AsReader®

Scan Module Setup Manual

ASR-023B

Revision History

VERSION	DESCRIPTION	REVISED BY	DATE
V1.0	Initial version	Trinity Liu	2020/07/01

Contents

1 Basic Information

Note: some of the settings in this setup manual may temporarily invalidate all the setting barcodes in the product user manual. For example, letter case conversion settings, or some barcode terminator settings, etc. The recovery method is very simple, just unsetting the scan module settings that caused the failure.

1.1. Factory Default Configuration

Communication Mode: USB
Trigger Mode: Manual mode
Terminator: CR

Factory default configuration

Note: After scanning the "Factory Default Configuration" barcode, the device may not be able to scan. In this case, you need to scan the following four barcodes in turn to make the device work properly.

TTL 232

*** 9600bps**

*** No parity**

***1 stop bit**

1.2. Save Current Configuration as Default

The user can set the required configuration , and then scan the following barcode，Save current configuration as default

Save current configuration as default

1.3. Default Configuration

When the user has set the default settings, scan the following barcode to restore the original set of customer configurations

Default configuration

1.4. Open/ Close the Parameter Code

Note: *When you want to set parameters by scanning parameter codes, please scan the following QR code "Open parameter code first to enable this function.*

***Open parameter code**

Close parameter code

2 Trigger Mode

2.1. Manual mode

Detects the change of the button level (Maintain 30ms) to start reading. The reading will be stopped once reading successfully or time out.

***Manual mode-Single key trigger**

2.2. Continuous Mode

The reading engine performs continuous work. Reading successfully or timeout will end the reading. Once reading successfully for timeout, it will automatically trigger the next reading not controlled by the trigger button.

The interval time between two readings in continuous mode is 1 second.

Continuous mode

2.3. Automatic Induction Mode

In automatic induction mode, the scan engine detects the brightness of the surroundings. Reading is triggered when the brightness changes. The reading will be stopped once reading successfully or time out. It will re-enter the detection of the surrounding environment brightness regardless of the last success or failure to read.

Automatic induction mode

2.3.1. Stability of Induction Time

Stability of induction time, Default: 500ms, unit:100ms, range: 0-9900ms

For example:

Set stability of induction time is 200ms

Scan stability of induction time setting code, then scan Numeric Barcodes 0 and2

Set stability of induction time is 1500ms

Scan stability of induction time setting code, then scan Numeric Barcodes 1 and 5

Stability of induction time

2.3.2. Sensitivity Level

Sensitivity can be set for automatic induction mode. There are three levels of sensitivity to choose from, Default: High.

***High**

Middle

Low

2.4. Duration in Scanning

This parameter sets the maximum time decode processing continues during a scan attempt. It is programmable in 0.1 second increments from 0.50 to 25.5 seconds.

To set a duration in scanning, scan the barcode below. Next scan three Numeric Barcodes in appendix that correspond to the desired-on time. Single digit numbers must have a leading zero. For example, to set an on time of 0.5 seconds, scan the barcode below, then scan the "0", "0" and "5" barcodes; to set an on time of 10.5 seconds, scan the barcode below, then scan the "1", "0" and "5" barcodes. To change the selection or cancel an incorrect entry, scan *Cancel* in appendix.

Duration in scanning (Default: 3.0 sec.)

2.5. Output Interval of the Same Code

To avoid reading the same barcode multiple times in continuous mode and automatic induction mode, set the scan engine to allow reading the same barcode after a delay. Output interval of the same code is to refuse to read the same barcode within the set length of time.

Default: 500ms, unit:100ms, range: 0-9900ms

To set output interval of the same code, scan the barcode below. Next scan two Numeric Barcodes in appendix that correspond to the desired time-out. Single digit values must have a leading zero. For example, to set a time-out of 0.5 seconds, scan the barcode below, then scan the “0” and “5” barcodes. To change the selection or cancel an incorrect entry, scan Cancel in appendix.

Output interval of the same code

2.6. Quick set for output Interval of The Same Code

None

Delay 1s

Delay 3s

Delay 5s

Delay 7s

Delay forever

3 Floodlight and Positioning Lights

3.1. Floodlight

- **Lighting when read** (default setting): the floodlight is on when reading, once reading stops, it will be off immediately.
- **Always lighting:** the floodlight will be on since the reading module is turned on.
- **Always close**: the floodlight does not light up under any circumstances.

*** Lighting when read**

Always lighting

Always close

3.2. Positioning Light

- **Lighting when read** (default setting): the positioning light is on when reading, once reading stops, it will be off immediately.
- **Always lighting:** the positioning light will be on since the reading module is turned on.
- **Always close**: the positioning light does not light up under any circumstances.
- **Blinking：** The positioning light blinks when it emits.
- **Non-blinking：** The positioning light does not blink when it emits.

Note: The function of setting positioning light to flash or not to flash only works when the positioning light is set to “Lighting when read" or "Always lighting". To set the positioning light to blink, you must first set it to “Lighting when read" or "Always lighting”.

*** Lighting when read**

Always lighting

Always close

Blinking

Non-blinking

4 Output and Prompt

4.1. Transmit “No Read” Message

Enable this option to transmit “NR” if a symbol does not decode during the timeout period. Any enabled prefix or suffixes are appended around this message.

When disabled, and a symbol cannot be decoded, no message is sent to the host.

Note: After enabling the "No read" prompt function, this function will not take effect until a barcode has been successfully scanned.

***Disable no read**

Enable no read

4.2. Letter Case Conversion

For example the barcode content is: ab123dE，if set to " All uppercase "，the output is: AB123DE； if set to "All lowercase", the output is: ab123de；
if set to " Case inversion", the output is:AB123De.

*** Normal letter case**

All uppercase

All lowercase

Case inversion

4.3. Data Encoding Format

0: Primitive Type

1: GBK(GB2312)

2: UTF-8

Note: For BLE and SPP mode, HID mode is not applicable. Used to decode barcodes encoded in different encoding types.

Primitive type

***GBK**

UTF-8

5 Data Edit

5.1. Code ID

The user can identify different barcode types by CODE ID, and CODE ID USES a character to identify them. See Appendix 3: Code ID

***Disable send code ID**

Enable send code ID

5.2. Terminator

A terminator is a character added after the decoded data. Format: Decode Data +Terminator.

CR: carriage return
LF: line feed
Note: If you use any of the following "TAB", "CRCR", "CR LF CR", then all the setting codes in the product user manual will be invalid.

***None**

CR LF

CR

TAB

CRCR

CR LF CR

5.3. Add Prefixes/ Suffixes

One prefix or two suffixes can be attached to the scanned data for data editing. The operation steps are as follows:

1. **Choose Adding Prefixes/ Suffixes**

Prefix

First Suffix

Second Suffix

2. **Define Prefix/ Suffix Content**
   The setting number corresponding to the prefixes can be found in Appendix 4 Character Comparison Table. Scan the Numeric Barcodes in turn to set prefixes.
   Example: the letter A corresponds to a number of 1065, so you need to scan the barcode of 1, 0, 6, and 5 in sequence.
3. **Scan the barcode below to set the data format you want.**

***Barcode data only**

Prefix+data

Data+Suffix1

Prefix+data+Suffix1

Data+Suffix1+Suffix2

Prefix+Data+Suffix1+Suffix2

5.4. Add Multiple Prefixes/ Suffixes

- **Prefixes**

(1) Scan following barcode “set multiple prefixes”

Set multiple prefixes

(2) The setting number corresponding to the prefixes can be found in Appendix 4 Character Comparison Table. Scan the Numeric Barcodes in turn to set prefixes.

(3) Scan following barcode “Complete setup multiple prefixes/suffixes”

Complete setup multiple prefixes/ suffixes

- **Suffixes**

(1) Scan following barcode “set multiple suffixes”

Set multiple suffixes

(2) The setting number corresponding to the suffixes can be found in Appendix 4 Character Comparison Table. Scan the Numeric Barcodes in turn to set suffixes.

(3) Scan following barcode” Complete setup multiple prefixes/suffixes”

Complete set multiple prefixes/ suffixes

- **Prefixes/ Suffixes Take Effect**

***Output decoding data only**

Data + Suffixes

Prefixes + Data

Prefixes+ Data+ Suffixes

5.5. Hide Data

5.5.1. Hide Head Data

To hide the beginning of the decoded data, it can be configured to hide any length. If the configured length exceeds the length of the barcode data, the entire contents of the current barcode will be hidden.

***Disable**

Enable

Set Hidden Length

Range 1-255. Scan the following barcode, Next scan three Numeric Barcodes in appendix. For example, if you need to hide 16 characters, scan three Numeric Barcodes in turn: 0 1 6

Hide head data-head

5.5.2. Hide Intermediate Data

To hide the middle part of the output decoded data, you can set any length to hide from any starting position. If the starting position exceeds the length of the barcode data, the current barcode is not hidden. If the length of the configuration exceeds the length of the remaining barcode data, all barcode data after the starting position is hidden.

***Disable**

Enable

Set the Start Position of Hidden Intermediate Data

Sets the start position of hidden intermediate data. Range 1-255.Scan the following barcode, Next scan three Numeric Barcodes in appendix, for example, to hide the data after the third character (the fourth begins to hide),scan three Numeric Barcodes in turn: 0 0 3

Set start position of hidden intermediate data

Set Hidden Length

Range 1-255. Scan the following barcode, Next scan three Numeric Barcodes in appendix. For example, if you need to hide 16 characters, scan three Numeric Barcodes in turn: 0 1 6

Set hidden length-intermediate

5.5.3. Hide Tail Data

To hide the tail part of the output decoded data, it can be configured to hide any length. If the configured length exceeds the length of the barcode data, the entire contents of the current barcode will be hidden.

***Disable**

Enable

Set Hidden Length

Range 1-255. Scan the following barcode, Next scan three Numeric Barcodes in appendix. For example, if you need to hide 16 characters, scan three Numeric Barcodes in turn: 0 1 6

Set hidden length-tail

6 Barcode Enable/ Disable

6.1. 1D Barcode Master Switch

Enable

***Disable**

6.2. 2D Barcode Master Switch

Enable

***Disable**

6.3. UPC-A

***Enable**

Disable

Do not transmit UPC-A check bit

***Transmit UPC-A check bit**

6.4. UPC-A Additional Codes

6.4.1. UPC-A 2 Additional Codes

Enable

***Disable**

6.4.2. UPC-A 5 Additional Codes

Enable

***Disable**

6.4.3. UPC-A Additional Code Reading

When there is an additional code, the additional code is also read and displayed

Enable

***Disable**

6.5. UPC-E

***Enable**

Disable

Do not transmit UPC-E check bit

*** Transmit UPC-E check bit**

6.6. UPC-E Additional Codes

6.6.1. UPC-E 2 Additional Codes

Enable

***Disable**

6.6.2. UPC-E 5 Additional Codes

Enable

***Disable**

6.6.3. UPC-E Additional Code Reading

When there is an additional code, the additional code is also read and displayed

Enable

***Disable**

6.7. UPC-E Transfer to UPC-A

If this feature is enabled, all UPC-E barcodes will be read as UPC-A barcodes. The missing bits are made up by four zeros before the last data bit. In addition, the barcode data read also includes the system bit and the check bit.

Enable

***Disable**

6.8. UPC-A Transfer to EAN-13

If this feature is enabled, when the UPC-A barcode is read, the barcode data read will include the system bit, otherwise not.

Enable

***Disable**

6.9. EAN-8

*** Enable**

Disable

6.10. EAN-8 Additional Codes

6.10.1. EAN-8 2 Additional Codes

Enable

***Disable**

6.10.2. EAN-8 5 Additional Codes

Enable

***Disable**

6.10.3. EAN-8 Additional Code Reading

When there is an additional code, the additional code is also read and displayed

Enable

***Disable**

6.11.EAN-13

*** Enable**

***Disable**

6.12.EAN-13 Additional Codes

6.12.1. EAN-13 2 Additional Codes

Enable

***Disable**

6.12.2. EAN-13 5 Additional Codes

Enable

***Disable**

6.12.3. EAN-13 Additional Code Reading

When there is an additional code, the additional code is also read and displayed

Enable

***Disable**

6.13.CODE 128

*** Enable**

Disable

6.14.GS1-128

*** Enable**

Disable

6.15.ISBT-128

*** Enable**

Disable

6.16.Interleaved 2 of 5

***Enable**

Disable

6.16.1. Set Lengths for Interleaved 2 of 5

For example, to decode Interleaved 2 of 5 symbols containing between 4 and 12 characters.

First scan "**I 2 of 5-Length within range"**, then scan **0**, **4**, **1** and **2** (single digit numbers must be preceded by a leading zero). Numeric Barcodes is in appendix. To change the selection or cancel an incorrect entry, scan *Cancel* in appendix.

I 2 of 5 - Length within range

I 2 of 5 - Any length

6.17.Matrix 2 of 5

Enable

***Disable**

6.17.1. Set Lengths for Matrix 2 of 5

For example, to decode Matrix 2 of 5 barcodes containing between 4 and 12 characters, first, you should scan the following barcode "**Matrix 2 of 5 - Length within range"**, then scan **0**, **4**, **1**, **2** (single digit numbers must be preceded by a leading zero). *Numeric Barcodes* is in appendix. To change the selection or cancel an incorrect entry, scan *Cancel* in appendix.

Matrix 2 of 5 - Length within range

Matrix 2 of 5 - Any length

6.17.2. Transmit Matrix 2 of 5 Check Bit

Enable

***Disable**

6.18. Industrial 2 of 5

Enable

***Disable**

6.18.1. Set Lengths for Industrial 2 of 5

For example, to decode Industrial 2 of 5 barcodes containing between 4 and 12 characters, first, you should scan the following barcode "**D 2 of 5 - Length within range"**, then scan **0**, **4**, **1**, **2** (single digit numbers must be preceded by a leading

zero). *Numeric Barcodes* is in appendix. To change the selection or cancel an incorrect entry, scan *Cancel* in appendix.

D 2 of 5 - Length within range

D 2 of 5 - Any length

6.19.Standard 2 of 5

Enable

***Disable**

6.19.1. Set Lengths for Standard 2 of 5

For example, to decode Standard 2 of 5 barcodes containing between 4 and 12 characters, first, you should scan the following barcode "**Standard 2 of 5 - Length within range"**, then scan **0**, **4**, **1**, **2** (single digit numbers must be preceded by a

leading zero). *Numeric Barcodes* is in appendix. To change the selection or cancel an incorrect entry, scan *Cancel* in appendix.

Standard 25 - Length within range

Standard 25 - Any length

6.19.2. Transmit Standard 2 of 5 Check Bit

Enable

***Disable**

6.20.Code 39

***Enable**

Disable

6.20.1. Code39 Length

Any length code39

6.20.2. Code39 Check Bit

Transmit

***Do not transmit**

6.20.3. Transmit the Start and Ending Symbol of Code 39

***Disable**

Enable

6.21.Code 39 Full ASCII

Enable

***Disable**

6.22.Code 32

By default, the prefix A is not displayed. To display the Prefix A, you need to enable "Code32 Add Prefix A".

After code 32 barcode is disabled, code 32 barcode will be read as code 39. If code 39 is not disabled, then when code 32 is scanned, it is read as code 39 and a string of letters is read. If you want to disable code 32 completely, you have to disable code 39 as well. (Code 32 barcode and Code39 barcode are closely connected, not only the encoding method is the same, but also the identification effect of Code 32 barcode will be automatically converted to 6-bit Code39 Code).

Enable

***Disable**

6.22.1. Code32 Add Prefix A

Enable

***Disable**

6.23.Code 93

Enable

***Disable**

6.24.Code 11

Enable

***Disable**

6.24.1. Transmit Check Bit

Enable

***Disable**

6.25.Codabar

Enable

***Disable**

Disable start and ending symbol

*** Enable start and ending symbol**

6.26.PLESSEY

Enable

***Disable**

6.27.MSI

Enable

***Disable**

6.27.1. Length

Any length can read

6.28.GS1-Databar

Enable

***Disable**

6.29.ITF14

Enable

***Disable**

Transmit check bit

*** Do not transmit check bit**

6.30.GS1 Composite Code

It is recommended to enable 1D barcode master switch and 2D barcode master switch before enabling GS1 composite code, otherwise GS1 composite code may not be really enabled.

Enable

***Disable**

6.31.QR Code

*** Enable**

Disable

6.31.1. Read Reverse CR Code

***Only read normal code**

Read normal/reverse code

6.32.Data Matrix

*** Enable**

Disable

6.32.1. Read Reverse Data Matrix

***Only read normal code**

Only read reverse code

Read normal/reverse code

6.33.PDF 417

***Enable**

Disable

6.33.1. Read Reverse PDF417

***Only read normal code**

Only read reverse code

Read normal/reverse code

6.34.Aztec Code

Enable

***Disable**

6.35.Maxi Code

Enable

***Disable**

6.36.Hanxin Code

Encode

***Disable**

Appendix 1: Numeric Barcodes

For parameters requiring specific numeric values, scan the appropriately numeric barcode(s).

0

1

2

3

4

5

6

7

8

9

Appendix 2: Cancel

To change the selection or cancel an incorrect entry, scan the barcode below.

Cancel

Appendix 3: Code ID

Code Character	Code Type
A	UPC-A, UPC-E, EAN-8, EAN-13
B	Code 39, Code 32
C	Codabar
D	Code 128, ISBT 128
E	Code 93
F	Interleaved 2 of 5/ITF, ITF14
G	Industrial 2 of 5, Standard 2 of 5
H	CODE11
J	MSI, MSI/Plessey
K	UCC/EAN-128/GS1-128
L	Bookland EAN/ISBN，ISSN
R	GS1 DataBar-14, GS1 DataBar Limited, GS1 DataBar Expanded, RSS
V	Matrix 2 of 5
r	PDF417
u	DataMatrix (DM)
q	QR
a	Aztec Code
x	Maxi Code
c	HanXin

Appendix 4: Character Comparison Table

Scan Value	HEX Value	Keyboard Function Key	Keyboard Ctrl Combination Key
1000	00h	Null	CTRL 2
1001	01h	Keypad Enter	CTRL A
1002	02h	Caps lock	CTRL B
1003	03h	Right Arrow	CTRL C
1004	04h	Up Arrow	CTRL D
1005	05h	Null	CTRL E
1006	06h	Null	CTRL F
1007	07h	Enter	CTRL G
1008	08h	Left Arrow	CTRL H
1009	09h	Horizontal Tab	CTRL I
1010	0Ah	Down Arrow	CTRL J
1011	0Bh	Vertical Tab	CTRL K
1012	0Ch	Backspace	CTRL L
1013	0Dh	Enter	CTRL M
1014	0Eh	Insert	CTRL N
1015	0Fh	Esc	CTRL O
1016	10h	F11	CTRL P
1017	11h	Home	CTRL Q
1018	12h	Print Screen	CTRL R
1019	13h	Delete	CTRL S
1020	14h	Tab + shift	CTRL T
1021	15h	F12	CTRL U
1022	16h	F1	CTRL V
1023	17h	F2	CTRL W
1024	18h	F3	CTRL X
1025	19h	F4	CTRL Y
1026	1Ah	F5	CTRL Z
1027	1Bh	F6	CTRL [
1028	1Ch	F7	CTRL \

1029	1Dh	F8	CTRL]
1030	1Eh	F9	CTRL 6
1031	1Fh	F10	CTRL -
1032	20h	Space	Space
1033	21h	/A	!
1034	22h	/B	‘
1035	23h	/C	#
1036	24h	/D	$
1037	25h	/E	%
1038	26h	/F	&
1039	27h	/G	‘
1040	28h	/H	(
1041	29h	/I	)
1042	2Ah	/J	*
1043	2Bh	/K	+
1044	2Ch	/L	,
1045	2Dh	-	-
1046	2Eh	.	.
1047	2Fh	/	/
1048	30h	0	0
1049	31h	1	1
1050	32h	2	2
1051	33h	3	3
1052	34h	4	4
1053	35h	5	5
1054	36h	6	6
1055	37h	7	7
1056	38h	8	8
1057	39h	9	9
1058	3Ah	/Z	:
1059	3Bh	%F	;
1060	3Ch	%G	<
1061	3Dh	%H	=
1062	3Eh	%I	>
1063	3Fh	%J	?

1064	40h	%V	@
1065	41h	A	A
1066	42h	B	B
1067	43h	C	C
1068	44h	D	D
1069	45h	E	E
1070	46h	F	F
1071	47h	G	G
1072	48h	H	H
1073	49h	I	I
1074	4Ah	J	J
1075	4Bh	K	K
1076	4Ch	L	L
1077	4Dh	M	M
1078	4Eh	N	N
1079	4Fh	O	O
1080	50h	P	P
1081	51h	Q	Q
1082	52h	R	R
1083	53h	S	S
1084	54h	T	T
1085	55h	U	U
1086	56h	V	V
1087	57h	W	W
1088	58h	X	X
1089	59h	Y	Y
1090	5Ah	Z	Z
1091	5Bh	%K	[
1092	5Ch	%L	\
1093	5Dh	%M	]
1094	5Eh	%N	^
1095	5Fh	%O	_
1096	60h	%W	‘
1097	61h	+A	a
1098	62h	+B	b

1099	63h	+C	c
1100	64h	+D	d
1101	65h	+E	e
1102	66h	+F	f
1103	67h	+G	g
1104	68h	+H	h
1105	69h	+I	i
1106	6Ah	+J	j
1107	6Bh	+K	k
1108	6Ch	+L	l
1109	6Dh	+M	m
1110	6Eh	+N	n
1111	6Fh	+O	o
1112	70h	+P	p
1113	71h	+Q	q
1114	72h	+R	r
1115	73h	+S	s
1116	74h	+T	t
1117	75h	+U	u
1118	76h	+V	v
1119	77h	+W	w
1120	78h	+X	x
1121	79h	+Y	y
1122	7Ah	+Z	z
1123	7Bh	%P	{
1124	7Ch	%Q	|
1125	7Dh	%R	}
1126	7Eh	%S	~
1127	7Fh		Undefined