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.

Output 16.1 on page 413 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:

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

proc explode;
   parmcards;
   TOP SECRET
;
```

Output 16.1 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.

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

**PROC EXPLODE Statement**

```sas
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 416

**Featured in:** Example 1 on page 417 and Example 2 on page 418

```sas
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 417 and Example 2 on page 418
Message line(s)

<\D | \L>

<\S | \P>

<\text>

<\U character-1 \...\text line(s)>

\ldots more blocks of option specifications and text lines \ldots

<\D | \L>

<\S | \P>

<\text>

<\U character-1 \...\text line(s)>

Required Argument

\text

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

ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890

\ldots\ldots 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 \textline option.

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

Options

<table>
<thead>
<tr>
<th>To do this</th>
<th>Use this option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control vertical spacing</td>
<td>Sn or \text</td>
</tr>
<tr>
<td>Control the text density</td>
<td></td>
</tr>
<tr>
<td>Specify dark characters</td>
<td>D</td>
</tr>
<tr>
<td>Specify light characters</td>
<td>L</td>
</tr>
<tr>
<td>Underline text</td>
<td>U</td>
</tr>
<tr>
<td>Begin a new page</td>
<td>P</td>
</tr>
</tbody>
</table>

\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 418  

**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 417  

**P**  
begins a new page before the next line of text.  
Featured in: Example 2 on page 418  

**Default:** 0  

**Requirement:** Must begin in column 1 and must be the only characters(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 418  

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**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 414
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

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

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 '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
;#
```
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 'parmfile';
```

```
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 **********
  ;;;;
```
Chapter 16

Important Message

SOME WORDS ARE

Important Message

SOME ARE ALSO

UNDERLINED