Hexadecimal encodings for displaying the digits 0 to F<sup>[12][13]</sup>

Digit   Display   gfedcba   abcdefg   a   b   c   d   e   f   g     0   □   0x3F   0x7E   on		1					J. 19.12				
1   B   0x06   0x30   off   on   on   off   on   off   on   off   on   on   off   on   on   off   on   on   off   on   on   on   off   on   on <td< th=""><th>Digit</th><th>Display</th><th>gfedcba</th><th>abcdefg</th><th>а</th><th>b</th><th>С</th><th>d</th><th>е</th><th>f</th><th>g</th></td<>	Digit	Display	gfedcba	abcdefg	а	b	С	d	е	f	g
2   2   0x5B   0x6D   on   on   off   on   on   on   off   on	0	8	0x3F	0x7E	on	on	on	on	on	on	off
3   3   3   0x4F   0x79   on on on on on off off on on   off on on on off off on on on   off on on on off on on on   on off on on on off on	1	8	0x06	0x30	off	on	on	off	off	off	off
4   9   0x66   0x33   off   on   on   off   on   on   off   on   on   off   on   <	2	8	0x5B	0x6D	on	on	off	on	on	off	on
5   S   0x6D   0x5B   on off on on off on on off on	3	В	0x4F	0x79	on	on	on	on	off	off	on
6   6   6   0x7D   0x5F   on off on	4	8	0x66	0x33	off	on	on	off	off	on	on
7   1   0x07   0x70   on   on   on   off   off   off   off     8   8   0x7F   0x7F   on	5	S	0x6D	0x5B	on	off	on	on	off	on	on
8 8 0x7F 0x7F on <	6	8	0x7D	0x5F	on	off	on	on	on	on	on
9 9 0x6F 0x7B on on on on on on off on on on   A 8 0x77 0x77 on on on off on on on on on   b 6 0x7C 0x1F off off on on on on on on on   C 6 0x39 0x4E on off off on on on on off of   d 8 0x5E 0x3D off on on on on on off of   E 8 0x79 0x4F on off off on on on on on on	7	В	0x07	0x70	on	on	on	off	off	off	off
A R 0x77 0x77 on on on on on off on	8	8	0x7F	0x7F	on	on	on	on	on	on	on
b   B   0x7C   0x1F   off   off   on   off   on   on   on   off   on   <	9	9	0x6F	0x7B	on	on	on	on	off	on	on
C   E   0x39   0x4E   on off   off off   on on on off   off     d   H   0x5E   0x3D   off   on on on on off   on off   on off     E   E   0x79   0x4F   on off   off   on on on on on   on on	Α	8	0x77	0x77	on	on	on	off	on	on	on
d   B   0x5E   0x3D   off   on   on   on   off   on     E   B   0x79   0x4F   on   off   off   on   on   on   on	b	8	0x7C	0x1F	off	off	on	on	on	on	on
E E 0x79 0x4F on off off on on on	С	8	0x39	0x4E	on	off	off	on	on	on	off
	d	8	0x5E	0x3D	off	on	on	on	on	off	on
F	Е	8	0x79	0x4F	on	off	off	on	on	on	on
	F	8	0x71	0x47	on	off	off	off	on	on	on



LED-based 7 segment display which cycles through the common glyphs of the ten decimal numerals and the six hexadecimal "letter digits" (A, b, C, d, E, F)[12][13][14][15]

However, this modern scheme wasn't always followed in the past, and various other schemes could be found as well:

- The Texas Instruments seven-segment display decoder chips 7446/7447/7448/7449 and 74246/74247/74248/74249 and the Siemens FLH551-7448/555-8448 chips used truncated versions of "2", "3", "4", "5" and "6" for digits A–E. Digit F (1111 binary) was blank. [3][16][17]
- Soviet programmable calculators like the <u>53-34</u> instead used the symbols "-", "L", "C", "Γ", "E", and " " (space) to display hexadecimal numbers above nine, allowing the error message <u>ΕΓΓ0Γ</u> to be displayed.
- Not all 7-segment decoders were suitable to display digits above nine at all. For comparison, the <u>National</u> Semiconductor MM74C912 displayed "o" for A and B, "-" for C, D and E, and blank for F. The CD4511 even just displayed blanks.

In addition, seven-segment displays can be used to show various other letters of the <u>Latin</u>, <u>Cyrillic</u> and <u>Greek alphabets</u> including <u>punctuation</u>, but few representations are unambiguous and intuitive at the same time. [18] Short messages giving status information (e.g. "no dISC" on a CD player) are also commonly represented on 7-segment displays. In the case of such messages it is not necessary for every letter to be unambiguous, merely for the words as a whole to be readable.

Similar displays with <u>fourteen</u> or <u>sixteen</u> segments are available allowing less-ambiguous representations of the alphabet.

Using a restricted range of letters that look like (upside-down) digits, seven-segment displays are commonly used by school children to form words and phrases using a technique known as "calculator spelling".

## See also

- Nine-segment display
- Fourteen-segment display
- Sixteen-segment display