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 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:

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

proc explode;
   parmcards;
   TOP SECRET
;
```

Output 17.1  A Line of Expanded Text

<table>
<thead>
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<td>* *</td>
<td>* *</td>
</tr>
</tbody>
</table>
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 418

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

```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 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 (ˆ) 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

<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 spacing-control</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.
**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

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';

   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 **********
   ;;;
   ;;;
Important Message

**SOME WORDS ARE**

**SOME ARE ALSO**

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H TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQ

H TQ H TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQ

H TQ H TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQ

H TQ H TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQH TQ