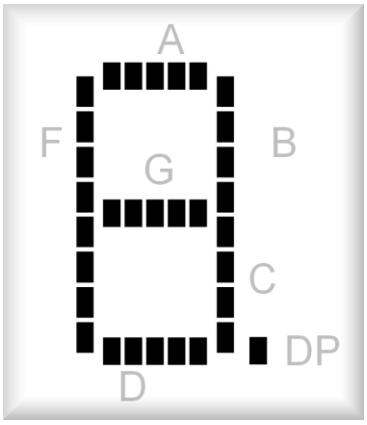

Figure 1: Segment mapping

Figure 2: Simulated LCD display with AF-LED7Seg-dots1 font

Figure 3: Simulated LED display with AF-LED7Seg-dots1 font

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1 Why use fonts from Fortune Fonts?

Most LED/LCD fonts cannot be used to represent electronic displays accurately. Your frustration arises from the facts that:

1. The shape of the segments and spacing between characters are not an accurate match for the display.
2. The spacing between characters changes when entering a decimal point or colon between them.
3. Custom characters are difficult or impossible to enter: you want to turn on a special pattern of segments the font designer did not include in the font.

Fortune Fonts fonts overcome these limitations, allowing you to easily produce datasheets and manuals showing exactly how the display looks for your product manuals and mock-ups.

2 About this font

This document describes how to use the AF-LED7Seg-dots1 font to prepare documents that accurately represent segmented displays. Other fonts are available for displays with a different number of segments, or with segments of a different shape. See “Other fonts available from FortuneFonts” on page 8.

3 Using the font

3.1 Installation

To install the font, see “General notes on fonts” on page 6.

3.2 Using the characters

There are four available methods for using a character in your documents. All methods require that the font be installed on your machine. All 128 combinations of segments are available, depending on which method you use to enter the characters.

You might find the following page helpful in choosing a character for your needs:
http://en.wikipedia.org/wiki/Seven-segment_display_character_representations

3.2.1 Method 1: Typing the characters by direct entry

This is the easiest method: just use the keyboard to enter characters. See **Table 2** as a guide.

3.2.2 Method 2: Browsing using “Insert Symbol”

In Microsoft Office applications, you can use Insert | symbol and browse all the characters available before inserting them. You must select “Unicode (hex)” in the dialogue box to see the full set of available characters.

3.2.3 Method 3: Copying and pasting

Copy and paste from this document, then change the font to AF-LED7Seg-dots1 for the characters you pasted into your document. See Table 2 and Table 3.

3.2.4 Method 4: Using numeric keypad to type character codes

An exhaustive set of all possible 128 LED segment combinations starts at character code 1000. (Placing them lower would overlap with tab and new paragraph characters.) Under Windows, these can be entered into Word by changing the font to AF-LED7Seg-dots1, holding down ALT, and entering the 4 digit code on the numeric keypad. For other operating systems such as Mac OS or X11, see http://en.wikipedia.org/wiki/Unicode_input.

See **Table 2** and **Table 3** as a guide. If you want to work out the codes for yourself, see Table 1.

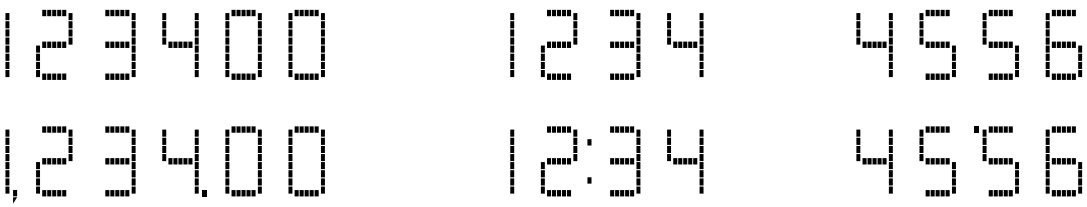
Table 1: Determining character code from segment pattern

Example Character	Segments (See Figure 1 on page 1) G 64	F 32	E 16	D 8	C 4	B 2	A 1	Character Code
	0	0	0	0	1	1	0	1000+4+2 = 1006
	1	0	0	1	0	0	1	1000+64+8+1 = 1073

Examples: To get | hold down ALT and type 1006 on the numeric keypad. To get ‾ hold down ALT and type 1073 on the numeric keypad.

3.3 Entering the decimal point, comma, colon and top-spot

These characters are entered using the full stop, comma, colon and | keys respectively. The spacing does not change when you place these characters between other characters. I.e. They are zero width in terms of moving the cursor along. E.g.



The punctuation characters above are in the default style for this font. If you prefer the alternative punctuation characters in the style shown in the line below, enter them using method 2,3 or 4 described above. The codes to enter are shown at the bottom of Table 2 (page 4).

3.4 Font tables

To see the characters properly in a document you generate, you will first need to install the font.

Table 2: Characters to type for direct entry

Character Code	Keyboard Character	AF-LED7Seg-dots1
30	-	-
31		
32		
33	!	!
34	"	"
35	#	#
36	$	$
37	%	%
38	&	&
39	'	'
40	(	(
41	)	)
42	*	*
43	+	+
44	,	,
45	-	-
46	.	.
47	/	/

48	0	0
49	1	1
50	2	2
51	3	3
52	4	4
53	5	5
54	6	6
55	7	7
56	8	8
57	9	9
58	:	:
59	;	;
60	<	<
61	=	=
62	>	>
63	?	?
64	@	@

Alternative Punctuation Marks	
1130	.
1131	,
1132	'
1133	:

65	A	A
66	B	B
67	C	C
68	D	D
69	E	E
70	F	F
71	G	G
72	H	H
73	I	I
74	J	J
75	K	K
76	L	L
77	M	M
78	N	N
79	O	O
80	P	P
81	Q	Q
82	R	R
83	S	S
84	T	T
85	U	U
86	V	V
87	W	W
88	X	X
89	Y	Y
90	Z	Z
91	[	[
92	\	\
93	]	]

94	^	^
95	_	_
96	`	`
97	a	a
98	b	b
99	c	c
100	d	d
101	e	e
102	f	f
103	g	g
104	h	h
105	i	i
106	j	j
107	k	k
108	l	l
109	m	m
110	n	n
111	o	o
112	p	p
113	q	q
114	r	r
115	s	s
116	t	t
117	u	u
118	v	v
119	w	w
120	x	x
121	y	y
122	z	z

Table 3: Character codes for all segment combinations

Character Code	AF-LED7Seg-dots1
1000	
1001	
1002	
1003	
1004	
1005	
1006	
1007	
1008	
1009	
1010	
1011	
1012	
1013	
1014	
1015	
1016	
1017	
1018	
1019	
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1021	
1022	
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1101	
1102	
1103	
1104	
1105	
1106	
1107	
1108	
1109	
1110	
1111	
1112	
1113	
1114	
1115	
1116	
1117	
1118	
1119	
1120	
1121	
1122	
1123	
1124	
1125	
1126	
1127	

4 General notes on fonts

4.1 Installing fonts in Windows

Open the fonts directory on your computer and copy the font file there. In Windows XP this can be done by: `Start | Control Panel | Fonts`

If you are trying to install another version of the same font, you will have to delete the current installation of the font from this directory first. To delete fonts, you will have to close any open programs that use fonts, e.g. Microsoft Word. You may need administrator privileges to install fonts.

4.2 Generating pdf documents with special fonts

Pdf documents that display the special font can be distributed with the font built into them. This means that the viewer of the document does not need to have the font installed on their computer.

4.2.1 Generating pdfs with PDF995

Be sure to check the option to include the font inside the document:

```
Print | Properties | advanced | graphic | download as soft font
Print | Properties | advanced | document | postscript | true font  download option
```

PDF995 is free and available from http://www.pdf995.com/

4.2.2 Generating pdfs with Microsoft Word 2007

Use `file | save as | pdf`

5 User manuals using outline font

In user manuals, it is often important to show all segments in outline form in the background.

1. Put an outline image of the display in the background showing all possible segments displayed in a low contrast colour. To generate the outline, enter the characters as normal, and then, in Microsoft Word, select the text, right click on it and choose font | effects | outline. Change the font colour to grey.
2. Copy this text box and paste it over the previous one. Turn off the outline option for this text box. Replace the text with what is supposed to be displayed and change the font colour to black.

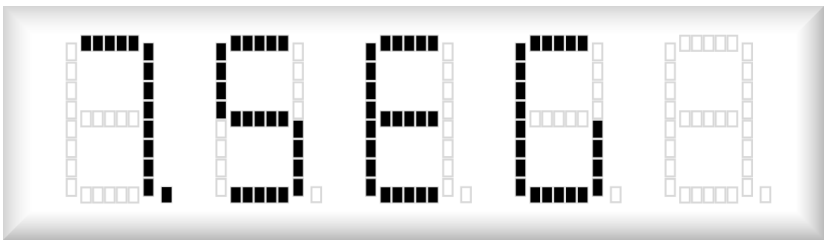


Figure 4: Using Word font effects to generate outline font.

If the outline option is not to your liking, you can use a solid low contrast fill as described in "Realistic looking displays" below.

6 Realistic looking displays using Microsoft Word 2010

You can make a display look more realistic by showing all available segments in a low contrast colour:

1. Put an image of the display in the background.
2. Put a text box on over that showing all possible segments displayed in a low contrast colour. The display in Figure 5 has the following characters in AF-LED7Seg-dots1 font

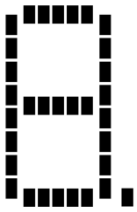
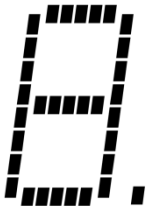
   8.8.8.8.

3. Copy and paste the text box over the top and change the font colour to the colour of active segments. Making the text boxes a different width makes selecting each one easier.
4. Change the characters to the desired display. Change the font colour just a little for each character to simulate a varying viewing angle.
5. You can alter the colour within each segment to provide more realism. To do this:
   a. From the home tab, click on "Text Effects"
   b. Choose Shadow | internal
   c. Click on "Text Effects" again
   d. Choose Shadow | Shadow options and set
      i. Transparency to 50%
      ii. Blur to 5
      iii. Distance to 4
6. You can add a glow effect to provide more realism for emissive displays. To do this:
   a. From the home tab, click on "Text Effects"
   b. Choose Glow | Glow options
   c. Choose a colour the same or similar to the colour of the font
   d. Set size to 6
   e. Set transparency to 70%
7. Use `Format | Send backward` if the ordering of the layers need correcting.
8. In Word 2007, you can simulate a glass layer over the top by using a rectangle with the "chrome" preset gradient fill. On the "Fill effects" gradient tab, set the "from" transparency to 80% and the "to" transparency to 95%.

Figure 5: Example of a realistic looking LED display using this method

7 Other fonts available from FortuneFonts

Table 4: Other fonts available from FortuneFonts

Name	Segment Shape
AF-LED7Seg-1	
AF-LED7Seg-2	
AF-LED7Seg-3	
AF-LED7Seg-Platz	
AF-LED7Seg-dots1	
AF-LED7Seg-dots2	
AF-LED14Seg-1	

8 Contact Us

Contact us to ask questions about this font, or about any other fonts that you need. There is a wide selection of fonts available that accurately represent electronic displays.

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