Product Engineering Specification – Scan Utility

Overview：

1. What is Scan Utility?

Scan Utility provides a user interface that communicates with the scanner. It can set up the scanner, download the scanner's internal settings and save the scanner's default settings, making it more convenient for the user to set up the scanner.

2. System requirements:

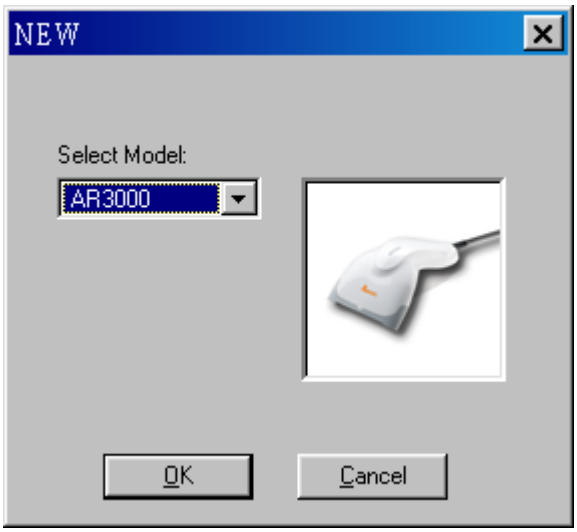
Operating system：Microsoft Windows 95/98/NT/ME/2000/XP/ Vista/ Win7
PC：at least IBM PC 80486
Memory：above 16 MB
Disk space：hard disk required 10 MB

3. Com port:

Interface: RS-232 Serial, USB virtual com
Protocol: Baud rate, Data Bits, Parity, Stop Bits
Flow Control: None, XON/XOFF and hardware

File

1. **New:** Open a new project. All of the settings are set to default depending on the scanner model.



2. **Open:** Open an existing file.

3. **Save:** Save a file.

4. **Save as:** Save a file under a different name.

5. **Print Setup:** Set options for printing.

6. **Preview:** Preview the printing file.

7. **Print:** Print the current parameter setting list.

8. **Exit:** Exit Scan Utility.

Toolbar

Icon definitions starting from left are:

1. Open a new project
2. Open
3. Save a file
4. Setup RS-232
5. Export parameters to Scanner
6. Download the scanner's internal settings
7. Download firmware.
8. Scanner parameter settings
9. Linear Barcode parameter settings
10. 2D Barcode parameter settings
11. Print the current parameter settings list
12. Scan Utility version
13. Scan Utility read me file

File type:

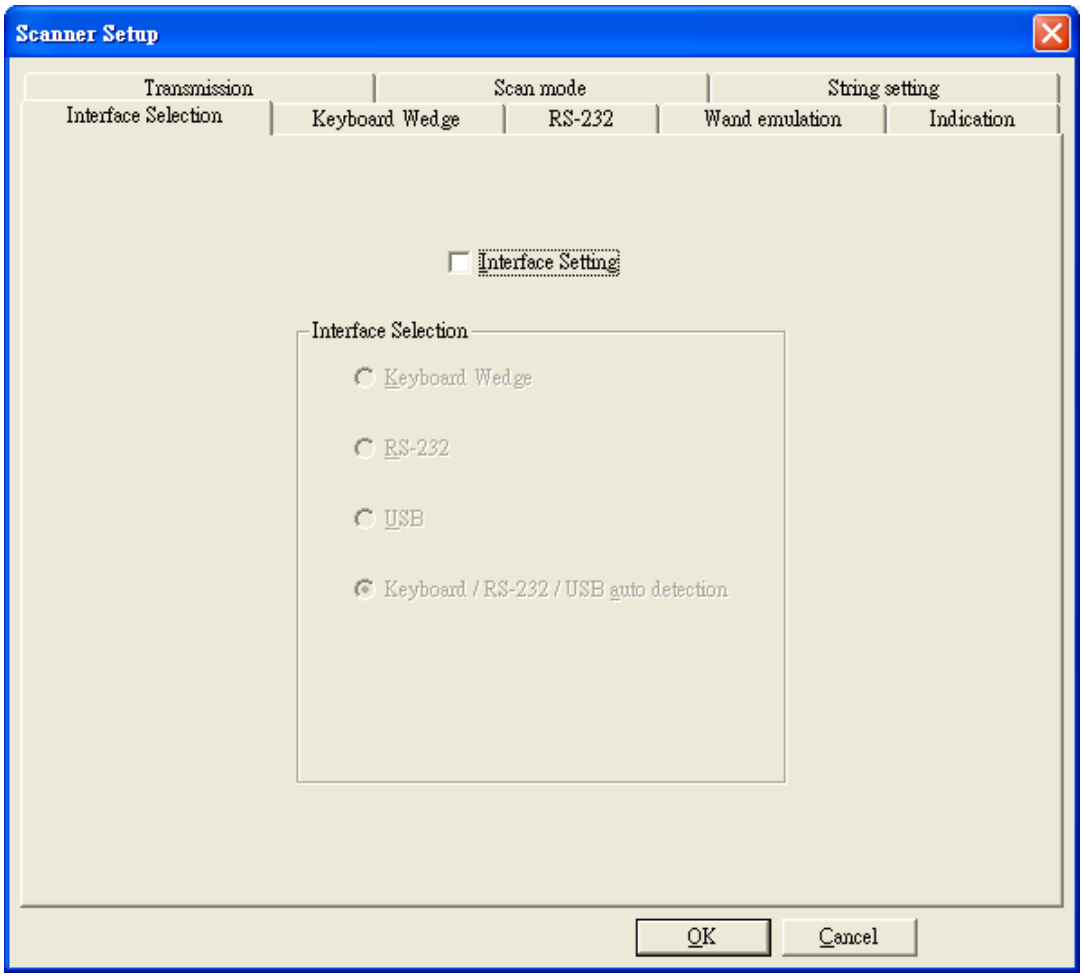
Save the Scan Utility file with the filename ***.ASC**.

Scanner Setup

1. Interface Selection Settings

Interface Selection: You can change the factory interface default for another interface. By plugging different cables and setting the right interface, the scanner will change to another interface. However, you must be sure of the cable you need.

(Keyboard Wedge)/ RS232/USB HID Auto detection: By setting this function, the Keyboard wedge or RS-232 is automatically selected as the user interface.



2. Keyboard Wedge Settings

Keyboard Layout: The keyboard layout supports many languages besides the USA keyboard layout. Confirm the language you wish to use.

Keyboard Type: Select the keyboard type connector of your host computer.

Keyboard Speed: You can select the output speed of the scanner to match the host computer. Generally, set 00 or 01 as the working high speed. If some output barcode characters have been lost, you may need to set 05 or 06 to

match your host keyboard speed.

Function Key: Set Enable and the scanner can output code by pressing a function key in your application program for the barcode data containing ASCII values between 0116 to 1F16. Refer to the ASCII table.

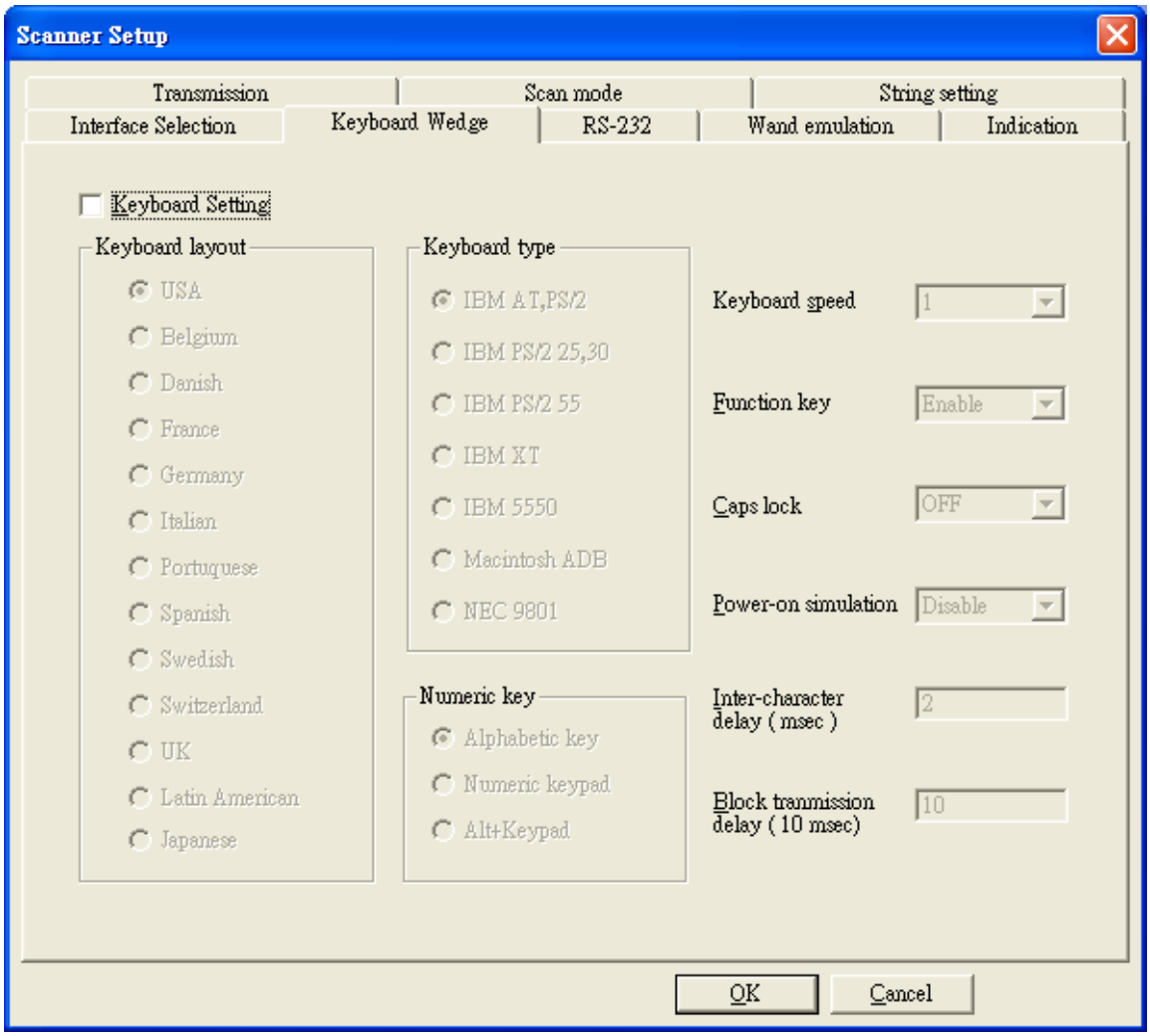
Numeric Key: Select the Keypad if your application program only accepts keypad numeric code. The scanner will output code as you press numeric keypad when it reads numeric digits. The keypad is on the right side of the keyboard, and Num Lock control key is also on. If Alt+Keypad is selected, Caps Lock and output will be independent.

Caps Lock: Provide the scanner with Caps Lock status by selecting Caps Lock or No Caps Lock,.

Power-on simulation: All PCs check the keyboard status during power-on self test. It is recommended that you Enable this function if you are working without a keyboard installed. It simulates keyboard timing and passes keyboard present status to the PC during power-on.

Inter-character delay: This delay is inserted after each data character is transmitted. If the transmission speed is too high, the system may not be able to receive all characters. Adjust it and try a suitable delay to make the system work properly.

Block transmission delay: This is a delay timer between barcode data output. The feature is used to transfer continually with shorter barcode data or multi-field scanning.



3. RS-232 Settings

Flow control:

None - Communication only uses T × D and R × D signals without regard for any hardware or software handshaking protocol.

RTS/CTS - If the scanner wants to send the barcode data to a host computer, it will issue the RTS signal first, wait for the CTS signal from the host computer, and then perform normal data communication. If there is no CTS signal reply from the host computer after the timeout (Response Delay) duration, the scanner will issue 5 warning beeps.

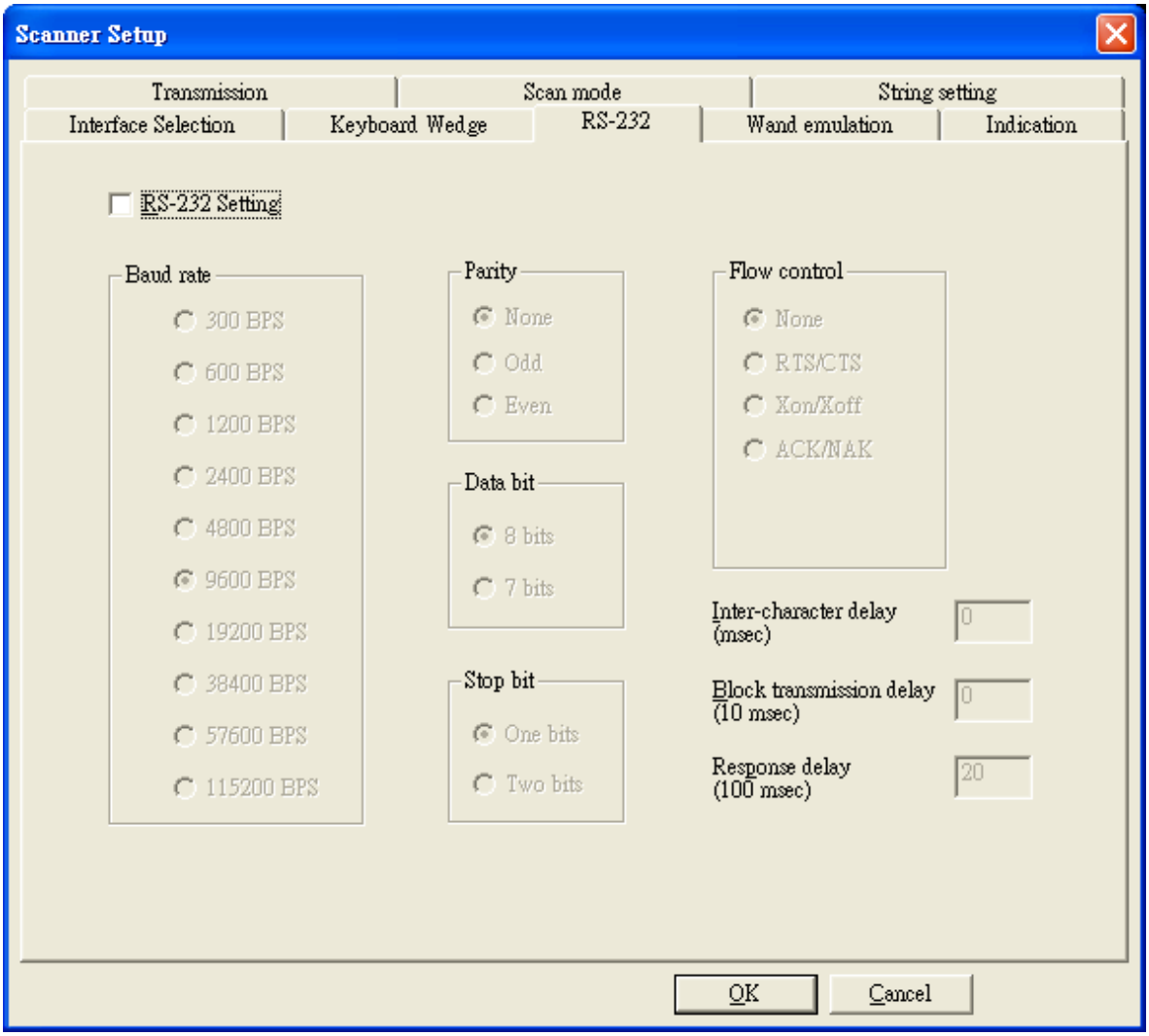
Xon/Xoff - When the host computer is unable to accept data, it sends an Xoff code to inform the scanner to suspend data transmission, and Xon to continue.

ACK/NAK- When the ACK/NAK protocol is used, the scanner waits for an ACK (acknowledge) or (not acknowledge) from the host computer after data transmission, and will resend in response to a NAK.

Inter-character delay: This is the delay time between data character's data output. It is also the same as the Inter-char. delay of the keyboard wedge.

Block transmission delay: This is the delay time between barcode data output. It is also the same as the Block transmission delay of the keyboard wedge.

Response delay: This delay is used for serial communication of the scanner to wait for handshaking acknowledgment from the host computer.



4. Wand Emulation Settings

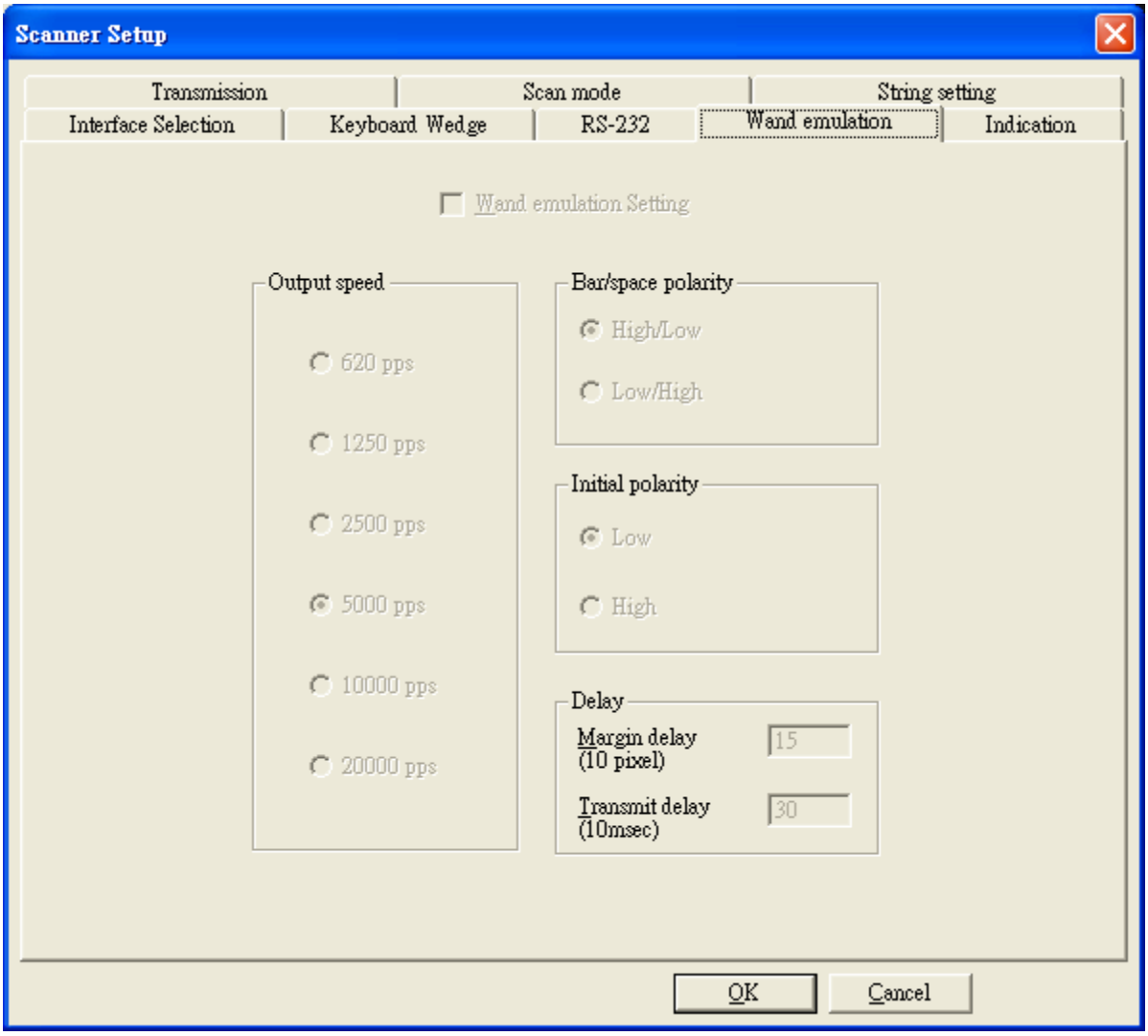
Bar/space polarity:
High/low - Black is transmitted as a high voltage level (+5) and space as low level (0V).
Low/high - Black is transmitted as a low voltage level (0V) and space as high level (+5).

Initial polarity: You must make sure of the initial polarity of your wand decode device in stand-by (idle). The initial signal state is a High voltage level (+5) or Low voltage level (0V).

Output speed: This setting is the same as serial transmission baud rate, and it must be appropriate for your wand decode resolution. The unit of speed is the width of the minimum narrow bar.

Margin delay: This is a timer of zone such as the space zone of a barcode label margin. The width of the margin time is added before and after in each barcode data automatically when it is transmitted.

Transmit delay: This is the delay time between barcode data output. It is the same as the Block transmission delay of the keyboard wedge.



5. Parameter Settings for Indication and Transmission

Power on alert: After power-on the scanner will generate an alert signal to indicate a successful self-test.

LED indicator: After each successful reading, the LED above the scanner will light up to indicate a good barcode reading.

Buzzer indicator: After each successful reading, the scanner will beep to indicate a good barcode reading, and its Beep loudness, Beep tone freq. and Beep tone duration are adjustable.

Beep loudness/Beep tone freq./Beep tone duration: You can adjust the Beep Loudness, Beep tone and Beep duration for a good reading as you prefer.

Preamble/ Postamble transmission: By setting Enable, the Preamble/Postamble is appended before the data is transmitted.

Insert data group 1-4 position: The scanner offers 4 positions to insert among the symbol. The position default value is “00” to indicate no character insertion. Make sure insertion positions are not greater than the symbols, otherwise the insertion data is not effective.

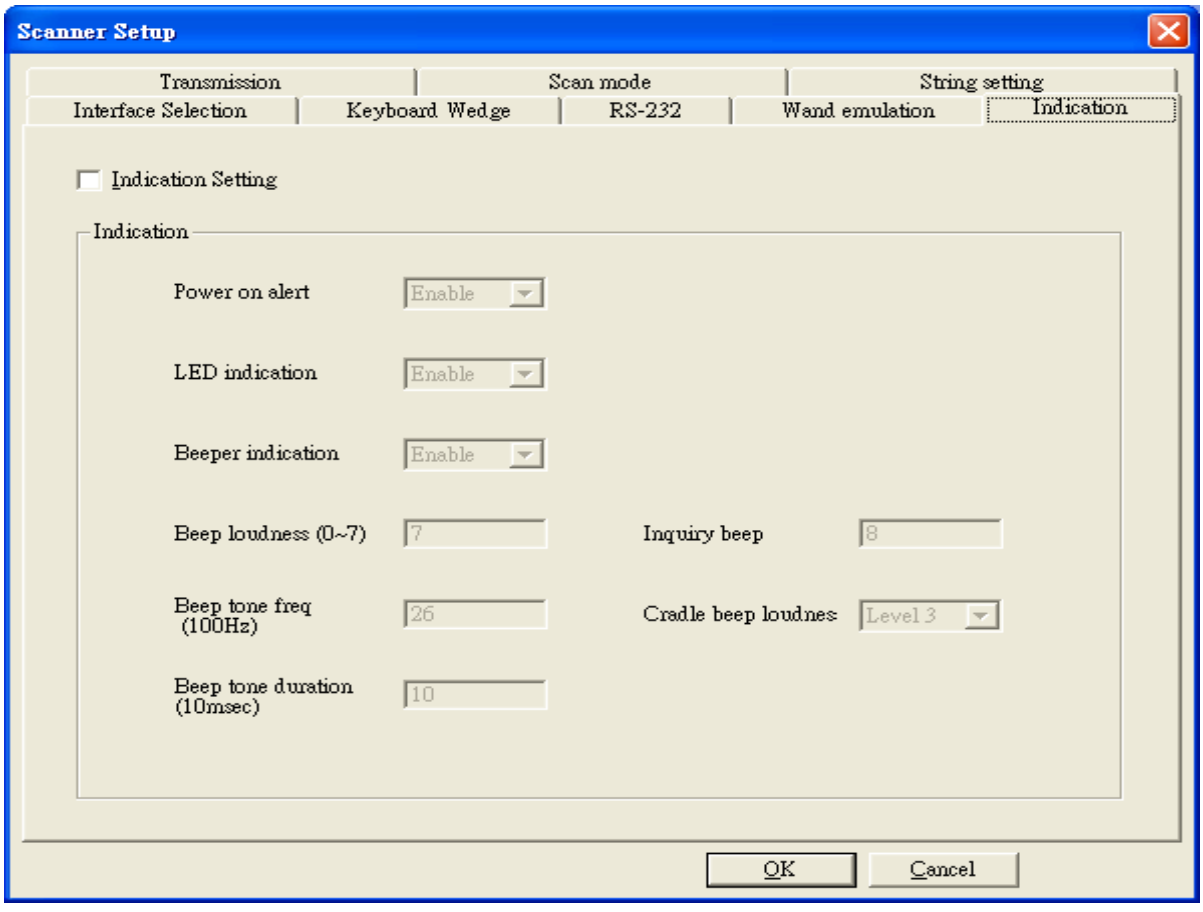
Code ID position: This sets the position of the Code ID for before or after code data for transmission.

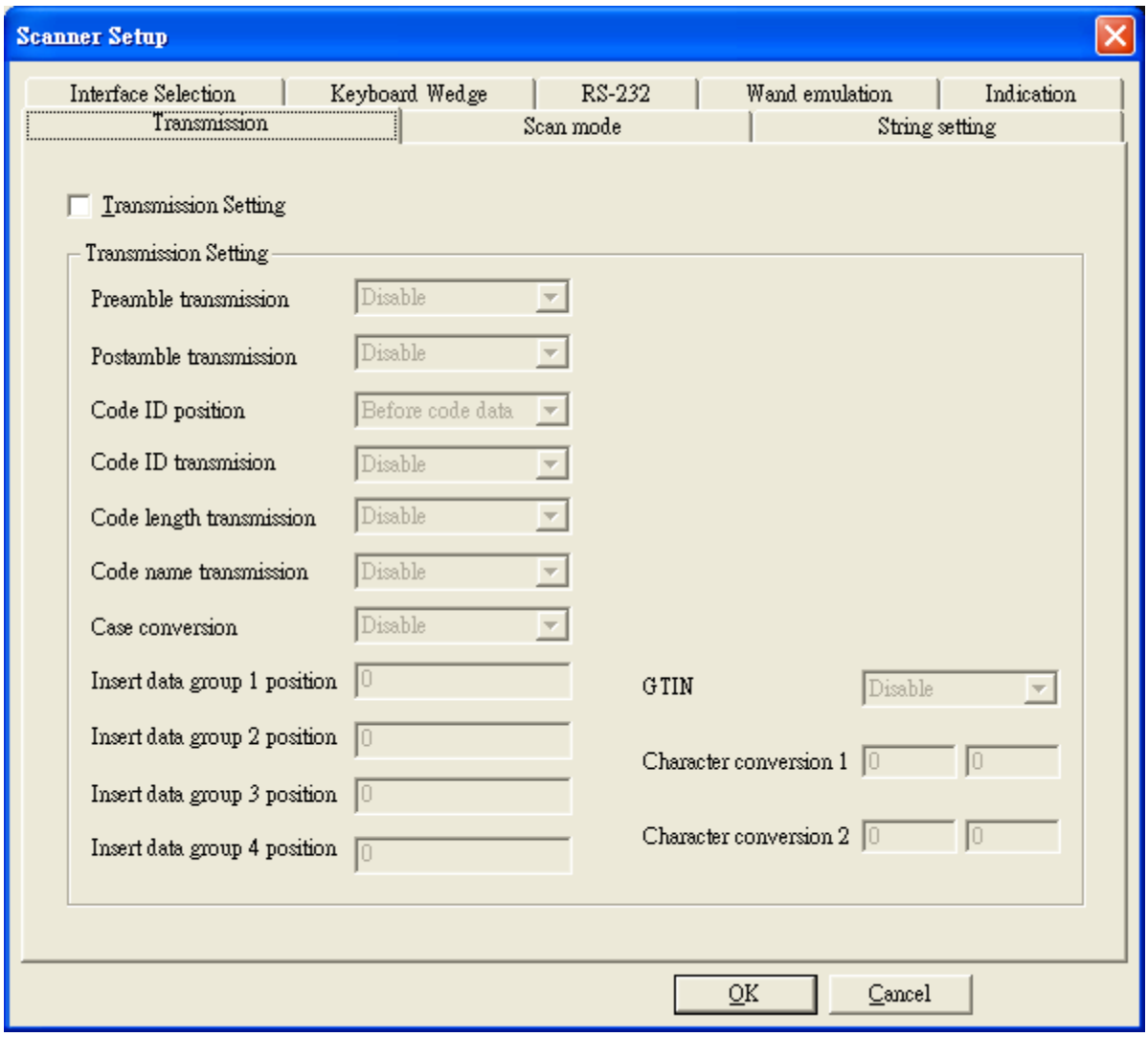
Code ID transmission: If your application needs to transmit Code ID, you must set this to Enable.

Code length transmission: A number of data digits can be transmitted before the code data when Enable is selected. The total length of the barcode is the number of barcode data except Truncate Leading/Ending Digits. The length is a number with two digits.

Code name transmission: This function shows unknown barcode symbologies that include all readable symbologies of the scanner. When Enable is selected, a Code Name is transmitted before code data to let you know the barcode symbology type.

Case conversion: Under the barcode, you can set the alphabet in either upper case or lower case.





6. Parameter Settings for Scanner

Preamble transmission: Set to Enable to append the Preamble before the transmitted data.

Postamble transmission: Set to Enable to append the Postamble before the transmitted data

Insert data group 1-4 position: The scanner offers 4 positions to insert among the symbol. The position default value is “00” to indicate no character insertion. Beside, make sure insertion positions are not greater than the symbols; otherwise the insertion data is not effective.

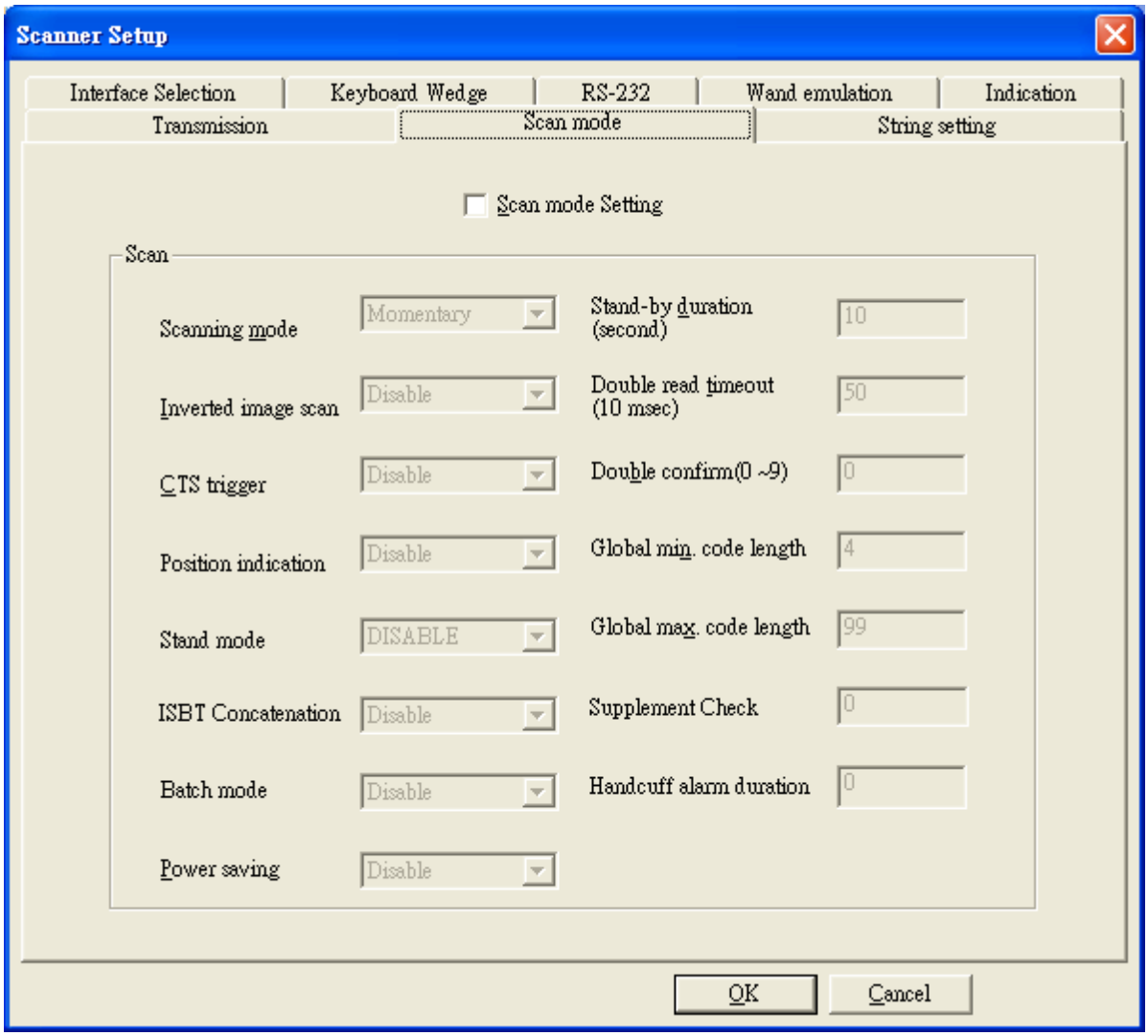
Code ID position: This sets the position of the Code ID for before or after code data for transmission.

Code ID transmission: Set to Enable if your application needs to transmit Code ID.

Code length transmission: A number of data digits can be transmitted before the code data when Enable is selected. The total length of the barcode is the number of barcode data except Truncate Leading/Ending Digits. The length is a number with two digits.

Code name transmission: This function shows unknown barcode symbologies that include all readable symbologies of the scanner. When Enable is selected, Code Name is transmitted before code data and you will know the barcode symbology type.

Case conversion: For the barcode, you can set the alphabet in either upper case or lower case.



7. String Settings

Prefix characters: Up to 22 ASCII characters may be sent before data digits.

Prefix	Data Digits	Suffix

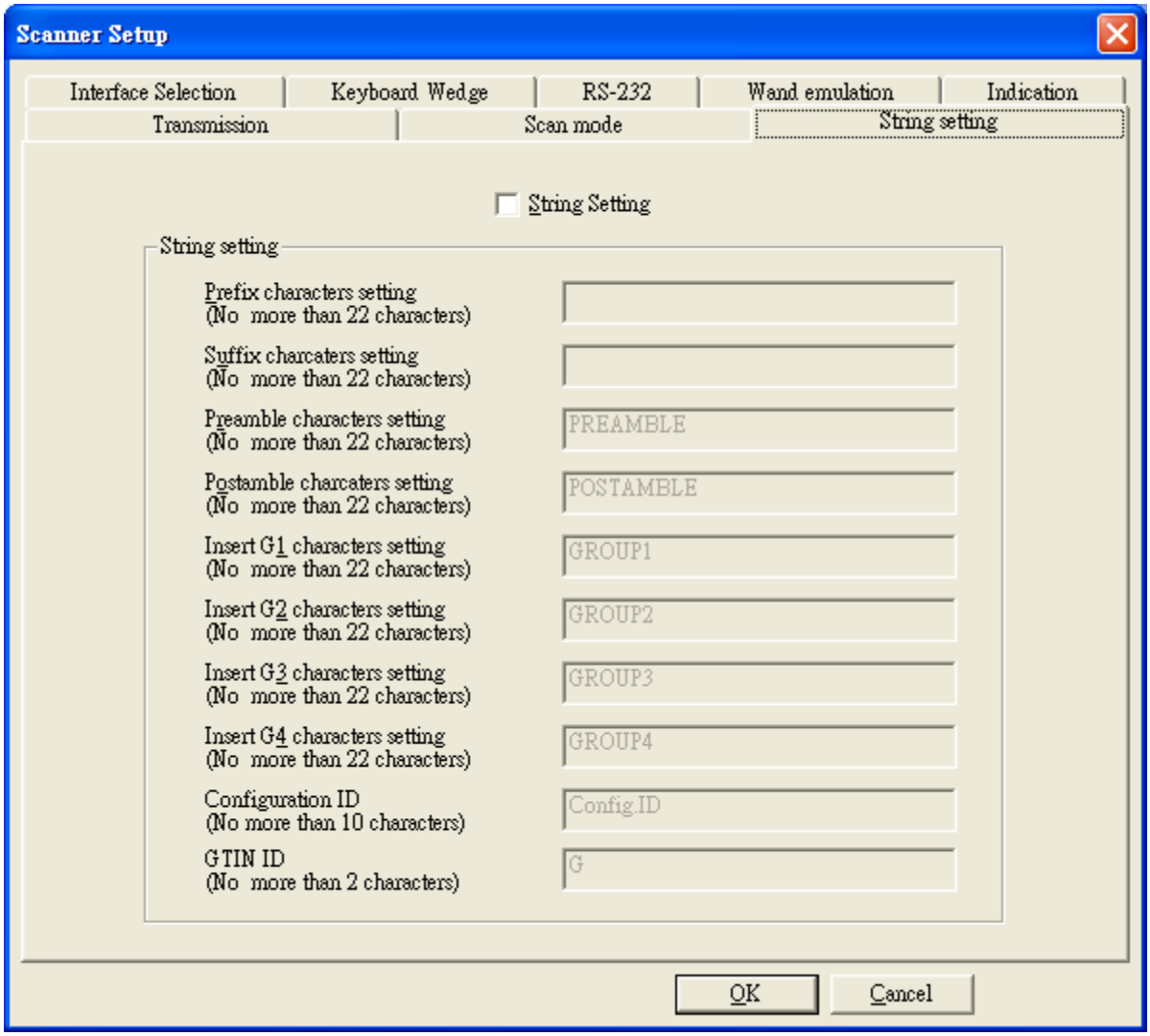
Suffix characters: Up to 22 ASCII characters may be sent after data digits.

Preamble/ Postamble characters: These characters are appended to the data automatically when each barcode is decoded.

Insert G1/G2/G3/G4 character setting: The scanner offers 4 positions and 4 characters to insert among the symbol.

Note: This function offers 22 characters. If it is over 22 characters, it deletes the excess part automatically. If you have any character that you cannot find on your keyboard, please refer to the ASCII code table.

Example: ★→ set “\x2A”. When the string setting shows “\x00”, this clears the characters that you set before.


Scanner Setup
Interface Selection
Keyboard Wedge
RS-232
Wand emulation
Indication
Transmission
Scan mode
String setting
String Setting
String setting
Prefix characters setting
(No more than 22 characters)
Suffix charcaters setting
(No more than 22 characters)
Preamble characters setting
(No more than 22 characters)
PREAMBLE
Postamble charcaters setting
(No more than 22 characters)
POSTAMBLE
Insert G1 characters setting
(No more than 22 characters)
GROUP1
Insert G2 characters setting
(No more than 22 characters)
GROUP2
Insert G3 characters setting
(No more than 22 characters)
GROUP3
Insert G4 characters setting
(No more than 22 characters)
GROUP4
Configuration ID
(No more than 10 characters)
Config.ID
GTIN ID
(No more than 2 characters)
G
OK
Cancel

8. DataMagic

DataMagic only supports the newest Argox scanner models, such as the AR-3000 and the AI-6800. The scanners allow a maximum of 10 Rules.

Functions
DataMagic has ten functions: InsertFront, InsertBack, CutFront, CutBack, Replace,-KeepFront, KeepBack
Find&Cut Front, Find &Cut Back, Erase.

InsertFront/InsertF: In the original data, insert a group at a specified position from the front. "**Position"** textbox specifies the insert position (starting from position 0). "**String from**" combobox specifies the string group to insert. Please refer to **Section 7. String Settings**.

InsertBack/InsertB : In the original data, insert a group at a specified position from the back. "**Position"** textbox specifies the insert position (starting from the back). "**String from"** combobox specifies the string group to insert.

CutFront/CutF: From the front of the original barcode data, cut the data from "**Position from"** textbox to "**to"** textbox.

CutBack/CutB: From the back of the original barcode data, cut the data from "**End from"** textbox to **"to"** textbox.

Replace: In the original data group, replace "**Replace"** combobox with "**with"** combobox.

KeepFront/KeepF: From the front of the original barcode data, keep the data from "**Keep from"** textbox to "**to"** textbox.

KeepBack/KeepB: From the back of the original barcode data, preserve the data from "**Keep from end**" textbox to "**to**" textbox.

Find&Cut Front/FindF: From the original barcode data, find and cut the string group selected by **"Find&CutFront"** combobox and the data in front of it. With the **"Include/Exclude"** combobox you can control whether to cut this string group.

Find &CutBack/FindB: From the original barcode data, find and cut the data behind a string group selected by the **"Find&CutBack"** combobox. With the **"Include/Exclude"** combobox you can control whether to cut this string group.

Erase: Erase this rule.

Multi-condition Example:

Barcode type: EAN13

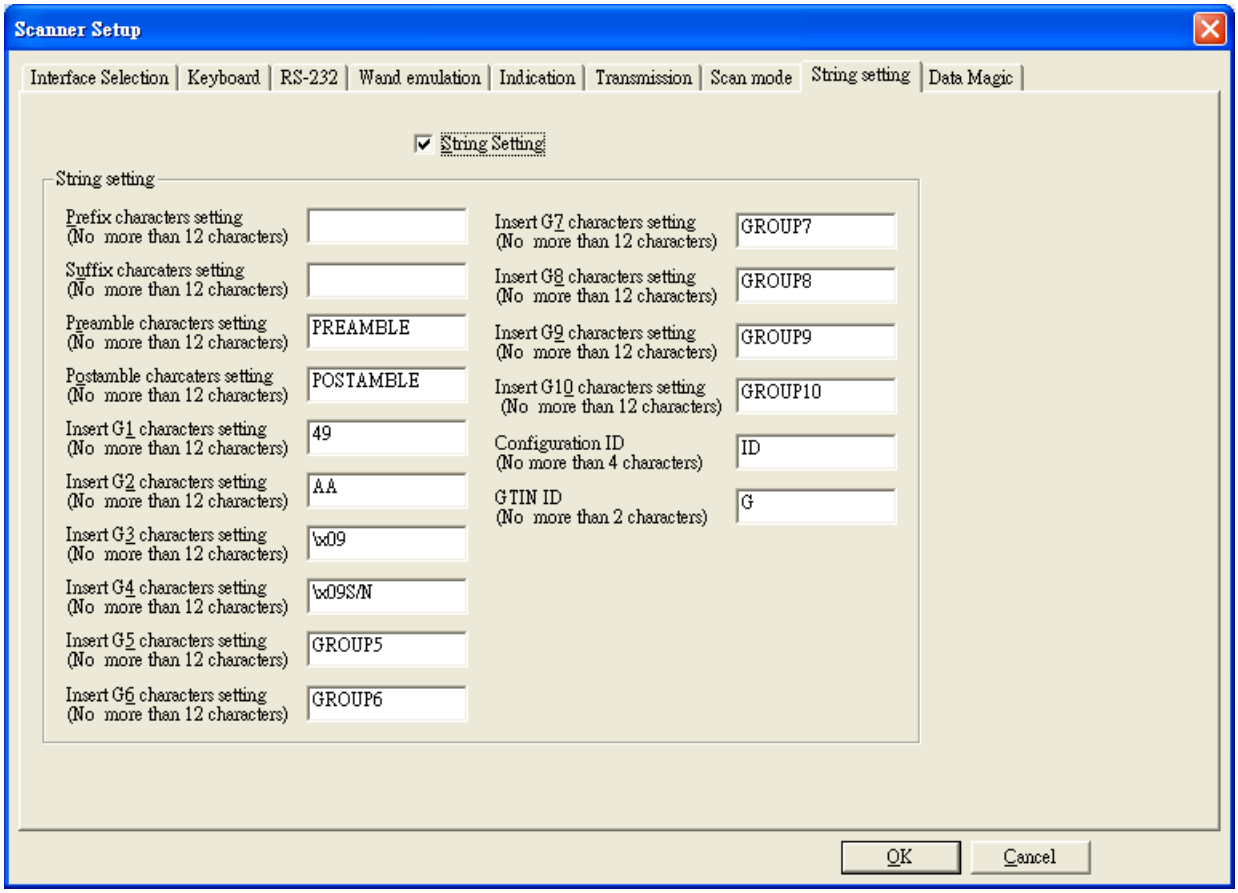
Interface: USB COM

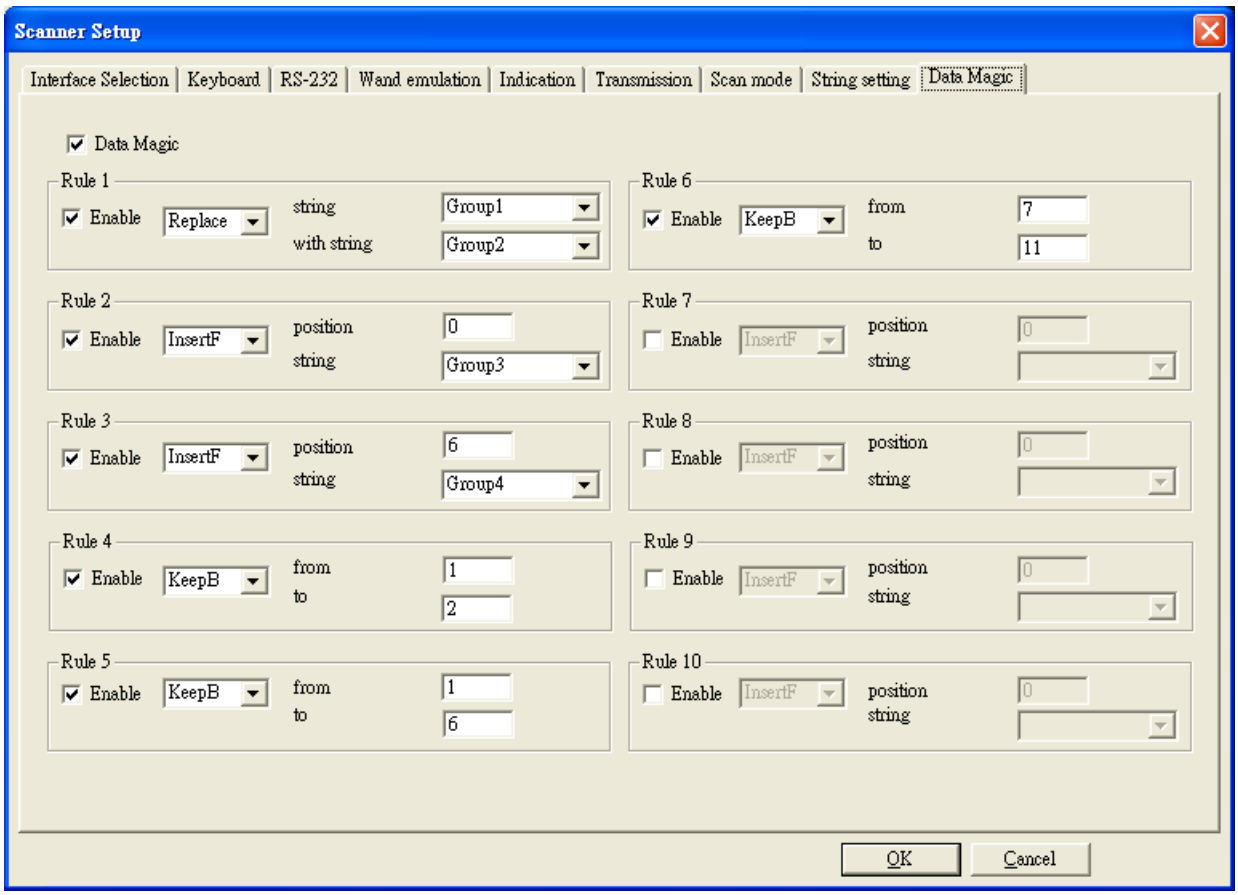
Original Barcode Data: 4901991570014

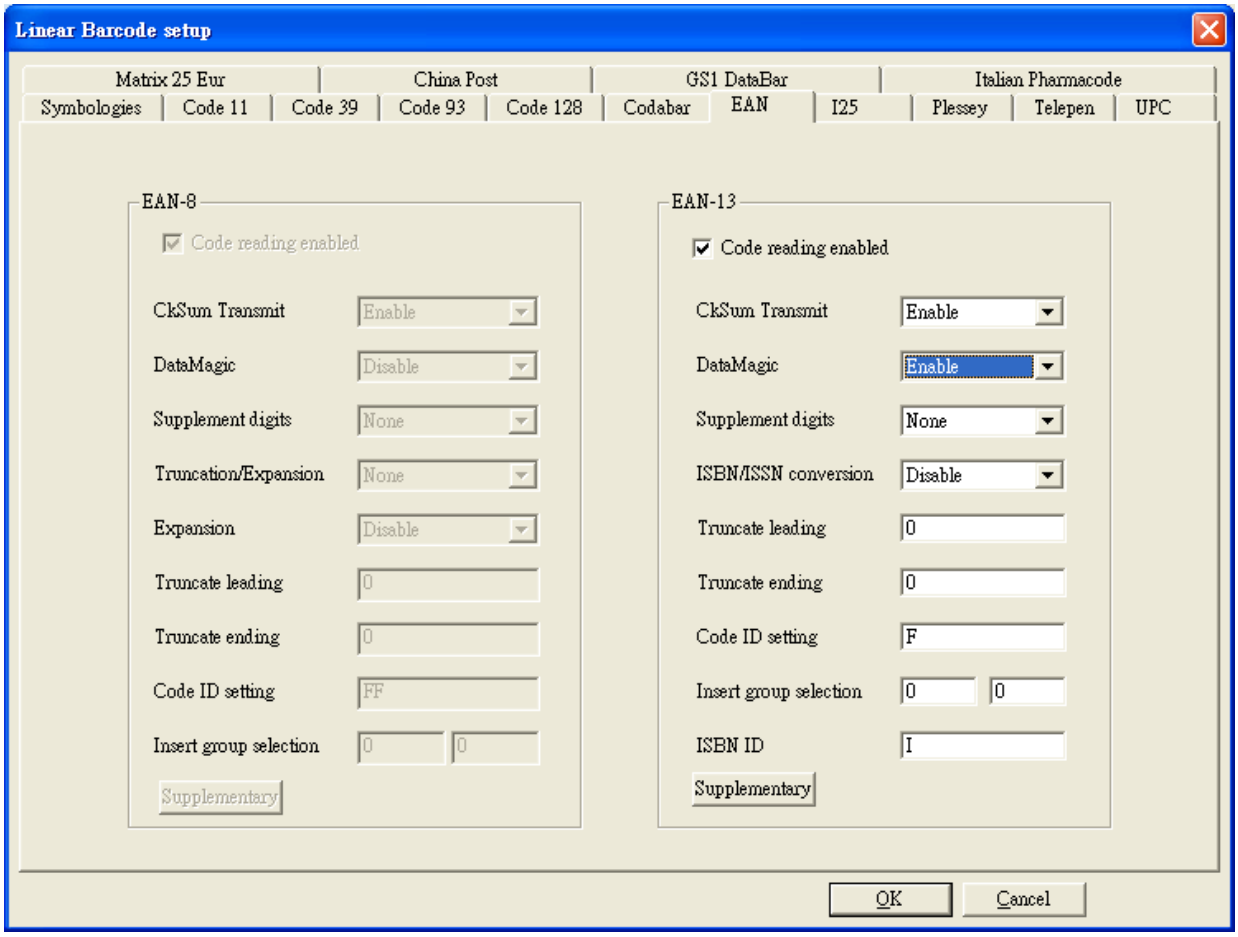
If you wish to output: 14[TAB]AA0199[TAB]S/N :15700

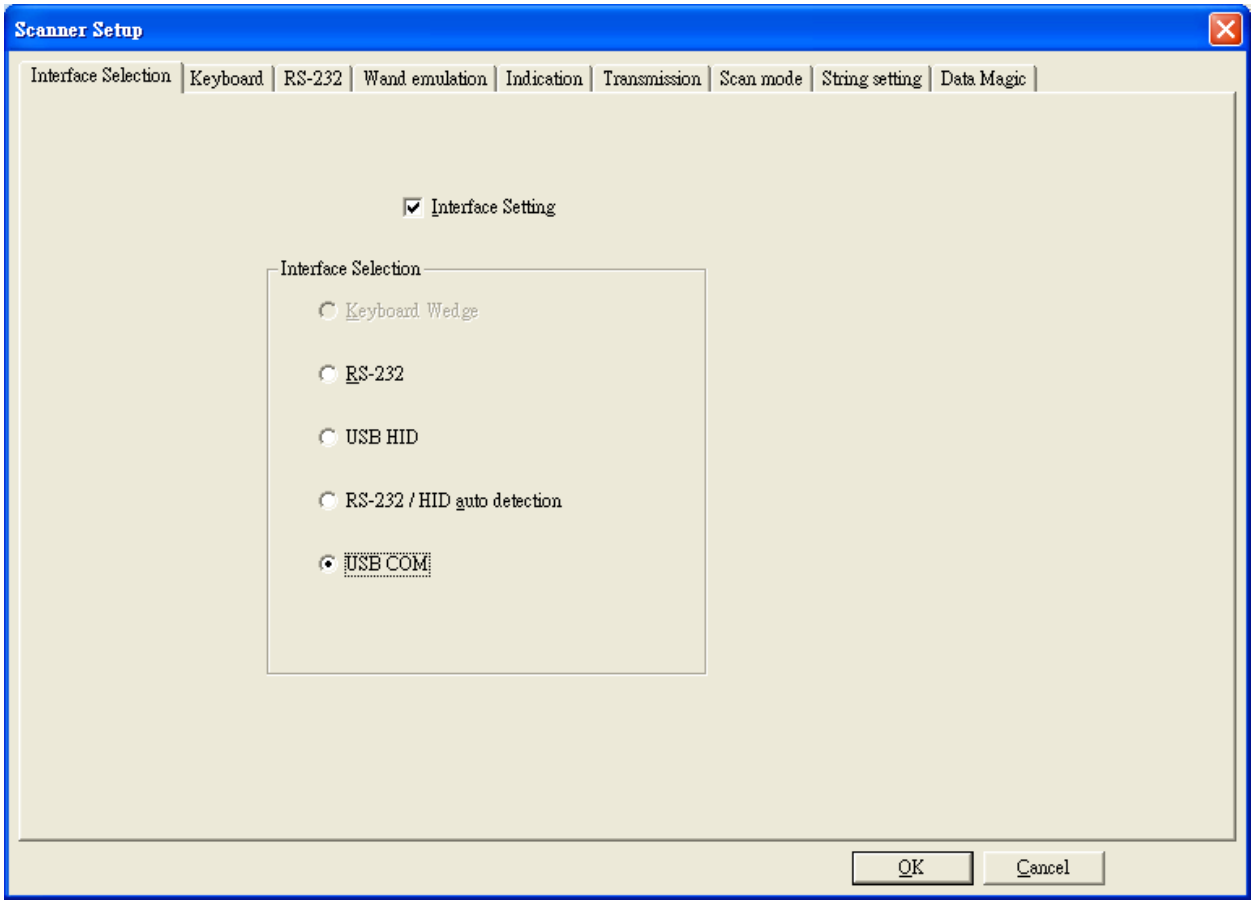
Steps:
1. Set up string groups
2. Set up DataMagic
3. Enable DataMagic for EAN-13
4. Select interface
5. Export to scanner

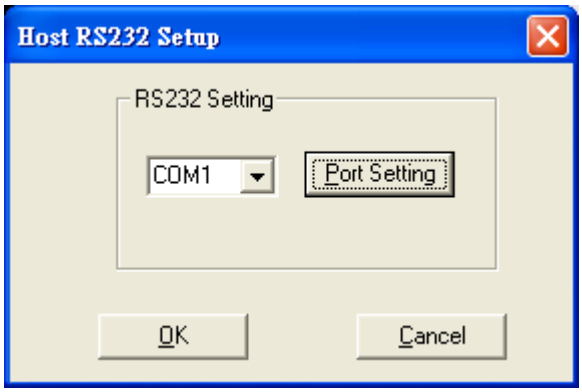
The Multi-condition example above is shown in the following screens.

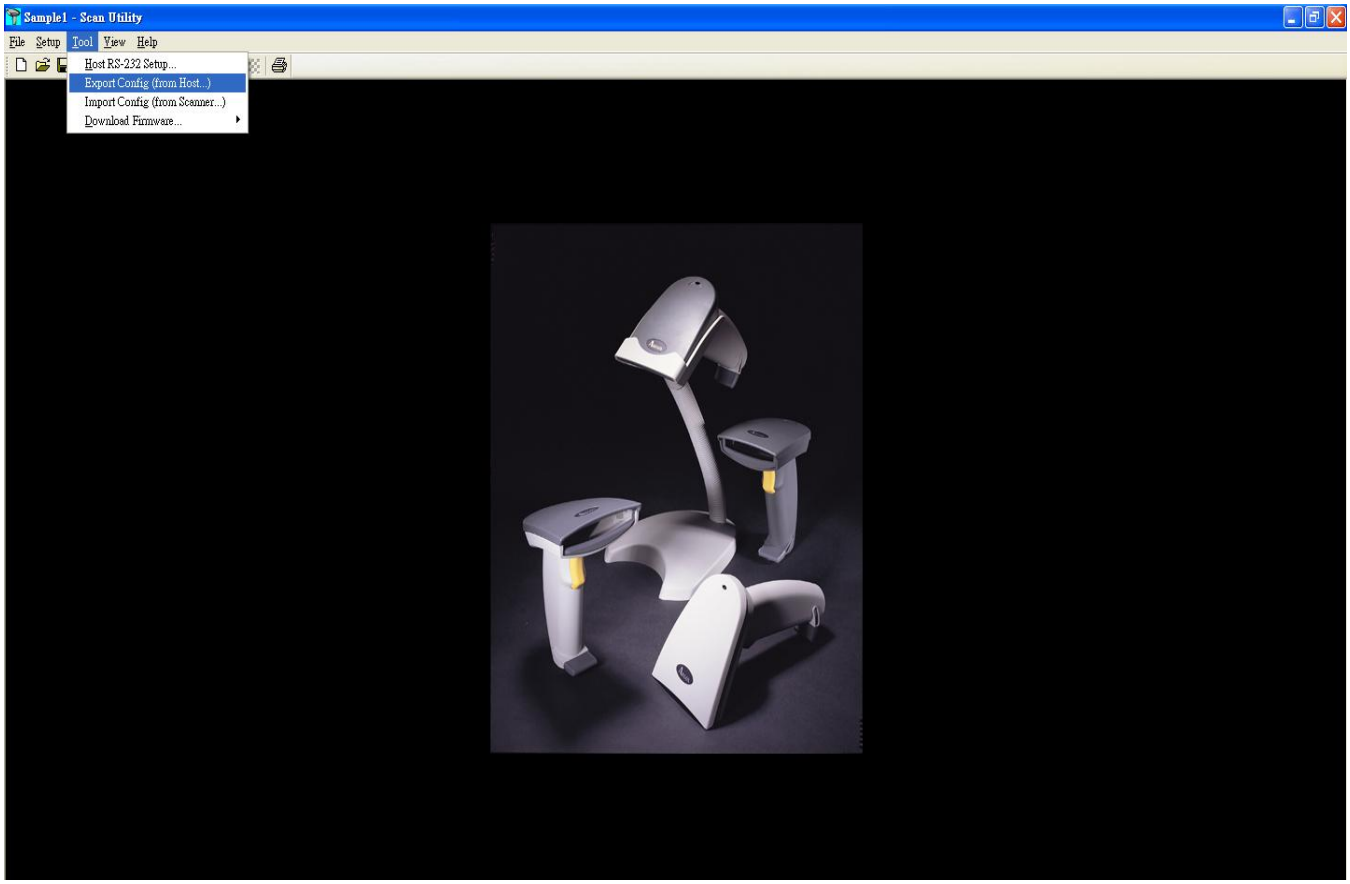

Scanner Setup
Interface Selection
Keyboard
RS-232
Wand emulation
Indication
Transmission
Scan mode
String setting
Data Magic
String Setting
String setting
Prefix characters setting (No more than 12 characters)
Suffix charcaters setting (No more than 12 characters)
Preamble characters setting (No more than 12 characters)
PREAMBLE
Postamble charcaters setting (No more than 12 characters)
POSTAMBLE
Insert G1 characters setting (No more than 12 characters)
49
Insert G2 characters setting (No more than 12 characters)
AA
Insert G3 characters setting (No more than 12 characters)
\x09
Insert G4 characters setting (No more than 12 characters)
\x09S/N
Insert G5 characters setting (No more than 12 characters)
GROUP5
Insert G6 characters setting (No more than 12 characters)
GROUP6
Insert G7 characters setting (No more than 12 characters)
GROUP7
Insert G8 characters setting (No more than 12 characters)
GROUP8
Insert G9 characters setting (No more than 12 characters)
GROUP9
Insert G10 characters setting (No more than 12 characters)
GROUP10
Configuration ID (No more than 4 characters)
ID
GTIN ID (No more than 2 characters)
G
OK
Cancel


Scanner Setup
Interface Selection
Keyboard
RS-232
Wand emulation
Indication
Transmission
Scan mode
String setting
Data Magic
Data Magic
Rule 1
Enable
Replace
string
Group1
with string
Group2
Rule 2
Enable
InsertF
position
0
string
Group3
Rule 3
Enable
InsertF
position
6
string
Group4
Rule 4
Enable
KeepB
from
1
to
2
Rule 5
Enable
KeepB
from
1
to
6
Rule 6
Enable
KeepB
from
7
to
11
Rule 7
Enable
InsertF
position
0
string
Rule 8
Enable
InsertF
position
0
string
Rule 9
Enable
InsertF
position
0
string
Rule 10
Enable
InsertF
position
0
string
OK
Cancel

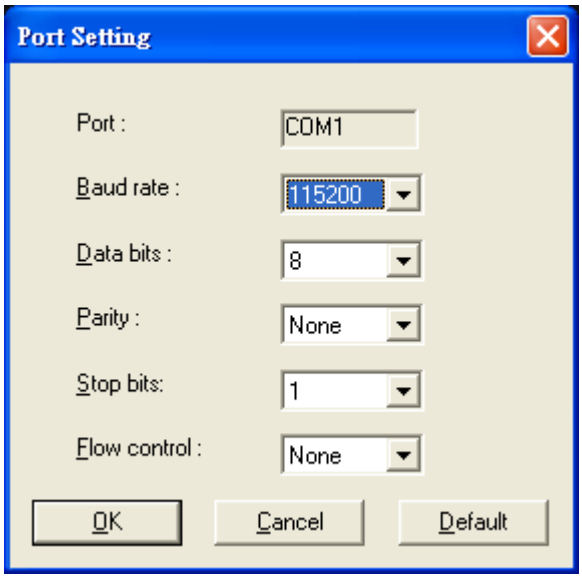

Linear Barcode setup
Matrix 25 Eur
China Post
GS1 DataBar
Italian Pharmacode
Symbologies
Code 11
Code 39
Code 93
Code 128
Codabar
EAN
I25
Plessey
Telepen
UPC
EAN-8
Code reading enabled
CkSum Transmit
Enable
DataMagic
Disable
Supplement digits
None
Truncation/Expansion
None
Expansion
Disable
Truncate leading
0
Truncate ending
0
Code ID setting
FF
Insert group selection
0
0
Supplementary
EAN-13
Code reading enabled
CkSum Transmit
Enable
DataMagic
Enable
Supplement digits
None
ISBN/ISSN conversion
Disable
Truncate leading
0
Truncate ending
0
Code ID setting
F
Insert group selection
0
0
ISBN ID
I
Supplementary
OK
Cancel


Scanner Setup
Interface Selection
Keyboard
RS-232
Wand emulation
Indication
Transmission
Scan mode
String setting
Data Magic
Interface Setting
Interface Selection
Keyboard Wedge
RS-232
USB HID
RS-232 / HID auto detection
USB COM
OK
Cancel


Host RS232 Setup
RS232 Setting
COM1
Port Setting
OK
Cancel


Sample1 - Scan Utility
File Setup Tool View Help
Host RS-232 Setup...
Export Config (from Host...)
Import Config (from Scanner...)
Download Firmware...

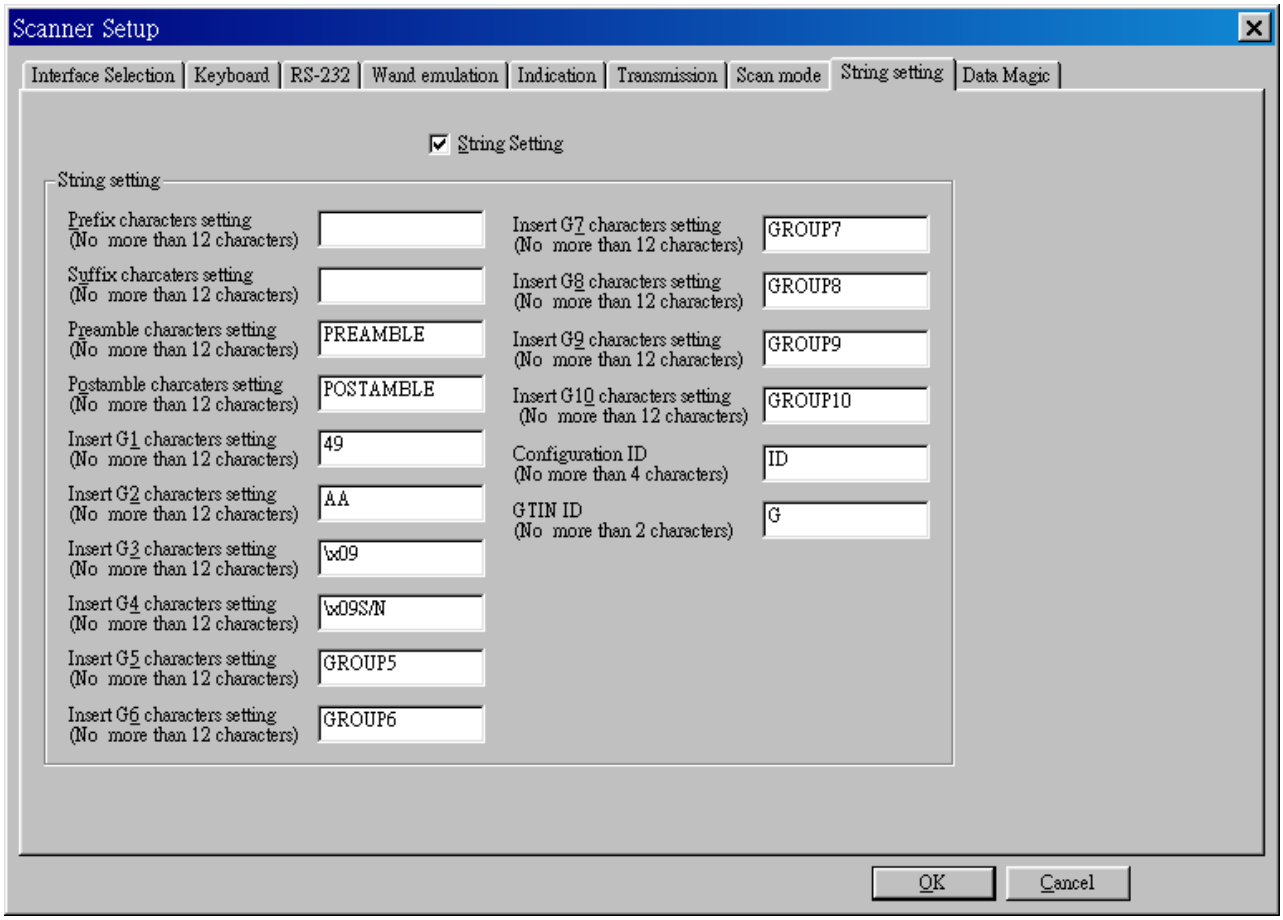

Export to device
Device
AR3000
Host
Scanner
Export
Cancel


Port Setting
Port :
COM1
Baud rate :
115200
Data bits :
8
Parity :
None
Stop bits:
1
Flow control :
None
OK
Cancel
Default

Step 1: Set up string groups

In the Scanner Setup / String setting screen below, set the content to insert:

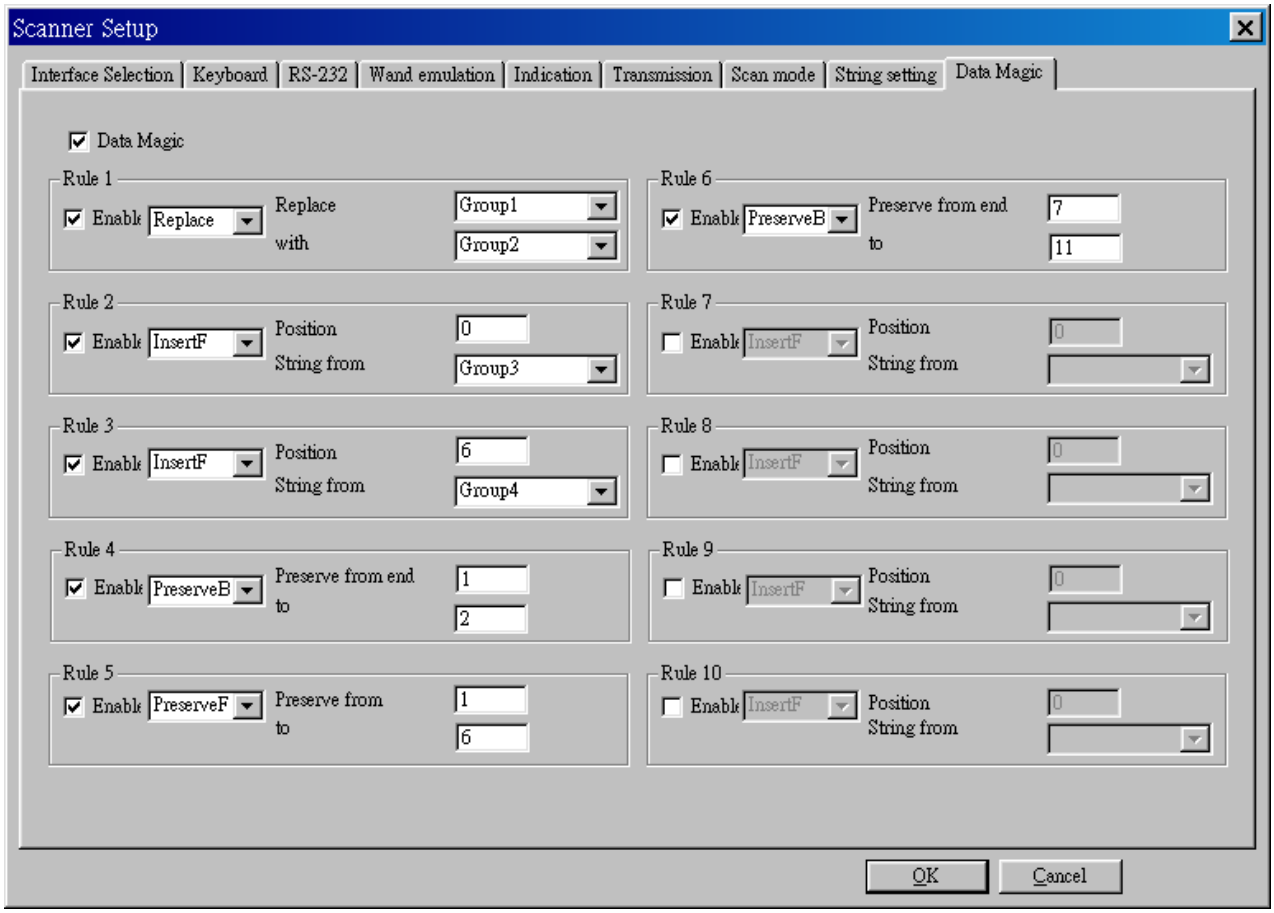
Insert G1: 49
Insert G2: AA
Insert G3:\x09
Insert G4: \x09S/N



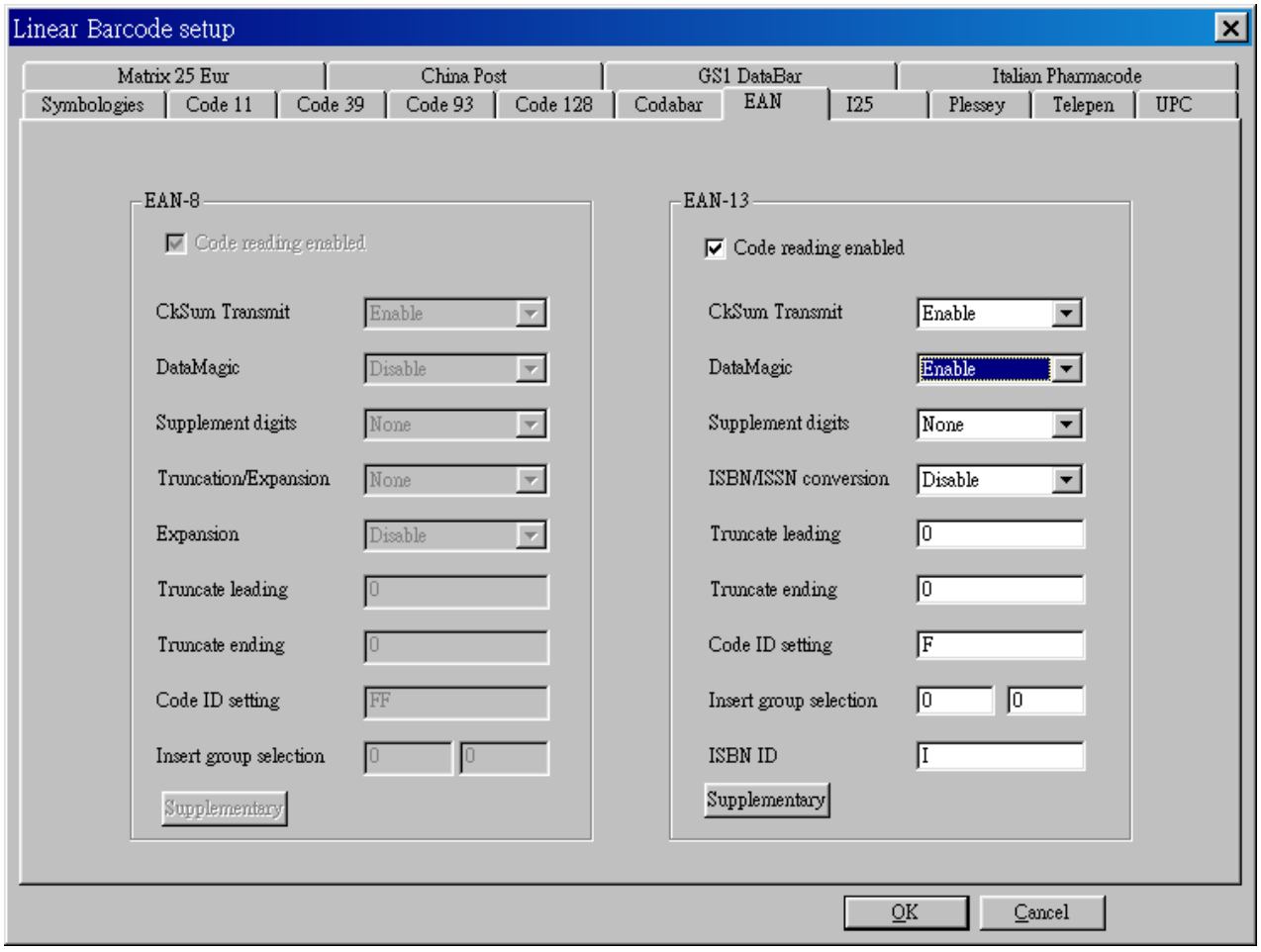
Step 2: Set up DataMagic

In the Scanner Setup / DataMagic screen, set the Rules as below:

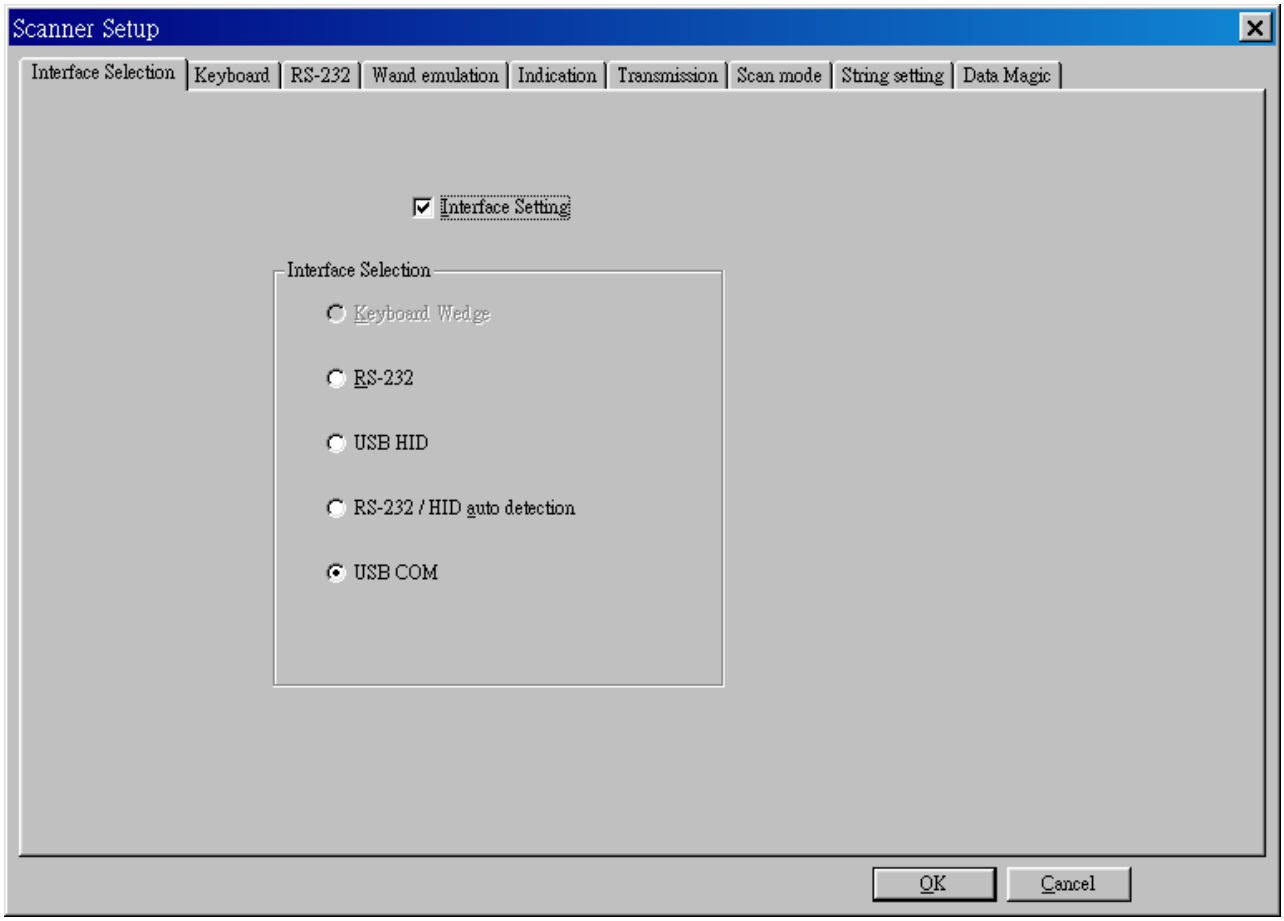
Rule 1: Replace G1 (49) with G2 (AA)
Rule 2: Insert Front Position (0) String from G3 (\x09)
Rule 3: Insert Front Position (6) String from G4 (\x09S/N)
Rule 4: Keep Back from end (1) to (2)
Rule 5: Keep Front from front (1) to (6)
Rule 6: Keep Back from end (7) to (11)

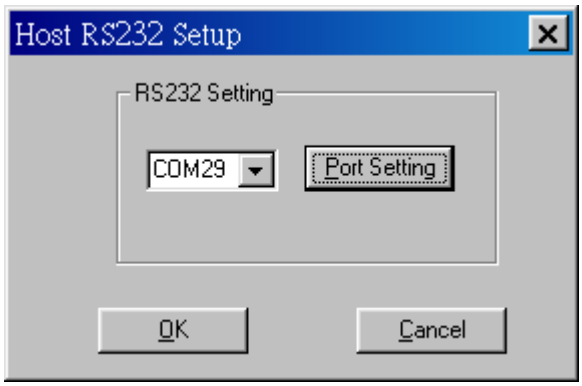


Step 3: In the Linear Barcode setup / EAN screen, enable DataMagic for EAN-13.

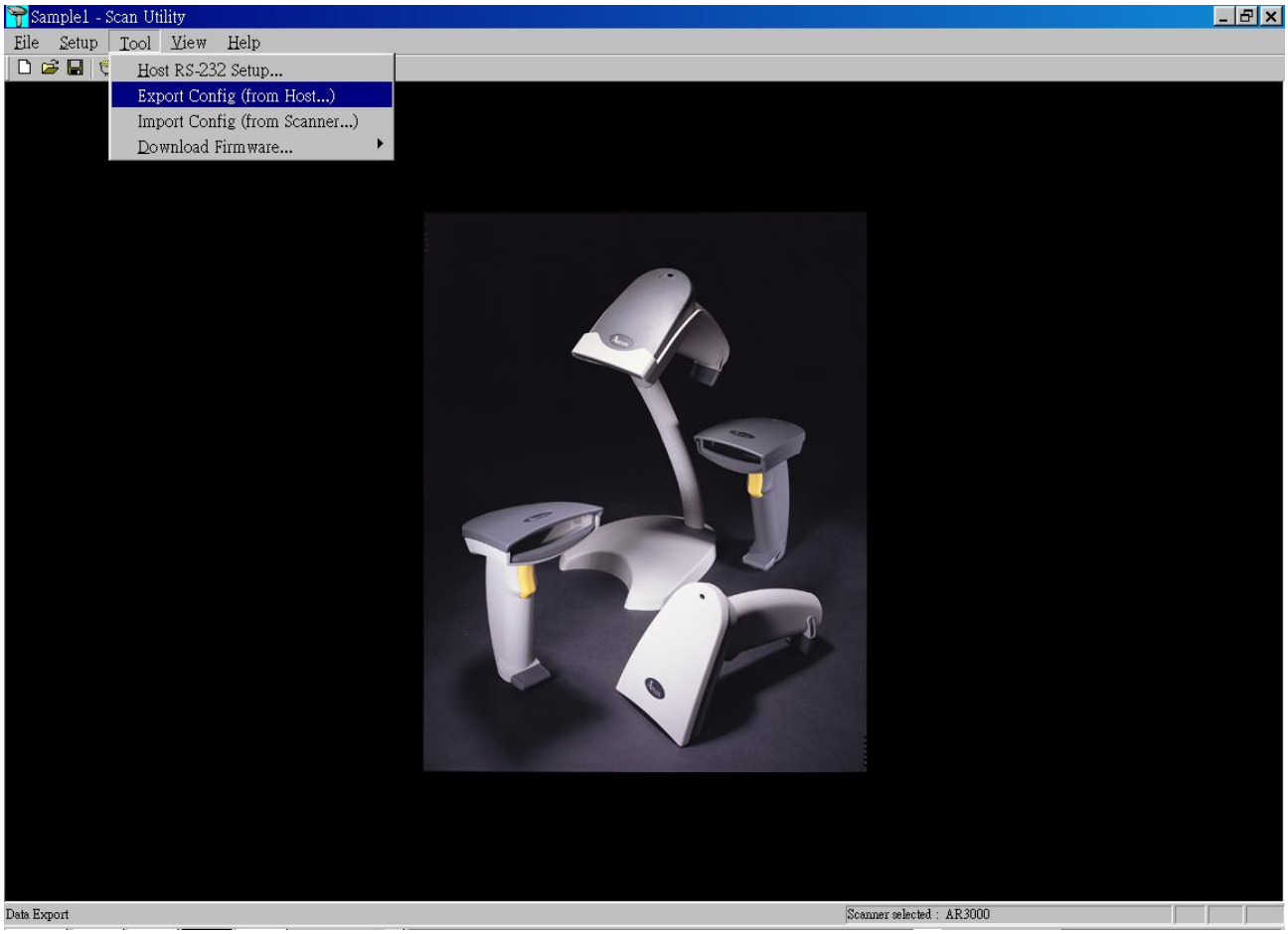


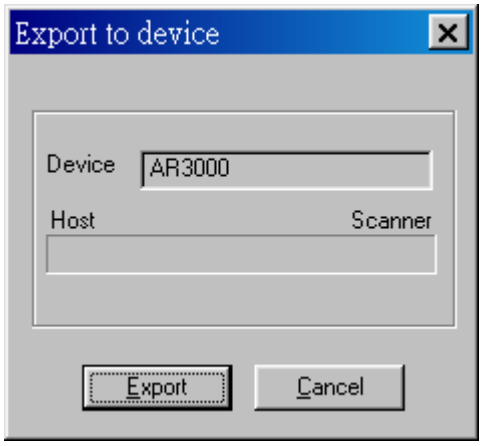
Step 4: In the Scanner Setup / Interface Selection screen, select the interface and Com port.





Step 5: In the Scanner Utility / Tool menu, select “Export Config from Host” and then the device.



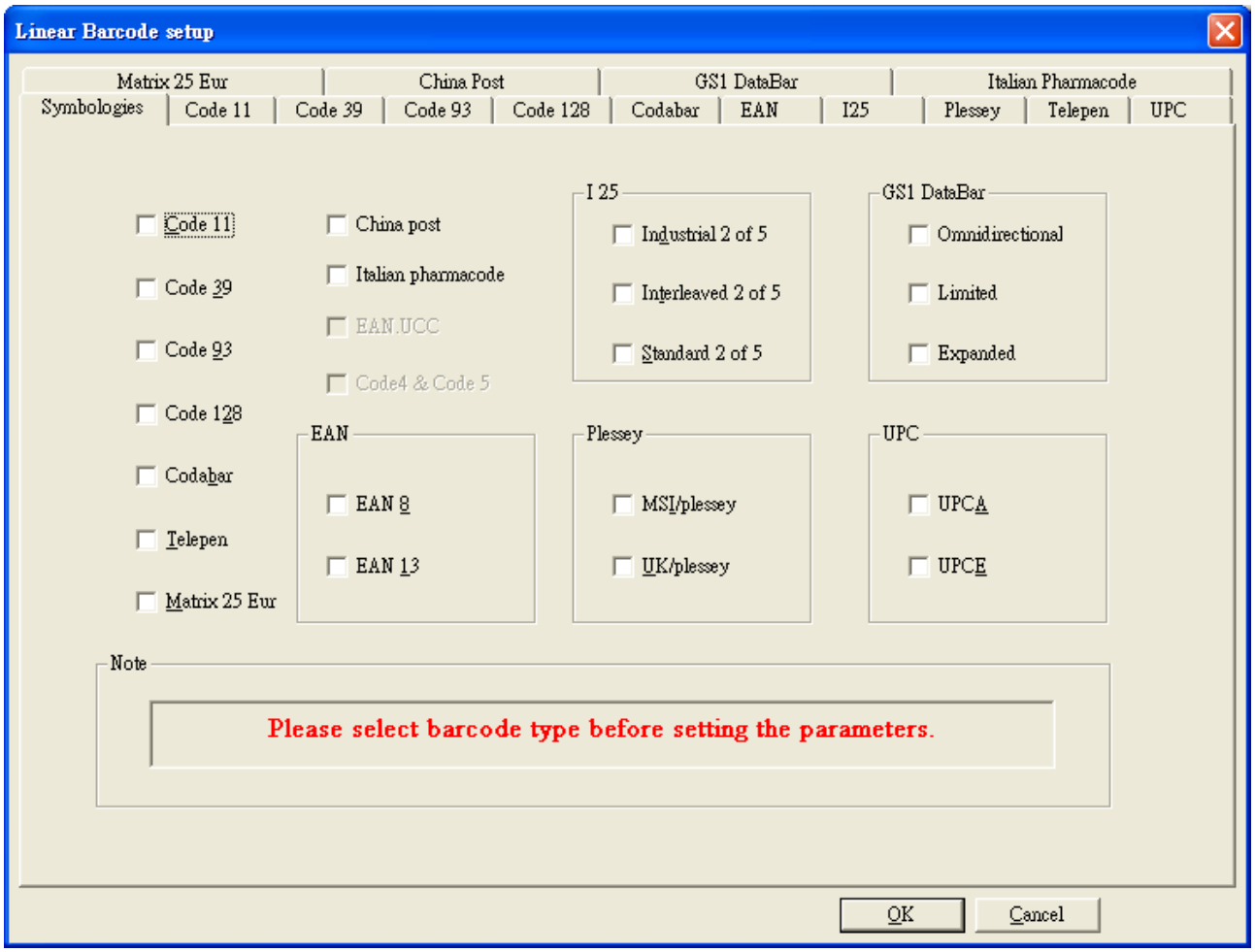


Linear Barcodes Setup

1. Symbologies

Symbology: You must select barcode type before setting the parameters.

Note: You can only set a maximum of 2 characters for Code ID setting. If it exceeds 2 characters, this function will delete the excess part automatically.



2. Code39

Check-sum verification: The checksum of Code-39 is optional and made as the sum module 43 of the numerical value of the data digits.

Check-sum transmission: Set Enable to transmit checksum.

Max./Min. code length: Each symbology has its own Max./Min. Code Length. This can be set to qualify data entry. If their Max./Min. Code Length is zero, the Global Min./Max. Code Length is in effect. The length is defined as the actual barcode data length to be sent. Labels with a length that exceeds these limits will be rejected. Make sure that the Minimum length setting is no greater than the Maximum length setting, or otherwise all the labels of the symbology will not be readable. In particular, you can set the same value for both Minimum and Maximum reading length to force the fixed length barcode decoding.

Truncate leading/ending: The leading or ending digits of barcode data characters can be truncated when these values are set to non-zero. This will beep instead of reading anything when the truncate value is more than the barcode data digits or the value of Truncate Leading overlaps with that of the Ending. The maximum value of the truncate digits is 15.

.

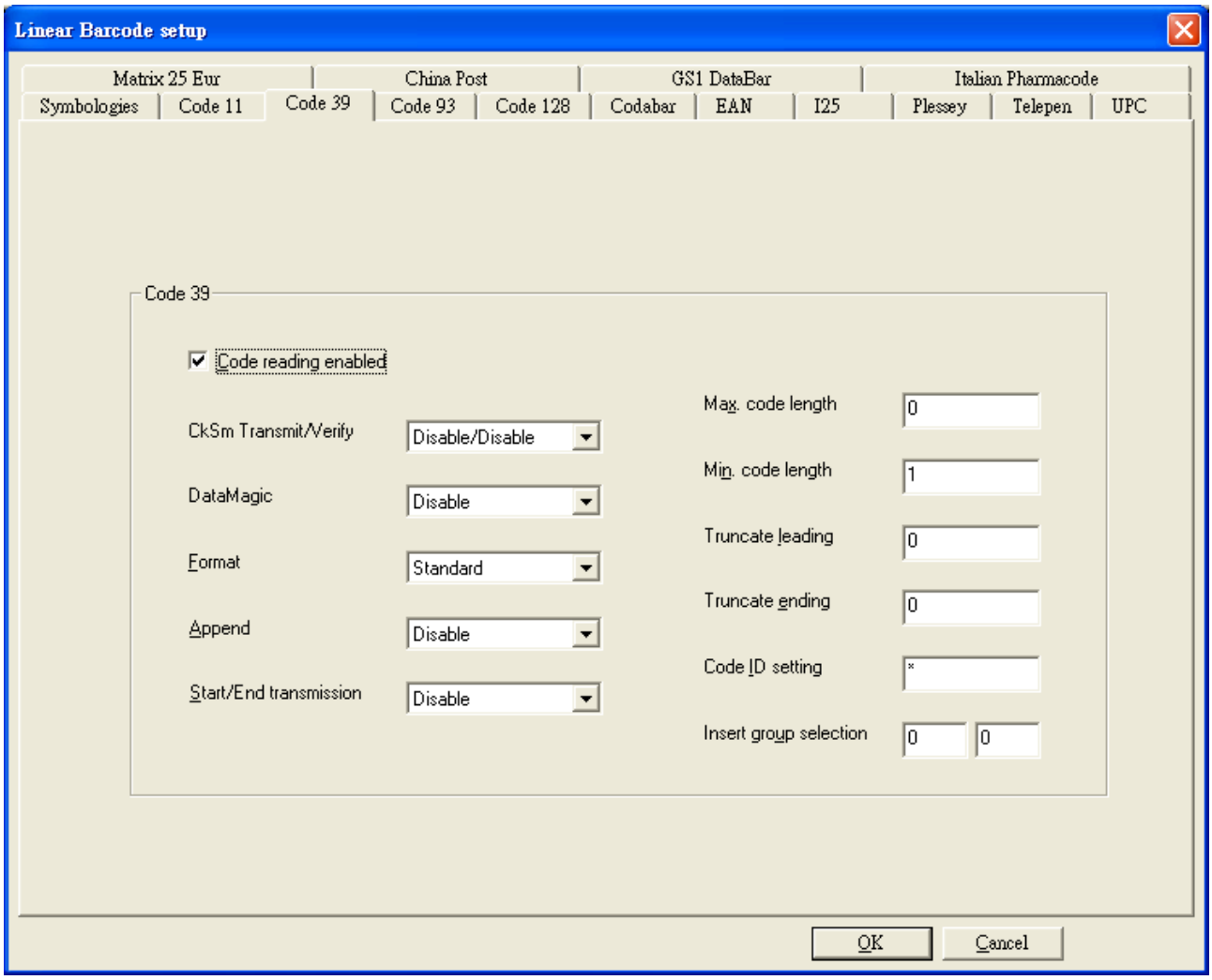
Code ID setting: Code ID setting is a character used to represent the symbol upon a succeeding reading. This sets the position of the Code ID for before or after code data for transmission.

Insertion group selection: The scanner offers one or two insertion groups for its own symbology. Set one or two digits to indicate which insertion group you want to insert. You may refer to Character insertion. Set from 0 to 4 for this function.

Format: The Full ASCII Code-39 is an enhanced set of Code-39 that is data with a total of 128 characters to represent the Full ASCII code. It combines one of the digits +, %, $ and/ with one of the alpha digits (A to Z).

Append: This function allows several symbols to be concatenates and treated as one single data entry. The scanner will not transmit the embedded appending code (space for Code-39). If Enable and other symbols were read again with the appended code, then codes are transmitted without Code ID, Preamble and Prefix. When a symbol is decoded without the appended code, the data is transmitted without Code ID and Prefix, but the Postamble Suffix codes are appended. This function is used when the first number of code 39 is a space.

Start/end transmission: The start and end characters of Code-39 are "★". You can transmit all data digits including two "★".



3. Code93

Checksum Verification: The checksum is made as the sum module 47 of the numerical values of all data digits.

Checksum Transmission: By setting Enable, checksum is transmitted.

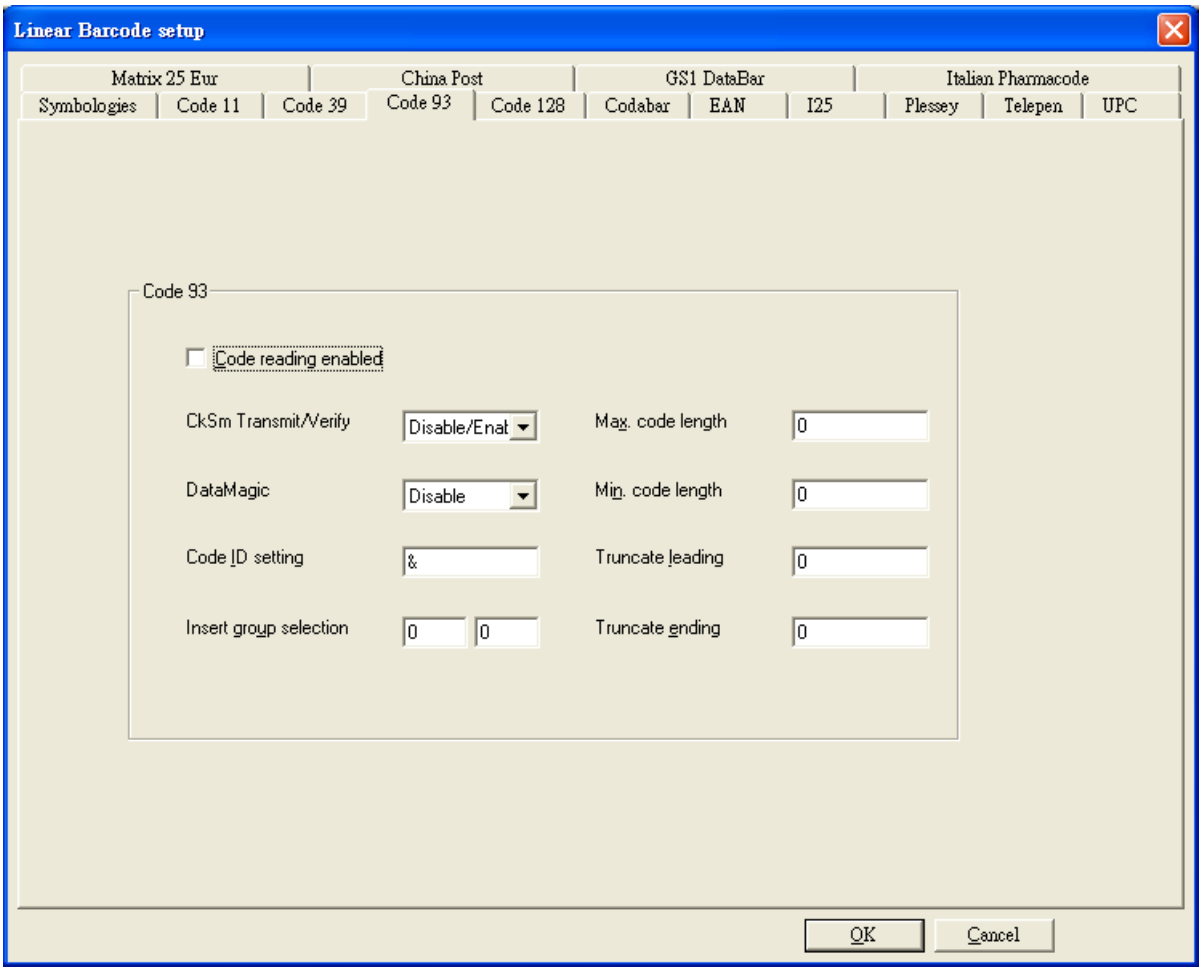
Datamagic: By setting Enable to run this function.

Max./Min. code length: Refer to Max./Min. code length of Code-39.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.



4. Code128

Checksum Verification: The checksum is made as the sum module 103 of all data digits.

Checksum Transmission: By setting Enable, checksum is transmitted.

Datamagic: By setting Enable to run this function.

Max./Min. code length: Refer to Max./Min. code length of Code-39.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

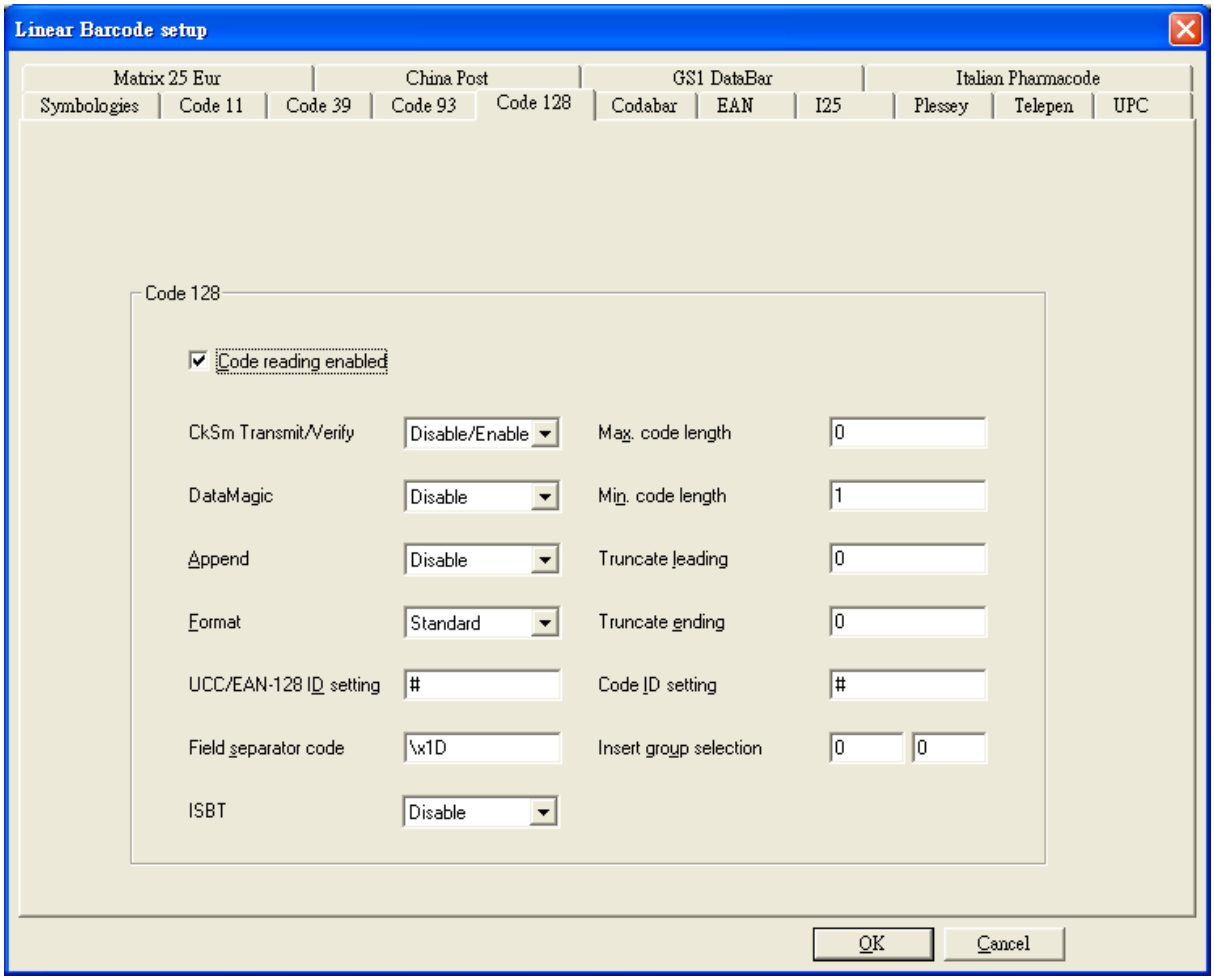
Insertion group selection: Refer to Insertion group selection of Code-39.

Format: The Code-128 can be translated to UCC/EAN-128 format if it starts with FNC1 character. The first FNC1 is translated to “]C1” and next to a concatenation code as <GS>(7F16).

]C1	Data	<GS>	Data	Checksum

Append: This function allows several symbols to be concatenates and treated as one single data entry.

Concatenation code: This feature is only used for the UCC/EAN-128 format. This Concatenation Data means you can reassign second or after a FNC1 for your usage. The default of ASCII code is <GS>(1D16)



5. Codabar

Checksum Verification: The checksum is made as the sum module 16 of the numerical values of all data digits.

Checksum Transmission: By setting Enable, checksum is transmitted.

Datamagic: By setting Enable to run this function.

Max./Min. code length: Refer to Max./Min. code length of Code-39.

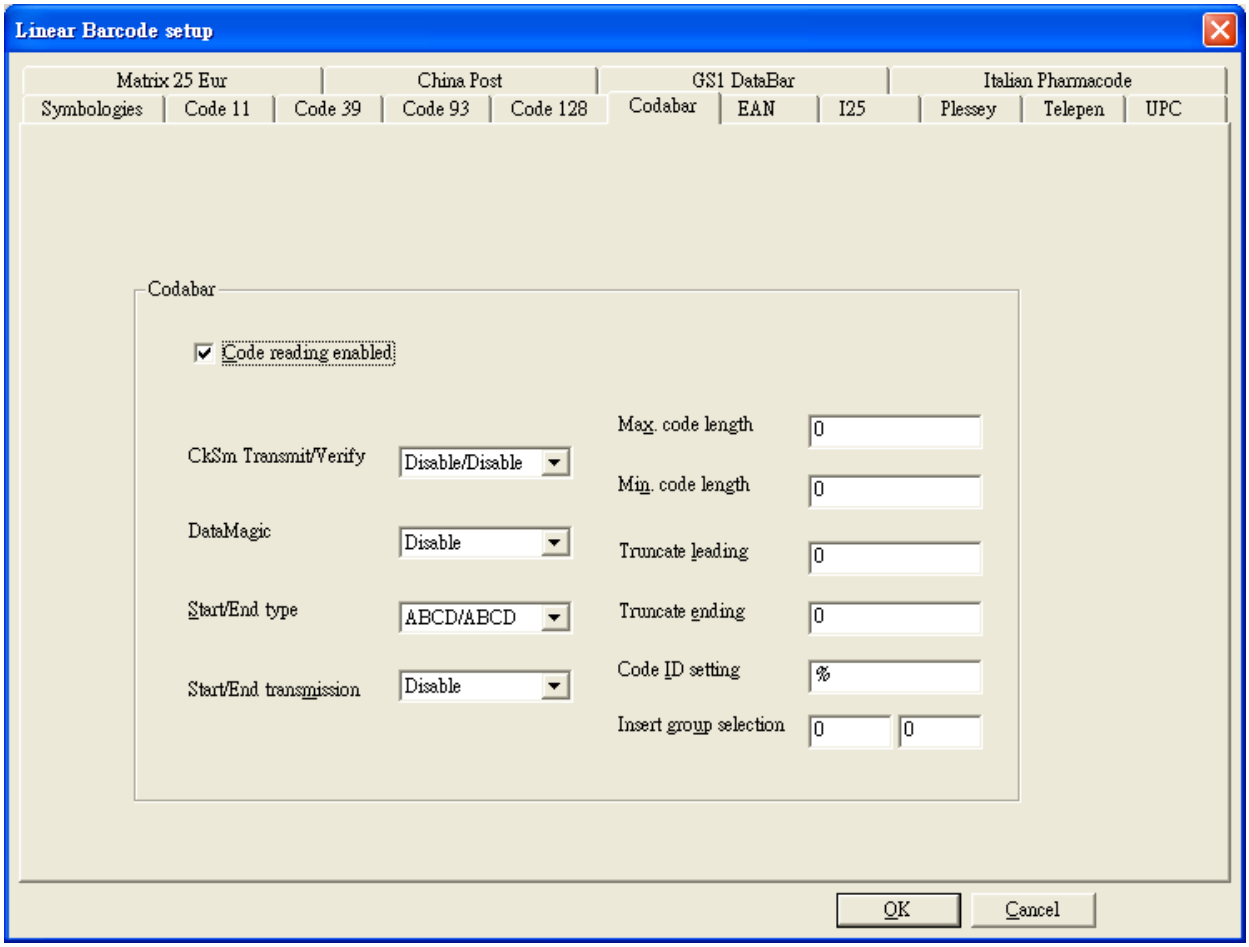
Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.

Start/Stop type: The Codabar has four pairs of Start/End pattern. You may select one pair to match your application.

Start/End Transmission: Refer to Start/End Transmission of Code 39.



6. EAN

Check-sum transmission: By setting Enable, checksum is transmitted.

Datamagic: By setting Enable to run this function.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.

Supplement digits: Format: EAN-8

Data Digits (7 Digits)	Check Digits	Supplement Digits 2 or 5

Format: EAN-13

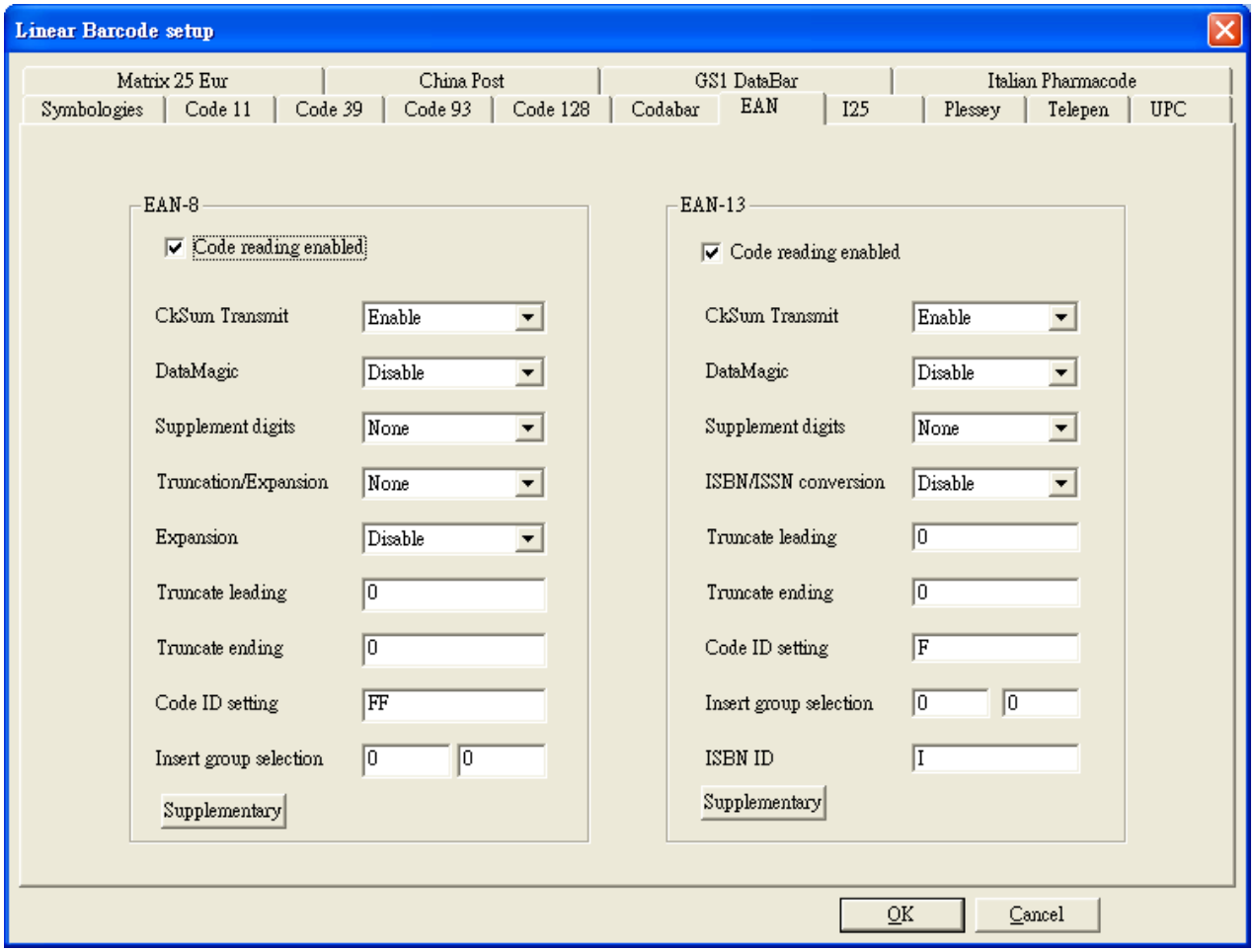
Data Digits (12 Digits)	Check Digits	Supplement Digits 2 or 5

Truncate Leading zero: Refer to Truncate Leading zero of Code-39.

Expansion (EAN-8): The expansion function is used only for UPCE and EAN-8 code reading. It extends to 13-digits with “0” digits when the feature is enabled.
Example: Barcode “0123654” - Output: “001230000057”

ISBN/ISSN: The ISBN (International Standard Book Number) and ISSN (International Standard Serial Number) are two kinds of barcodes for books and magazines. The ISBN is 10 digits with leading “978” and the ISSN is 8 digits with leading “977” of the “EAN-13” symbology.

Example: Barcode “9789572222720” - Output: “9572222724”



7. I25

Check-sum verification: The checksum is made as the sum module 10 of the numerical values of all data digits.

Check-sum transmission: By setting Enable, checksum is transmitted.

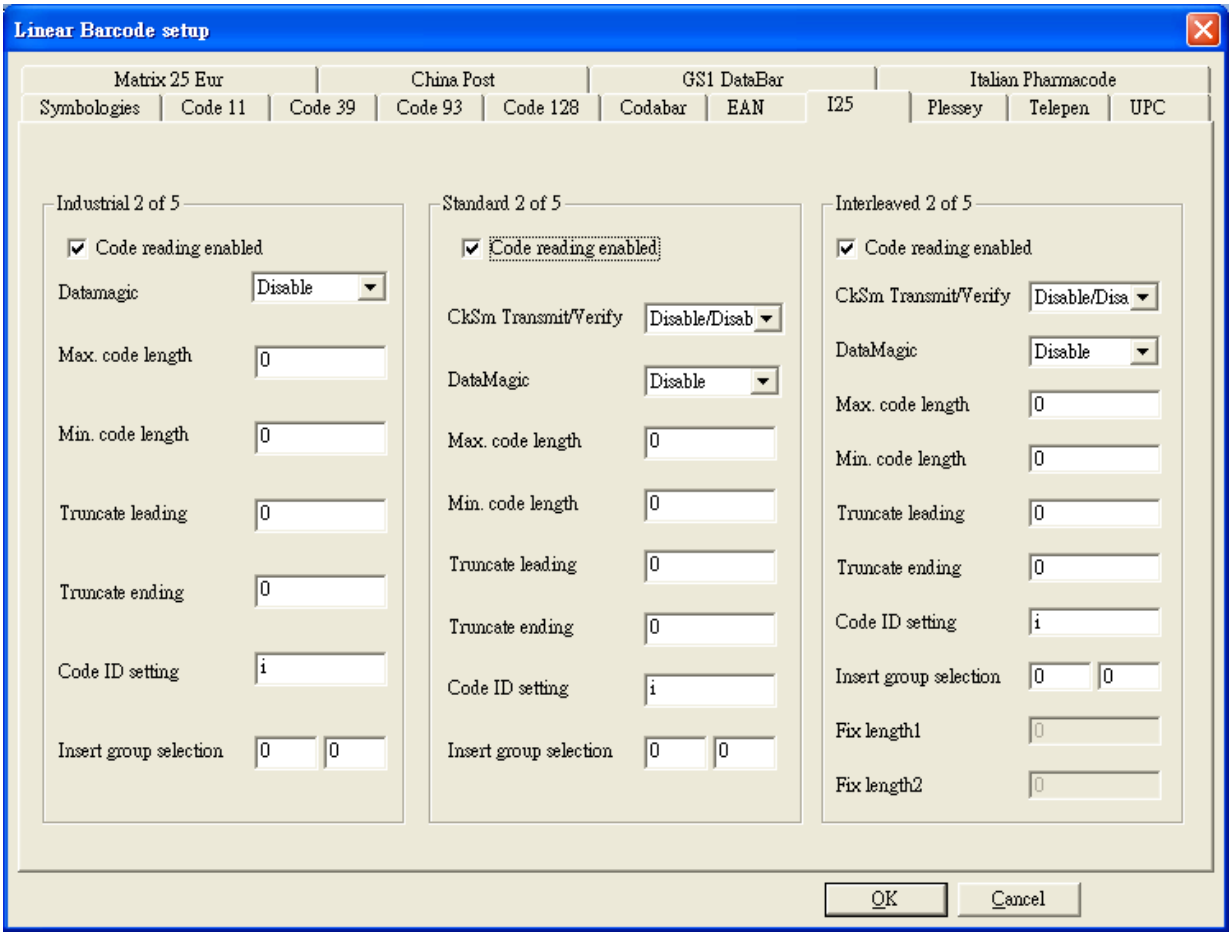
Datamagic: By setting Enable to run this function.

Max./Min. code length: Refer to Max./Min. code length of Code-39.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.



8. Plessey

Checksum Verification: The **MSI/Plessey** has one or two optional checksum digits. The checksum is presented using three methods: Mod10, Mod10/10 and Mod 11/10. The checksum1 and checksum2 are calculated as the sum module 10 or 11 of the data digits.

The **UK/Plessey** has one or two optional checksum digits. The checksum1 and checksum2 are calculated as the sum module 10 or 11 of the data digits.

Checksum Transmission: (MSI Plessey) By setting Enable, checksum1 and checksum2 are transmitted upon your selected checksum verification method. **(UK Plessey)** By setting Enable, checksum is transmitted.

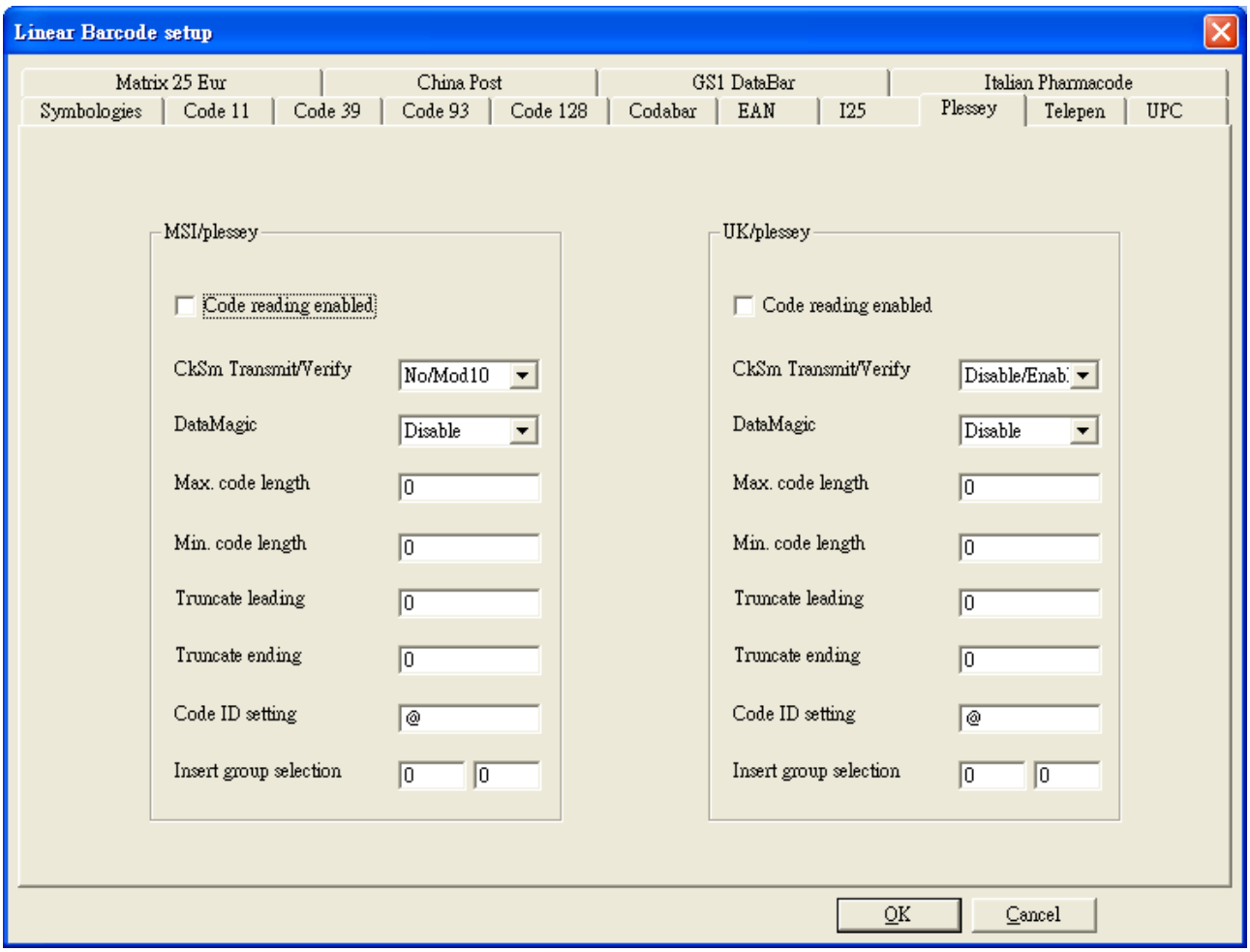
Datamagic: By setting Enable to run this function.

Max./Min. code length: Refer to Max./Min. code length of Code-39.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.



9. Others

Read (Telepen): IATA (International Air Transport Association).

Datamagic: By setting Enable to run this function.

Checksum Transmission: By setting Enable, checksum is transmitted.

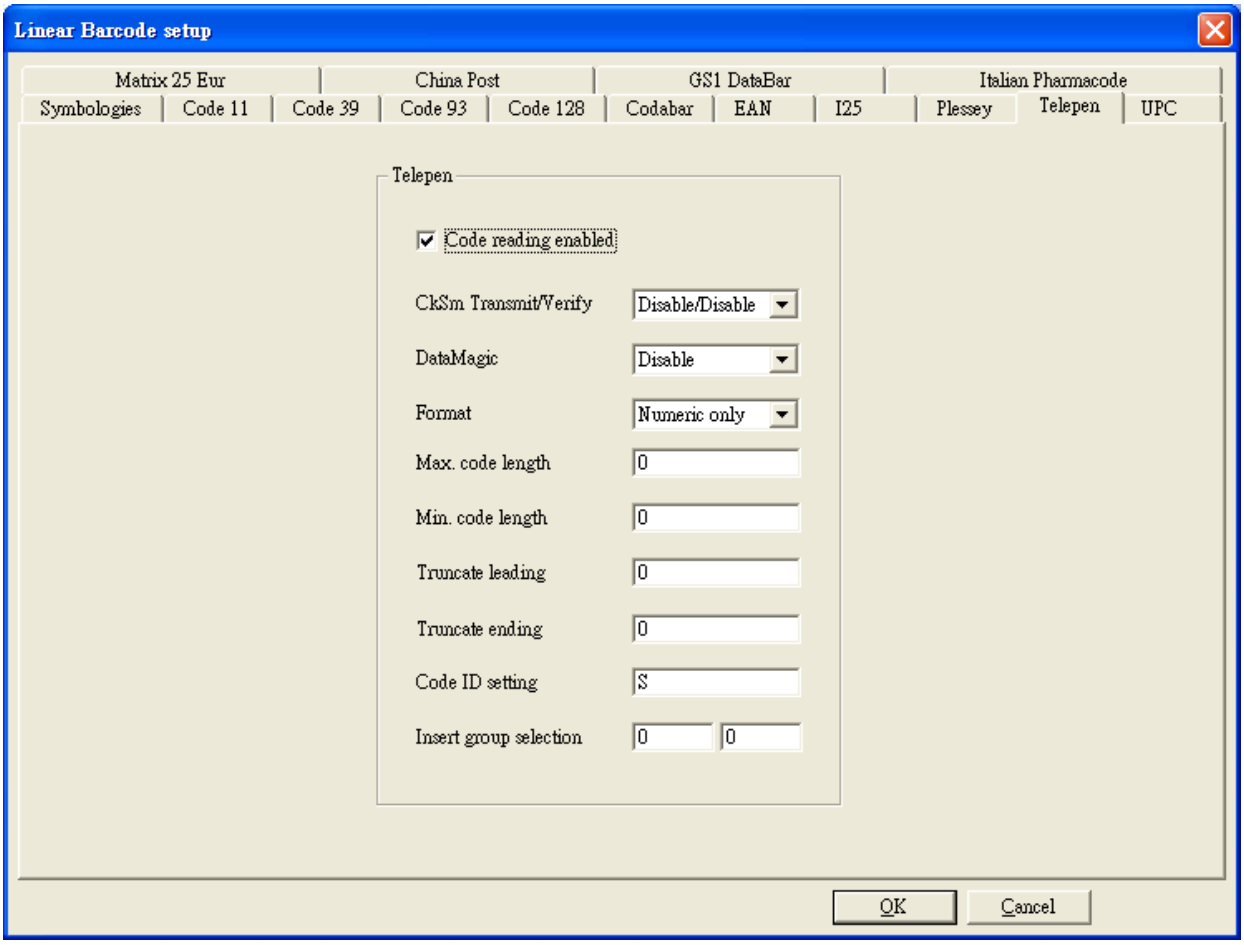
Checksum Transmission: (Code-11) By setting Enable, checksum1 and checksum2 are transmitted upon your selected checksum verification method. **(Telepen)** The checksum is presented as the sum module 11 of all data digits.

Max./Min. code length: Refer to Max./Min. code length of Code-39.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.



10. UPC

Check-sum transmission: By setting Enable, checksum is transmitted.

Datamagic: By setting Enable to run this function.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.

Supplement digits: Supplement digits barcode is the supplemental 2 or 5 characters for WPC code.

Format (UPCA)

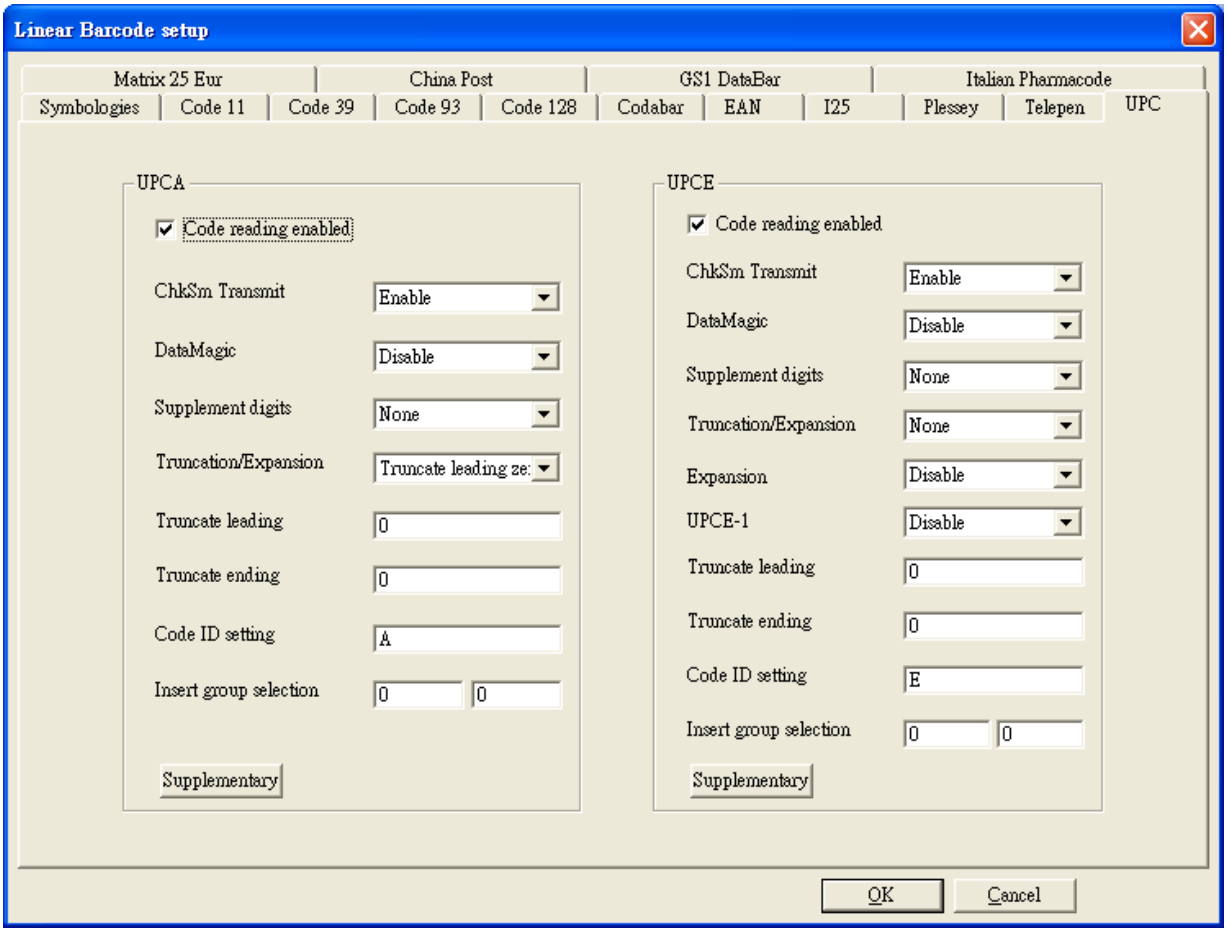
Leading Zero	Data Digits (11 Digits)	Check Digit	Supplement Digits 2 or 5

Format (UPCE)

Leading Zero	Data Digits (6 Digits)	Check Digit	Supplement Digits 2 or 5

Truncate Leading zero: Refer to Truncate Leading zero of Code-39.

Expansion: Refer to Expansion of EAN-8.



11. Matrix 25 Eur

Checksum Verification: The checksum is made as the sum module 10 of the numerical values of all data digits.

Datamagic: By setting Enable to run this function.

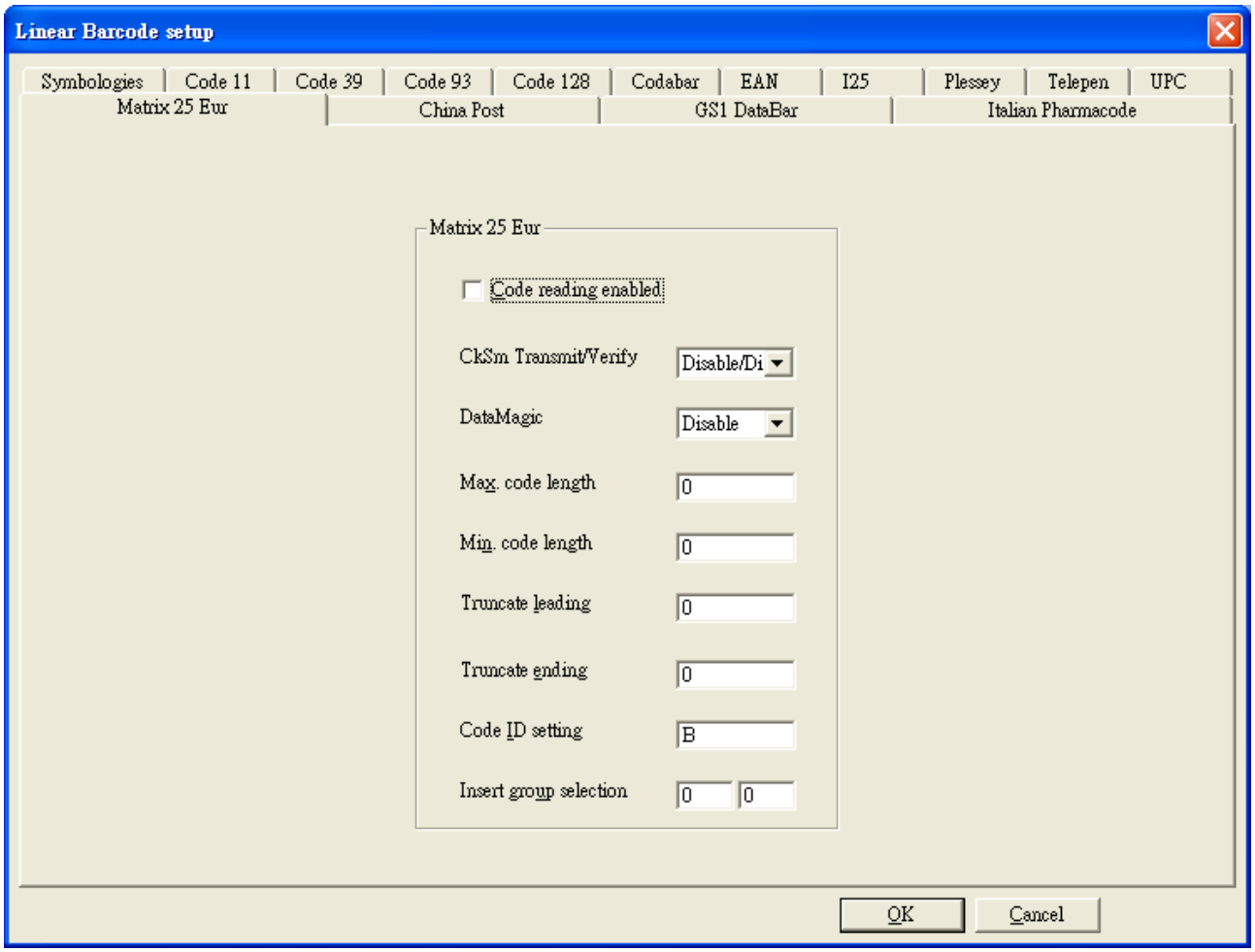
Checksum Transmission: By setting Enable, checksum is transmitted.

Max./Min. code length: Refer to Max./Min. code length of Code-39.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

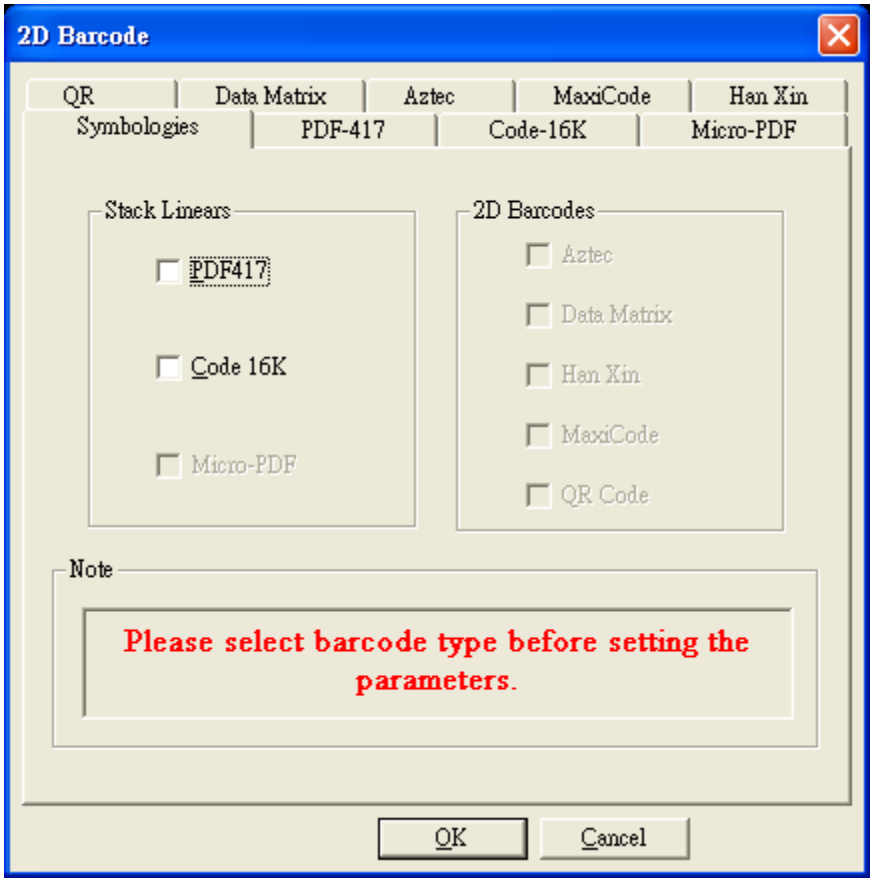
Insertion group selection: Refer to Insertion group selection of Code-39.


Linear Barcode setup
Symbologies
Code 11
Code 39
Code 93
Code 128
Codabar
EAN
I25
Plessey
Telepen
UPC
Matrix 25 Eur
China Post
GS1 DataBar
Italian Pharmacode
Matrix 25 Eur
Code reading enabled
CkSm Transmit/Verify
Disable/Di
DataMagic
Disable
Max. code length
0
Min. code length
0
Truncate leading
0
Truncate ending
0
Code ID setting
B
Insert group selection
0
0
OK
Cancel

Barcode in 2D Setup

1. Symbologies

Symbologies: You have to select barcode type before setting the parameters.



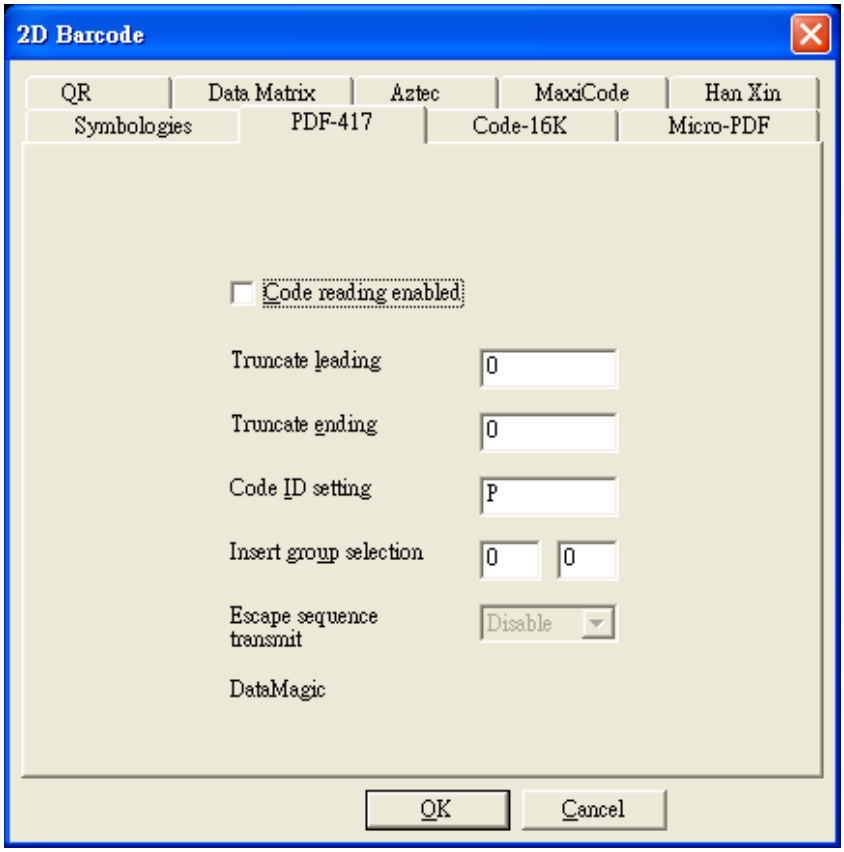
2. PDF-417

Only the AS-8250/8312/9500 can decode PDF-417.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.



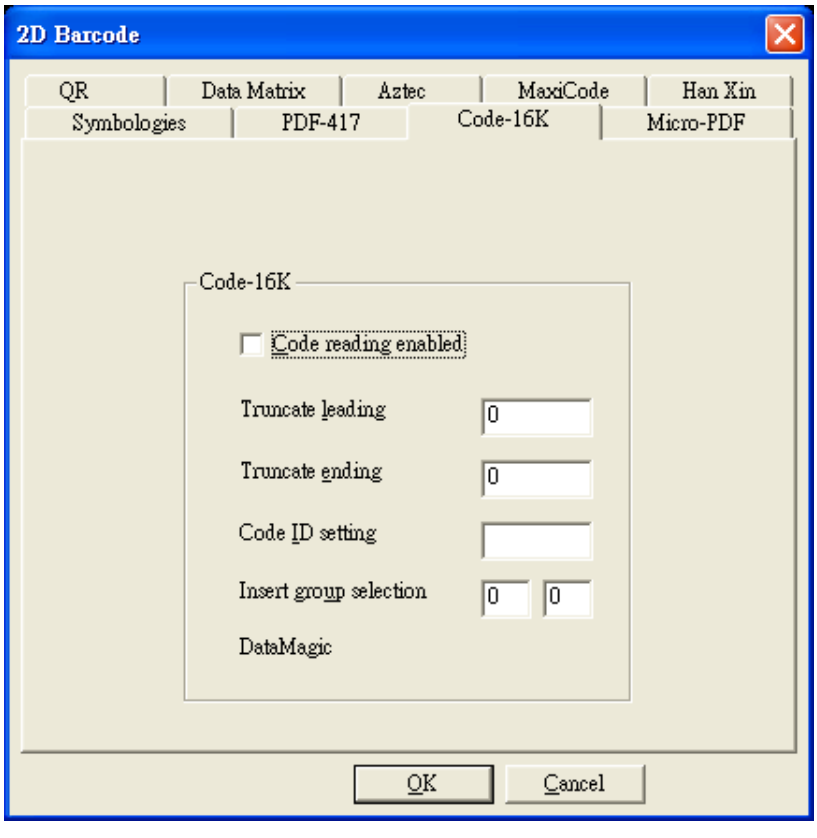
3. Code-16K

Only the AS-8250/8312/9500 can decode Code-16K.

Truncate leading/ending: Refer to Truncate leading/ending of Code-39.

Code Id setting: Refer to Code ID setting of Code-39.

Insertion group selection: Refer to Insertion group selection of Code-39.



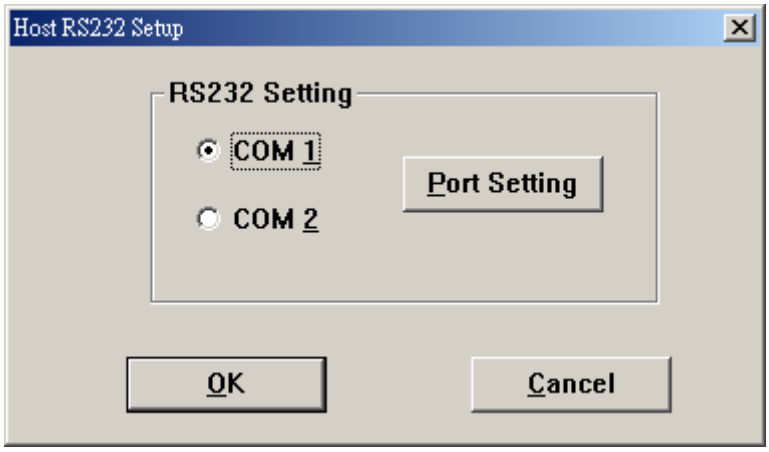
Downloading

1. Host RS-232 Setup

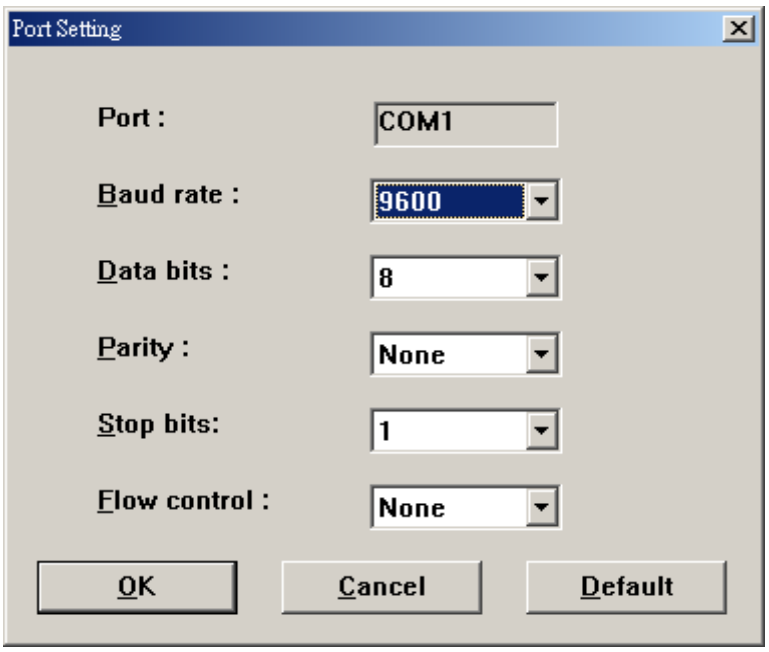
Setup the output port and protocol of host.

Port	Baud Rate	Data Bits	Parity	Stop Bits	Flow Control
COM1	300 BPS	8 bits	None	One bit	None
COM2	600 BPS	7 bits	Odd	Two bits	RTS/CTS
	1200 BPS		Even		Xon/Xoff
	2400 BPS				
	4800 BPS				
	9600 BPS				
	19200 BPS				
	38400 BPS				
	57600 BPS				
	115200BPS				

2. Host RS232 Setup



3. Port Settings



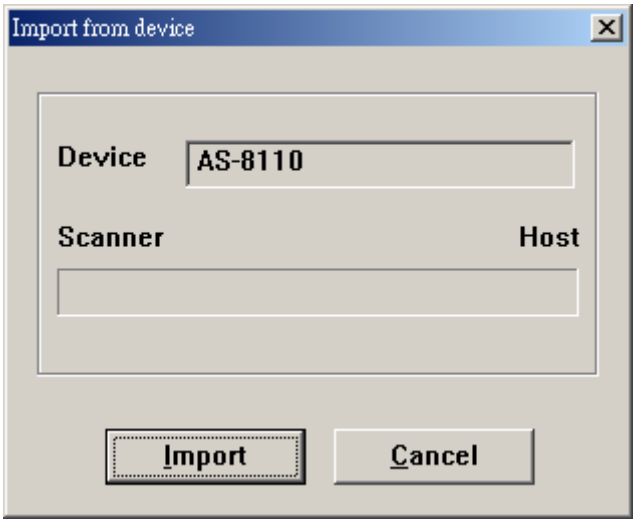
AR-3000 Baud rate default is 115200BPS.

Data Export (Host -> Scanner)

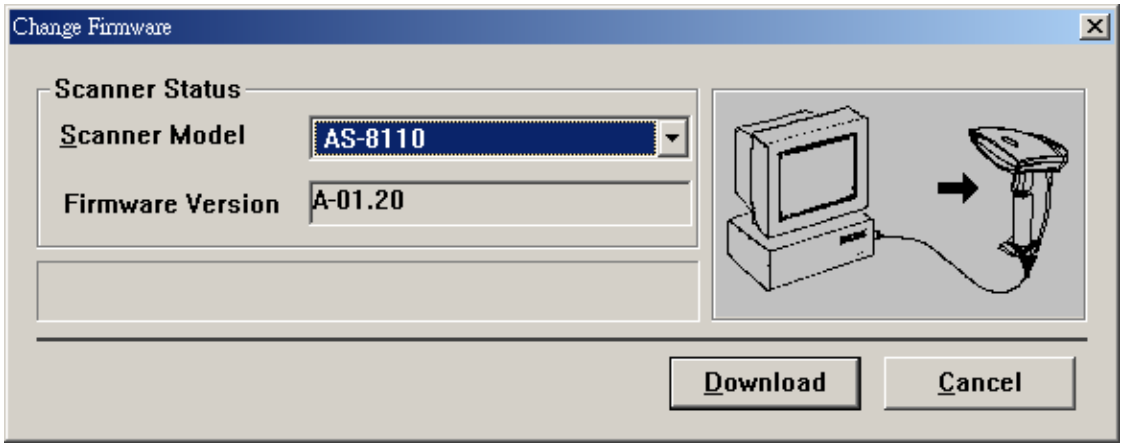
Export the default value from Scan Utility to Scanner.

Data Import (Scanner -> Host)

Import all of the default values from Scanner to Scan Utility.



Download Firmware



ASCII Code Table

L \ H	2	3	4	5	6	7
0	SP	0	@	P	`	p
1	!	1	A	Q	a	q
2	“	2	B	R	b	r
3	#	3	C	S	c	s
4	$	4	D	T	d	t
5	%	5	E	U	e	u
6	&	6	F	V	f	v
7	‘	7	G	W	g	w
8	(	8	H	X	h	x
9	)	9	I	Y	i	y
A	★	:	J	Z	j	z
B	+	;	K	[	k	{
C	,	<	L	\	l	|
D	-	=	M	]	m	}
E	.	>	N	^	n	~
F	/	?	O	_	o	DEL

Example: ASCII ”A” = “41”.