actually print on each page.

If using standard 66 line (Printer Page of 66) 8 1/2" by 11" paper, a Printer Page of 60 will print 60 lines, skip 6 lines at the end of the page, then start printing on the next page.

In the above example, to get three blank lines at the top of each page, and three blank lines at the bottom of each page, just set the printer to start printing at the third line from the top of the first page.

An advance to the next page will occur if an entire Print Format will not fit in the space remaining.

Decimal Places

The Decimal Places specification determines how many Decimal Places will appear in the output of a Numeric Field. The total size of a Numeric Field includes all numbers, the decimal point, and the minus sign (if used). If the number of Decimal Places specified is greater than the size of the Numeric Field, or does not leave enough room in the Field for the integer (whole) part of the number, the Field will be filled with dollar signs, "$".

If Decimal Places is set at 0, numeric Fields will print exactly as they were entered into the Data Base. A number greater than zero will determine the number of Decimal Places to be printed.

For example, assume the following numbers were entered into a Field:

```
(-123.443   )
(12          )
(333.1       )
```

With Decimal Places set at zero, they would print as:

```
-123.443
12
333.1
```

With Decimal Places set at one, they would print as:

        -123.4
          12.0
         333.1

With Decimal Places set at eight, they would print as:

        $$$$$$$$$$$$
         12.00000000
        333.10000000

The contents of the first Field are replaced with dollar signs to indicate that the number of characters exceeds the Field size of twelve characters.

When the Output Specifications are completed, press ⟨F1⟩, or ⟨SHIFT⟩ ⟨R/S⟩, to return to the Setup Editor.

Printing Output Setups

Whenever a Print Format, or Output Specifications, are displayed on the screen, the entire screen may be sent to the printer. As with all screen printing, just press ⟨F5⟩. The Status Line will display:

Print Screen?   :S:F: C=   _

Press Y, or ⟨RETURN⟩, for Yes to print everything on the screen below the Status Line, or press N, for No, to abort.

The highlighted characters representing Fields will appear underlined on most ASCII printers. Commodore Dot Matrix printers will actually print the characters as highlighted; white characters on a black background as opposed to the regular black characters on a white background.

Memorizing an Output Setup

A complete Output Setup (both the Print Format, and Output Specifications) may be saved on the data diskette. These Setups may be recalled for use at some later time.

Ten separate Output Setups for each File may be Memorized. Setups are numbered from zero to nine.

To memorize an Output Setup, press ⟨F7⟩ from the Setup Editor. The Status Line will display:

Recall or Memorize?   :S:F: C=   _

Press M, for Memorize. The Status Line will change to:

Memorize Set-up #   :S:F: C=   _

Enter the desired number for this Setup. The Setup will then be sent to disk, then to Status Line will show:

Stored - Set-up # X   :S:F: C=   _

If the Setup number chosen is already in use, the Status Line will display:

REPLACE Set-up # X   :S:F: C=   _

To replace the existing Setup, press ⟨RETURN⟩. Otherwise, press ⟨F1⟩ to abort the Memorize.

If there is not enough room on the data diskette to store another Setup, the Status Line will show:

Disk Full   :S:F: C=   _

In this case, an existing Setup must be overwritten in order to save the new Setup.

Recalling an Output Setup

To Recall an existing Output Setup (the Print Format and Output Specifications), press <F7> from the Setup Editor. The Status Line will show:

Recall or Memorize?   :S:F: C=   _

Press R for Recall. The Status Line will display:

Recall Set-up #   :S:F: C=   _

Press the number which corresponds to the Setup required. If the number is not known, begin at zero and recall the existing Setups until the desired Setup is found.

To help Recall a certain Setup, or help remember which Setups are already on disk, it is a good idea to print out a copy of them just before, or just after, Memorizing the Setup. "Printing Output Setups" was discussed on the previous page.

OUTPUT

Introduction

Once an Output Setup has been finalized, FilePro will allow selection of data from the File to be Output. With the many options available, almost any combination of Records may be chosen.

Data Sets

To select which Records are to be Output, at least one "Data Set" must be defined. There are two types of Data Sets; "First" and "Second". Either type may be specified for certain Fields of the Record. Data Sets are much like substrings used in Multi Item Searches, except they are used to define a "Range" of information to be Output.

Data Sets may be entered for as many, or as few, Fields as desired; but Fields that help to specify Records for Output should have a Data Set defined. Both sorted and unsorted Fields may have Data Sets defined, but **at least one such Field must be a sorted Field.**

Types of Data Elements

Data Sets, once defined, may be chosen to work:

      I   Inclusively
      E   Exclusively
      R   Range
      O   Outside a Range

These terms, and what they represent, are outlined below.

Inclusive

Only Records containing Fields that match either Data Set will be selected. If only one Data Set is given, only Records containing Fields that match it will be selected.

For example, if a Data Set of "Toronto" was chosen for a "City" Field (leaving the other Data Set blank), only those Records with Fields referring to the City of Toronto would be selected. If the other Data Set was also specified, to contain "New York", then only Records with Fields referring to the Cities Toronto **or** New York would be selected.

Exclusive

Only Fields **not** matching the Data Set given, or either Data Set if two Sets are given, will be selected.

If "Toronto" was the only Data Set specified, then all Records **not** referring to the City of Toronto would be selected. If the Data Set "New York" was also specified, then all Records referring **neither** Toronto **nor** New York would be selected.

Range

In this case, the First Data Set specifies a lower limit (alphabetically, or numerically, corresponding to Field Type); the Second Data Set specifies an upper limit. Records containing Fields that fall within this limit will be selected, including Fields that contain either Data Set.

If the First Data Set is left blank, every Record containing Fields up to and including the Second Data Set will be selected. If the Second Data Set is left blank, every Record containing Fields higher than, or including, the First Data Set, will be selected.

For example, if a Postal Code Field had a First Data set "G", and a Second Data Set "P", then all Records with Postal Codes starting with G, H, K, L, M, N, or P, would be selected (there are no Postal Codes starting with I or O). As a point of interest, this would give all Records with data about something in Ontario or Quebec, as Ontario/Quebec Postal Codes range from G to P.

Outside a Range

Only Records containing Fields with information that does not fall between the two Data Sets will be selected. If the First Data Set is left blank, all Records with Fields falling after, and not including, the Second Data Set, will be selected. If the Second Data Set is left blank, all Records with Fields falling before, and not including, the First Data Set, will be selected.

Using the same Data Sets, "G" and "P", as in the previous example for a Postal Code Field, would cause selection of all Records **not** containing data on anything in Ontario or Quebec.

Method: Printer Output

First load or create the Output Setup desired. From the Main Menu, press O for Output to Printer. The Status Line will display:

<u>F</u>irst Data Set   F=   R=   _

The Record Editor will be active. Enter a First Data Set for at least one sorted Field, and as many other Fields as required.

Once satisfied will all entries, press ⟨ARR LEFT⟩. The Status Line will display:

<u>S</u>econd Data Set   F=   R=   _

Enter any Second Data Sets required. Once satisfied with them, press ⟨ARR LEFT⟩.

Remember that it is not necessary to use both the First Data Set and the Second Data Set for any Field or Fields. One Data Set might suffice. If only First Data Sets are to be used, press ⟨ARR LEFT⟩ when asked for Second Data Sets. If only Second Data Sets are to be used, press ⟨ARR LEFT⟩ when asked for the First Data Set.

The Parenthesis Sets shorten to only one character apart. All Parenthesis Sets will display the letter <u>I</u> for <u>I</u>nclusive. The Status Line will display:

<u>T</u>ypes of Data Elements   F=   R=   _

Move the cursor to each Field or Fields with Data Set entries and enter the Types of Data Elements required (default of <u>I</u>nclusive, or change to <u>E</u>xclusive, <u>R</u>ange, or <u>O</u>utside a Range).

When all of the Data Sets, and their Types, are satisfactory, press ⟨ARR LEFT⟩. The Status Line will display:

<u>S</u>earch By   F=   R=   _

FilePro is now waiting for entry of the Index letter of the **Preferred Field** by which it will search. This Preferred Field should be chosen with the same considerations as given for a Preferred Field of a Multi Item Search.

The Preferred Field **must** have had a First or Second Data Set entered, and **must** be a sorted Field. Comparable to Multi Item Searches, this option is used when several Fields have Data Sets specified.

Press the letter which corresponds to the Preferred Field. The Status Line will display:

<u>S</u>earch By X   Order By   F=   R=   _

In the above Status Line, "X" represents the Index letter of the Preferred Field just entered.

Any sorted Field may be used to determine the order in which Record data will be printed. Enter the Index letter of the Field to be used.

At any time, leading up to and including the last question, the entire operation may be aborted by pressing ⟨F1⟩.

Once this question has been answered, printing will begin. The screen will show the Print Format. At this time, printing may be stopped by pressing ⟨R/S⟩. Once the printing has been stopped, ⟨F1⟩ will abort the printout, and C will continue.

Variable Data within Headers

As mentioned under "Page Headers", page 39, Variable Data appearing within a Header is taken from the First Data Set entered for the chosen Field.

For example, consider a FilePro File with the following Record structure:

```
A   Country          (                    )
B   City             (                    )
C   Rainfall         (          )
```

A Print Format of this form was chosen:

```
←4
Mean Annual Rainfall              AAAAAAAAAAAAAAA
*****************************************
City                          Rainfall (inches)
----                          -----------------
BBBBBBBBBBBBBBB                    CCCCC
```

Fields A, and C, were chosen as Right Aligned, Field B was chosen as Left Aligned. If a First Data Set of "U.S.A." was chosen for Field A, in order to print rainfall for all American cities of the File, the following Output would result:

```
Mean Annual Rainfall                     U.S.A.
*****************************************
City                          Rainfall (inches)
----                          -----------------
New York                            17.50
Washington D.C.                     34.00
Michigan                            28.00
Oregon                              95.50
Florida                             30.00

etc.
```

Output to Disk

FilePro data may be Output to disk in sequential (SEQ) format. The SEQ File created may then be read in as Data for some other program, such as Wordpro. Output to Wordpro specifically will be covered seperately.

To begin a Disk Output, press D from the Main Menu. The only difference in procedure between Disk and Printer Output is that FilePro will also prompt for a File name to send the data to.

The Output sent to the SEQ File will differ from Printer Output, because this function has been implemented mainly for Output to Wordpro. Differences follow:

Only Variable Data will be sent to disk, any Fixed Data will be ignored. Each Field will be followed by a Carriage Return (same as the character generated by <RETURN>). Any blank Fields will be sent as Wordpro checkmark symbols.

Merging a FilePro File with Wordpro

Before attempting a Merge to Wordpro, read all previous information in this, the "Output" section of this manual, beginning on page 49. A good working knowledge of how to create Print Formats is also required. This information may be found starting on page 35.

A FilePro Disk Output File is specifically designed as a sequential (SEQ) file for transfer to Wordpro. Using the method described below, a FilePro File may be merged into a Wordpro Form Letter.

From FilePro, begin the Merge by loading the File containing data to be Merged with Wordpro. Enter the Setup Editor, and create a Print Format that will Output Fields in the order required by the Wordpro Form Letter, with only one Field per line. Output Specifications will have no effect, so they may be left as they are.

Make sure that the number of Fields in the Print Format equals the number of Variable Blocks in the Wordpro Form Letter. If there are more Fields than there are Variable Blocks, or vice versa, the Fields will not Merge properly.

An example of the above may be found on the next page.

Example: Consider the Merging of a Name and Address File into a Wordpro Form Letter containing 6 Variable Blocks. Assume the FilePro File has Fields representing:

A: Name (20)
B: Company Name (20)
C: Address (30)
D: City (20)
E: State (20)
F: Zip Code (7)

The numbers in brackets represent each Field's size. A FilePro Print Format for Disk Output of this File could be:

AAAAAAAAAAAAAAAAAAAA
BBBBBBBBBBBBBBBBBBBB
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
DDDDDDDDDDDDDDDDDDDD
EEEEEEEEEEEEEEEEEEEE
FFFFFFF

Each Field must be given a Compressed Field Type.

Once the Print Format has been developed, press <F1> to return to the Main Menu, then press D for Disk Output. The Status Line will display:

Disk File: 0:   F=   R=   _

Enter the name by which the FilePro SEQ data file should be called, then press <RETURN>. If there already is a file with that name, the Status Line will display:

Replace?   F=   R=   _

To replace the existing File, press <RETURN>. To abort, and **not** replace the existing File, press <F1>.

Once a satisfactory filename has been entered, the Status Line will display:

First Data Set   F=   R=   _

Below the Status Line, Record Display Mode will be active. Enter a First Data Set, and/or Second Data Set for at least one sorted Field, and any other Fields that may aid in data selection.

Once the First Data set information has been entered, press <ARR LEFT>. The Status Line will display:

Second Data Set   F=   R=   _

Enter any Second Data sets required, then press ⟨ARR LEFT⟩. The Status Line will display:

<p align="center">Types of Data Elements   F=   R=</p>

The Parenthesis Sets will close to become one character wide. Each Parenthesis Set contains the default I, for Inclusive. These Data Element Types may be now be changed, if desired.

Once the Data Element Types are satisfactory, press ⟨ARR LEFT⟩. The Status Line will display:

<p align="center">Search by   F=   R=   _</p>

Enter the Index Letter of the Field by which the File will be searched. This must be a sorted Field. The Status Line will display:

<p align="center">Search by X Order by   F=   R=   _</p>

In the above example, the "X" represents the Index letter just entered. Press the Index letter of the Field by which Output will ordered.

FilePro will then create the SEQ File on the diskette. When the File creation has finished, the Main Menu will appear on the screen.

To Merge this newly created SEQ File into Wordpro, first clear FilePro from the computer by pressing ⟨SHIFT⟩ Q.

The SEQ List Data file from FilePro will have to fit into Wordpro's Extra Text area. The Form Letter that will use this List Data should be in Main Text. Keeping these points in mind, load Wordpro according to the Wordpro User Guide. Allocate only as many lines in Main Text as needed by the Form Letter; remember to leave enough lines in Extra Text for the List Data now on disk.

Load the Wordpro Form Letter into Main Text. Switch to Extra Text with ⟨LOGO⟩ X, then press ⟨F8⟩ (⟨SHIFT⟩ ⟨F7⟩). Wordpro's Status Line will display:

<p align="center">EOP Character?   C=   L=   _</p>

Just press ⟨RETURN⟩. Wordpro's Status Line will display:

<p align="center">RECALL   C=   L=   _</p>

Enter the name of the FilePro SEQ data file, then press ⟨RETURN⟩. Wordpro will then Recall the List Data from the FilePro SEQ data file into Extra Text.

Once the SEQ file has been recalled, press <SHIFT> <F1> to move to the end of Extra Text. There will be a small block, followed by a Wordpro Return character, " ". This is simply an end of file marker, and should be removed. Place the cursor on to the block, then press <LOGO> E R to remove it.

Press <HOME> twice to move to the beginning of the List Data. Insert a blank line at the very beginning, by pressing <F1> <INST>. Now, enter the Wordpro checkmark symbol with <LOGO> /, followed by ld. Enter the number of Variable Blocks required by the Form Letter (this should be the same as the number of Fields output from each Record of FilePro). Finally, press <RETURN>.

For example, assuming six Fields of data, from two seperate FilePro Records, was output by the Print Format shown earlier. It would now be in this form:

> √ld6
> John Martin ←
> ACE Products Ltd, ←
> 1322 Brooke Road ←
> Brooklyn ←
> New York ←
> 06542 ←
> Abe Wagner ←
> Data Systems Inc. ←
> 3324 Ford Street ←
> Boston ←
> Massachusetts ←
> 02215 ←

Now that the List Data has been set up, return to Main Text. To print out the Form Letters, press <LOGO> O, then select the Wordpro output option L (for List Data), along with any other options required. The Form Letter will fill with the first piece of List Data from Extra Text, then print. One Form Letter for each set of List Data will be printed.

If the Form Letter's Variable Blocks are not filling properly with the List Data, check to make sure each piece of List Data is represented by it's own Variable Block. If two items of List Data are to be printed side by side, such as City/State, two Variable Blocks are still required (see the Wordpro User Guide).

Printing from Wordpro can be stopped at any time by pressing any key. Once stopped, pressing <F1> will abort, pressing any other key will continue.

Load "FP64 Install", 8

UTILITIES

Changing Defaults

Changing FilePro's defaults is done with the program, "PF64 INSTALL". This program will replace a small file called "P.INSTALL", from which FilePro reads it's defaults directly.

Since it will be necessary to actually change "P.INSTALL" on the diskette, the FilePro program diskette will have to have a write enable notch cut into it. Instructions follow.

Take a notched diskette and place it on top of the FilePro program diskette. Trace the notch boundaries with a pencil. With a pair of small sewing scissors or a single hole punch, cut the notch out. Be careful not to cut the notch too deep into the disk. Don't bend or twist the diskette out of shape.

Power up the Commodore 64 and disk drive, and place the FilePro program diskette into the drive. Type:

<u>LOAD</u> **"PF64** INSTALL",8 ⟨RETURN⟩   *"FP64 Install",*

When the <u>READY.</u> prompt appears, type:

RUN ⟨RETURN⟩

The diskette will start to spin, shortly after which the "Menu" screen will appear. The horizontal reverse field (back lit) bar may be moved to any of the choices available, with ⟨DOWN⟩ and ⟨UP⟩ (⟨SHIFT⟩ ⟨DOWN⟩).

None of the following changes will be permanent until a new "P.INSTALL" is saved to the FilePro program diskette. Saving instructions may be found after all options have been described.

Changing Screen Colors

Position the reverse field bar over the color area to be changed. Press ⟨FWD⟩, this prompt will appear:

Color Number?

Use the chart at the top of the screen to select a new Color Number. Enter the number, then press ⟨RETURN⟩. The color name at the end of the line will change to the new color. All Screen Colors may be changed this way.

Changing Printer Type

Move the reverse field bar over the line that says "Default Printer Type". Press ⟨FWD⟩, this prompt will appear:

Printer Type?

'A' for ASCII, 'C' for CBM

If using an ASCII printer, press A; if using a Commodore printer, press C. The letter shown at the end of the reverse field bar will change accordingly.

Changing Printer Device
Default Disk Device
Output/Input Disk Device

Move the reverse field bar over the corresponding line, then press ⟨FWD⟩. This prompt will appear:

Device Number?

Enter the Device Number required by the printer or disk drive to be used, then press ⟨RETURN⟩. The Device Number shown will change to the number entered.

Changing Output/Input Drive Number

Position the reverse field bar over the "Output/Input Drive Number" line, then press ⟨FWD⟩. This prompt will appear:

Drive Number?

Enter the Drive Number wanted; "0" (zero), or "1" only. If using a single disk drive, this should be a "0".

Changing Bus Type

Move the reverse field bar over the "Bus Type" line, then press ⟨FWD⟩. The following will appear:

Bus Type?

'S' for Serial, 'P' for Parallel

Press the key corresponding to the Bus Type wanted. The Type entry will change accordingly.

Changing Drive Type

Position the reverse field bar over "Drive Type", then press <FWD>. The following prompt will appear:

> **Drive Type?**
>
> 0 = 1541/Indus GT/MSD/4040, 1 = 8050
> 2 = 8250, or 9060/9090 hard disk

Press the numeric key corresponding to the Drive Type number required.

Changing Printer Secondary Address (SA)

Position the reverse field bar over the "Printer SA" line, then press <FWD>. This prompt will appear:

> **Secondary Address?**

Enter the Secondary Address needed for the printer to be used.

Saving Changes

To save a new "P.INSTALL" with the configurations currently shown on the screen, press <ARR LEFT>. This prompt will appear:

> **Write Configuration to Disk?**

At this point, entering N, for No, will return to allow further changes. Otherwise, Y, for Yes, will automatically save the new "P.INSTALL" to disk, finalizing the changes. The Commodore 64 will then return to it's initial power-up state.

The Final Step

Before using the FilePro program diskette, place a write protect tab over the notch. A piece of tape (masking tape is preferable) can be used if a write protect tab is not available. Don't write to the FilePro program diskette, other than for changing these defaults.

Dual Parallel Drive Diskette Backup and Copy

The following two functions will not work unless a **dual parallel** (IEEE) disk drive is used. Such drives are: MSD SD-2 in IEEE mode, Commodore 4040, 8050, or 8250.

Before starting either of these functions, place the diskette containing the FilePro data Files into Drive 0, and place the diskette to which these data Files will be sent in Drive 1.

Backup Data Diskette

Data diskettes should be duplicated regularly. Diskettes may fail due to external causes, such as close proximity to electric motors, or magnetic fields (a ringing telephone creates magnetic fields that may partially erase a diskette). Should a data diskette be destroyed, there is no way to bring back it's data, unless the data can be retrieved from it's backup diskette.

To backup the data diskette in drive 0, onto the diskette in drive 1, first press B, for Backup, from the Main Menu. The diskette in Drive 1 does not need to be previously initialized ("newed"); all data on it will be erased, so it should be blank or unwanted. The Status Line will display:

<div align="center">

Backup?   F=   R=   _

</div>

Press Y, or <RETURN>, for Yes; N, for No. Approximate times needed to complete a backup on different Parallel Dual drives follow:

Disk Drive	Time
MSD SD-2 (IEEE Mode)	2:30
Commodore 4040	2:20
Commodore 8050	8:00
Commodore 8250	16:00

Times given are in minutes (ie; 2:30 is two minutes and thirty seconds).

File Copy

Backup will copy an entire diskette; File Copy will copy only the currently Loaded File to another diskette. Any data already on the other diskette will not be destroyed, the File will just be added to it.

Load the File to be Copied (see "Loading a File", page 19), then, from the Main Menu, press F, for File Copy. The Status Line will display:

<div align="center">

Copy File?   F=   R=   _

</div>

Press Y, or <RETURN>, for Yes; or N, for No. The copy will begin. If copying a large File, this function may take up to fifteen minutes.

FilePro with the C64-Link

To use FilePro with a C64-Link, the C64-Link must first be relocated to $C000. A C64-Link Relocator program should have been supplied with the C64-Link; load and run it, specifying the $C000 relocation.

After relocation, insert the FilePro program diskette into the drive, then type:

.   LOAD "VLOADER",8,1 <RETURN>

This program will LOAD and RUN FilePro automatically, setting it up to work properly with the C64-Link.

QUICK REFERENCE GUIDE

Getting Started

Make sure your Commodore 64, disk drive, and printer are set up according to their respective owners manuals.

Insert the FilePro program diskette into the drive, then type:

<u>LOAD"0:*",8</u> ⟨RETURN⟩

After the "READY" prompt appears, type:

<u>RUN</u> ⟨RETURN⟩

FilePro will then load, using the default colors; printer type and secondary address; disk drive device number, drive number, and type; and bus type; as set in "P.INSTALL".

The title screen will be displayed for 2 seconds (or press ⟨F1⟩ to abort it immediately), after which the Main Menu will appear.

Main Menu

Key	Function
A	Add New Records
B	Backup Disk (Parallel Dual Drives Only)
C	Create a New File
D	Disk Output
E	Edit Field Names
F	File Copy (Parallel Dual Drives Only)
I	Index of FilePro Files
L	Load an Existing FilePro File
M	Merged Data Entry from SEQ File and Keyboard
N	Number: Version #, and Max # Records/File
O	Output to Printer
R	Recall a Record
S	Setup Editor
W	WordPro Data Entry (from SEQ file)
⟨F1⟩	Abort Current Function
⟨F3⟩	Next Character Color
⟨F4⟩	Previous Character Color
⟨F5⟩	Next Background Color
⟨F6⟩	Previous Background Color
⟨F7⟩	Next Border Color
⟨F8⟩	Previous Border Color
⟨SHIFT⟩ Q	Quit (Exit to BASIC)

Status Line: A

When FilePro is first loaded, the Status Line will appear:

       File :   F=   R=   _

When a File is in memory,

        F= gives the number of Fields in each Record.
        R= gives the number of Records currently in the File.

When a FilePro function is underway, the word **File** will be replaced by a corresponding operating message.

Parenthesis Editor

Key	Function
⟨FWD⟩	Cursor Forward (right)
⟨BACK⟩	" Back (left)
⟨UP⟩	" Up
⟨DOWN⟩	" Down
⟨HOME⟩	" Home
⟨DEL⟩	Delete Character
⟨INST⟩	Insert Space
⟨RETURN⟩	Clear to End of Set, Move Cursor to Next Set
⟨SHIFT⟩ ⟨RETURN⟩	Move Cursor to Next Set
⟨F1⟩	Abort Current Function
⟨F3⟩	Clear: All Sets or Remainder of Sets
⟨F5⟩	Print Screen
⟨ARR LEFT⟩	Accept Data into Current Function

Field Types: A

Key	Field Type
L	Literal (alphanumeric plus symbols)
S	Shifted Literal (as above, but all letters capitalized).
#	Numeric (numbers and "-", "." only)
Y	Yes/No (⟨RETURN⟩ defaults to Y)
N	No/Yes (⟨RETURN⟩ defaults to N)

The above types are used when Creating a File, or when Changing Field information with E, for Edit Field Names.

Record Editor

Parenthesis Editor, plus:

Key	Function
⟨SHIFT⟩ ⟨R/S⟩	Modify Default Strings
⟨ARR UP⟩	Enter Default String

Searches

Single Item: Enter Search String (sorted Field only), press ⟨ARR LEFT⟩.

Multi Item: Enter Search Strings, place cursor in Preferred Field (must be a sorted Field), press ⟨ARR LEFT⟩.

Record Display Mode

Parenthesis Editor, plus

Key	Function
⟨LOGO⟩ B	Backward through Records by Step Field
⟨LOGO⟩ D	Delete Displayed Record
⟨LOGO⟩ F	Forward through Records by Step Field
⟨LOGO⟩ N	To Next Multi Item Match Record
⟨LOGO⟩ S	Change Step Field
⟨LOGO⟩ U	Update Displayed Record .

Setup Editor

Parenthesis Editor (though no Parenthesis Sets appear on screen while developing Print Format), plus:

Key	Function
⟨LOGO⟩ C	Change Field Type
⟨LOGO⟩ D	Delete Field
⟨LOGO⟩ E	Erase All or Remainder of screen
⟨LOGO⟩ F	Enter Field
⟨LOGO⟩ ⟨F3⟩	Delete Line
⟨LOGO⟩ ⟨F5⟩	Insert Line
⟨F7⟩ M	Memorize Complete Output Setup
⟨F7⟩ R	Recall Complete Output Setup
⟨ARR UP⟩	Absolute Position Indicator
⟨ARR LEFT⟩ [#]	Define [#] Lines long Header
⟨POUND⟩	Shift Lock Mode (capitalize all letters entered)

Status Line: B

During Output Setup, the Status Line will appear:

Output Setup Editor   :S:F: C=   _

:S: will light up to indicate Shift Lock Mode.
:F: will light up to indicate Field Mode.
C= will indicate current cursor column position.

Field Types: B

Key	Field Type	
L	Left Justified (aligned)	
R	Right Justified (")	
C	Compressed	
#	Within Header:	Page Number
	Not in Header:	Sequence Number

These Field types are used while creating a Print Format with the Output Setup Editor.

Data Set Types

Key	Type
I	Inclusive
E	Exclusive
R	Range
O	Outside Range

The above types are used when defining Data Element Types for Output.

Changing Defaults: "PF64 INSTALL" *"FP64 INSTALL", 8*

Power up the Commodore 64 in BASIC, place the FilePro program diskette in drive 0 of device 8, then type:

<u>LOAD</u> **"PF64 INSTALL",8** *"FP64 INSTALL", 8*

The reverse field bar may be moved with <DOWN> and <UP>. Position the bar over the default to be changed, then press <FWD>. Enter new data, then press <RETURN>.

Once all defaults are satisfactory, press <ARR LEFT>. Now, pressing N will return for more changes; pressing Y will save the new defaults into the file called "P.INSTALL". The Commodore 64 will then return to power-up state.

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IN-D-FPR