

Subject: Seven characters defined by the C standard need names
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1 **1 Edits**

2 Edits refer to 02-007. Page and line numbers are displayed in the margin. Absent other
 3 instructions, a page and line number or line number range implies all of the indicated text is to
 4 be replaced by associated text, while a page and line number followed by + (-) indicates that
 5 associated text is to be inserted after (before) the indicated line. Remarks are noted in the
 6 margin, or appear between [and] in the text.

7 [The values of the seven escape sequences for “Character display semantics” (5.2.2 of the C
 8 standard) are not provided in Section 15. Not having definitions for these makes it difficult for
 9 Fortran procedures to share character data with C functions. It would be better to have named
 10 constants with names and values specified by the standard. This paper provides for them.]

11 [Editor: “C_PTR, C_NULL_CHAR” ⇒ “C_NULL_CHAR, C_ALERT, C_BACKSPACE, 371:17
 12 C_FORM_FEED, C_NEW_LINE, C_CARRIAGE_RETURN, C_HORIZONTAL_TAB,
 13 C_VERTICAL_TAB, C_PTR”, both to add the new names to the list and to put them
 14 into the same order as on page 372.]

15 The following entities shall be named constants of type character with a length parameter of 372:17-22
 16 one. The kind parameter value shall be equal to the value of C_CHAR unless C_CHAR = -1, in
 17 which case the kind parameter value shall be the same as for default kind. The values of these
 18 constants are specified in Table 1. In the case that C_CHAR ≠ -1 the value is specified using
 19 C syntax. The semantics of these values are explained in 5.2.1 and 5.2.2 of the C standard.

Table 1: Names of C characters with special semantics

Name	C definition	Value	
		C_CHAR = -1	C_CHAR ≠ -1
C_NULL_CHAR	null character	CHAR(0)	'\0'
C_ALERT	alert	ACHAR(7)	'\a'
C_BACKSPACE	backspace	ACHAR(8)	'\b'
C_FORM_FEED	form feed	ACHAR(12)	'\f'
C_NEW_LINE	new line	ACHAR(10)	'\n'
C_CARRIAGE_RETURN	carriage return	ACHAR(13)	'\r'
C_HORIZONTAL_TAB	horizontal tab	ACHAR(9)	'\t'
C_VERTICAL_TAB	vertical tab	ACHAR(11)	'\v'