UCC/EAN-128

UCC / EAN-128 is a convention for printing data fields with standard Code 128 bar code symbols. UCC / EAN-128 symbols are distinguished by a leading FNC 1 character as the first or second character in the symbol. Other FNC 1 characters are used to delineate fields.

When EAN-128 symbols are read, they will be transmitted after special formatting strips off the leading FNC 1 character, and replaces other FNC 1 characters with the ASCII 29 GS control character.

When AIM symbology identifiers are transmitted, the modifier character indicates the position of the leading FNC 1 character according to AIM guidelines.

Standard Code 128 bar codes which do not have a leading FNC 1 may still be used, but will not be encoded according to the EAN-128 convention. Standard Code 128 and UCC / EAN-128 may be mixed in an application. The LS 5300 autodiscriminates between these symbols, and can enable or disable one or both code types via bar code menus. The following table indicates the behavior of the LS 5300 in each of the four possible parameter settings.

UCC/EAN-128 (Continued)

Table A-1. Code 128 - UCC/EAN 128)

Standard Code 128	UCC/EAN-128	Effect and Example
Disable	Disable	No Code 128 symbols can be read.
Disable	Enable	Read only symbols with leading FNC 1. Examples: ^{FNC1}ABCD^{FNC1}E will be read as ABCD^{29}E A^{FNC1}BCD^{FNC1}E will be read as ABCD^{29}E ^{FNC1FNC1}ABCD^{FNC1}E will be read as ABCD^{29}E ABCD^{FNC1}E can not be read ABCDE can not be read
Enable	Disable	Read only symbols without leading FNC 1. Examples: ^{FNC1}ABCD^{FNC1}E can not be read A^{FNC1}BCD^{FNC1}E can not be read ^{FNC1FNC1}ABCD^{FNC1}E can not be read ABCD^{FNC1}E will be read as ABCD^{29}E ABCDE will be read as ABCDE

Standard Code 128	UCC/EAN-128	Effect and Example
Enable	Enable	Read both types of symbols. Examples: ^{FNC1}ABCD^{FNC1}E will be read as ABCD^{29}E A^{FNC1}BCD^{FNC1}E will be read as ABCD^{29}E ^{FNC1FNC1}ABCD^{FNC1}E will be read as ABCD^{29}E ABCD^{FNC1}E will be read as ABCD^{29}E ABCDE will be read as ABCDE

AIM Code Identifiers

Each AIM Code Identifier contains the three-character string **]cm** where:

] = Flag Character (ASCII 93)
c = Code Character (see Table 1)
m = Modifier Character (see Table 2)

Table A-2. Code Characters

Code Character	Code Type
A	Code 39
C	Code 128
E	UPC/EAN
I	Interleaved 2 of 5
F	Codabar

AIM Code Identifiers (Continued)

The modifier character is the sum of the applicable option values based on the following table.

Table A-3. Modifier Characters

Code Type	Option Value	Option
Code 39	0	No Check Character or Full ASCII processing
	1	Reader has checked one check character
	2	Reader has stripped check character
	4	Reader has performed Full ASCII character conversion
Example:	A Full ASCII bar code with check character W, A+I+MI+DW, can be transmitted as]A7AimId where 7 = (1+2+4).	

Code Type	Option Value	Option
Code 128	0	Standard data packet. No Function code 1 in first symbol position.
	1	Function code 1 in first symbol character position.
	2	Function code 1 in second symbol character position.
Example:	A Code (EAN) 128 bar code with Function 1 character in the first position, Fcnt1AimId will be transmitted as]C1AimId.	
UPC/ EAN	0	Standard packet in full EAN country code format, which is 13 digits for UPC-A and UPC-E (not including supplemental data).
	1	Two digit supplement data only.
	2	Five digit supplement data only.
	4	EAN-8 data packet.
Example:	A UPC-A bar code 012345678905 will be transmitted as]E00012345678905.	

Code Type	Option Value	Option
I 2 of 5	0	No check digit processing.
	1	Reader has checked check digit.
	2	Reader has stripped check digit before transmission.
Example:	An I 2 of 5 bar code without check digit, 4123, will be transmitted as]I04123.	

According to AIM standards, a UPC with supplemental bar code is transmitted in one of the following formats:

]E0 (UPC chars) (terminator) **]E2** (supplemental) (terminator) or

]E2 (supplemental) (terminator) **]E0** (UPC chars) (terminator)

In the LS 5300, however, the format is changed to:

]E0 (UPC chars) **]E2** (supplemental)

Therefore, a UPC with two supplemental characters, 01234567890510, will be transmitted to the host as a 21-character string, **]E0**0012345678905**]E1**10.

The following values can be assigned as prefixes or suffixes for data transmission. Not all options are available on every keyboard. Refer to your own keyboard for pertinent keystrokes.

ASCII Value	Full ASCII Code 39 Encode Char.	Keystroke
1000	%U	CTRL 2
1001	$A	CTRL A
1002	$B	CTRL B
1003	$C	CTRL C
1004	$D	CTRL D
1005	$E	CTRL E
1006	$F	CTRL F
1007	$G	CTRL G
1008	$H	CTRL H
1009	$I	CTRL I
1010	$J	CTRL J
1011	$K	CTRL K
1012	$L	CTRL L
1013	$M	CTRL M
1014	$N	CTRL N
1015	$O	CTRL O
1016	$P	CTRL P
1017	$Q	CTRL Q
1018	$R	CTRL R
1019	$S	CTRL S
1020	$T	CTRL T
1021	$U	CTRL U
1022	$V	CTRL V
1023	$W	CTRL W

ASCII Value	Full ASCII Code 39 Encode Char.	Keystroke
1024	$X	CTRL X
1025	$Y	CTRL Y
1026	$Z	CTRL Z
1027	%A	CTRL [
1028	%B	CTRL \
1029	%C	CTRL]
1030	%D	CTRL 6
1031	%E	CTRL -
1032	Space	Space
1033	/A	!
1034	/B	"
1035	/C	#
1036	/D	$
1037	/E	%
1038	/F	&
1039	/G	‘
1040	/H	(
1041	/I	)
1042	/J	*
1043	/K	+
1044	/L	,
1045	-	-
1046	.	.
1047	/	/
1048	0	0
1049	1	1

ASCII Value	Full ASCII Code 39 Encode Char.	Keystroke
1050	2	2
1051	3	3
1052	4	4
1053	5	5
1054	6	6
1057	7	7
1056	8	8
1057	9	9
1058	/Z	:
1059	%F	;
1060	%G	<
1061	%H	=
1062	%I	>
1063	%J	?
1064	%V	@
1065	A	A
1066	B	B
1067	C	C
1068	D	D
1069	E	E
1070	F	F
1071	G	G
1072	H	H
1073	I	I
1074	J	J
1075	K	K

ASCII Value	Full ASCII Code 39 Encode Char.	Keystroke
1076	L	L
1077	M	M
1078	N	N
1079	O	O
1080	P	P
1081	Q	Q
1082	R	R
1083	S	S
1084	T	T
1085	U	U
1086	V	V
1087	W	W
1088	X	X
1089	Y	Y
1090	Z	Z
1091	%K	[
1092	%L	\
1093	%M	]
1094	%N	^
1095	%O	_
1096	%W	`
1097	+A	a
1098	+B	b
1099	+C	c
1100	+D	d

ASCII Value	Full ASCII Code 39 Encode Char.	Keystroke
1101	+E	e
1102	+F	f
1103	+G	g
1104	+H	h
1105	+I	i
1106	+J	j
1107	+K	k
1108	+L	l
1109	+M	m
1110	+N	n
1111	+O	o
1112	+P	p
1113	+Q	q
1114	+R	r
1115	+S	s
1116	+T	t
1117	+U	u
1118	+V	v
1119	+W	w
1120	+X	x
1121	+Y	y
1122	+Z	z
1123	%P	{
1124	%Q	|
1125	%R	}
1126	%S	~
1127		Undefined

ALT Keys	Keystroke
2064	ALT 2
2065	ALT A
2066	ALT B
2067	ALT C
2068	ALT D
2069	ALT E
2070	ALT F
2071	ALT G
2072	ALT H
2073	ALT I
2074	ALT J
2075	ALT K
2076	ALT L
2077	ALT M
2078	ALT N
2079	ALT O
2080	ALT P
2081	ALT Q
2082	ALT R
2083	ALT S
2084	ALT T
2085	ALT U
2086	ALT V
2087	ALT W
2088	ALT X
2089	ALT Y
2090	ALT Z
2091	ALT [
2092	ALT \
2093	ALT]
2094	ALT 6
2095	ALT -

Misc. Key	Keystroke
3001	PA 1
3002	PA 2
3003	CMD 1
3004	CMD 2
3005	CMD 3
3006	CMD 4
3007	CMD 5
3008	CMD 6
3009	CMD 7
3010	CMD 8
3011	CMD 9
3012	CMD 10
3013	¥
3014	£
3015	¤
3016	¬
3017	°
3018	1/2
3019	¶
3020	§
3021	|
3022	0/00

PF Keys	Keystroke
4001	PF 1
4002	PF 2
4003	PF 3
4004	PF 4
4005	PF 5
4006	PF 6

PF Keys	Keystroke
4007	PF 7
4008	PF 8
4009	PF 9
4010	PF 10
4011	PF 11
4012	PF 12
4013	PF 13
4014	PF 14
4015	PF 15
4016	PF 16
4017	PF 17
4018	PF 18
4019	PF 19
4020	PF 20
4021	PF 21
4022	PF 22
4023	PF 23
4024	PF 24

F Keys	Keystroke
5001	F 1
5002	F 2
5003	F 3
5004	F 4
5005	F 5
5006	F 6
5007	F 7
5008	F 8
5009	F 9
5010	F 10
5011	F 11

F Keys	Keystroke
5012	F 12
5013	F 13
5014	F 14
5015	F 15
5016	F 16
5017	F 17
5018	F 18
5019	F 19
5020	F 20
5021	F 21
5022	F 22
5023	F 23
5024	F 24
5025	F 25
5026	F 26
5027	F 27
5028	F 28
5029	F 29
5030	F 30
5031	F 31
5032	F 32
5033	F 33
5034	F 34
5035	F 35
5036	F 36
5037	F 37
5038	F 38
5039	F 39

Numeric Keypad	Keystroke	Extended Keypad	Keystroke
6042	*	7001	Break
6043	+	7002	Delete
6044	Undefined	7003	Pg Up
6045	-	7004	End
6046	.	7005	Pg Dn
6047	/	7006	Pause
6048	0	7007	Scroll Lock
6049	1	7008	Backspace
6050	2	7009	Tab
6051	3	7010	Prnt Screen
6052	4	7011	Insert
6053	5	7012	Home
6054	6	7013	Enter
6055	7	7014	Escape
6056	8	7015	Up Arrow
6057	9	7016	Dn Arrow
6058	Enter	7017	Left Arrow
6059	Num Lock	7018	Right Arrow
6060	00	7019	Back Tab