



CHAPTER 17

The EXPLODE Procedure

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Overview

The EXPLODE procedure produces printed output with oversized text by expanding each letter into a matrix of characters. You can use the EXPLODE procedure to generate posters, flip charts, and header pages for computer output.

Note: PROC EXPLODE with a PARMCARDS statement cannot be included in a macro. Δ

Output 17.1 on page 415 shows the results of the most basic form of a PROC EXPLODE step with only one line of text. The following statements produce the output:

```
options nodate pageno=1 linesize=80
      pagesize=60;

proc explode;
  parmcards;
  TOP SECRET
;
```

Output 17.1 A Line of Expanded Text

```

                                The SAS System                                1
*****   ***   ****           ***   *****   ***   ****   *****   *****
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   ****   *   *****   *   *****   ****   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   ***   *   ***   *****   ***   *   *   *****   *
```

Through options you can control spacing, the density of the text, and underlining.

Procedure Syntax

Requirements: PARMCARDS or PARMCARDS4

Message line(s)

Null statement

Reminder: You can use global statements with PROC EXPLODE. See Chapter 2, “Fundamental Concepts for Using Base SAS Procedures,” for a list.

```
PROC EXPLODE;
  PARMCARDS | PARMCARDS4;
  message-line(s)
  ;|;;;
```

PROC EXPLODE Statement

```
PROC EXPLODE;
```

PARMCARDS or PARMCARDS4 Statement

Signals the beginning of the message lines.

Requirement: If any part of the message contains a semicolon, you must use PARMCARDS4.

See also: “Null Statement” on page 418

Featured in: Example 1 on page 419 and Example 2 on page 420

```
PARMCARDS | PARMCARDS4;
```

Message Lines

Specifies the block of text (one or more lines) and any special characters that control the appearance of the text.

Featured in: Example 1 on page 419 and Example 2 on page 420

Message line(s)

<D | L>

<Sn | P>

<spacing-control>

text<U *character-1* <...*character-n*>>. . . *more blocks of option specifications and text lines* . . .

<D | L>

<Sn | P>

<spacing-control>

<U *character-1* <...*character-n*>>**Required Argument****text**

specifies the line of printed text. It can contain only the following characters:

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890

. - + , = * \$ / _ () > < | & ? ! ; # ~ " % @ blank

The not symbol (¬) can also appear as either a hat (^) or a tilde (~) depending on your keyboard. PROC EXPLODE ignores lowercase characters.

The EXPLODE procedure reproduces horizontal spacing as it appears in the program, except for column 1, which is reserved for the *spacing-control* option.

Restriction: *text* can begin in any column except the first.

Options

To do this	Use this option
Control vertical spacing	<i>Sn</i> or <i>spacing-control</i>
Control the text density	
Specify dark characters	D
Specify light characters	L
Underline text	U
Begin a new page	P

D | L

controls the density of printed characters. Specify D to produce dark characters that are formed by overprinting the characters H, T, and Q. Specify L to produce light characters that are formed of asterisks.

Default: L initially, then for each line of text the value is carried over from the previous line if you do not specify a value.

Requirement: Must appear in column 1, and must be the only character on that line.

Requirement: To produce overprinting, the SAS system option OVP must be in effect, and your printer must support overprinting.

Featured in: Example 2 on page 420

L

See D | L.

P

See *Sn* | P.

***Sn* | P**

controls the amount of space before the next line of text.

Sn

skips *n* lines before the next line of text.

Range: 1–9

See also: *spacing-control*

Featured in: Example 1 on page 419

P

begins a new page before the next line of text.

Featured in: Example 2 on page 420

Default: 0

Requirement: Must begin in column 1 and must be the only character(s) on that line.

spacing-control

specifies the number of lines to skip before the next line of text.

Default: 0

Range: 1–9

Requirement: Must appear in column 1.

Restriction: Spacing control does not work at the top of the page.

See also: *Sn* option

<U *character-1* <...*character-n*>

underlines the *text* on the previous line with asterisks. The *character* values can be anything. The nonblank characters determine where the underline appears. PROC EXPLODE skips two lines before printing the underline.

Featured in: Example 2 on page 420

Null Statement

Ends the PROC EXPLODE step.

Requirement: The Null statement must begin in the first column. If any part of the message contains a semicolon, use four semicolons instead of one.

See also: “PARMCARDS or PARMCARDS4 Statement” on page 416

;
;|;;;

Examples

Example 1: Controlling Spacing

Procedure features: PARMSCARDS statement

Message lines options: S

spacing-control

This example

- controls horizontal spacing in the output by shifting the starting point of the text lines in the program
- controls vertical spacing with an initial gap of two lines and another gap of two lines before the second line of text.

Program

```
options nodate pageno=1 linesize=88 pagesize=60;
```

PARMSCARDS= specifies the file reference, EXTFILE, of the file, PARMFILE, to which PROC EXPLODE writes the text in the message lines.

```
options parmcards=extfile;
filename extfile 'parmfile';
```

```
proc explode;
  title 'Cover Page';
```

The numeral 6 before **WORDS** specifies the spacing control. S2 skips two lines before the next line of text.

```
  parmcards;
  THESE
  6 WORDS
  S2
  ARE BIG
  ;
```

Output

```

Cover Page
***** * * ***** *** *****
* * * * * * * *
* * * * * * * *
* ***** ***** * *****
* * * * * * * *
* * * * * * * *
* * * ***** *** *****

* * *** ***** ***** ***
* * * * * * * * * * *
* * * * * * * * * *
* * * * * ***** * * *
* * * * * * * * * * *
** ** * * * * * * * * *
* * *** * * ***** ***

* ***** *****
* * * * *
* * * * *
***** *****
* * * * *
* * * * *
* * * * *
* * * * *
***** *****

```

Example 2: Darkening and Underlining Text

Procedure features: PARMSCARDS4 statement

Message lines options: D

L

P

U

SAS system option: OVP

This example

- prints dark text and then returns to light text
- specifies a page break
- underlines text.

Program

OVP allows overprinted characters in the text.

```
options nodate pageno=1 linesize=88 pagesize=60 ovp;
```

PARMCARDS= specifies the file reference, EXTFILE, of the file, PARMFILE, to which PROC EXPLODE writes the text in the message lines.

```
options parmcards=extfile;
filename extfile 'parmfild';

proc explode;
  title 'Important Message';
```

D overprints the line of text to make it darker, P begins a new page, and L returns to regular printing. U with the line of asterisks creates the underline.

```
  parmcards4;
SOME WORDS
  ARE
D
  DARK;
P
L
  SOME ARE
  ALSO
```

The Null statement uses four semicolons because the message contains a semicolon.

```
D
  UNDERLINED
U *****
  ; ; ; ;
```

Output

```
                                     Important Message                                     1
***   ***   *   *   *****   *   *   ***   ****   ****   ***
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
***   ***   *   *   *****   *   *   ***   ****   ****   ***

                                     *   ****   *****
                                     *   *   *   *   *
                                     *   *   *   *   *
                                     *****   *****   *****
                                     *   *   *   *   *
                                     *   *   *   *
                                     *   *   *   *   *****

@#@#@@  @  @#@#@@  @  @  @#@
@  @  @  @  @  @  @  @  @  @  @  @  @  @  @  @
@  @  @  @  @  @  @  @  @  @  @  @  @  @  @  @
@  @  @#@#@@  @#@#@@  @#@#@@  @#@
@  @  @  @  @  @  @  @  @  @  @  @  @  @  @
@  @  @  @  @  @  @  @  @  @  @  @  @  @  @
@#@#@@  @  @  @  @  @  @  @  @  @  @  @  @  @
```

```
                                     Important Message                                     2
***   ***   *   *   *****   *   *   ***   ****   ****   ***
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *   *   *   *   *   *
***   ***   *   *   *****   *   *   ***   ****   ****   ***

                                     *   *   ***   ***
                                     *   *   *   *   *   *
                                     *   *   *   *   *   *
                                     *****   *   *   *
                                     *   *   *   *   *   *
                                     *   *   *   *   *   *
                                     *   *   *****   ***   ***

@  @  @  @  @  @#@#@@  @#@#@@  @#@#@@  @  @#@#@@  @  @  @#@#@@  @#@#@@
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*****
```


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