

## Extended Underlining

---

**Product:** R&R Report Writer®  
**Version:** All

**Oper Sys:** DOS®

---

### Summary

R&R Report Writer normally underlines a field only as far as the data extends. However, there are some applications in which you may want to underline the entire field width, even when the field is blank or partially filled. The results give your report the look and feel of a preprinted form as in Figure 1. This technical bulletin describes this process.

### Underlining a Field

This technique for extended underlining exploits the characteristics of hard spaces produced by the SPACE function. It applies to fields in which the data is left, center, or right aligned. The two most common examples involve left aligned and centered data.

Extended Underlining Example	
Name:	<u>John Anderson</u>
Company:	<u>Concentric Data Systems, Inc.</u>
Address:	<u>18 Lyman Street</u>
City:	<u>Westboro</u>
State:	<u>MA</u>
Zip:	<u>01581</u>
Articles Written:	<u>Database Design for Networks</u>
	<u>Fundamental Report Processing Techniques</u>
	<u>Graphic Presentation Methods</u>
	<u>Optimizing Database Design</u>

Figure 1. Extended Underlining

When you enter data in a dBASE® character field, it is automatically padded with spaces so that the field is always the same length. For example, if you have a field 30 characters wide, the expression LEN(<fieldname>) always returns 30. As you probably know from using dBASE, you must use the expression LEN(TRIM(<fieldname>)) to find the length of the actual data.

Typically, when you apply the underline attribute to a left aligned field in R&R Report Writer, you want only the data underlined. R&R Report Writer obliges by not underlining the trailing spaces. Similarly, when you center data, R&R Report Writer doesn't underline the leading or trailing spaces. To accomplish this, R&R Report Writer trims off the extra spaces.

---

R&R Report Writer distinguishes between these soft spaces used for padding, and the hard spaces you intentionally add to calculated fields with the SPACE function. Since hard spaces are never trimmed away by R&R Report Writer, a useful technique is to replace the soft spaces with hard spaces to extend underlining to the full field width.

Using a database field named TITLE, the following calculated field expressions illustrate how this technique can be applied to centered data and to left aligned data. After creating the fields, place them on the report using the /Field Insert command. Then use the /Field Attribute command to apply underlining.

```
TitleCntr = SPACE((LEN(TITLE)-LEN(TRIM(TITLE)))/2)+
            TRIM(TITLE)+
            SPACE((LEN(TITLE)-LEN(TRIM(TITLE)))/2)

TitleLeft = TRIM(TITLE)+
            SPACE(LEN(TITLE)-LEN(TRIM(TITLE)))
```

In both examples, the trick is to calculate the number of soft spaces and replace them with hard spaces. The number of soft spaces is determined by subtracting the length of the data from the length of the field.

When centering the data, insert half the number of spaces before the data and the other half after the data. When using left alignment, insert all of the spaces after the data. The SPACE function is used to insert the appropriate number of hard spaces.

In both examples, you can easily extend the underlining beyond the original field width. For example, if the TITLE field is 30 characters wide, you can make the result 40 characters wide by adding 10 to the field length, as in the following expressions. You also need to increase the field width by 10 using the /Field Width command.

```
TitleCntr =
            SPACE(((LEN(TITLE)+10)-LEN(TRIM(TITLE)))/2)+
            TRIM(TITLE)+
            SPACE(((LEN(TITLE)+10)-LEN(TRIM(TITLE)))/2)

TitleLeft =
            TRIM(TITLE)+
            SPACE(LEN(TITLE)-LEN(TRIM(TITLE))+10)
```

---

All trademarks are the property of their respective owners. The information contained in this technical bulletin is subject to change without notice. Liveware Publishing Inc. provides this information "as is" without warranty of any kind, either expressed or implied, but not limited to the implied warranty of merchantability and fitness for a particular purpose. Liveware Publishing may improve or change the product at any time without further notice; this document does not represent a commitment on the part of Liveware Publishing. The software described in this document is furnished under a license agreement or nondisclosure agreement. The software may be used or copied only in accordance with the terms of the licensing agreement.

---