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**Information technology — 8-bit single-byte  
coded graphic character sets —**

**Part 8:**  
Latin/Hebrew alphabet

*Technologies de l'information — Jeux de caractères graphiques codés sur  
un seul octet —*  
*(Partie 8: Alphabet latin/hébreu)*

ISO/IEC 8859-8:1999

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and nongovernmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

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International Standard ISO/IEC 8859-8 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 2, *Coded character sets*.  
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This edition cancels and replaces ISO 8859-8:1988 which has been technically revised.

ISO/IEC 8859 consists of the following parts, under the general title *Information technology – 8-bit single-byte coded graphic character sets*:

- Part 1: *Latin alphabet No. 1*
- Part 2: *Latin alphabet No. 2*
- Part 3: *Latin alphabet No. 3*
- Part 4: *Latin alphabet No. 4*
- Part 5: *Latin/Cyrillic alphabet*
- Part 6: *Latin/Arabic alphabet*
- Part 7: *Latin/Greek alphabet*
- Part 8: *Latin/Hebrew alphabet*
- Part 9: *Latin alphabet No. 5*
- Part 10: *Latin alphabet No. 6*

Annexes A to D of this part of ISO/IEC 8859 are for information only.

## Introduction

ISO/IEC 8859 consists of several parts. Each part specifies a set of up to 191 graphic characters and the coded representation of these characters by means of a single 8-bit byte. Each set is intended for use for a particular group of languages.

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# Information technology – 8-bit single-byte coded graphic character sets – Part 8: Latin/Hebrew alphabet

## 1 Scope

This part of ISO/IEC 8859 specifies a set of 155 coded graphic characters identified as Latin/Hebrew alphabet.

This set of coded graphic characters is intended for use in data and text processing applications and also for information interchange.

The set contains graphic characters used for general purpose applications in typical office environments in at least the following languages:

English, Hebrew, Latin.

It is not intended for pointed Hebrew.

This set of coded graphic characters may be regarded as a version of an 8-bit code according to ISO/IEC 2022 or ISO/IEC 4873 at level 1.

This part of ISO/IEC 8859 may not be used in conjunction with any other parts of ISO/IEC 8859. If coded characters from more than one part are to be used together, by means of code extension techniques, the equivalent coded character sets from ISO/IEC 10367 should be used instead within a version of ISO/IEC 4873 at level 2 or level 3.

The coded characters in this set may be used in conjunction with coded control functions selected from ISO/IEC 6429. However, control functions are not used to create composite graphic symbols from two or more graphic characters (see clause 6).

**NOTE** – ISO/IEC 8859 is not intended for use with Telematic services defined by ITU-T. If information coded according to ISO/IEC 8859 is to be transferred to such services, it will have to conform to the requirements of those services at the access-point.

## 2 Conformance

### 2.1 Conformance of information interchange

A coded-character-data-element (CC-data-element) within coded information for interchange is in conformance with this part of ISO/IEC 8859 if all the coded representations of graphic characters within that CC-data-element conform to the requirements of clause 6.

### 2.2 Conformance of devices

A device is in conformance with this part of ISO/IEC 8859 if it conforms to the requirements of 2.2.1, and either or both of 2.2.2 and 2.2.3. A claim of conformance shall identify the document which contains the description specified in 2.2.1.

#### 2.2.1 Device description

A device that conforms to this part of ISO/IEC 8859 shall be the subject of a description that identifies the means by which the user may supply characters to the device, or may recognize them when they are made available to him, as specified respectively in 2.2.2 and 2.2.3.

#### 2.2.2 Originating devices

An originating device shall allow its user to supply any sequence of characters from those specified in clause 6, and shall be capable of transmitting their coded representations within a CC-data-element.

#### 2.2.3 Receiving devices

A receiving device shall be capable of receiving and interpreting any coded representations of characters that are within a CC-data-element, and that conform to clause 6, and shall make the corresponding characters available to its user in such a way that the user can identify them from among those specified there, and can distinguish them from each other.

## 3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 8859. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 8859 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 2022:1994, *Information technology – Character code structure and extension techniques.*

ISO/IEC 4873:1991, *Information technology – ISO 8-bit code for information interchange – Structure and rules for implementation.*

ISO/IEC 8824-1:1995, *Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation.*

## 4 Definitions

For the purposes of this part of ISO/IEC 8859 the following definitions apply:

**4.1 bi-directional text:** A text which may contain strings of characters with left-to-right and right-to-left directions.

**4.2 bit combination:** An ordered set of bits used for the representation of characters.

**4.3 byte:** A bit string that is operated upon as a unit.

**4.4 character:** A member of a set of elements used for the organization, control, or representation of data.

**4.5 code table:** A table showing the characters allocated to each bit combination in a code.

**4.6 coded character set; code:** A set of unambiguous rules that establishes a character set and the one-to-one relationship between the characters of the set and their bit combinations.

**4.7 coded-character-data-element (CC-data-element):** An element of interchanged information that is specified to consist of a sequence of coded representations of characters, in accordance with one or more identified standards for coded character sets.

**4.8 directional character properties:** A set of mutually exclusive properties which may qualify the members of a character set. These properties are used by algorithms which transform text from processing sequence into presentation sequence. Examples of values for directional character properties are "right-to-left", "left-to-right", "digit", "numeric separator", "neutral".

**4.9 graphic character:** A character, other than a control function, that has a visual representation normally handwritten, printed or displayed, and that has a coded representation consisting of one or more bit combinations.

**NOTE** – In ISO/IEC 8859 a single bit combination is used to represent each character.

## 5 Notation, code table and names

### 5.1 Notation

The bits of the bit combinations of the 8-bit code are identified by  $b_8$ ,  $b_7$ ,  $b_6$ ,  $b_5$ ,  $b_4$ ,  $b_3$ ,  $b_2$ , and  $b_1$ , where  $b_8$  is the highest-order, or most-significant bit and  $b_1$  is the lowest-order, or least-significant bit.

The bit combinations may be interpreted to represent numbers in binary notation by attributing the following weights to the individual bits:

Bit	$b_8$	$b_7$	$b_6$	$b_5$	$b_4$	$b_3$	$b_2$	$b_1$
Weight	128	64	32	16	8		2	1

Using these weights, the bit combinations are identified by notations of the form  $xx/yy$ , where  $xx$  and  $yy$  are numbers in the range 00 to 15. The correspondence between the notations of the form  $xx/yy$  and the bit combinations consisting of the bits  $b_8$  to  $b_1$  is as follows:

–  $xx$  is the number represented by  $b_8$ ,  $b_7$ ,  $b_6$  and  $b_5$  where these bits are given the weights 8, 4, 2, and 1 respectively.

–  $yy$  is the number represented by  $b_4$ ,  $b_3$ ,  $b_2$  and  $b_1$  where these bits are given the weights 8, 4, 2, and 1 respectively.

The bit combinations are also identified by notations of the form  $hk$ , where  $h$  and  $k$  are numbers in the range 0 to F in hexadecimal notation. The number  $h$  is the same as the number  $xx$  described above, and the number  $k$  the same as the number  $yy$  described above.

## 5.2 Layout of the code table

An 8-bit code table consists of 256 positions arranged in 16 columns and 16 rows. The columns and the rows are numbered 00 to 15. In hexadecimal notation the columns and the rows are numbered 0 to F.

The code table positions are identified by notations of the form xx/yy, where xx is the column number and yy is the row number. The column and row numbers are shown at the top and left edges of the table respectively. The code table positions are also identified by notations of the form hk, where h is the column number and k is the row number in hexadecimal notation. The column and row numbers are shown at the bottom and right edges of the table respectively.

The positions of the code table are in one-to-one correspondence with the bit combinations of the code. The notation of a code table position, of the form xx/yy, or of the form hk, is the same as that of the corresponding bit combination.

## 5.3 Names and meanings

This part of ISO/IEC 8859 assigns a unique name and a unique identifier to each graphic character. These names and identifiers have been taken from ISO/IEC 10646-1 (E). This part of ISO/IEC 8859 also specifies an acronym for each of the characters SPACE, NO-BREAK SPACE, SOFT HYPHEN, LEFT-TO-RIGHT MARK and RIGHT-TO-LEFT MARK. For acronyms only Latin capital letters A to Z are used. It is intended that the acronyms be retained in all translations of the text.

Except for SPACE (SP), NO-BREAK SPACE (NBSP), SOFT HYPHEN (SHY), LEFT-TO-RIGHT MARK (LRM) and RIGHT-TO-LEFT MARK (RLM), this part of ISO/IEC 8859 does not define and does not restrict the meanings of graphic characters.

This part of ISO/IEC 8859 specifies a graphic symbol for each graphic character. This symbol is shown in the corresponding position of the code table. However, this part, or any other part, of ISO/IEC 8859 does not specify a particular style or font design for imaging graphic characters. Annex B of ISO/IEC 10367 gives further information on this subject.

### 5.3.1 SPACE (SP)

A graphic character the visual representation of which consists of the absence of a graphic symbol.

### 5.3.2 NO-BREAK SPACE (NBSP)

A graphic character the visual representation of which consists of the absence of a graphic symbol, for use when a line break is to be prevented in the text as presented.

### 5.3.3 SOFT HYPHEN (SHY)

A graphic character that is imaged by a graphic symbol identical with, or similar to, that representing HYPHEN, for use when a line break has been established within a word.

### 5.3.4 LEFT-TO-RIGHT MARK (LRM)

A graphic character the visual representation of which consists of the absence of a graphic symbol, which acts like a left-to-right character in a bi-directional text (such as LATIN SMALL LETTER A).

### 5.3.5 RIGHT-TO-LEFT MARK (RLM)

A graphic character the visual representation of which consists of the absence of a graphic symbol, which acts like a right-to-left character in a bi-directional text (such as HEBREW LETTER ALEF).

## 6 Specification of the coded character set

### 6.1 Characters of the set and their coded representation

See table 1.

Table 1 – Character set, coded representation

Bit combination	Hex	Identifier	Name
02/00	20	U+0020	SPACE
02/01	21	U+0021	EXCLAMATION MARK
02/02	22	U+0022	QUOTATION MARK
02/03	23	U+0023	NUMBER SIGN
02/04	24	U+0024	DOLLAR SIGN
02/05	25	U+0025	PERCENT SIGN
02/06	26	U+0026	AMPERSAND
02/07	27	U+0027	APOSTROPHE
02/08	28	U+0028	LEFT PARENTHESIS
02/09	29	U+0029	RIGHT PARENTHESIS
02/10	2A	U+002A	ASTERISK
02/11	2B	U+002B	PLUS SIGN
02/12	2C	U+002C	COMMA
02/13	2D	U+002D	HYPHEN-MINUS
02/14	2E	U+002E	FULL STOP
02/15	2F	U+002F	SOLIDUS
03/00	30	U+0030	DIGIT ZERO
03/01	31	U+0031	DIGIT ONE
03/02	32	U+0032	DIGIT TWO
03/03	33	U+0033	DIGIT THREE
03/04	34	U+0034	DIGIT FOUR
03/05	35	U+0035	DIGIT FIVE
03/06	36	U+0036	DIGIT SIX
03/07	37	U+0037	DIGIT SEVEN
03/08	38	U+0038	DIGIT EIGHT
03/09	39	U+0039	DIGIT NINE
03/10	3A	U+003A	COLON
03/11	3B	U+003B	SEMICOLON
03/12	3C	U+003C	LESS-THAN SIGN
03/13	3D	U+003D	EQUALS SIGN
03/14	3E	U+003E	GREATER-THAN SIGN
03/15	3F	U+003F	QUESTION MARK
04/00	40	U+0040	COMMERCIAL AT
04/01	41	U+0041	LATIN CAPITAL LETTER A
04/02	42	U+0042	LATIN CAPITAL LETTER B
04/03	43	U+0043	LATIN CAPITAL LETTER C
04/04	44	U+0044	LATIN CAPITAL LETTER D
04/05	45	U+0045	LATIN CAPITAL LETTER E
04/06	46	U+0046	LATIN CAPITAL LETTER F
04/07	47	U+0047	LATIN CAPITAL LETTER G
04/08	48	U+0048	LATIN CAPITAL LETTER H
04/09	49	U+0049	LATIN CAPITAL LETTER I
04/10	4A	U+004A	LATIN CAPITAL LETTER J
04/11	4B	U+004B	LATIN CAPITAL LETTER K
04/12	4C	U+004C	LATIN CAPITAL LETTER L
04/13	4D	U+004D	LATIN CAPITAL LETTER M
04/14	4E	U+004E	LATIN CAPITAL LETTER N
04/15	4F	U+004F	LATIN CAPITAL LETTER O

Table 1 (continued)

Bit combination	Hex	Identifier	Name
05/00	50	U+0050	LATIN CAPITAL LETTER P
05/01	51	U+0051	LATIN CAPITAL LETTER Q
05/02	52	U+0052	LATIN CAPITAL LETTER R
05/03	53	U+0053	LATIN CAPITAL LETTER S
05/04	54	U+0054	LATIN CAPITAL LETTER T
05/05	55	U+0055	LATIN CAPITAL LETTER U
05/06	56	U+0056	LATIN CAPITAL LETTER V
05/07	57	U+0057	LATIN CAPITAL LETTER W
05/08	58	U+0058	LATIN CAPITAL LETTER X
05/09	59	U+0059	LATIN CAPITAL LETTER Y
05/10	5A	U+005A	LATIN CAPITAL LETTER Z
05/11	5B	U+005B	LEFT SQUARE BRACKET
05/12	5C	U+005C	REVERSE SOLIDUS
05/13	5D	U+005D	RIGHT SQUARE BRACKET
05/14	5E	U+005E	CIRCUMFLEX ACCENT
05/15	5F	U+005F	LOW LINE
06/00	60	U+0060	GRAVE ACCENT
06/01	61	U+0061	LATIN SMALL LETTER A
06/02	62	U+0062	LATIN SMALL LETTER B
06/03	63	U+0063	LATIN SMALL LETTER C
06/04	64	U+0064	LATIN SMALL LETTER D
06/05	65	U+0065	LATIN SMALL LETTER E
06/06	66	U+0066	LATIN SMALL LETTER F
06/07	67	U+0067	LATIN SMALL LETTER G
06/08	68	U+0068	LATIN SMALL LETTER H
06/09	69	U+0069	LATIN SMALL LETTER I
06/10	6A	U+006A	LATIN SMALL LETTER J
06/11	6B	U+006B	LATIN SMALL LETTER K
06/12	6C	U+006C	LATIN SMALL LETTER L
06/13	6D	U+006D	LATIN SMALL LETTER M
06/14	6E	U+006E	LATIN SMALL LETTER N
06/15	6F	U+006F	LATIN SMALL LETTER O
07/00	70	U+0070	LATIN SMALL LETTER P
07/01	71	U+0071	LATIN SMALL LETTER Q
07/02	72	U+0072	LATIN SMALL LETTER R
07/03	73	U+0073	LATIN SMALL LETTER S
07/04	74	U+0074	LATIN SMALL LETTER T
07/05	75	U+0075	LATIN SMALL LETTER U
07/06	76	U+0076	LATIN SMALL LETTER V
07/07	77	U+0077	LATIN SMALL LETTER W
07/08	78	U+0078	LATIN SMALL LETTER X
07/09	79	U+0079	LATIN SMALL LETTER Y
07/10	7A	U+007A	LATIN SMALL LETTER Z
07/11	7B	U+007B	LEFT CURLY BRACKET
07/12	7C	U+007C	VERTICAL LINE
07/13	7D	U+007D	RIGHT CURLY BRACKET
07/14	7E	U+007E	TILDE



Table 1 (continued)

Bit combination	Hex	Identifier	Name
10/00	A0	U+00A0	NO-BREAK SPACE
10/01	A1		<i>(This position shall not be used)</i>
10/02	A2	U+00A2	CENT SIGN
10/03	A3	U+00A3	POUND SIGN
10/04	A4	U+00A4	CURRENCY SIGN
10/05	A5	U+00A5	YEN SIGN
10/06	A6	U+00A6	BROKEN BAR
10/07	A7	U+00A7	SECTION SIGN
10/08	A8	U+00A8	DIAERESIS
10/09	A9	U+00A9	COPYRIGHT SIGN
10/10	AA	U+00AD	MULTIPLICATION SIGN
10/11	AB	U+00AB	LEFT-POINTING DOUBLE ANGLE QUOTATION MARK
10/12	AC	U+00AC	NOT SIGN
10/13	AD	U+00AD	SOFT HYPHEN
10/14	AE	U+00AE	REGISTERED SIGN
10/15	AF	U+00AF	MACRON
11/00	B0	U+00B0	DEGREE SIGN
11/01	B1	U+00B1	PLUS-MINUS SIGN
11/02	B2	U+00B2	SUPERSCRIP TWO
11/03	B3	U+00B3	SUPERSCRIP THREE
11/04	B4	U+00B4	ACUTE ACCENT
11/05	B5	U+00B5	MICRO SIGN
11/06	B6	U+00B6	PILCROW SIGN
11/07	B7	U+00B7	MIDDLE DOT
11/08	B8	U+00B8	CEDILLA
11/09	B9	U+00B9	SUPERSCRIP ONE
11/10	BA	U+00F7	DIVISION SIGN
11/11	BB	U+00BB	RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK
11/12	BC	U+00BC	VULGAR FRACTION ONE QUARTER
11/13	BD	U+00BD	VULGAR FRACTION ONE HALF
11/14	BE	U+00BE	VULGAR FRACTION THREE QUARTERS
11/15	BF		<i>(This position shall not be used)</i>
12/00	C0		<i>(This position shall not be used)</i>
12/01	C1		<i>(This position shall not be used)</i>
12/02	C2		<i>(This position shall not be used)</i>
12/03	C3		<i>(This position shall not be used)</i>
12/04	C4		<i>(This position shall not be used)</i>
12/05	C5		<i>(This position shall not be used)</i>
12/06	C6		<i>(This position shall not be used)</i>
12/07	C7		<i>(This position shall not be used)</i>
12/08	C8		<i>(This position shall not be used)</i>
12/09	C9		<i>(This position shall not be used)</i>
12/10	CA		<i>(This position shall not be used)</i>
12/11	CB		<i>(This position shall not be used)</i>
12/12	CC		<i>(This position shall not be used)</i>
12/13	CD		<i>(This position shall not be used)</i>
12/14	CE		<i>(This position shall not be used)</i>
12/15	CF		<i>(This position shall not be used)</i>

Table 1 (concluded)

Bit combination	Hex	Identifier	Name
	D0		<i>(This position shall not be used)</i>
	D1		<i>(This position shall not be used)</i>
	D2		<i>(This position shall not be used)</i>
	D3		<i>(This position shall not be used)</i>
	D4		<i>(This position shall not be used)</i>
	D5		<i>(This position shall not be used)</i>
	D6		<i>(This position shall not be used)</i>
	D7		<i>(This position shall not be used)</i>
	D8		<i>(This position shall not be used)</i>
	D9		<i>(This position shall not be used)</i>
	DA		<i>(This position shall not be used)</i>
	DB		<i>(This position shall not be used)</i>
	DC		<i>(This position shall not be used)</i>
	DD		<i>(This position shall not be used)</i>
	DE		<i>(This position shall not be used)</i>
	DF	U+2017	DOUBLE LOW LINE
	E0	U+05D0	HEBREW LETTER ALEF
	E1	U+05D1	HEBREW LETTER BET
	E2	U+05D2	HEBREW LETTER GIMEL
	E3	U+05D3	HEBREW LETTER DALET
	E4	U+05D4	HEBREW LETTER HE
	E5	U+05D5	HEBREW LETTER VAV
	E6	U+05D6	HEBREW LETTER ZAYIN
	E7	U+05D7	HEBREW LETTER HET
	E8	U+05D8	HEBREW LETTER TET
	E9	U+05D9	HEBREW LETTER YOD
	EA	U+05DA	HEBREW LETTER FINAL KAF
	EB	U+05DB	HEBREW LETTER KAF
	EC	U+05DC	HEBREW LETTER LAMED
	ED	U+05DD	HEBREW LETTER FINAL MEM
	EE	U+05DE	HEBREW LETTER MEM
	EF	U+05DF	HEBREW LETTER FINAL NUN
	F0	U+05E0	HEBREW LETTER NUN
	F1	U+05E1	HEBREW LETTER SAMEKH
	F2	U+05E2	HEBREW LETTER AYIN
	F3	U+05E3	HEBREW LETTER FINAL PE
	F4	U+05E4	HEBREW LETTER PE
	F5	U+05E5	HEBREW LETTER FINAL TSADI
	F6	U+05E6	HEBREW LETTER TSADI
	F7	U+05E7	HEBREW LETTER QOF
	F8	U+05E8	HEBREW LETTER RESH
	F9	U+05E9	HEBREW LETTER SHIN
	FA	U+05EA	HEBREW LETTER TAV
	FB		<i>(This position shall not be used)</i>
	FC		<i>(This position shall not be used)</i>
	FD	U+200E	LEFT-TO-RIGHT MARK
	FE	U+200F	RIGHT-TO-LEFT MARK
	FF		<i>(This position shall not be used)</i>