

ANNEX E (normative)

Character repertoires for Programme Service name, Programme Type Name, RadioText and alphanumeric Radio Paging

Three different alphanumeric character repertoires have been defined; they are reproduced in figures E.1 to E.3. Taken together, they permit the composition of texts indicating the name of the programme service and the constitution of radio-data messages or alphanumeric paging calls, and they satisfy all the known requirements of the EBU Active Members as regards radio-data transmission. The three code-tables each contain almost all the characters in the international reference version of ISO Publication 646 ¹⁾. The same codes have been given to each of these characters in all three tables. Care has been taken in the design of the coding tables to ensure that it will be possible to satisfy all the requirements within large geographical areas with each repertoire, and it is therefore likely that some receivers will be equipped to display only the characters included in one of the three repertoires. Nonetheless, it will be necessary to provide information identifying the repertoire in use, in order to ensure that the display corresponds as closely as possible to the intentions of the broadcasting organisation when received on a receiver able to display characters from more than one repertoire.

The repertoire tables were designed by the EBU [12] with the view to cover the requirements satisfying the use of languages within the European Broadcasting Area. However a compromise had to be made to keep these tables small in size. As a consequence of this, one or the other character from a particular language was left out, because it is possible to substitute it by another. For example, in Greek, small theta (θ) should be substituted by capital theta (Θ).

In accordance with the practice in the videotex service, where more than one character repertoire is defined also, control codes have therefore been allocated to distinguish between the basic (G0) and two auxiliary (G1 and G2) code-tables. The selection of the required code-table is controlled in videotex by the transmission of the corresponding repertoire control characters; SI (0/15), SO (0/14) and LS2 (1/11 followed by 6/14)²⁾. In radio-data, it is controlled by the transmission of one of the following pairs of repertoire control characters:

- 0/15, 0/15: code-table of figure E.1
- 0/14, 0/14: code-table of figure E.2
- 1/11, 6/14: code-table of figure E.3

These characters do not occupy a space in the display, but have effect on the displayable characters having the same address, and on all characters having numerically higher addresses up to, but not including, the address of another repertoire control character. In default of a repertoire control character, the display coding taking effect at address 0 should be assumed to be in accordance with figure E.1.

¹⁾ Including the figures 0 to 9 and punctuation; nonetheless, in certain cases, codes have been re-allocated to characters taken from the EBU repertoires, in accordance with the provision of ISO Publication 646.

²⁾ The notation A/B is used to designate the character appearing on line B of column A in the table.

For example, the name of the second Greek programme service could be transmitted in type 0 groups as follows:

Characters:	ΔE	YT	EP	O
Text segment address :	0	1	2	3

<u>Text segment address</u>	<u>Character codes</u>	<u>Characters</u>	<u>Effect</u>
0	0/14, 0/14	SO, SO	Selection of code-table (figure E.2)
0	15/14, 4/5	Δ, E	First two letters
1	5/9, 5/4	Y, T	Second two letters
2	4/5, 5/0	E, P	Third two letters
3	4/15, 2/0	O,	Last letter and space

Additional displayable characters for:																				
Displayable characters from the code table of ISO Norm 646:								EBU common-core (7 languages)				Complete Latin-based repertoire (25 languages)								
					b7	0	0	0	0	0	0	1	1	1	1	1	1	1		
					b6	0	0	1	1	1	1	0	0	0	0	1	1	1	1	
					b5	1	1	0	0	1	1	0	0	1	1	0	0	1	1	
					b4	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
b3	b2	b1	b0		2	3	4	5	6	7	8	9	10	11	12	13	14	15		
0	0	0	0	0	0	0	@	P	|	|	p	á	â	ã	ä	Á	Â	Ã	ä	
0	0	0	1	1	1	1	A	Q	a	q	ä	å	α	¹	À	Å	Ä	Å	å	
0	0	1	0	0	2	2	B	R	b	r	é	ê	©	²	É	Ê	Æ	æ		
0	0	1	1	0	3	3	C	S	c	s	è	ë	%	³	È	Ë	Œ	œ		
0	1	0	0	0	4	4	D	T	d	t	í	î	Ĝ	±	Í	Î	ŷ	ŵ		
0	1	0	1	0	5	5	E	U	e	u	ì	ï	ě	ı	Ì	Ï	Ý	ý		
0	1	1	0	0	6	6	F	V	f	v	ó	ô	ñ	ñ	Ó	Ô	Õ	õ		
0	1	1	1	0	7	7	G	W	g	w	ò	ö	ó	ü	Ò	Ö	Ø	ø		
1	0	0	0	0	8	8	H	X	h	x	ú	û	π	μ	Ú	Û	Þ	þ		
1	0	0	1	0	9	9	I	Y	ı	y	ù	ü	£	¢	Ù	Ü	Ŋ	ŋ		
1	0	1	0	0	10	10	*	:	J	Z	j	z	Ñ	ñ	£	÷	Ř	ř	Ř	ř
1	0	1	1	0	11	11	+	;	K	[⁽¹⁾	k	{ ⁽¹⁾	Ç	ç	¢	°	Č	č	Č	č
1	1	0	0	0	12	12	,	<	L	\	l	|	Ş	ş	←	¼	Š	š	Š	š
1	1	0	1	0	13	13	-	=	M] ⁽¹⁾	m	{ ⁽¹⁾	ß	ß	↑	½	Ž	ž	Ž	ž
1	1	1	0	0	14	14	.	>	N	—	n	—	ı	ı	→	¾	Đ	đ	Ʀ	Ʀ
1	1	1	1	0	15	15	/	?	O	—	o	—	U	ıj	↓	§	Ł	ł	Đ	đ

Figure E.1: Code table for 218 displayable characters forming the complete EBU Latin-based repertoire. The characters shown in positions marked (!) in the table are those of the "international reference version" of ISO Publication 646 that do not appear in the complete Latin-based repertoire given in Appendix 2 of EBU document Tech. 3232 (2nd edition, 1982). Attention is drawn to the fact that low cost receivers may be able to display only the limited character set in Column 2 lines 0, 7, 12, 13, 14 and 15; Column 3 lines 0 to 9; Column 4 lines 1 to 15; Column 5 lines 0 to 10.

The code-tables of figures E.1, E.2 and E.3 have also been adopted for the "service identification system" defined in the specifications of the MAC/packet family of systems for satellite broadcasting in Europe (see [13] in annex Q).

				Latin (ISO Publication 646)						EBU common-core		Part of the EBU complete Latin-based repertoire				Cyrillic etc.		Greek	
				b7	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
				b6	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1
				b5	1	1	0	0	1	1	0	0	1	1	0	0	1	1	1
				b4	0	1	0	1	0	1	0	1	0	1	0	1	0	1	1
b3	b2	b1	b0		2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0	0	0	0	0		0	@	P	||	p	ā	â	ä	°	€	ý	Π	π	
0	0	0	1	1	!	1	A	Q	a	q	ā	ä	l'		Я	Љ	α	Ω	
0	0	1	0	2	"	2	B	R	b	r	é	ê	©		Б	д'	β	ρ	
0	0	1	1	3	#	3	C	S	c	s	è	ë	%		Ч	Ш	ψ	σ	
0	1	0	0	4	⊗	4	D	T	d	t	í	î	ã	±	Д	Ц	δ	τ	
0	1	0	1	5	%	5	E	U	e	u	ì	ï	ě	ı	Э	Ю	ε	ξ	
0	1	1	0	6	&	6	F	V	f	v	ó	ô	ñ	ñ	Ф	Щ	φ	Θ	
0	1	1	1	7	'	7	G	W	g	w	ò	ö	õ	ü	Г	Ъ	γ	Γ	
1	0	0	0	8	(	8	H	X	h	x	ú	û	é	ı	Ь	Ц	γ _i	Ξ	
1	0	0	1	9	)	9	I	Y	i	y	ù	ü	Ě	č	И	Й	ι	υ	
1	0	1	0	10	*	:	J	Z	j	z	ñ	ñ	£	÷	Ж	З	Σ	ζ	
1	0	1	1	11	+	;	K	[⁽¹⁾	k	{ ⁽¹⁾	Ç	ç	š	°	К	č	κ	ς	
1	1	0	0	12	,	<	L	\	l		Ş	ş	←	¼	Л	š	λ	Λ	
1	1	0	1	13	-	=	M] ⁽¹⁾	m	{ ⁽¹⁾	ß	ğ	↑	½	ћ	ž	μ	Ψ	
1	1	1	0	14	.	>	N		n		ı	ı	→	¾	ђ	đ	ν	Δ	
1	1	1	1	15	/	?	O		o		П	ij	↓	§	Ы	ć	ω		

Figure E.2: Code table for a combined repertoire consisting of the EBU Common-core, Greek and upper-case Cyrillic alphabets (together with certain characters from the EBU complete Latin based repertoire, and the lower-case characters required for texts in Serbo-Croat, Slovenian, Slovakian, Hungarian and Romanian). The characters shown in positions marked ⁽¹⁾ in the table are those of the "international reference version" of ISO Publication 646 that do not appear in the "complete Latin-based repertoire" given in Appendix 2 of EBU document Tech. 3232 (2nd edition, 1982) [12].

Latin (ISO Publication 646)										Arabic		Hebrew		Cyrillic etc.		Greek			
				b7	0	0	0	0	0	0	1	1	1	1	1	1	1		
				b6	0	0	1	1	1	1	0	0	0	0	1	1	1		
				b5	1	1	0	0	1	1	0	0	1	1	0	0	1		
				b4	0	1	0	1	0	1	0	1	0	1	0	1	0		
b3	b2	b1	b0			2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	0	0	0		0	@	P	||	p	ﺍ	ﺏ	כ	ל	€	ý	Π	π	
0	0	0	1	1	!	1	A	Q	a	q	ﺕ	ﺓ	א	מ	Я	Љ	α	Ω	
0	0	1	0	2	"	2	B	R	b	r	ﺕ	ﺔ	ב	נ	Б	д'	б	ρ	
0	0	1	1	3	#	3	C	S	c	s	ﺕ	ﺖ	ג	ס	Ч	Ш	ψ	σ	
0	1	0	0	4	⌘	4	D	T	d	t	ﺝ	ﻕ	ד	ק	Д	Ц	δ	τ	
0	1	0	1	5	%	5	E	U	e	u	ﺡ	ﻙ	ה	ק	Э	Ю	ε	ξ	
0	1	1	0	6	&	6	F	V	f	v	ﺥ	ﻝ	ז	ל	Ф	Щ	φ	Θ	
0	1	1	1	7	'	7	G	W	g	w	ﻉ	ﻩ	ח	פ	í	Ь	γ	Γ	
1	0	0	0	8	(	8	H	X	h	x	ﺉ	ﺏ	ט	ר	Ъ	Ц	η	Ξ
1	0	0	1	9	)	9	I	Y	i	y	)	ﻩ	'	ש	И	Й	ι	υ
1	0	1	0	10	*	:	J	Z	j	z	)	9	א	ת	Ж	З	Σ	ζ
1	0	1	1	11	+	;	K	[⁽¹⁾	k	{ ⁽¹⁾	ﺱ	ﻲ	ך	°	К	č	х	ς	
1	1	0	0	12	,	<	L	\	l		ﺵ	←	ל	¼	Л	š	λ	Λ	
1	1	0	1	13	-	=	M] ⁽¹⁾	m	{ ⁽¹⁾	ﺙ	↑	מ	½	М	ž	μ	Ψ	
1	1	1	0	14	.	>	N		n	ς	ﺙ	→	מ	¾	Н	đ	ν	Δ	
1	1	1	1	15	/	?	O		o	\	ﺕ	↓	נ	§	Ы	é	ω		

Figure E.3: Code table for a combined repertoire consisting of the ISO Publication 646 Latin-based alphabet, Greek, upper-case Cyrillic and Hebrew and Arabic. The characters shown in positions marked (1) in the table are those of the "international reference version" of ISO Publication 646 that do not appear in the "complete Latin-based repertoire" given in Appendix 2 of EBU document Tech. 3232 (2nd edition, 1982) [12].