TEXT OUTPUT PROCESSOR MANUAL

TECHNICAL DESIGN LABS

TDL Z80 Text Output Processor

User's Manual

Revision 1.0

February 14, 1977

Written by Neil J. Colvin

Introduction

Files to be processed by the TDL Text Output Processor
are prepared by using the TDL Text Editor. The Processor
accepts the prepared file from the reader device and
produces a formatted document on the list device.

Each line read from the file is inspected for a first
character of "." (period), which identifies a format
control word. Format control words are not printed, but
are interpreted to specify changes in the current output
format. Control words may be entered in either upper or
lower case, and should be separated from their operands,
if any, by one or more blanks.

Control words may appear at the beginning of any line in
the file, with any changes in format taking place below
the point at which they occur. No input data should be
included on lines containing control words, since this
data could in some cases be lost or interpreted as an
operand of the control word.

Control Words:

The control words are listed below.

Control	Meaning
.BL	Blank Line
.BM	Bottom Margin
.BR	Break
.BK	Break Mode
.CE	Center
.CM	Comment
.CO	Concatenate
.CP	Conditional Page
.DS	Double Space
.EN	End
.FO	Format
.HE	Heading
.HM	Heading Margin
.IG	Ignore
.IB	Ignore Break
.IN	Indent
.JU	Justify
.LL	Line Length
.NB	No Break
.NC	No Concatenate
.NF	No Format
.NJ	No Justify
.NS	No Space
.OF	Offset
.PA	Page
.PL	Page Length
.PW	Page Width
.PI	Permanent Indentation
.SS	Single Space
.SC	Space Character
.SP	Space Line
.SH	Subheading
.TB	Tab Settings
.TM	Top Margin
.UN	Undent

Default Values for Control Words

When processing a file, many variables, such as line
length and page length, are assumed to have certain
values ("default" values) until specified by a control
word. This fact can simplify the formatting of files;
many control words need not be used. The following is a
list of control words having default values which are
assumed to be in every file.

```
.PW 60
.LL 60
.PL 66
.TM 5
.BM 3
.HM 1
.PI 15
.TB 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75
.FO  (.CO and .JU)
.SS
.BK
.SC _
```

Errors

The processor prints all errors encountered in the
specified file with self-descriptive error messages, and
with an exact image of the line at fault. Processing
continues with the next input line.

Notes on Certain Uses

1. Top-Of-Page Format

Setting up the top of a processed page is not complicated
once you understand the rules.

"Top Margin" is the number of lines between the top of

the page and the first line of text. It includes the
heading line, the subheading line, and the heading
margin.

A heading line and a subheading line are always printed,
even if they are blank.

"Heading Margin" is the number of lines between the
subheading line (even if it is not visible) and the first
line of text.

For example, given the two control words

          .tm 7
          .hm 3
the following top-of-page format would be printed:

 1st line: Top margin blank line
 2nd line: Top margin blank line
 3rd line: Heading blank line with   Page <number>
 4th line: Subheading blank line
 5th line: Heading margin blank line
 6th line: "   "   "   "
 7th line: "   "   "   "
 8th line: First line of text

Given the default top margin (5) and the default heading
margin (1) and the heading:

     .he User's Manual

the following format would be produced:

 1st line: Top margin blank line
 2nd line: Top margin blank line
 3rd line: User's Manual   Page 92
 4th line: Subheading blank line
 5th line: Heading margin blank line
 6th line: First line of text

2. Space Character

A space indicates where line breaks (the end of a line)
and justification (the insertion of spaces to make an
even right margin) can occur. Sometimes it is desirable
that a space be printed, but that a line end or extra

space insertion does not occur at this point. This "non-space" space is provided by the use of the "space-character". Normally, this character is the "_" (but may be changed by the ".SC" command.) When encountered by the processor, it is treated as a non-blank character, but is printed as a space. For example:

     ".IN_0"

This phrase will appear as ".IN 0"; it will not be split across two lines, and no extra spaces will be inserted between the N and the 0.

3. Tabulation

Tabulation is also provided through the use of a special character <HT> (Control-I). When encountered in the input, the tab character causes a "typewriter type" tabulation to the next "tab stop". The default is a tab stop every five spaces, but can be set to any value by the ".TB" control word. If the output pointer is currently at a tab stop, it will be moved to the next one (as with a typewriter).

It should be noted that a tab character or a space as the first character of an input line normally causes a "break", but this can be suppressed by the .NB and .IB controls.

Text Output Processor Example


```
.tm 10
.fo
.ce
Text Output Processor Example
.sp 2
.ds
This example will demonstrate some of the capabilities of
the Text Output Processor.  The next two pages will
appear first as they would in a file with the control
words visible; then the same file will appear as it
would if processed.
This paragraph was double-spaced with the .DS control.
.ss
.sp
No Break was needed here, since the .SS (Single-space)
control acts as a break.  Although this is in Format
mode, tabular information can be included:
.sp
        SPACE              .SP     .sp
        SINGLE SPACE       .SS     .ss
        DOUBLE SPACE       .DS     .ds
.sp
The blanks beginning each line caused a Break each time,
and the lines were not concatenated.
.sp
Use of the Line Length control allows space to be left
within a page for figures or drawings.  It may take some
experimentation to find how many lines will fit alongside
a figure.
.ll 30
.sp
The new line length must take effect at a paragraph,
since it acts as a Break.  The switch back to standard
line length (60) is also a Break, and usually ends a
paragraph.
.ll 60
.nf
By switching out of Format Mode            CAPTION
and doing some justification
by eye, other effects can be obtained.  This also takes
some practice and experimentation.
.sp
.fo
PARAGRAPHS
.br
If no space follows a paragraph heading, and if the
paragraphs are not indented, a Break is necessary in
Format Mode to keep the heading line from being
justified.
        A few leading blanks are the easiest way to force a
break and separate paragraphs, as this one was done.
.sp
```

        The Center control is handy for small figures
included in the text. A .CE in front of each line of
the figure is necessary. Note that leading blanks
count as characters when the line is centered.
.sp
.ce

.ce
! FORMAT ! EXAMPLE n !
.ce
!   ! E   !
.ce

.ce
Figure A

Text Output Processor Example

This example will demonstrate some of the capabilities of
the Text Output Processor. The next two pages will
appear first as they would in a file with the control
words visible; then the same file will appear as it
would if output by the Text Output Processor. This
paragraph was double-spaced with the .DS control.

No Break was needed here, since the .SS (Single Space)
control acts as a break. Although this is in Format
mode, tabular information can be included:

              SPACE   .SP   .sp
              SINGLE SPACE   .SS   .ss
              DOUBLE SPACE   .DS   .ds

The leading blanks caused a Break each time, and the
lines were not concatenated.

Use of the Line Length control allows space to be left
within a page for figures or drawings. It may take some
experimentation to find how many lines will fit alongside
a figure.

The new line length must
take effect at a paragraph,
since it acts as a Break.
The switch back to standard
line length (60) is also a
Break, and usually ends a
paragraph.
By switching out of Format Mode   CAPTION
and doing some justification
by eye, other effects can be obtained. This also takes
some practice and experimentation.

PARAGRAPHS
If no space follows a paragraph heading, and if the
paragraphs are not indented, a Break is necessary in
Format Mode to keep the heading line from being
justified.
     A few leading blanks are the easiest way to force a
break and separate paragraphs, as this one was done.

        The Center   control   is   handy   for   small   figures
included in the text. A .CE in front of each line of the
figure is necessary. Note that leading blanks count as
characters when the line is centered.

```
        ------------------------------
        !  FORMAT  !  EXAMPLE  n  !
        !          !  E           !
        ------------------------------
```

                        Figure A

BLANK LINE Control
----- ---- -------

Purpose:

The BLANK LINE control word generates a specified
number of blank lines before the next printed line.

Format:

.BL <n>

<n>   specifies the number of blank lines to
                 be inserted in the output. If omitted,
                 1 is assumed.

Usage:

The BLANK LINE control word may be used anywhere in
the file to generate blank lines. If the end of the
page is reached during a BLANK LINE operation, the
operation is terminated and a new page is started.
If, after the specified number of blank lines are
inserted in the output, there are less than two
printable lines remaining on that current page, a new
page is started.

Notes:

This control word acts as a BREAK.

The printing of blank lines is independent of the
current spacing.

Examples:

.BL 3

Three blank lines are inserted in the output before
the next printed line.

.BL

A single blank line is inserted in the output.

BOTTOM MARGIN Control
------ ------ -------

Purpose:

The BOTTOM MARGIN control word specifies the number
of lines to be skipped at the bottom of output pages,
overriding the standard value of three.

Format:

.BM <n>

<n>   specifies the   number   of   lines   to   be
                skipped at the   bottom of   output pages.
                If omitted, 1 is assumed.

Usage:

This control overrides the   standard bottom margin
size of three lines, and need not be included in the
file   if   that   value   is   satisfactory.   It   may   be
included anywhere in the file, and the most recent
value set applies on any page.

Note:

The BOTTOM MARGIN control word also acts as a BREAK.

Example:

.BM 10

Ten lines will be left blank at the bottom of the
current page, if possible, and on all subsequent
pages.

BREAK Control
----- -------

Purpose:

When CONCATENATE is in effect, BREAK causes the previous line to be typed without filling in words from the next line.

Format:

.BR

Usage:

BREAK is used to prevent concatenation of lines such as paragraph headings or the last line of a paragraph. It causes the preceding line to be typed as a short line; the next line will be printed on a new line.

Notes:

Many of the other control words have the effect of a BREAK. No BREAK is necessary when one of these is present.

A leading blank or tab character on a line has the effect of a BREAK.

Example:

Heading:

.BR

First line of the paragraph . . .

This part of a file will be printed by SCRIPT as:

Heading:

First line of the paragraph . . .

If the BREAK control word were not included, it would

be typed:

Heading: First line of the paragraph . . .

BREAK MODE Control
----- ---- -------

Purpose:

The BREAK MODE control reestablishes the BREAK
function of the tab and space characters when they
are the first on a line.

Format:

.BK

Usage:

This command is provided to reestablish the normal
BREAK function initiated by the occurrence of a tab
or space character at the start of an input line.
This would only be necessary if a .NB command had
been given previously.

CENTER Control
------ -------

Purpose:

The line following the CENTER control word will be
centered over the specified column.

Format:

.CE <n>

<n>   specifies the column over which the
                 following line will be centered. If
                 omitted, the line length divided by two
                 is assumed.

Usage:

The line to be centered is entered on the line
following the CENTER control word. It starts at the
left margin, and leading blanks will be considered
part of its length. The column over which the line
is to be centered is independent of any currently in
effect controls (e.g. indent, undent, etc.).

Notes:

The CENTER control acts as a BREAK.

If the line to be centered exceeds the current line
length value, it is truncated.

Examples:

.CE

Other Methods

"Other Methods" will be centered over the column whose number is equal to the current line length divided by two.

.CE 27

Column Title

When this line of the file is typed, the title "Column Title" will be centered over column 27 of the output.

COMMENT Control
------- -------

Purpose:

The COMMENT control word causes the remainder of the
line to be ignored, allowing comments which are not
printed when the file is processed.

Format:

.CM <comments>

Usage:

The .CM control word allows comments to be stored in
a file for future reference. These comments can be
seen when editing the file or when the file is
listed. The comments may also be used to store
unique identification that   can be   useful when
attempting to locate a specific region of the file
during editing.

Example:

.CM Remember to change the date.

The line above will be seen when examining an
unformatted listing of the file and remind the user
to update the date used in the text.

CONCATENATE Control
----------- -------

Purpose:

CONCATENATE cancels a previous NO CONCATENATE control
word, causing output lines to be formed by
concatenating input lines and truncating at the
nearest word to the specified line length.

Format:

.CO

Usage:

The CONCATENATE control specifies that output lines
are to be formed by shifting words to or from the
next input line. The resulting line will be as close
to the specified line length as possible without
exceeding it or splitting a word. This resembles
normal typing output. This is the normal mode of
operation for the processor. CONCATENATE is only
included to cancel a previous NO CONCATENATE control
word.

Note:

This control word acts as a BREAK.

Example:

.CO

Output from this point on in the file will be formed
to approach the right margin without exceeding it.

CONDITIONAL PAGE Control
----------- ---- -------

Purpose:

The CONDITIONAL PAGE control word causes a new page
to be started if space for less than the specified
number of lines remain on the current page.

Format:

.CP <n>

<n>   specifies the number of lines that must
                    remain on the current page for
                    additional lines to be printed on it.

Usage:

The .CP control word will cause printing to begin on
a new page if "n" lines do not remain on the current
page. This request is especially meaningful (1)
before an .SP control word to guarantee that
sufficient space remains on the current page for the
number of spaces requested along with any titles, and
(2) preceding a section heading to eliminate the
possibility of a heading occurring as the last line
of a page.

Note:

If no operand is specified with the .CP request, the
request will be ignored.

Example:

.CP 10

If less than 10 lines remain on the current page,
printing will begin on a new page. If 10 or more
lines remain, printout will continue on the current
page.

DOUBLE SPACE Control
------ ----- -------

Purpose:

The DOUBLE SPACE control word causes a line to be
skipped between each line of printed output.

Format:

.DS

Usage:

DOUBLE SPACE may be included anywhere in the file to
force double spaced output.

Notes:

This control word has the effect of a BREAK.

It affects all control words but BLANK LINE (.BL).

Example:

.DS

Blank lines will be inserted between output lines
below this point in the file.

END Control
--- -------

Purpose

The END control word is used to mark the end of the
source file to the processor.

Format:

.EN

Usage:

The END control word must be the last line in the
source file. When encountered, the output is spaced
to the top of the next page, and the processor
returns to the monitor.

Note:

This control word acts as a BREAK.

FORMAT Control
------ -------

Purpose:

The FORMAT control word cancels a previous NO FORMAT
control word (or NO CONCATENATE and/or NO JUSTIFY
control word),   causing concatenation   and right
justification of output lines to resume.

Format:

    .FO

Usage:

The FORMAT control word is a shorthand way to specify
the two control words: CONCATENATE and JUSTIFY. This
control specifies that lines are to be formed by
shifting words to or from the next line (concatenate)
and padded with extra blanks to produce an even right
margin (justify). Since this is the normal mode of
operation for the processor, FORMAT is only included
to cancel a previous NO FORMAT control word.

Notes:

This control word acts as a BREAK.

If a line without any blanks exceeds the current line
length, it is truncated.

Example:

    .FO

Output from this point on in the file will be formed

to produce an even right margin on the output page.

HEADING Control
------- -------

Purpose:

The HEADING control word specifies a heading line to
be printed at the top of subsequent output pages.

Format:

.HE <line>

<line>   specifies the heading to be printed at
              the top of subsequent pages.

Usage:

All of the line following the first blank after the
HEADING control word is printed at the top of pages
starting after the control word is encountered. No
heading is printed on the first page of an output
file. The heading is printed at the left margin.
Its length must be at least 10 less than the output
page width, to allow for a page number at the right
margin. Leading blanks may be used to center the
heading. The heading is printed in the line
specified by the heading margin and top margin
control words. Additional .HE control words may be
included at any point in the file to change the
heading on subsequent pages.

Note:

If a new heading is to be placed on a page forced

with the PAGE control word the HEADING control must

precede the PAGE control.

Examples:

.HE ON-LINE EDITING SYSTEM

The characters "ON-LINE EDITING SYSTEM" will be

printed at the left in the second-last line of the

top margin on all pages started after this point in

the file:

ON-LINE EDITING SYSTEM   PAGE 7

. .HE   EDL

The heading blanks are considered part of the

heading, so the characters "EDL" will be centered in

the heading line:

                        EDL   PAGE 8

HEADING MARGIN Control
------- ------ -------

Purpose:

The HEADING MARGIN control word specifies the number

of lines to be skipped between the two heading lines

and the first line of text, overriding the standard

value of one.

Format:

.HM <n>

<n>   specifies the number of lines to be

                   skipped after the heading lines.

Usage:

The heading lines will be placed a specified number

of lines above the first line of text. If no HEADING

MARGIN control word is included in the file, the

default value is one. The HEADING MARGIN specified

must always be less than or equal to the current TOP

MARGIN minus the two heading lines.

Note:

This control word acts as a BREAK.

Examples:

.HM 3

Three lines will be left between the heading lines

and the first line of text. If the default top

margin of 5 is in effect, the headings will occur at
the top of the paper followed by three more blank
lines (the heading margin) and then the text.

.HM 1

The standard heading margin of one is set.

IGNORE Control
------ -------

Purpose:

   The IGNORE control word allows a line beginning with

   a period (.) to be printed.

Format:

   .IG

Usage:

   The .IG control word specifies that the following

   line of the input is to be treated as text even if it

   begins with a period.

Note:

   This control has no other effect than the above. It

   is not a BREAK.

Example:

   .IG

   . . . . and so forth.

   The second line will be treated just as if it did not

   begin with a period.

IGNORE BREAK Control
------ ----- -------

Purpose:

IGNORE BREAK causes the next break initiated by a leading blank or tab character to be ignored.

Format:

.IB

Usage:

A line beginning with a space or a tab character causes a break; the line is printed on a new line. When the first character of a line is a space or a tab character, IGNORE BREAK causes the break to be ignored. The two-line string of characters (the preceeding and the current lines together) is printed as one line.

Note:

Ignore Break control will affect the next space- or tab character-initiated break; it need not be placed immediately before it.

INDENT Control
------ -------

Purpose:

The INDENT control word allows the left side of the
printout to be indented.

Format:

.IN <n>

<n>   specifies the   number   of   spaces   to be
                  indented.   If omitted, indentation will
                  revert to the absolute margin.

Usage:

The .IN control word causes printout to be indented
"n" spaces from the absolute left margin. This
indentation remains in effect for all following
lines, including new paragraphs and pages, until
another .IN control word is encountered. ".IN 0"
will cancel the indentation,   and printout will
continue at the absolute left margin.

Notes:

A) The .IN request acts as a BREAK.

B) The .IN request will reset the effective left
margin, causing any .OF setting to be cleared. The
.OF request may be used alone or in conjunction with
.IN. When the latter is the case, .IN settings will

take precedence.

Examples:

.IN 5

All lines printed after this request will be indented
5 spaces from the absolute left margin. This
indentation will continue until another .IN control
word is encountered.

.IN 0

The effect of any current indentation will be
canceled and printout will continue at the absolute
left margin.

JUSTIFY Control
------- -------

Purpose:

The JUSTIFY control word cancels a previous NO
JUSTIFY control word (or part of a NO FORMAT control
word), causing right justification of output lines to
resume.

Format:

.JU

Usage:

This control word specifies that lines are to be
justified (printed evenly on the right margin) by
padding with extra blanks. If concatenate mode is in
effect, the concatenation process occurs before
justification. Since this is the normal mode of
operation for the processor, JUSTIFY is only included
to cancel a previous NO JUSTIFY control word or the
NO JUSTIFY part of a NO FORMAT control word.

Notes:

A) This control acts as a BREAK.

B) If a line exceeds the current line length and
CONCATENATE mode is not in effect, the line is
printed as is.

C) This control word is seldom used without CONCATENATE mode. FORMAT should be used to enter both JUSTIFY and CONCATENATE modes.

Example:

.JU

Output from this point on in the file will be padded to produce an even right margin on the output page as long as the input lines do not exceed the line length.

LINE LENGTH Control
---- ------ -------

Purpose:

The LINE LENGTH control word specifies a line length
that is to override the standard line length of 60
characters.

Format:

.LL <n>

<n>   specifies output line length not greater
                than 132 characters.

Usage:

The LINE LENGTH control sets the length for output
lines until the   next LINE LENGTH control word is
encountered. If no LINE LENGTH control is included
in a file, the standard line length of 60 characters
is used. In the JUSTIFY/NO CONCATENATE mode, lines
shorter than line length are justified to length by
blank padding. In the CONCATENATE mode, lines longer
than line length are spilled into the following line.
Shorter lines get words from previous or following
lines to approach line length.

Note:

This control acts as a BREAK.

Example:

.LL 50

Succeeding lines will be no more than 50 characters

in length.

NO BREAK Control
-- ----- -------

Purpose:

   NO   BREAK   causes   all   subsequent   space-   or   tab
   character-initiated breaks to be ignored.

Format:

   .NB

Usage:

   After the No Break control word, all breaks caused by
   a space or tab character as the first character on a
   line are ignored. Such lines will be printed where
   the previous line stopped.

Note:

   NO BREAK will remain in effect until counteracted by
   .BK, Break Mode.

NO CONCATENATE Control
-- ----------- -------

Purpose:

The NO CONCATENATE control stops words from shifting

to or from the next line.

Format:

.NC

Usage:

The NO CONCATENATE control word stops words from

shifting to and from the next line to even out the

line length. The printed lines will appear as they

do in the source file. It is useful for sections of

files containing tabular information or other special

formats.

Note:

This control acts as a BREAK.

Example:

.NC

Concatenation will be completed for the preceding

line or lines, but following lines will be printed

without words being moved to and from lines.

NO FORMAT Control
-- ------ -------

Purpose:

The NO FORMAT control stops the CONCATENATE and
JUSTIFY mode, causing lines to be printed just as
they appear in the file.

Format:

.NF

Usage:

The NO FORMAT control is a short-hand way to specify
the two control words: NO CONCATENATE and NO JUSTIFY.
This stops line justification and concatenation until
a FORMAT, JUSTIFY, or CONCATENATE control word is
encountered. It is useful for sections of files
containing tabular information or other special
formats.

Note:

This control acts as a BREAK.

Example:

.NF

Justification and concatenation will be completed for
the preceding line or lines, but following lines will
be printed exactly as they appear in the file.

NO JUSTIFY Control
-- ------- -------

Purpose:

The NO JUSTIFY control stops padding lines to cause
right justification of output lines.

Format:

.NJ

Usage:

The NO JUSTIFY control word stops the padding of
lines with additional blanks to form even right
margins. If CONCATENATE mode is in effect, lines
will be formed that approach the current line length
but will not be forced to the exact length. The
resulting lines resemble the output usually produced
by a typist.

Note:

This control acts as a BREAK.

Example:

.NJ

Justification will be completed for the preceding
line or lines, but following lines will be printed
without additional blanks inserted to pad the line.

NO SPACE Control
-- ----- -------

Purpose:

The NO SPACE control withholds the printing of a
space after the last word on a line.

Format:

.NS

Usage:
.

A space is normally printed after the last character
on a line as it appears in the source file. The NO
SPACE control causes the   next   line   of text to be
printed without this   last   space. It   is   used   in
creating longer lines when this space is not wanted.

Note:

NO SPACE will affect the next line of text; it need
not be placed immediately before it. It affects only
that line.

OFFSET Control
------ -------

Purpose:

The OFFSET control word provides a technique for
indenting all but the first line of a section.

Format:

.OF <n>

<n>   specifies the number of spaces to be
                   indented after the next line is printed.

Usage:

The .OF control word may be used to indent the left
side of the printout. Its effect does not take place
until after next line is printed, and the indentation
will remain in effect until a break or until another
.OF word is encountered. The .OF control may be used
within a section which is also indented with the .IN
control. Note that .IN settings take precedence over
.OF, however, and any .IN request will cause a
previous offset to be cleared. If is desired to
start a new section with the same offset as the
previous section; it is necessary to repeat the
".OF n" request.

Notes:

A)   This control acts as a BREAK.

B)   Two OFFSET control words without an intervening

text line is considered an error condition.

Examples:

.OF 10

The line immediately following the   .OF control word

will be printed at the current left margin. All

lines thereafter (until the next break or .OF

request) will be indented 10 spaces from the current

margin setting.

.OF

The effect of any previous .OF request will be

canceled, and all printout after the next line will

continue at the current left margin setting.

PAGE Control
____ _____

   Purpose:

      PAGE causes a new page to be started.

   Format:

      .PA <n>

      <n>   specifies the page number of the next

                     page. If   "n" is   not   specified,

                     sequential page numbering is assumed.

   Usage:

      Whenever a PAGE control word is encountered, the rest

      of the current page is skipped. The paper is

      advanced to the next page, the heading and page

      number are typed, and output resumes with the line

      following the PAGE control word.

   Notes:

      A)   This control acts as a BREAK.

      B) If the heading, line length, or other format

      parameters are to be different on the new page, the

      appropriate control words must appear before the PAGE

      word.

   Examples:

      .PA

The rest of the current page will be skipped. The
heading and page number will be printed in the top
margin of the next page, and output will resume.

.PA 5

Regardless of the number of the current page, the
rest of that page will be skipped, the heading and
page number 5 will be printed in the top margin of
the next page, and output will resume.

PAGE LENGTH Control
---- ------ -------

Purpose:

The PAGE LENGTH control word specifies the length of
output pages in lines. The value specified overrides
the standard page length of 66 lines.

Format:

.PL <n>

<n>   specifies the length of output pages in
                  lines.

Usage:

The PAGE LENGTH control word allows varying paper
sizes to be used for output. It should not be used
to print additional lines on a page. Use the .BM
control word. If no PAGE LENGTH control word is
included in a file, 66 is the default value. This is
the correct size of standard typewriter paper (at six
lines per inch). Page length may be changed anywhere
in a file, with the change effective on the current
page if possible.

Note:

This control word acts as a BREAK.

Example:

.PL 51

Page length is set to 51 lines.

PAGE WIDTH Control
---- ----- -------

Purpose:

The PAGE WIDTH control specifies the width of the output page in characters. The value specified overrides the standard page width of 60 characters.

Format:

.PW <n>

<n>   specifies the width of the output page in characters

Usage:

The PAGE WIDTH control word allows varying paper sizes to be used for output. It should not be used to control the length of the line printed on the page. Use the .LL control word. If no PAGE WIDTH control word is included in a file, 60 is the default value. This is the correct size of standard typewriter paper (at ten characters per inch) leaving a one and one-half inch margin at the left, and a one inch margin at the right. Page width may be changed anywhere in the file, with the change effective on the current page if possible.

Note:

This control word acts as a BREAK.

Example:

.PW 50

The page width is set to 50 characters.

PERMANENT INDENTATION Control
--------- ----------- -------

Purpose:

The PERMANENT INDENTATION   control specifies   the
location of the left margin on the output page. The
value specified overrides the standard margin of 15
characters (one and one-half inch).

Format:

.PI <n>

<n>   specifies the size of the left margin in
               characters

Usage:

The PERMANENT INDENTATION control allows a fixed
amount of space to be left at the left margin of the
output page. If no PERMANENT INDENTATION control
word is included in the file, a default value of 15
characters (one and one-half inch) is used. This is
the normal margin for typewriter paper when the
printer start at the extreme left of the paper.

Note:

This control word acts as a BREAK.

Example:

.PI 10

Permanent Indentation is set to 10 characters (one
inch).

SINGLE SPACE Control
------ ----- -------

Purpose:

The SINGLE SPACE control word cancels a previous
DOUBLE SPACE control word, and causes output to be
single-spaced.

Format:

.SS

Usage:

Output following the SINGLE SPACE control word is
single-spaced. Since this is   the normal output
format, SINGLE SPACE is only included in a file to
cancel a previous DOUBLE SPACE control word.

Note:

This control word acts as a BREAK.

Example:

.SS

Single-spacing will resume below this point in the
file.

SPACE CHARACTER Control
----- --------- -------

Purpose:

Space Character control enables the user to change
the space character from "_" to any other character.

Format:

.SC <character>

<character> specifies the next "space character".

Usage:

The Space Character control is used to change the
space character "_" to any other character. This
would be done when "_" should appear in the text.
The space character is treated like a character in
joining two words which the user wants printed on the
same line, but it is printed as a space.

Example:

.SC !

This allows "_" to be printed out. "!" will be
printed as a space.

SPACE LINE Control
----- ---- -------

Purpose:

The SPACE LINE control word generates a specified number of blank print lines before the next printed line.

Format:

.SP <n>

<n>   specifies the number of blank print lines to be inserted in the output. If omitted, 1 is assumed.

Usage:

The SPACE LINE control word may be used anywhere in the file to generate blank print lines. If the end of the page is reached during a SPACE LINE operation, the operation is terminated and a new page is started. If after the specified number of blank printed lines are inserted in the output there are less than two printable lines remaining on that current page, a new page is started.

Notes:

A)   This control acts as a BREAK.

B)   The printing of blank lines is controlled by the current spacing, either single or double. In doublespace mode, ".SP" generated blank lines

alternate with ".DS" generated blank lines.

Examples:

.SP 3

Three blank print lines are inserted in the output before the next printed line.

.SP

A single blank print line is inserted in the output.

SUBHEADING Control
---------- -------

Purpose:

   The SUBHEADING control word specifies a subheading
   line to be printed under the heading line on the top
   of subsequent output pages.

Format:

   .SH <line>

   <line>   specifies the subheading to be printed
                   under the heading line at   the   top of
                   subsequent pages.

Usage:

   All of the line following the first blank after the
   SUBHEADING control word is printed under the heading
   line of pages starting after   the   control   word is
   encountered. No subheading is printed on the first
   page of an output file. The subheading is printed at
   the left margin. Leading blanks may be used to
   center the heading. The subheading is printed on the
   line specified by the heading margin and top margin
   control words. If no subheading is specified, a line
   of blanks is printed in its place. Additional .SH
   control words may be included at any point in the
   file to change the subheading on subsequent pages.

Note:

   If a new subheading is to be placed on a page forced

with the PAGE control word, the SUBHEADING control

must proceed the PAGE control.

Example:

.SH LINE EDITING COMMANDS

The   characters   "LINE   EDITING   COMMANDS" will be

printed at the left margin underneath the heading

line on the top of all pages started after this point

in the file:

ON-LINE EDITING SYSTEM   PAGE 7
LINE EDITING COMMANDS

TAB SETTING Control
--- ------- -------

Purpose:

The TAB SETTING control word specifies the tab stops
to be assumed for the following lines when converting
the TAB character into the appropriate number of
spaces.

Format:

.TB <n(1) n(2) n(3) n(4) n(5)>

<n(i)>   specifies the   column   location   of   the
                (i)th tab   stop;   the   sequence   must
                consist of values separated by one or
                more spaces.

Usage:

TAB characters entered into the file during EDIT file
creation are expanded by the processor into one or
more blanks to simulate the effect of a logical tab
stop.   The TAB SETTING control word specifies the
locations of the logical tab stops. This overrides
the default tab stops of 5, 10, 15, 20, 25, 30, 35,
40, 45, 50, 55, 60, 65, 70, 75. A TAB SETTING
control word without any tab stops specified, results
in reversion to the default tab settings. This
control word is useful for indenting the beginning of
a paragraph (remember a TAB causes a paragraph BREAK)
or for tabular information and diagrams.

Note:

This control word acts as a BREAK.

Examples:

.TB 10 20 30 40

Tab stops are interpreted as columns 10, 20, 30, and 40.

.TB

Tab stops will revert to default values of 5, 10, 15, etc.

TOP MARGIN Control
--- ------ -------

Purpose:

The TOP MARGIN control word specifies the number of
lines between the text and the top of the page. This
includes the heading line, the subheading line, and
the heading margin.

Format:

.TM <n>

<n>   specifies the number of lines to be
                    skipped at the top of output pages. n
                    must be two or greater.

Usage:

The specified number of lines will be left at the top
of succeeding output pages before the first line of
text. The page number and heading, if any, are
placed within the top margin by the .HM control. If
no TOP MARGIN control word is included in the file,
the default value is five. The top margin specified
must always be equal to or greater than the current
heading margin plus two lines for the heading and
subheading.

Notes:

To determine a top margin,

    a) select a heading margin

    b) add two lines (for the heading and subheading)

c) add the number of lines to be left blank above

the heading line.

For example:

a) .hm 4

b) +2

c) +6 blank lines (1 inch)

= .tm 12

This control word acts as a BREAK.

Example:

.TM 3

Three lines will be left at the top of pages started
after the current page. The heading and page number
will be printed on the first line and the subheading
on the second line under the default heading margin.

UNDENT Control
------ -------

Purpose:

The UNDENT control word forces the immediately following line to start further left than the position indicated by the current indent.

Format:

.UN <n>

<n>   specifies the number of spaces to be "undented" (negative indent) for the next line only; it must be less than or equal to the amount of indent currently in effect.

Usage:

The UNDENT control word serves the same purpose as the OFFSET control word but in a different manner. It is usually used to make the first line of a paragraph or section extend further to the left than the body of the paragraph. The choice between using UNDENT and OFFSET is usually a matter of personal preference. In general, UNDENT is more convenient once one becomes familiar with its usage.

Note:

This control acts as a BREAK.

Examples:

.UN 10

If an indentation of 10 is in effect, the next line

will start at the left margin; all following lines

will occur at normal indent position, 10 spaces from

the left margin.

Appendix I
Text Output Processor Operation

The TDL Text Output Processor requires 4K of memory, a TDL
system monitor (either ZAP, ZAPPLE, or SMB), a reader device
and a list device for proper operation. The reader MUST be
under software control.

After loading the Output Processor by using the R command of
the monitor, the previously prepared source file is readied
in the reader device. The Processor is started by issuing
the G command to the monitor. The Output Processor will
sign on on the console, and then wait. At this time, adjust
the paper in the output device so that printing will begin
on the first line of the page. A CR (carriage return) is
then entered to start the output.

Upon completion of the output, the Processor will TRAP to
the monitor. If additional source is to be processed, the
Processor may be restarted by simply issuing another G
command to the monitor.

During operation, the output may be temporarily stopped by
entering a Control-S on the console (provided it is not
being used as the reader device). A Control-Q is entered to
continue output. A Control-C will abort the Processor and
TRAP back to the monitor. To resume output, use the
monitor's G command.