

# How to use the built-in font tables

In this tutorial, we will show you how to use the Y Series module's built-in font tables.

**Part 1 – Select from international variants of ASCII ►**

**Part 2 – Set the extended ASCII font table ►**

**Part 3 – Wide range of international fonts ►**

# How to select the international variants of ASCII

In this tutorial, we will show you how to select from international variants of ASCII (20h - 7Fh). Changes will not affect extended ASCII (80h - FFh).

## Step 1 – Set the international variants of ASCII

In this example we will be selecting the Sweden variants of ASCII. Send the following codes to the Y Series module:

```
1 | 1Bh 52h 05h
```

### Codes breakdown

Line #1	<u>1Bh 52h</u>	<u>05h</u>
	1	2

1. Sets international variants of ASCII.
2. 02h specifies Sweden variants of ASCII.  
Default value is 00h: ASCII-based font table.

Following is the international variants of ASCII built-in to the Y Series module:

00h: ASCII-based							
	2	3	4	5	6	7	
	x	x	x	x	x	x	x
	h	h	h	h	h	h	h
x0h	0	1	2	3	4	5	6
x1h	!	!	A	Q	a	q	
x2h	"	2	B	R	b	r	
x3h	#	3	C	S	c	s	
x4h	\$	4	D	T	d	t	
x5h	%	5	E	U	e	u	
x6h	&	6	F	V	f	v	
x7h	'	7	G	W	g	w	
x8h	(	8	H	X	h	x	
x9h	)	9	I	Y	i	y	
xAh	*	:	J	Z	j	z	
xBh	+	;	K	^	k	^	
xCh	,	<	L	\	l	\	!
xDh	-	=	M		m		>
xEh	.	>	N	^	n	^	~
xFh	/	?_	O	_	o	_	

01h: France							
	2	3	4	5	6	7	
	x	x	x	x	x	x	x
	h	h	h	h	h	h	h
x0h	0	1	2	3	4	5	6
x1h	!	!	A	Q	a	q	
x2h	"	2	B	R	b	r	
x3h	#	3	C	S	c	s	
x4h	\$	4	D	T	d	t	
x5h	%	5	E	U	e	u	
x6h	&	6	F	V	f	v	
x7h	'	7	G	W	g	w	
x8h	(	8	H	X	h	x	
x9h	)	9	I	Y	i	y	
xAh	*	:	J	Z	j	z	
xBh	+	;	K	^	k	^	
xCh	,	<	L	ç	l	ç	!
xDh	-	=	M	è	m	è	>
xEh	.	>	N	^	n	^	~
xFh	/	?_	O	_	o	_	

02h: Germany							
	2	3	4	5	6	7	
	x	x	x	x	x	x	x
	h	h	h	h	h	h	h
x0h	0	1	2	3	4	5	6
x1h	!	!	A	Q	a	q	
x2h	"	2	B	R	b	r	
x3h	#	3	C	S	c	s	
x4h	\$	4	D	T	d	t	
x5h	%	5	E	U	e	u	
x6h	&	6	F	V	f	v	
x7h	'	7	G	W	g	w	
x8h	(	8	H	X	h	x	
x9h	)	9	I	Y	i	y	
xAh	*	:	J	Z	j	z	
xBh	+	;	K	^	k	^	
xCh	,	<	L	ö	l	ö	!
xDh	-	=	M	ü	m	ü	>
xEh	.	>	N	^	n	^	~
xFh	/	?_	O	_	o	_	

03h: England

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	I	Y	i	y	
xAh	*	:	J	Z	j	z
xBh	+	:	K	k		
xCh	,	<	L	l		
xDh	-	=	M	m		
xEh	.	>	N	n		
xFh	/	?@				

04h: Denmark 1

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	I	Y	i	y	
xAh	*	:	J	Z	j	z
xBh	+	:	K	k		
xCh	,	<	L	l		
xDh	-	=	M	m		
xEh	.	>	N	n		
xFh	/	?@				

05h: Sweden

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	I	Y	i	y	
xAh	*	:	J	Z	j	z
xBh	+	:	K	k		
xCh	,	<	L	l		
xDh	-	=	M	m		
xEh	.	>	N	n		
xFh	/	?@				

06h: Italy

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	I	Y	i	y	
xAh	*	:	J	Z	j	z
xBh	+	:	K	k		
xCh	,	<	L	l		
xDh	-	=	M	m		
xEh	.	>	N	n		
xFh	/	?@				

07h: Spain 1

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	I	Y	i	y	
xAh	*	:	J	Z	j	z
xBh	+	:	K	k		
xCh	,	<	L	l		
xDh	-	=	M	m		
xEh	.	>	N	n		
xFh	/	?@				

08h: Japan

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	I	Y	i	y	
xAh	*	:	J	Z	j	z
xBh	+	:	K	k		
xCh	,	<	L	l		
xDh	-	=	M	m		
xEh	.	>	N	n		
xFh	/	?@				

09h: Norway

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	9	I	Y	i	y
xAh	*	:	J	Z	j	z
xBh	+	:	K	k	k	k
xCh	,	<	L	l	l	l
xDh	-	=	M	m	m	m
xEh	.	>	N	n	n	n
xFh	/	?_	O	_	o	

0Ah: Denmark 2

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	9	I	Y	i	y
xAh	*	:	J	Z	j	z
xBh	+	:	K	k	k	k
xCh	,	<	L	l	l	l
xDh	-	=	M	m	m	m
xEh	.	>	N	n	n	n
xFh	/	?_	O	_	o	

0Bh: Spain 2

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	9	I	Y	i	y
xAh	*	:	J	Z	j	z
xBh	+	:	K	k	k	k
xCh	,	<	L	l	l	l
xDh	-	=	M	m	m	m
xEh	.	>	N	n	n	n
xFh	/	?_	O	_	o	

0Ch: Latin America

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	9	I	Y	i	y
xAh	*	:	J	Z	j	z
xBh	+	:	K	k	k	k
xCh	,	<	L	l	l	l
xDh	-	=	M	m	m	m
xEh	.	>	N	n	n	n
xFh	/	?_	O	_	o	

0Dh: Korea

	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h
x0h	0	1	2	3	4	5
x1h	!	A	B	C	D	E
x2h	"	F	G	H	I	J
x3h	#	L	M	N	O	P
x4h	\$	R	S	T	U	V
x5h	%	X	Y	Z	[	]
x6h	&	^	_	`	{	}
x7h	'	~				
x8h	<	H	X	h	x	
x9h	>	9	I	Y	i	y
xAh	*	:	J	Z	j	z
xBh	+	:	K	k	k	k
xCh	,	<	L	l	l	l
xDh	-	=	M	m	m	m
xEh	.	>	N	n	n	n
xFh	/	?_	O	_	o	

Note: Gray highlight represents the characters replaced from the default font table.

# How to set the extended ASCII font table

In this tutorial, we will show you how to set the extended ASCII font table (80h - FFh) for the Y Series modules.

## Step 1 - Set the extended ASCII font table

In this example we will be setting the extended ASCII to PC850 (multilingual). Send the following codes to the Y Series module:

```
1 | 1Bh 74h 02h
```

### Codes breakdown

Line #1	<u>1Bh 74h</u> 1	<u>02h</u> 2
---------	---------------------	-----------------

1. Sets international variants of ASCII.
2. 02h specifies Extended ASCII font table for PC850 (multilingual).  
Default value is 00h: PC437 (USA - Euro std).  
Following is the extended ASCII font tables built-in to the Y Series module:

00h: PC437 (USA – Euro std)								01h: Katakana - Japanese								02h: PC850 (multilingual)							
	8xh	9xh	Axh	Bxh	Cxh	Dxh	Fxh		8xh	9xh	Axh	Bxh	Cxh	Dxh	Fxh		8xh	9xh	Axh	Bxh	Cxh	Dxh	Fxh
x0h	€	£	¤	¥	¦	§	¨	ー	ゝ	ゞ	ゑ	を	口	田	€	£	¤	¥	¦	§	¨		
x1h	À	Á	Â	Ã	Ä	Å	Æ	ゝ	ゞ	ゑ	を	口	田	厶	À	Á	Â	Ã	Ä	Å	Æ		
x2h	È	É	Ê	Ë	Ì	Í	Î	ゝ	ゞ	ゑ	を	口	田	厶	È	É	Ê	Ë	Ì	Í	Î		
x3h	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	ゝ	ゞ	ゑ	を	口	田	厶	Ð	Ñ	Ò	Ó	Ô	Õ	Ö		
x4h	à	á	â	ã	ä	å	æ	ゝ	ゞ	ゑ	を	口	田	厶	à	á	â	ã	ä	å	æ		
x5h	è	é	ê	ë	ì	í	î	ゝ	ゞ	ゑ	を	口	田	厶	è	é	ê	ë	ì	í	î		
x6h	ð	ñ	ò	ó	ô	õ	ö	ゝ	ゞ	ゑ	を	口	田	厶	ð	ñ	ò	ó	ô	õ	ö		
x7h	ç	ø	é	à	í	í	æ	ゝ	ゞ	ゑ	を	口	田	厶	ç	ø	é	à	í	í	æ		
x8h	ê	ú	ç	í	í	æ	°	ゝ	ゞ	ゑ	を	口	田	厶	ê	ú	ç	í	í	æ	°		
x9h	ë	ö	í	í	í	í	°	ゝ	ゞ	ゑ	を	口	田	厶	ë	ö	í	í	í	í	°		
xAh	è	ó	í	í	í	í	°	ゝ	ゞ	ゑ	を	口	田	厶	è	ó	í	í	í	í	°		
xBh	ì	ë	í	í	í	í	°	ゝ	ゞ	ゑ	を	口	田	厶	ì	ë	í	í	í	í	°		
xCh	ì	ë	í	í	í	í	°	ゝ	ゞ	ゑ	を	口	田	厶	ì	ë	í	í	í	í	°		
xDh	ì	ë	í	í	í	í	°	ゝ	ゞ	ゑ	を	口	田	厶	ì	ë	í	í	í	í	°		
xEh	À	×	×	×	×	×	×	ゝ	ゞ	ゑ	を	口	田	厶	À	×	×	×	×	×	×		
xFh	À	×	×	×	×	×	×	ゝ	ゞ	ゑ	を	口	田	厶	À	×	×	×	×	×	×		

03h: PC860  
(Portuguese)

	8xh	9xh	Axh	Bxh	Cxh	Dxh	Exh	Fxh
x0h	Q	E	E	Q	L	A	O	≡
x1h	Q	A	I	Q	T	T	B	±
x2h	E	E	O	Q	T	T	T	?
x3h	E	O	Q	T	T	T	T	<
x4h	E	O	T	T	T	T	T	
x5h	E	O	T	T	T	T	T	
x6h	A	O	E	T	T	T	T	
x7h	E	O	T	T	T	T	T	
x8h	E	O	T	T	T	T	T	
x9h	E	O	T	T	T	T	T	
xAh	E	O	T	T	T	T	T	
xBh	I	E	T	T	T	T	T	
xCh	O	E	T	T	T	T	T	
xDh	I	O	T	T	T	T	T	
xEh	R	R	T	T	T	T	T	
xFh	A	O	T	T	T	T	T	

04h: PC863  
(Canadian-French)

	8xh	9xh	Axh	Bxh	Cxh	Dxh	Exh	Fxh
x0h	Q	E	E	Q	L	A	O	≡
x1h	Q	E	'	Q	T	T	B	±
x2h	E	E	O	Q	T	T	T	?
x3h	E	O	Q	T	T	T	T	<
x4h	A	E	T	T	T	T	T	
x5h	E	I	L	T	T	T	T	
x6h	A	O	E	T	T	T	T	
x7h	E	O	T	T	T	T	T	
x8h	E	O	T	T	T	T	T	
x9h	E	O	T	T	T	T	T	
xAh	E	O	T	T	T	T	T	
xBh	I	E	T	T	T	T	T	
xCh	I	E	T	T	T	T	T	
xDh	E	O	T	T	T	T	T	
xEh	A	O	T	T	T	T	T	
xFh	E	O	T	T	T	T	T	

05h: PC865 (Nordic)

	8xh	9xh	Axh	Bxh	Cxh	Dxh	Exh	Fxh
x0h	Q	E	E	Q	L	A	O	≡
x1h	Q	A	I	Q	T	T	B	±
x2h	E	E	O	Q	T	T	T	?
x3h	E	O	Q	T	T	T	T	<
x4h	E	O	T	T	T	T	T	
x5h	E	O	T	T	T	T	T	
x6h	A	O	E	T	T	T	T	
x7h	E	O	T	T	T	T	T	
x8h	E	O	T	T	T	T	T	
x9h	E	O	T	T	T	T	T	
xAh	E	O	T	T	T	T	T	
xBh	I	E	T	T	T	T	T	
xCh	O	E	T	T	T	T	T	
xDh	I	O	T	T	T	T	T	
xEh	R	R	T	T	T	T	T	
xFh	A	O	T	T	T	T	T	

10h: WPC1252

	8xh	9xh	Axh	Bxh	Cxh	Dxh	Exh	Fxh
x0h	E			A	B	A	B	
x1h		I	T	A	B	A	B	
x2h	,	'	E	A	B	A	B	
x3h	4	"	E	A	B	A	B	
x4h	7	"	E	A	B	A	B	
x5h	.	+	E	A	B	A	B	
x6h	†	-	E	A	B	A	B	
x7h	#	-	E	A	B	A	B	
x8h	>	~	E	A	B	A	B	
x9h	2	"	E	A	B	A	B	
xAh	E	E	E	E	E	E	E	
xBh	<	>	E	E	E	E	E	
xCh	E	E	E	E	E	E	E	
xDh			E	E	E	E	E	
xEh	E	E	E	E	E	E	E	
xFh		Y	T	A	B	A	B	

11h: PC866  
(Cyrillic #2)

	8xh	9xh	Axh	Bxh	Cxh	Dxh	Exh	Fxh
x0h	A	P	A	B	T	T	T	E
x1h	B	C	B	T	T	T	T	E
x2h	B	T	B	T	T	T	T	E
x3h	T	Y	T	T	T	T	T	E
x4h	A	B	A	T	T	T	T	E
x5h	E	X	E	T	T	T	T	E
x6h	X	L	X	T	T	T	T	E
x7h	Q	H	Q	T	T	T	T	E
x8h	H	W	H	T	T	T	T	E
x9h	X	W	X	T	T	T	T	E
xAh	K	b	K	T	T	T	T	E
xBh	L	M	L	T	T	T	T	E
xCh	M	b	M	T	T	T	T	E
xDh	H	O	H	T	T	T	T	E
xEh	O	M	O	T	T	T	T	E
xFh	O	R	O	T	T	T	T	E

12h: PC852 (Latin 2)

	8xh	9xh	Axh	Bxh	Cxh	Dxh	Exh	Fxh
x0h	Q	E	E	Q	L	A	O	-
x1h	Q	A	I	Q	T	T	B	±
x2h	E	E	O	Q	T	T	T	?
x3h	E	O	Q	T	T	T	T	<
x4h	E	O	T	T	T	T	T	
x5h	C	L	T	T	T	T	T	
x6h	C	K	Z	A	X	T	T	
x7h	E	E	E	E	E	E	E	
x8h	E	E	E	E	E	E	E	
x9h	E	O	T	T	T	T	T	
xAh	O	O	T	T	T	T	T	
xBh	O	T	T	T	T	T	T	
xCh	I	E	T	T	T	T	T	
xDh	E	E	E	E	E	E	E	
xEh	A	X	E	T	T	T	T	
xFh	O	E	T	T	T	T	T	

13h: PC858

	8 x h	9 x h	A x h	B x h	C x h	D x h	E x h	F x h
x0h	0	1	2	3	4	5	6	7
x1h	8	9	A	B	C	D	E	F
x2h	0	1	2	3	4	5	6	7
x3h	8	9	A	B	C	D	E	F
x4h	0	1	2	3	4	5	6	7
x5h	8	9	A	B	C	D	E	F
x6h	0	1	2	3	4	5	6	7
x7h	8	9	A	B	C	D	E	F
x8h	0	1	2	3	4	5	6	7
x9h	8	9	A	B	C	D	E	F
xAh	0	1	2	3	4	5	6	7
xBh	8	9	A	B	C	D	E	F
xCh	0	1	2	3	4	5	6	7
xDh	8	9	A	B	C	D	E	F
xEh	0	1	2	3	4	5	6	7
xFh	8	9	A	B	C	D	E	F

# How to support wide range of international fonts

In this tutorial, we will show you how to support wide range of international characters for the Y Series modules.

## Step 1 - Select from the built-in font tables

In this example we will be selecting the Norway's variant of ASCII and set the extended ASCII to PC866 (Cyrillic #2). Send the following codes to the Y Series modules

1	1Bh 52h 09h
2	1Bh 74h 11h

### Codes breakdown

Line #1	<table border="1"><tr><td><u>1Bh 52h</u></td><td><u>09h</u></td></tr><tr><td>1</td><td>2</td></tr></table>	<u>1Bh 52h</u>	<u>09h</u>	1	2
<u>1Bh 52h</u>	<u>09h</u>				
1	2				
Line #2	<table border="1"><tr><td><u>1Bh 74h</u></td><td><u>11h</u></td></tr><tr><td>3</td><td>4</td></tr></table>	<u>1Bh 74h</u>	<u>11h</u>	3	4
<u>1Bh 74h</u>	<u>11h</u>				
3	4				

1. Sets international variants of ASCII
2. Norway's variant of ASCII.  
Default value is 00h: ASCII-based font table.
3. Sets the extended ASCII font table.
4. Extended ASCII font table character code for PC866 (Cyrillic #2).  
Default value is 00h: PC437 (USA - Euro std).



Following is the Norway's variant of ASCII font table and PC866 (Cyrillic #2) extended ASCII font table:

1Bh 52h 09h (Norway)							1Bh 74h 11h (PC866 Cyrillic #2)							
	2 x h	3 x h	4 x h	5 x h	6 x h	7 x h	8 x h	9 x h	A x h	B x h	C x h	D x h	E x h	F x h
x0h	0	1	2	3	4	5	А	В	С	Д	Е	Ф	Г	И
x1h	!	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з
x2h	"	!"	#"	%"	%"	%"	А	В	С	Д	Е	Ф	Г	И
x3h	#	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з
x4h	\$	!"	#"	%"	%"	%"	А	В	С	Д	Е	Ф	Г	И
x5h	%	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з
x6h	&	!"	#"	%"	%"	%"	А	В	С	Д	Е	Ф	Г	И
x7h	'	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з
x8h	(	!"	#"	%"	%"	%"	А	В	С	Д	Е	Ф	Г	И
x9h	)	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з
xAh	*	!"	#"	%"	%"	%"	А	В	С	Д	Е	Ф	Г	И
xBh	+	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з
xCh	,	!"	#"	%"	%"	%"	А	В	С	Д	Е	Ф	Г	И
xDh	-	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з
xEh	.	!"	#"	%"	%"	%"	А	В	С	Д	Е	Ф	Г	И
xFh	/	!"	#"	%"	%"	%"	а	б	в	г	д	е	ж	з

This tutorial is based on "International Font set" and "Character Table type" in the specification.

**Download the Y Series spec ►**