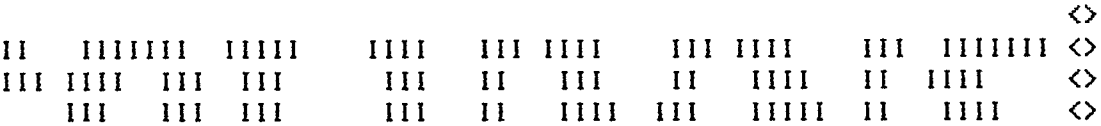
<> $9.95



USER'S MANUAL

COLUMNS (tm) Version 2.0

4/29/86

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FUNCTION

COLUMNS is a file formatter designed to--

- [] convert single-column text into multi-column text (and vice versa).
- [] manipulate columns of text as easily as word processors manipulate lines of text.

COLUMNS runs on computers using either the CP/M 2.2 or CP/M 3 operating system. (CP/M is a registered trademark of Digital Research, Inc.)

INTRODUCTION

Word processors are line-oriented. They make it easy to manipulate lines of text, to allow lines to be added, deleted, moved, or combined.

These capabilities are enough for most textual purposes.

But there are times when it would be convenient if text could be manipulated not as a set of lines, but as a set of columns. At these times, a "column processor" would be preferable to a "word processor."

COLUMNS is such a column processor.

COLUMNS allows you to automatically reformat a column of text as a multi-column text (like a newsletter). It lets you do this entirely in software, without scissors and paste, and requires only that you specify the desired page size, margins, and number of columns.

Version 2 of COLUMNS now adds even more capability. The functions present in word processors for line handling have been emulated in COLUMNS for column handling. COLUMNS now allows entire columns to be added, deleted, moved, or combined.

In short, COLUMNS now provides column-handling facilities for text that formerly were common only in spreadsheet programs.

COLUMNS has undergone years of use, refinement, and enhancement by Logic Associates. We're sure you will be more than pleased with its performance and capabilities.

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WHAT COLUMNS CAN DO

- [ ] COLUMNS accepts any standard ASCII text file as input, and creates only standard ASCII text as output.

  This means that both the input and the output files can be edited on most word processors, and printed on any printer.

- [ ] COLUMNS can process text lines up to 250 characters long.

- [ ] COLUMNS can send output to the console, printer, and/or disk.

- [ ] COLUMNS runs interactively. It lets the user experiment with page size, margins, and number of columns.

- [ ] Each COLUMNS command has a reverse or "undo" command. Among other benefits, this allows files to be stored in one format, and to be converted by COLUMNS to other formats as needed.

- [ ] COLUMNS can run in batch mode. Batch mode allows the user to build up a library of standard command sequences, so that complex tasks can be entirely automated.

- [ ] COLUMNS will suspend output if the user presses any key. The user then is asked whether to continue or discontinue the output.

- [ ] COLUMNS provides help to the user on request.

WHAT COLUMMS CANNOT DO

[] COLUMNS is not a word processor. It does not allow editing words or lines of text. If such processing is needed, it should be done with your present word processor before COLUMNS is invoked.

[] COLUMNS will not internally reorganize columns. For instance, it cannot take--

```
is a sample of a 40-character column
that the user might want to reorganize
into a 30-wide column.
```

and turn it into--

```
is a sample of a 40-character
column that the user might
want to reorganize into a
30-wide column.
```

Such reorganization of a file should be done with your word processor before the file is used as input to COLUMNS.

[] COLUMNS allows top, left, and bottom margins to be inserted into each output page. But it does not provide facilities for adding headings, footings, or page numbers on output pages.

These elements can be added to the COLUMNS output file by using your word processor.

[] COLUMNS can usually recreate an original input text from the output text. But there are two cases in which this is not possible:

- [] The output file was produced in part by truncating or deleting information from the input file.
- [] The duplex-input function was used to "zipper" two files together, and some of the resulting columns are not "left-justified" (do not have a straight-edge left margin).

[] COLUMNS does not preserve tabs, but converts them to the equivalent number of spaces. This is done because a tab does not retain its value when it is relocated on a line.

CONTROL PANEL

Parameter settings for COLUMNS are managed by a "control panel":

```
:-----------------------------------------------------:
    Infile: X.DOC                      Action: ONE-->MANY
   Outfile: Z.DOC
                                       Fill-No   Pause-No
   Output MARGINS     Output TEXT
    Upper = 0          Width = 79      Move 1/250 To 0
     Left = 0           Rows = 66
   Bottom = 0           Cols = 2       View 1/250

   (Type H for Help)  Changes? _
:-----------------------------------------------------:
```

[] Several parameters are initially set to 250. This is the maximum line length that COLUMNS can process.

[] Some parameters can be set to a value as high as 32767. Due to memory limitations, COLUMNS may abort if certain parameters are set to this value, or to other values that exhaust memory.

[] The input file is processed entirely in one pass to produce the output file. The user may suspend or abort processing at any time.

[] Single-column text is treated as a single marginless "page" of indefinite length. This is true for both input and output.

The margin and text parameters always refer to the multi-column text, both on input and on output.

Thus, [] Margins are added to a multi-column text on output.

[] Margins are deleted from a multi-column text on input.

[] Parameters are changed by--

- [] Typing their initial (for instance, "I" for "Infile") in upper or lower case.
- [] Typing the intended value.
- [] Pressing <r> ("<r>" means the RETURN key).

NOTE: No blanks should be imbedded within commands. "IX.DOC" is acceptable, but "I X.DOC" is not.

INSTALLING COLUMNS

Copy files COL.COM, COLTEST, and COLTESTB from the COLUMNS master diskette to drive A. Then store the COLUMNS master diskette in a safe place.

Do not use the COLUMNS master diskette for any purpose apart from creating copies in this fashion.

You are now ready to practice using COLUMNS.

GETTING STARTED

1) Begin COLUMNS from the operating system command line by typing--

<^C>	where "<^C>" means control-C.
x:<r>	where "x" is the drive containing files COL.COM, COLTEST, and COLTESTB, and "<r>" is the RETURN key.
col<r>	to invoke COLUMNS.

2) Create some simple output:

icoltest<r>	to specify COLTEST as the Infile.
v1/79<r>	to set view-field for 80-column screen.
<r>	to say "all parameters ok."

   When you issue the next command, you will notice a view-line "ruler" is displayed before the output results are displayed. This ruler reflects the "View" parameter setting, and identifies character-column locations on the output line.

c	to send the output to the console. (No "<r>" here.)

   The console will now display COLTEST in two column format. (COLTEST itself is not changed.)

3) When printing finishes,

   [] Select any parameter, except "Infile" and "Action."

   [] Refer to HOW TO SET PARAMETERS (page 8) for an explanation of the selected parameter.

   [] Change the parameter to any acceptable value.

   [] Press the RETURN key, then press-- c
   This will display the newly formatted file.

   [] Reset the above parameter to its original value.

4) Repeat step 3 as many times as desired.

When you feel that you understand how to do things with COLUMNS, turn to Appendix A, read the examples, and try to reproduce them by employing the settings illustrated.

HOW TO SET PARAMETERS

(For a sample display of parameters, see CONTROL PANEL, page 5.)

PARAMETER	EXPLANATION

Infile

Provides the name of the input text file or files. For example,

IX.DOC

Up to two filenames can be specified if they are separated by a comma. For instance,

IX.DOC,Y.DOC

If two filenames are specified, they will be input side-by-side: Each line from the first file will have the corresponding line from the second file appended.

Thus, if X.DOC contains-- and Y.DOC contains--

1....	A....
2....	B....
3....	C....

using IX.DOC,Y.DOC as the "Infile" parameter will present the following lines as input to COLUMNS:

```
1....A....
2....B....
3....C....
```

Shorthand tips:

- [] You can change the first name in "Infile" without changing the second. Example: IX.DOC
- [] You can change the second name in "Infile" without changing the first. Example: I,Y.DOC
- [] You can blank out the second name in "Infile" by the command "I,".
- [] "," is an acceptable substitute for "I," for adding or deleting the second name.

(continued)

Outfile Provides the name of the output text file. For example, to set the output file to Z.DOC, type--

OZ.DOC

An output file name need not be specified until you are ready to create an output file.

When output to a disk file begins, COLUMNS will first erase any file on the disk that has the same name as the specified output file.

NOTE: COLUMNS will permit the control panel to temporarily display an input filename that is the same as the output filename. But disk output will be precluded during that time.

Upper The number of lines in the top margin of the multi-column page.

Sample setting: U4

The maximum value of "Upper" is 32767.

Left The number of blanks in the left margin of the multi-column page.

Sample setting: L10

The maximum value of "Left" is 249. If a higher value is entered, "Left" is automatically reset to 249.

The sum of "Width" plus the new "Left" must be 250 or less. Otherwise, "Width" is automatically reset to 250 minus "Left".

The sum of "Cols" plus the new "Left" must be 250 or less. Otherwise, "Cols" is automatically reset to 250 minus "Left".

Bottom The number of lines in the bottom margin of the multi-column page.

Sample setting: B2

The maximum value of "Bottom" is 32767.

Width The maximum number of text characters per line in the multi-column text (excluding margins).

Sample setting: W40

The maximum value of "Width" is 250. If a higher value is entered, "Width" is set to 250.

The sum of "Left" plus the new "Width" must be 250 or less. Otherwise, "Left" is automatically reset to 250 minus "Width".

Rows The number of text lines per page on the multi-column page (excluding margins).

Sample setting: R66

The maximum value of "Rows" is 32767.

Cols The number of text columns in the multi-column page. A two-column text might look like this:

```
This          This
is            is
column        column
one.          two.
```

Sample setting: C2

The maximum value of "Cols" is 250. If a higher value is entered, "Cols" is automatically reset to 250.

The sum of "Left" plus the new "Cols" must be 250 or less. Otherwise, "Left" is automatically reset to 250 minus "Cols".

Action Specifies the column transformation that is to take place:

ONE-->MANY Convert a single-column text file into a multi-column text file.

MANY-->ONE Convert a multi-column text file into a single-column text file.

The two possible commands for this parameter are AO and AM.

Fill Tells whether to pad each output line with blanks.

If "Yes",

- [] short output lines (including blank lines) get padded with blanks, up through the end of the rightmost text column.
- [] all lines (including blank lines) are output.

If "No",

- [] all blanks are trimmed away from the end of each output line.

- [] all blank lines are omitted from the end of the output file.

The two possible commands for this parameter are FY and FN.

Pause

Tells whether COLUMNS should suspend printing at the end of each page and wait for a go-ahead from the user. (This is useful when using a single-sheet printer.)

This option has no effect during disk output.

The two possible commands for this parameter are PY and PN.

Move

Specifies the start column and the end column of a "move" field. ("Column" here refers to character columns, with the leftmost character column being considered "1". Most video display terminals, for instance, have 80 character columns per line.)

Sample setting: M1/5

The move function is disabled if the "To" parameter is 0. Any other value of "To" enables the move function.

If the move function is enabled, the move field is moved ahead of the character column indicated by the "To" parameter.

The move is performed for each output line after all column and margin adjustments have been made.

If the "move" field comes from beyond the end of the output line, the field is considered to be filled with blanks.

The largest possible "move" field is 1/250.

Shorthand tips:

- [] You can change the first parameter of "Move" without changing the second.
  Example: M5

- [] You can change the second parameter of "Move" without changing the first.
  Example: M/25

For an example of use of the Move function, see the "To" parameter below.

To

Specifies the character column before which the "move" field is to be inserted. "To" specifies the column by the position it has before the move takes place.

Sample setting: T10

Character columns 16 through 20 can be moved to the beginning of the output line by the commands--

M16/20 T1

Note that the move is performed only after columns and margins (if any) have been adjusted.

For example, if the output line without the move would be--

A....B....C....D....E....F....G....

the above move would produce the following line instead:

D....A....B....C....E....F....G....

If the "To" parameter specifies a location that is far enough beyond the field of "View", the field that is to be moved is deleted.

The maximum value of "To" is 251. If the user supplies a a value that is higher (but still less than 32767), it will be reduced to 251.

The move function is disabled if the "To" parameter is 0. Any other value of "To" enables the move function.

View

Defines the segment of the output line that is to be output. The other portions of the line are discarded.

Example: V1/79

During console output, this command can be used to confine output to the width of the screen, for easier viewing.

Different segments of long output lines can be viewed at different times by changing this parameter. For instance, the first time a file is processed, you may wish to view columns 1/79 on the screen. The second time, you may wish to view columns 80/158, and so on.

This parameter is operational during console, printer, and disk output. So it can be used to screen out unwanted columns from the final output file.

"View" operates on the final output line only after all other operations have been performed. Thus, it operates only after columns have been formatted, all margins have been adjusted, and the "move" function (if enabled) has been performed.

The maximum possible field of "View" is 1/250.

Shorthand tips: [] You can change the first parameter of "View" without changing the second. Simply omit the "/". Example: V1

[] You can change the second parameter of "View" without changing the first. Simply do not provide a value for the first parameter. Example: V/79

Help Display the help file, which provides a summary of how to operate COLUMNS. (See Appendix B).

To invoke this command, type-- H then press the return key.

In addition to the above parameter commands, several others are available:

K Keep all current settings, and begin output processing.

<r> Same as "K" ("<r>" means the RETURN key.)

S SAVE the current screen parameters into buffer G or GG.
SS

G GET the screen parameters from buffer G or GG.
GG All parameters except the file names will be restored to the screen. The current file names will not be affected.

X At the control panel: Exit to the operating system.
During output processing: Exit to the control panel.

("X" can be pressed at any time.)

Any key but X During output processing: Interrupt the output, and wait for a "Continue" or "Exit" command from the console.

REPORT TOTALS

When output processing is finished, COLUMNS will display a statistical report of the work accomplished. Here is a sample screen:

```
:-------------------------------------------------------:
                  <<<< End of file >>>>
                  Summary of Processing

                    Rows      Lines     Pages
          Input:     120        120       --
         Output:      60         60        1

:-------------------------------------------------------:
```

"Lines" refers to total lines, including top and bottom margins.

"Rows" refers to data lines, which excludes top and bottom margins.

In the above example, output is less than input because the input was single-column, and the output was multi-column. This normally compresses text into fewer lines.

NOTE: If "Fill" is yes and the last output page is not full, the page will be padded with blank lines to make a full page.

"WHAT WENT WRONG?"

If the output from COLUMNS is not exactly in the format that you had in mind, see if the problem is described below.

[] **"THE OUTPUT LINE IS SHORTER THAN IT SHOULD BE."**

- [] The input file may have other than the expected contents.
- [] The "Move" option may inadvertently be in effect, or may have the wrong value. To deactivate the "Move" option, set "To" to 0.
- [] The "View" parameter may be set to some incorrect value. The final size of the output line is determined by the shorter of the two parameters, "Width" and "View".

  If you set "View" to different values, it is convenient to use the parameter buffers G and GG to switch between them. (See "G" on page 13 under HOW TO SET PARAMETERS.)

[] **"THE OUTPUT LINE IS SCRAMBLED."**

- [] The input file may have other than the expected contents.
- [] The "Move" option may inadvertently be in effect, or may have the wrong value. To deactivate the "Move" option, set "To" to 0.

[] **"THE OUTPUT FILE IS MISSING SOME LINES."**

- [] The input file may have other than the expected contents.
- [] Blank lines may have been deleted from the end of the last page. This happens when "Fill" is set to "No".
- [] Some input lines may have been discarded as marginal. If "Action" is "MANY-->ONE", each page of the input file will be stripped of upper and lower margins. Only the remaining lines will be used as input.

[] **"THE COLUMNS ON THE LAST PAGE AREN'T RIGHT"**

The last page of a multi-column output file usually is not a full page. This means that at least one of the output columns will be shorter than a full page.

(continued)

COLUMNS attempts to make all columns on the last page the same length.

[] The rightmost column on the last page will sometimes be shorter than the other columns on the page. Some of the rightmost columns may even be entirely blank.

This is not due to an anomaly in COLUMNS, but is a function of both the number of columns specified, and the attempt to make all the columns on the page have the same length.

If COLUMNS had made the other columns shorter, enough data items would have been shifted from those columns to the rightmost column to make it longer than the others.

Given this alternative, it is preferable to make the rightmost column shorter than the others.

[] If you wish, you can force COLUMNS to fill each column entirely before beginning to fill the next column.

Do this by adding enough blank lines to the end of the input file to fill out the last page of output. COLUMNS will accept the blank lines as normal lines of text.

This procedure displaces the current last page from its last-page positon. The new last page is likewise a partial page, but is entirely blank. And if "Fill" is set to "No", no portion of this blank page will be output.

A rule of thumb is to set a quantity of blank lines equal to the product of "Rows" times "Cols." Thus, if "Rows" is is 6 and "Cols" is 10, the recommended number of blank lines is 60.

TIPS

ADDING A BLANK COLUMN

A blank column may be used to widen the distance between any two columns of text, or to split one of the text columns down the middle.

To insert a blank column into the output, use the "Move" and "To" parameters to move a field of blanks into place.

To insure that the "Move" field is blank, set its beginning beyond the character column indicated by "Width" + "Left".

BATCHED COMMANDS

See Appendix C, "BATCHED AND STACKED COMMANDS," page 28.

DELETING A COLUMN

You can delete a column in either of two ways:

- [] If the column is at the left or right edge of the output line, set the "View" parameter such that the column will be trimmed from the output.

or

- [] Use the "Move" and "To" parameters to move the column well outside the "View" range.

"THE FILE GOES ROUND AND ROUND"

Any files produced by COLUMNS can also be used as input to COLUMNS, in the same way as any standard ASCII text file.

Two-step processing can be used to advantage in some applications. Here is one example:

- [] Step 1: Transform a column of figures into a small chart. Use your word processor to insert the chart into a single-column text file the same width as the chart.

- [] Step 2: Transform the single-column text into a two-column report.

Here's another example:

- [] Step 1: Transform an n-across set of mailing labels into a 1-across set.

[] Step 2: Transform the 1-across set into an n-across set, using a value of n different from the original.

or Transform the 1-across set into a name and address list. (For an illustration, see Appendix A, Example 3, page 26.)

A third example:

[] Step 1: Transform single-column text into a two-column text file.

[] Step 2: Transform the above file into two-page text file (as in a newsletter layout).

"Width" on this second pass should be set to the desired page width, including left and right margins.

LEAVING SPACE FOR NON-TEXT MATERIAL (PHOTOS, CLIP ART)

[] In the input file, insert blank lines at the position or positions in the column that are to be reserved for non-text material. The number of blank lines should correspond to the length of the non-text material.

[] If the reserved space will span two columns in the output file, insert blank lines at two locations in the original input column.

When calculating where the second location should be, remember that inserting blanks in the first location will cause the second location to be shifted down.

MIXED-SIZED PAGES OR COLUMNS

COLUMNS treats all columns and all pages alike. If some pages or columns need to be a different length or width,

[] Using your word processor, place the text for those pages into separate files.

[] Run those files separately through COLUMNS, using the appropriate parameters each time.

STACKED COMMANDS

See Appendix C, "BATCHED AND STACKED COMMANDS," page 28.

"ZIPPERING" FILES TOGETHER

It is sometimes useful to "zipper" two files together: To input two files simultaneously, "side by side."

This makes it appear as though only one "file" is being read, even though each line from that "file" consists of a line from the first file attached to the corresponding line from the second file.

COLUMNS allows zippered input by means of the duplex-"Infile" parameter mode. (See "Infile" under HOW TO CHANGE PARAMETERS.)

If you wish to save the zippered file without further changes, set parameters as follows:

[]	"Outfile"	(Your choice of name.)
[]	"Cols"	1
[]	"Top"	0
[]	"Left"	0
[]	"Bottom"	0
[]	"To"	0
[]	"View"	1/250

NOTE: If the files to be "zippered" together have columns that are not right-justified, the "zippered" file may not have straight columns. COLUMNS cannot "unzipper" such a file.

"UNZIPPERING" A FILE

1) Set the parameters as specified under "ZIPPERING," below.

2) Set "Outfile" to some currently unused filename.

3) Set "View" to isolate the portion of the line that is to go to the first file.

4) Send the output to disk. (Press RETURN, then press D.)

5) Set "Outfile" to a different unused filename.

6) Set "View" to isolate the portion of the line that is to go to the next file.

7) Send the output to disk. (Press RETURN, then press D.)

8) Repeat steps 5 - 7 for each column that is to go into a separate file.

Appendix A: EXAMPLES

The examples below refer to files COLTEST and COLTESTB. These are the sample text files provided with COLUMNS for illustrative purposes.

The beginning and the end records of COLTEST are illustrated below. COLTESTB looks the same, except that it has an additional 36 lines at the end, and they are all blank.

COLTEST

```
001.......        <--first record.
002.......
003.......
004.......
005.......
006_______      <--each sixth line has underlines
007.......         instead of dots.

   etc.

114_______
115.......
116.......
117.......
118.......
119.......
120_______        <-last record.
```

Please note that values marked "xxxx" in the sample control panels below are not pertinent in the given example.

EXAMPLE 1A: Convert one-column text to six-column text.

```
:-------------------------------------------------------------:
    Infile: COLTEST                        Action: ONE-->MANY
   Outfile: xxxxx
                                           Fill-xxx  Pause-xxx
   Output MARGINS     Output TEXT
    Upper = 0          Width = 79         Move xxxxx To 0
     Left = 0           Rows = 66
   Bottom = 0           Cols = 6          View 1/250

   (Type H for Help)  Changes? _
:-------------------------------------------------------------:
```

OUTPUT:

001.....	021.....	041.....	061.....	081.....	101.....
002.....	022.....	042_____	062.....	082.....	102_____
003.....	023.....	043.....	063.....	083.....	103.....
004.....	024_____	044.....	064.....	084_____	104.....
005.....	025.....	045.....	065.....	085.....	105.....
006_____	026.....	046.....	066_____	086.....	106.....
007.....	027.....	047.....	067.....	087.....	107.....
008.....	028.....	048_____	068.....	088.....	108_____
009.....	029.....	049.....	069.....	089.....	109.....
010.....	030_____	050.....	070.....	090_____	110.....
011.....	031.....	051.....	071.....	091.....	111.....
012_____	032.....	052.....	072_____	092.....	112.....
013.....	033.....	053.....	073.....	093.....	113.....
014.....	034.....	054_____	074.....	094.....	114_____
015.....	035.....	055.....	075.....	095.....	115.....
016.....	036_____	056.....	076.....	096_____	116.....
017.....	037.....	057.....	077.....	097.....	117.....
018_____	038.....	058.....	078_____	098.....	118.....
019.....	039.....	059.....	079.....	099.....	119.....
020.....	040.....	060_____	080.....	100.....	120_____

COMMENT: There are only twenty lines on this page because there were not enough input lines to fill the page, and COLUMNS attempts to make all columns on the last page the same length.

EXAMPLE 1B: Convert six-column text to one-column text.

As input, use a file created as output in Example 1A above. Assume it is named "COL6".

```
:-------------------------------------------------------:
   Infile: COL6                        Action: MANY-->ONE
  Outfile: xxxx
                                       Fill-xxx  Pause-xxx
  Output MARGINS     Output TEXT
   Upper = 0          Width = 79       Move xxxxx To 0
    Left = 0           Rows = 66
  Bottom = 0           Cols = 6        View 1/250

  (Type H for Help)  Changes? _
:-------------------------------------------------------:
```

OUTPUT:

Contents are the same as those of COLTEST.

COMMENT: The control panel settings are identical to those in Example 1A, except for the "Infile" and the "Action" parameters.

EXAMPLE 2A: Discovering unexpected output on last page.

INTENTION:

Convert one-across mailing labels to four-across.
Fill ACROSS the page before moving DOWN the page.
Assume each old label has six lines.

```
:-----------------------------------------------------:
 Infile: COLTEST                    Action: ONE-->MANY
Outfile: xxxx
                                    Fill-xxx  Pause-xxx
Output MARGINS     Output TEXT
 Upper = 0          Width = 79     Move xxxxx To 0
  Left = 0           Rows = 6
Bottom = 0           Cols = 6      View 1/250

(Type H for Help)  Changes? _
:-----------------------------------------------------:
```

OUTPUT:

```
001.....  007.....  013.....  019.....  025.....  031.....
002.....  008.....  014.....  020.....  026.....  032.....
003.....  009.....  015.....  021.....  027.....  033.....
004.....  010.....  016.....  022.....  028.....  034.....
005.....  011.....  017.....  023.....  029.....  035.....
006_____  012_____  018_____  024_____  030_____  036_____
037.....  043.....  049.....  055.....  061.....  067.....
038.....  044.....  050.....  056.....  062.....  068.....
039.....  045.....  051.....  057.....  063.....  069.....
040.....  046.....  052.....  058.....  064.....  070.....
041.....  047.....  053.....  059.....  065.....  071.....
042_____  048_____  054_____  060_____  066_____  072_____
073.....  079.....  085.....  091.....  097.....  103.....
074.....  080.....  086.....  092.....  098.....  104.....
075.....  081.....  087.....  093.....  099.....  105.....
076.....  082.....  088.....  094.....  100.....  106.....
077.....  083.....  089.....  095.....  101.....  107.....
078_____  084_____  090_____  096_____  102_____  108_____
109.....  111.....  113.....  115.....  117.....  119..... <--
110.....  112.....  114_____  116.....  118.....  120_____ <--
```

COMMENT: The last two lines (marked) are not in proper format for labels.

To see how to correct this result, see the next example.

EXAMPLE 2B: Correction of the result in Example 2A.

```
:-------------------------------------------------------:
    Infile: COLTESTB                    Action: ONE-->MANY
   Outfile: xxxx
                                        Fill-xxx  Pause-xxx
   Output MARGINS     Output TEXT
    Upper = 0          Width = 79      Move xxxxx To 0
     Left = 0           Rows = 6
   Bottom = 0           Cols = 6       View 1/250

   (Type H for Help)  Changes? _
:-------------------------------------------------------:
```

OUTPUT:

```
001.....  007.....  013.....  019.....  025.....  031.....
002.....  008.....  014.....  020.....  026.....  032.....
003.....  009.....  015.....  021.....  027.....  033.....
004.....  010.....  016.....  022.....  028.....  034.....
005.....  011.....  017.....  023.....  029.....  035.....
006_____  012_____  018_____  024_____  030_____  036_____
037.....  043.....  049.....  055.....  061.....  067.....
038.....  044.....  050.....  056.....  062.....  068.....
039.....  045.....  051.....  057.....  063.....  069.....
040.....  046.....  052.....  058.....  064.....  070.....
041.....  047.....  053.....  059.....  065.....  071.....
042_____  048_____  054_____  060_____  066_____  072_____
073.....  079.....  085.....  091.....  097.....  103.....
074.....  080.....  086.....  092.....  098.....  104.....
075.....  081.....  087.....  093.....  099.....  105.....
076.....  082.....  088.....  094.....  100.....  106.....
077.....  083.....  089.....  095.....  101.....  107.....
078_____  084_____  090_____  096_____  102_____  108_____
109.....  115.....
110.....  116.....
111.....  117.....
112.....  118.....
113.....  119.....
114_____  120_____
```

COMMENT: The control panel is set exactly as the previous example, except that COLTESTB is used as the input file.

COLTESTB is the new name of COLTEST after it has been edited to include an additional 36 lines at the end, all of them blank. (A copy of COLTESTB is provided on your COLUMNS master diskette.)

For an explanation of these results, refer to "THE COLUMNS ON THE LAST PAGE AREN'T RIGHT", in the section "WHAT WENT WRONG?"

EXAMPLE 3: Convert one-across mailing labels to a name-and-address list.

Assume each label has six lines.

```
:-------------------------------------------------------------:
 Infile: COLTEST                          Action: ONE-->MANY
Outfile: xxxxx
                                          Fill-xxx  Pause-xxx
Output MARGINS     Output TEXT
 Upper = 0          Width = 79            Move xxxxx To 0
  Left = 0           Rows = 1
Bottom = 0           Cols = 6             View 1/250

(Type H for Help)  Changes? _
:-------------------------------------------------------------:
```

OUTPUT:

```
001.......  002.......  003.......  004.......  005.......  006_______
007.......  008.......  009.......  010.......  011.......  012_______
013.......  014.......  015.......  016.......  017.......  018_______
019.......  020.......  021.......  022.......  023.......  024_______
025.......  026.......  027.......  028.......  029.......  030_______
031.......  032.......  033.......  034.......  035.......  036_______
037.......  038.......  039.......  040.......  041.......  042_______
043.......  044.......  045.......  046.......  047.......  048_______
049.......  050.......  051.......  052.......  053.......  054_______
055.......  056.......  057.......  058.......  059.......  060_______
061.......  062.......  063.......  064.......  065.......  066_______
067.......  068.......  069.......  070.......  071.......  072_______
073.......  074.......  075.......  076.......  077.......  078_______
079.......  080.......  081.......  082.......  083.......  084_______
085.......  086.......  087.......  088.......  089.......  090_______
091.......  092.......  093.......  094.......  095.......  096_______
097.......  098.......  099.......  100.......  101.......  102_______
103.......  104.......  105.......  106.......  107.......  108_______
109.......  110.......  111.......  112.......  113.......  114_______
115.......  116.......  117.......  118.......  119.......  120_______
```

Appendix B: RUNTIME HELP

These are the help-text pages displayed by the "H" command.

```
:-------------------------------------------------------:
                INSTRUCTIONS (page 1 of 2)

[]  To EXIT processing, press the "X" key at any time.

[]  To KEEP all current values, press the <RETURN> key.
    (Or press the "K" key, then press the <RETURN> key.)

[]  To CHANGE a variable,
       1)  Type the initial character of its name.
       2)  Type the desired value or values (no blanks).
       3)  Press the <RETURN> key.

       Examples:      AM<RETURN>        M1/79<RETURN>

[]  To SET defaults = current values, type S<RETURN>.
    To GET defaults back into current, type G<RETURN>.
    (Use "SS" and " GG" for a second set of defaults.)

[]  Commands can be batched.  E.g.,   M1/79 T1<RETURN>

[]  To interrupt the output process, press any key.

:-------------------------------------------------------:
                INSTRUCTIONS (page 2 of 2)

  []  The input file must be a standard ASCII text file.
  []  Each tab gets replaced by its equivalent in blanks.

  []  "ONE"   = single-column text with zero margins.
  []  "WIDTH" = characters per line, ignoring margins.
  []  "COLS"  = text fields per line.
  []  "FILL"  = fill short lines on right with blanks.
  []  "MOVE"  = left/right edges of column to move.
                   (To disable, set "To" = 0.)
  []  "VIEW" = left/right edges of desired output.

  []  Neither LEFT+WIDTH nor LEFT+COLS can exceed 250.
  []  Other numeric values cannot exceed 32767.

  []  You can specify any or all commands at the same
      time that you invoke COLUMNS.  Thus, to convert R
      into two columns, save in file S, then exit, you
      can type--
                      COLUMNS ir os k d x<RETURN>

:-------------------------------------------------------:
```

```
*****************************************************************************
*                                                                           *
*              Appendix C:  BATCHED AND STACKED COMMANDS                    *
*                                                                           *
*****************************************************************************
```

STACKED COMMANDS refers to the entry of several commands at a time.

Suppose you wish to transform file R.DOC into three-column format, output it to disk file S.DOC, then return to the operating system.

To do this, you might enter the commands in this fashion:

```
ir.doc<r>                "<r>" means the RETURN key.
os.doc<r>
c3<r>
k<r>
d                        (The "d" needs no "<r>".)
x<r>
```

But you can just as well enter them in this fashion:

```
ir.doc  os.doc  c3  k  d  x<r>
```

If an error is detected while stacked commands are being processed, all the remaining commands are erased, and control is returned to the user.

BATCHED COMMANDS refers to commands stacked before COLUMNS is run.

Batched commands allow COLUMNS to run with little or no keyboard input. Such commands are sent to COLUMNS by way of the command line that initially invokes COLUMNS.

In the above example, COLUMNS would have performed its task entirely on its own if the following command had been given to the operating system:

```
col  ir.doc  os.doc  c3  k  d  x<r>
```

The word "col" above invokes COLUMNS; the rest of the line is passed to COLUMNS for processing as commands.

To save the time of typing the above line whenever you wish to process R.DOC into S.DOC, you can place the above line into a SUBMIT file. The same SUBMIT file can also contain commands that invoke other programs, allowing you to create a complex combination of programmed tasks.

For more information on the SUBMIT facility, refer to the operating system manual supplied with your computer system.

Appendix D: RIGHT/LEFT JUSTIFICATION

INTRODUCTION

Word processors normally create text in "left-justified" format. This means that the first character of each line is positioned directly beneath the first character of the line above.

But there are times when we prefer our text to be "right-justified" as well. This means that the last character on each line will be positioned directly beneath the last character on the line above.

Left/right-justification is sometimes achieved by strategically inserting extra blanks between the words on each line. Text formatted in this fashion is completely compatible with COLUMNS, and entails no special considerations or procedures.

Better-looking left/right-justification results from inserting only partial blanks between characters, widening each character on the line by a small amount. This is called "proportional spacing" or "microspacing," and many contemporary printers offer this option.

Microspacing is directed by means of control codes imbedded in the text. These control codes are usually inserted automatically by your word processor. You need only specify which portions of the text are to be left/right-justified.

TESTING YOUR PRINTER

If your printer can employ microspacing in combination with your word processor or page formatter, try this test:

- [] Create a file consisting of these two lines:

  1234567890
  abcdefghijklmnop

  Do not insert any blanks or tabs before "1" or "a".

- [] Set the left margin to "none."

- [] Set the right margin to allow 16 characters of text.

- [] Turn ON left/right-justification (with microspacing).

- [] Turn OFF the proportional-printing option, if present.

- [] Print the above file.

On your printout, the "1" should appear directly above the "a", and the "0" should appear directly above the "p". If they do not, check your settings and repeat the above steps.

[] Using the same margin and justification options, "print" the text to disk instead of the printer, and call the new file PRINT.TXT.

PRINT.TXT should be a "printer image" of the first file, containing the original text plus printer-control codes.

If your present software does not allow you to create a print image on disk, you can employ a co-resident software utility for this purpose. For CP/M 2.2, you might investigate the public-domain utility I/O-CAP.

[] Edit PRINT.TXT: Add "<TAB>x" at the very end of each line, after any control characters that may be present on the line. ("<TAB>" means the TAB key. Don't forget the "x".)

[] Save the new version of PRINT.TXT to disk.

[] Output the new version of PRINT.TXT to your printer.

The test result is positive if the second "x" prints directly below the first "x".

If the test result was negative, check your printer manual to see if your printer has an alternate microspacing-option. If so, install this option into an expendible copy of your word processor or page formatter, then repeat the above test.

If the test result was positive, you can use COLUMNS and microspacing to produce left/right-justified columns. For instructions, see Appendix F "SPECIAL SPACING," page 31.

Appendix E: PROPORTIONAL PRINTING

INTRODUCTION

For most of their history, typewriters and computer printers have alloted the same width to all printed characters. In this convention, "." and "W" are given exactly the same character-space on a page.

Today, printers can allocate space to each character in proportion to its graphic width. Under this convention, "." gets much less space than "W". This convention is called "proportional printing."

TESTING YOUR PRINTER

If your printer allows proportional printing, run this test:

[] With your word processor, create a file that contains just two lines:

mmmmmmm<TAB>x where "<TAB>" means the TAB key.
iiiiiii<TAB>x

There should be exactly seven "m"s on the first line, and exactly seven "i"s on the second line. There should be no blanks or tabs in front of the "m"s or "i"s.

[] Turn ON the proportional-printing option of your printer; and turn OFF the microspacing option, if present. If necessary, imbed the required control codes for these options into the above file, at the top.

[] Print the file.

If the second "x" prints directly below the first "x", you can use COLUMNS with your printer to create proportionally printed columns.

For instructions, see Appendix F "SPECIAL SPACING," page 31.

Appendix F: SPECIAL SPACING

The procedure described below allows you to create two-column text featuring proportional printing and/or proportional justification. This procedure can be generalized for text with more than two columns.

Before attempting this procedure, be sure--

- [] That your system passes the test in--
  - [] Appendix D "LEFT/RIGHT-JUSTIFICATION" (page 28)
  - or [] Appendix E "PROPORTIONAL PRINTING" (page 30).
- [] That your word processor or page formatter allows you to "print" files to disk, as though to a printer. This must create a file containing both the original text and also the control codes that normally go directly to the printer.

  If your software does not allow creating a "print image" on disk, you should obtain a co-resident utility program that does permit this. For CP/M 2.2, you might use the public-domain utility I/O-CAP.

For greater convenience, you can install the following procedure into a batch job. See Appendix C "BATCHED AND STACKED COMMANDS," page 27.

- [] Create the original file (let's call it "ORIGINAL.TXT").
  - [] Create the text as a single column, using the width desired for a single column in the final two-column file. (Let's call this latter file "DOUBLE.PRT.")
  - [] At the very top of ORIGINAL.TXT, insert a NEW line.

    On this line, place commands that are recognized by your word processor or page formatter. Do not use direct-to-the-printer control codes.

    The commands should--
    - [] Turn ON proportional printing and/or proportional spacing.
    - [] Set the left margin to "none."
    - [] Set the right margin to the column width.
    - [] Set the top and bottom margins to 0.
    - [] Set any other parameters as desired.

[] Now create another file, called CONTROL.TXT.

    [] On line one, insert the same first line you created for ORIGINAL.TXT, with the following changes:

        [] Set the margins as desired in DOUBLE.PRT.
        [] Set a tab stop for each column's left edge.
        [] Clear all other tab stops.

    [] On line two, insert only a TAB character.

    [] On line three, insert any optional wrapup commands, such as that for "Turn off proportional printing."

[] Using your word processor or page formatter, "print" ORIGINAL.TXT to disk rather than the printer, and call the new file SINGLE.PRO (or some name ending in ".PRO").

[] Do the same for CONTROL.TXT, and call the result SINGLE.CTL (or some name ending in ".CTL" that matches the name of the ".PRO" file created above).

You should now have two "print image" files on disk: SINGLE.PRO and SINGLE.CTL. Each should contain only text and control codes that can directly control your printer.

[] Run COLUMNS.

    [] Issue the following set of commands:

        ISINGLE.PRO ODOUBLE.PRT W250 FY C2

    [] Display the results on the console, if you wish. But the imbedded printer-control codes may make the display look strange. Notice that COLUMNS--

        [] Ignores the top line of SINGLE.PRO, which contains printer commands no longer needed.

        [] Prefixes the first line of SINGLE.CTL to the first line of output.

        [] Uses the second line of SINGLE.CTL (a tab) as the separator between columns (and as the left margin, if "Left" is not zero).

        [] Appends the last line of SINGLE.CTL to the last line of the output.

    [] Output the result to disk, creating DOUBLE.PRT.

DOUBLE.PRT can be further edited (for instance, to add headers and footers), or can be sent directly to the printer as is.

---end

REFUND REQUEST FORM

I hereby request full refund of the fee paid for (product)

_____, Registration #_____.

I have irretrievably erased all the original software and documentation for this product from the master diskette. I also have irretrievably destroyed all software and documents derived in whole or in part from the originals.

I am enclosing or have already returned the User Manual and the master diskette issued under this license. Both items are in their original physical condition.

My reasons for dissatisfaction with this product are—

_____

_____

_____

_____

_____

(Continue on back of form if desired)

SIGNED_____DATE_____

* You must complete this entire form to qualify for a refund.

* Please use one copy of this form per product.

* Mail this form on or before _____SAMPLE_____to—

Logic Associates
1433 W. Thome
Chicago, IL 60660