AMBIR®

USER GUIDE · 2D BARCODE SCANNER SERIES

BR212 & BR312

Wireless 2D Barcode Scanners

BR212
Wireless 2D Barcode Scanner

BR312
Wireless 2D Barcode Scanner

MODELS BR212-AS · BR312-AS

REVISION 2026_V_1

WWW.AMBIR.COM

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Programming your BR-series scanner. Scan the setup codes in this guide with the scanner to configure behavior, symbologies, output format, and prefixes or suffixes.

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01 · GETTING STARTED

About This Guide

This document is the configuration and programming reference for the AMBIR® **BR212** and **BR312** 2D wireless barcode scanners. The two models share the same firmware and programming codes, and the instructions in this guide apply equally to both.

The scanner is configured by scanning the setup codes printed throughout this guide. Each code changes one setting on the scanner. Default values are marked with an orange asterisk (*) and highlighted in tint.

How to program your scanner

1. Power on the scanner and confirm it is connected to your host (see *Quick Start*, page 5).
2. Open this guide to the section for the setting you want to change.
3. Point the scanner at the target setup code and pull the trigger. A confirmation tone indicates the setting was accepted.
4. For multi-step settings (prefix, suffix, hiding digits), scan the codes in the order listed in the section.
5. To undo all changes at any time, scan the *Restore Default Settings* code on page 6.

BEFORE YOU BEGIN

Keep the scanner's 2.4 GHz USB receiver (dongle) connected to a powered USB port on the host computer during programming. The receiver stores some settings on behalf of the scanner.

Conventions used in this guide

Orange tint with asterisk (*). Factory default value. The scanner ships with this setting already active.

Setup code. A small black-and-white 2D code the scanner reads to change an internal setting. Setup codes do not send data to the host when scanned.

Data code. Any normal barcode printed on a product, document, or ID. Scanning a data code sends its decoded text to the host as if typed on a keyboard.

02 · GETTING STARTED

Product Overview

The AMBIR BR212 and BR312 are durable cordless 2D imager scanners built for healthcare reception desks, pharmacy counters, financial services, legal offices, and point-of-sale environments. They capture standard 1D barcodes, 2D codes (QR, Data Matrix, PDF417, Aztec), and mobile-screen codes reliably, and transmit to the host through a 2.4 GHz USB receiver.

Indicator Lights & Sounds

INDICATOR	MEANING
Single green beep	Successful scan — data transmitted to host.
Double beep	Setup code accepted; setting changed.
Long low tone	Transmission error — receiver not found or host buffer full.
Slow blue flash	Searching for its paired USB receiver.
Solid blue	Connected to the USB receiver.
Red	Low battery — charge via USB cable.

Charging

Connect the supplied USB cable between the scanner and any powered USB port. The charge indicator turns red while charging and green when the battery is full. A full charge typically takes 3–4 hours.

03 · GETTING STARTED

Quick Start

The BR-series scanners are shipped pre-paired with the USB receiver in the box. Follow the three-step setup to begin scanning.

1 · Plug in the USB receiver

Insert the small USB receiver (dongle) into a free USB port on your host computer. Windows will recognize it automatically as a standard HID keyboard — no drivers required.

2 · Power on the scanner

Pull the trigger briefly to wake the scanner. The indicator light turns blue when the scanner has located its paired receiver. This typically happens within 1–2 seconds of powering on.

3 · Test with any barcode

Open any text editor (Notepad, Word, your EHR or POS application) with the cursor in a text field and scan any barcode. The decoded value will appear as if typed on the keyboard, followed by a carriage return by default.

2.4 GHZ CORDLESS RANGE

The BR212 and BR312 operate on the 2.4 GHz ISM band and maintain a line-of-sight range of approximately 30 meters (100 ft). Range may be reduced by metal shelving, walls, and nearby 2.4 GHz wireless networks.

Inventory (offline) mode

The BR-series supports an **inventory mode** that stores scans in the scanner's internal memory when the host is out of range. When the receiver comes back into range, scan the *Data Upload* code to transfer the stored scans. See section 1.6 on page 10.

Need to start over

To return the scanner to its factory configuration at any time, scan the *Restore Default Settings* code on page 6. This clears all programmed prefixes, suffixes, and symbology changes.

PART I · BASIC SETTINGS

Version, Defaults & Language

The codes in this section control firmware version display, factory defaults, and keyboard language for data output.

1.1 · Version Display

Scan this code to output the scanner's firmware version and model identifier to the host. Useful when contacting AMBIR Support.



Display version information

1.2 · Default Settings

Restore the scanner to its factory configuration, or lock in a custom default profile.



* Restore default settings

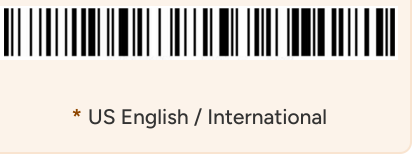


Set current configuration as default

1.3 · BASIC SETTINGS

Keyboard Language

Set the keyboard layout the scanner uses when transmitting characters. Match this to the operating-system keyboard layout on the host computer. **US English is the default.**



* US English / International



American English



German



French



Spanish



Italian



Japanese



Belgian French



Portuguese



British English



German iOS (Apple)



Brazilian Portuguese



Russian



Czech



Italian 142



Turkish Q



Turkish F



Swedish / Finnish

1.3 · CONTINUED

Keyboard Language (cont.)



TIP

If scanned characters appear as the wrong letters on the host (for example, `Z` instead of `Y`), the scanner's keyboard language does not match the host. Scan the correct layout from this section to resolve.

1.4 · BASIC SETTINGS

Encoding

Select the character encoding the scanner uses when transmitting multi-byte barcode data.



GBK encoding



* UTF encoding

1.5 · BASIC SETTINGS

Sound & Buzzer

Volume



Mute



Low volume



Medium volume



* High volume



Buzzer frequency 2 kHz



* Buzzer frequency 2.7 kHz

Sound Source



Scan-head sound



* MCU sound

1.6 · BASIC SETTINGS

Transmission Mode

In **Normal** mode, each scan is transmitted to the host immediately. In **Inventory** mode, scans are stored to internal memory for later upload — useful when the scanner is out of range of its receiver.



* Enter Normal mode



Enter Inventory mode

Inventory Controls



Upload stored data



Display total stored entries



Clear inventory memory

INVENTORY MODE WORKFLOW

Scan *Enter Inventory mode*, capture codes as usual while disconnected, return within range, then scan *Upload stored data*. The scanner will transmit all stored entries in the order scanned.

1.7 · BASIC SETTINGS

Sleep Timer

Set how long the scanner waits without activity before entering low-power sleep. Press the trigger to wake.



30 seconds



1 minute



* 2 minutes



5 minutes



10 minutes



30 minutes



Never sleep



Sleep now

1.8 · BASIC SETTINGS

Battery Status & Vibration



Display current battery level



Vibration on



* Vibration off

1.9 · BASIC SETTINGS

Transfer Speed

Controls how quickly decoded characters are sent to the host. Use a slower speed with slower hosts (terminal emulators, older POS systems) if characters are being dropped.



* Fast



Medium



Low



Ultra-low

1.10 · BASIC SETTINGS

Wireless Mode

The BR212 and BR312 communicate with the host over 2.4 GHz wireless with the supplied USB receiver, or as USB HID when plugged in via cable. If the scanner loses its receiver or a replacement receiver is installed, scan *Force pair with receiver* to pair them again.



* 2.4 GHz wireless mode



Android input mode (USB OTG)



Virtual serial port (USB VCP)



Force pair with receiver

VIRTUAL SERIAL PORT

Use this mode when an application requires a COM-port interface instead of keyboard-wedge input. Install the AMBIR virtual-COM driver on the host first; contact AMBIR Support for the current driver package.

1.11 · BASIC SETTINGS

GS Conversion Character

Converts the non-printable `GS` (Group Separator, ASCII 29) character to a printable placeholder in GS1-128 and similar concatenated barcodes.



Turn GS conversion on



* Turn GS conversion off

1.12 · BASIC SETTINGS

Prefix & Suffix (Quick Set)

To add a short prefix or suffix, scan the appropriate setup code below, then scan each character from the Visible Character Table on pages 37–40. Maximum length is 32 bytes. To clear a prefix or suffix, scan the setup code followed by any ordinary barcode. See Part V for full instructions.



Set prefix



Set suffix

1.13 · BASIC SETTINGS

Hide Barcode Digits

Trim characters from the start or end of every transmitted barcode. Scan *Hide the front* or *Hide the back*, then scan a digit code (1–4) to specify how many characters to remove.



Hide the front of the barcode



Hide the back of the barcode



Hide 1 digit



Hide 2 digits



Hide 3 digits



Hide 4 digits

1.14 · BASIC SETTINGS

Function Key at End of Scan

Append a keystroke automatically after every scan — typically used to submit forms or move to the next field.



* Append Enter (Carriage Return)



Append Line Feed



Append CR + LF



Append Tab



Disable append

1.15 · BASIC SETTINGS

Case Conversion



Convert all output to lowercase



Convert all output to uppercase



Swap case (upper ↔ lower)



* Disable case conversion

PART II · FUNCTION MODE

Trigger, Interval, Aim & Illumination

Controls the scanner's working behavior — when it reads, how often it re-reads the same code, whether the aimer and illumination LEDs are active.

2.1 · Trigger Mode



7E9AA2

* Manual trigger mode



7E9AA0

Automatic (continuous) scan mode

2.2 · Same-Barcode Re-read Interval

In automatic mode, sets the minimum time the scanner must wait before re-reading an identical barcode. Prevents duplicate scans of the same label.



7EFD61

50 ms



7EFD62

100 ms



7EFD63

150 ms



7EFD64

200 ms



7EFD65

* 250 ms



7EFD66

300 ms



7EFD68

400 ms



7EFD610

500 ms



7EFD616

800 ms

2.3 · FUNCTION MODE

Enable / Disable All Barcodes

Quickly turn entire families of symbologies on or off. Use as a starting point before enabling specific codes individually in Part IV.



FFFEFD

* Enable all 1D & 2D codes



FFFEFC

Disable all 1D & 2D codes



FFFEFB

Enable all 1D codes



FFFEFA

Disable all 1D codes



FFFEF9

Enable all 2D codes



FFFEF8

Disable all 2D codes

2.4 · FUNCTION MODE

Aiming & Illumination



B66771

* Aiming light on



B66770

Aiming light off



B66781

* Illumination LED on



B66780

Illumination LED off

PART III · OUTPUT CONFIGURATION

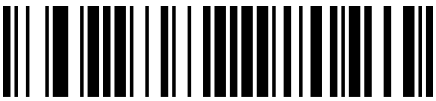
Enter, Newline & Additional Codes

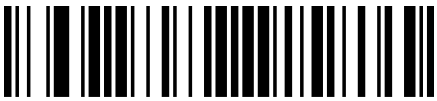
Additional controls over the exact characters transmitted at the end of each scan, and whether supplemental 2-digit / 5-digit addenda on UPC and EAN codes are transmitted.

3.1 · Enter / Newline


7CC791
* Add Enter


7CC790
Remove Enter


7CC781
Add Newline


7CC780
Remove Newline

3.2 · Additional (UPC / EAN Addenda) Codes


6787D1
Enable 2-digit additional code


6787D0
* Disable 2-digit additional code


6787C1
Enable 5-digit additional code


6787C0
* Disable 5-digit additional code


678791
Require UPC/EAN to have additional code


678790
* Additional code not required

4.1 · BARCODE SYMBOLOGIES

Airline 2 of 5 – Codablock A

Enable or disable decoding for each symbology type. Disabling unused symbologies speeds up decoding on busy labels with multiple codes. Symbologies are listed alphabetically; the range covered is shown at the top of each page.

Airline 2 of 5



Enable



* Disable

Aztec Code



Enable



* Disable

Codabar



* Enable



Disable

Codablock A



Enable



* Disable

4.1 · CONTINUED

Codablock F – Code 32

Codablock F



8CA771

Enable



8CA770

* Disable

Code 128



667791

* Enable



667790

Disable

Code 11



666791

Enable



666790

* Disable

Code 32



6687B1

Enable



6687B0

* Disable

4.1 · CONTINUED

Code 39 – Data Matrix

Code 39



667771

* Enable



667770

Disable

Code 93



667781

Enable



667780

* Disable

Composite



A66761

Enable



A66760

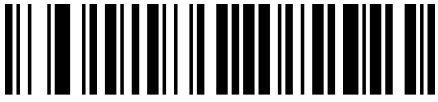
* Disable

Data Matrix



66B791

* Enable



66B790

Disable



A7F7D1

Enable DM mirror decoding



A7F7D0

* Disable DM mirror decoding

4.1 · CONTINUED

Data Matrix – EAN / UPC

Data Matrix (cont.)



66B780

* Disable DM inverse color



66B883

Enable DM inverse color

EAN / UPC (master enable)



6677C1

* Enable



6677C0

Disable



6787D1

Enable 2-digit addendum



6787D0

* Disable 2-digit addendum



6787C1

Enable 5-digit addendum



6787C0

* Disable 5-digit addendum



7C8A60

Require addendum



678790

* Addendum not required

4.1 · CONTINUED

EAN / UPC – EAN-8

EAN / UPC (master enable) (cont.)



678761

Add space before addendum



678760

Cancel space before addendum



A87860

* Enable direct-color EAN/UPC



A87861

Enable direct & reverse color

EAN-8



6687A1

* Enable



6687A0

Disable



6DF761

* Transmit EAN-8 check digit



6DF760

Omit EAN-8 check digit



6DB781

Convert EAN-8 to EAN-13



6DB780

* Don't convert EAN-8 to EAN-13

4.1 · CONTINUED

EAN-13 – GS1 DataBar Expanded

EAN-13



668771

* Enable



668770

Disable



6DF781

* Transmit EAN-13 check digit



6DF780

Omit EAN-13 check digit



A87781

Remove check-code spaces



A87780

* Keep check-code spaces

Full ASCII Code 39



6687D1

Enable



6687D0

Disable

GS1 DataBar Expanded



66A7B1

Enable



66A7B0

* Disable

4.1 · CONTINUED

GS1 DataBar Limited – Hong Kong 2 of 5

GS1 DataBar Limited



66A7A1

Enable



66A7A0

* Disable

GS1 DataBar Omnidirectional



66A791

Enable



66A790

* Disable

Han Xin Code



8D9771

Enable



8D9770

* Disable

Hong Kong 2 of 5 (China Post)



6697C1

Enable



6697C0

* Disable

NOTE

When a postal symbology is enabled, disable all others — only one postal format can be active at a time.

4.1 · CONTINUED

Interleaved 2 of 5 – Micro PDF417

Interleaved 2 of 5

6677B1
* Enable

6677B0
Disable

Matrix 2 of 5

6667B1
Enable

6667B0
* Disable

MaxiCode

66C7A1
Enable

66C7A0
* Disable

Micro PDF417

66A7D1
Enable

66A7D0
* Disable

4.1 · CONTINUED

Micro QR Code – Pharmacode

Micro QR Code



66C7B1

Enable



66C7B0

* Disable

MSI



668781

Enable



668780

* Disable

PDF417



666761

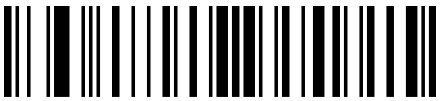
* Enable



666760

Disable

Pharmacode



ACF7B1

Enable



ACF7B0

* Disable

4.1 · CONTINUED

QR Code – Straight 2 of 5 Industrial

QR Code



66C781

* Enable



66C780

Disable



A6E760

* Allow URL QR codes



A6E761

Block URL QR codes



A86761

Enable QR mirror decoding



A86760

* Disable QR mirror decoding



66C791

Enable QR inverse color



66C790

* Disable QR inverse color

Straight 2 of 5 Industrial



667761

Enable



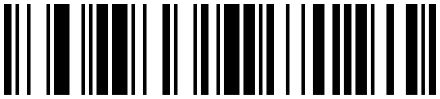
667760

* Disable

4.1 · CONTINUED

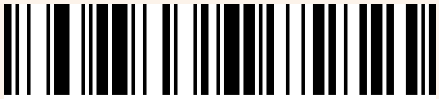
Telepen – UPC-A

Telepen



6667D1

Enable



6667D0

* Disable

Trioptic Code



669781

Enable



669780

* Disable

UPC-A



6687C1

* Enable



6687C0

Disable



6DB7D1

* Transmit UPC-A check digit



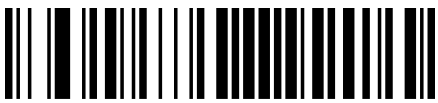
6DB7D0

Omit UPC-A check digit



6DB771

* Transmit number-system character



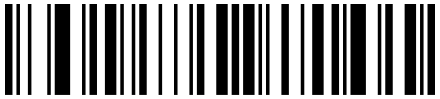
6DB770

Omit number-system character

4.1 · CONTINUED

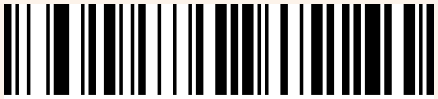
UPC-A – UPC-E

UPC-A (cont.)



6DB7A1

Convert UPC-A to EAN-13



6DB7A0

* Don't convert UPC-A to EAN-13

UPC-E



668761

* Enable



668760

Disable



6DB7C0

* Omit UPC-E check digit



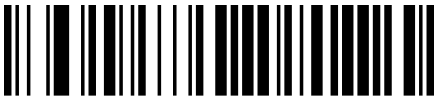
6DB7C1

Transmit UPC-E check digit



6DB790

* Omit UPC-E lead character



6DB791

Transmit UPC-E lead character



6DB7B1

Expand UPC-E to 12 digits



6DB7B0

* Don't expand UPC-E to 12 digits

4.2 · BARCODE SYMBOLOGIES

Code ID Output

Prefix each scan with a one-character identifier that tells the host which symbology produced the data. Useful for data validation and routing logic on the host side.



Enable Code ID output



* Disable Code ID output

Code ID Reference

SYMBOLOGY	ID	SYMBOLOGY	ID
Code 128	j	Plessey	n
GS1-128	j	Matrix 2 of 5	m
Code 39	b	Industrial 2 of 5	F
EAN-8	D	IATA 2 of 5	f
EAN-13	d	China Post 2 of 5	Q
UPC-E	E	Code 11	h
UPC-A	c	MSI	g
Interleaved 2 of 5	e	Code 93	i
ITF-14	–	RSS-14	y
Codabar	a	RSS-Limited	{
RSS-Expanded	}	GM Code	X
QR Code	s	Micro PDF417	R
PDF417	r	Micro QR	-

4.2 · CONTINUED

Code ID Output (cont.)

Code ID Reference (cont.)

SYMBOLOGY	ID	SYMBOLOGY	ID
Data Matrix	w	USPS Postnet	P
Aztec Code	z	USPS Intelligent Mail	–
MaxiCode	x	Royal Mail	–
Han Xin Code	H	USPS Planet	L
KIX Post	K	Australian Post	A

PART V · PREFIX & SUFFIX

Programming Prefixes and Suffixes

Use this section to program up to 32 bytes of prefix or suffix characters appended to every scan. Characters are selected from the Control Character Table (ASCII 0–31) and the Visible Character Table (ASCII 32–127) that follow.

How to program

1. Scan *Set Prefix* or *Set Suffix* from the pair below.
2. Scan each character from the appropriate table (pages 34–36 for control characters, pages 37–40 for visible characters), in the order you want them transmitted.
3. For control characters (Enter, Tab, Arrow keys, F-keys), first choose an escape character set (below) that matches how your host handles those keystrokes.

To clear an existing prefix or suffix, scan *Set Prefix* or *Set Suffix* and then scan any ordinary barcode.



Set prefix



Set suffix

5.2 · Escape Character Sets

The Control Character Table offers five escape sets (0–4) that translate non-printable ASCII characters into keystrokes the host OS understands. Pick the set that matches the column behavior you want, then scan your control characters.



* Escape set 0 (default)



Escape set 1



Escape set 2



Escape set 3



Escape set 4

5.3 · PREFIX / SUFFIX

Control Character Table

ASCII 1–31. Each row shows which keystroke is produced under each escape set. Scan the setup code in the final column.

HEX	ASCII	SET 0	SET 1	SET 2	SET 3	SET 4	CODE
01	SOH	NUL	Home	Ctrl+A	Alt+001	Keypad Enter	%%01
02	STX	Ctrl+B	End	Ctrl+B	Alt+002	CapsLock	%%02
03	ETX	Ctrl+C	↑	Ctrl+C	Alt+003	→	%%03
04	EOT	*Custom 1	↓	Ctrl+D	Alt+004	↑	%%04
05	ENQ	*Custom 2	←	Ctrl+E	Alt+005	NUL	%%05
06	ACK	*Custom 3	→	Ctrl+F	Alt+006	NUL	%%06
07	BEL	*Custom 4	Shift+Tab	Ctrl+G	Alt+007	Enter	%%07
08	BS	Backspace	Backspace	Backspace	Alt+008	←	%%08
09	HT	Tab	Tab	Tab	Alt+009	Tab	%%09
0A	LF	Enter	Enter	Ctrl+J	Alt+010	↓	%%0A
0B	VT	NUL	NUL	Ctrl+K	Alt+011	Tab	%%0B
0C	FF	NUL	NUL	Ctrl+L	Alt+012	Delete	%%0C
0D	CR	Enter	Enter	Enter	Alt+013	Enter	%%0D

5.3 · CONTINUED

Control Character Table (cont.)

HEX	ASCII	SET 0	SET 1	SET 2	SET 3	SET 4	CODE
0E	SO	F1	Page Up	Ctrl+N	Alt+014	Insert	%%0E
0F	SI	F2	Page Down	Ctrl+O	Alt+015	Esc	%%0F
10	DLE	F3	F11	Ctrl+P	Alt+016	F11	%%10
11	DC1	F4	NUL	Ctrl+Q	Alt+017	Home	%%11
12	DC2	F5	NUL	Ctrl+R	Alt+018	PrintScreen	%%12
13	DC3	F6	NUL	Ctrl+S	Alt+019	Backspace	%%13
14	DC4	F7	NUL	Ctrl+T	Alt+020	Shift+Tab	%%14
15	NAK	F8	F12	Ctrl+U	Alt+021	F12	%%15
16	SYN	F9	F1	Ctrl+V	Alt+022	F1	%%16
17	ETB	F10	F2	Ctrl+W	Alt+023	F2	%%17
18	CAN	F11	F3	Ctrl+X	Alt+024	F3	%%18
19	EM	F12	F4	Ctrl+Y	Alt+025	F4	%%19
1A	SUB	NUL	F5	Ctrl+Z	Alt+026	F5	%%1A
1B	ESC	Esc	F6	Ctrl+[	Alt+027	F6	%%1B

5.3 · CONTINUED

Control Character Table (cont.)

HEX	ASCII	SET 0	SET 1	SET 2	SET 3	SET 4	CODE
1C	FS	Alt+028	F7	Ctrl+\	Alt+028	F7	
1D	GS	Alt+029	F8	Ctrl+]	Alt+029	F8	
1E	RS	NUL	F9	Ctrl+^	Alt+030	F9	
1F	US	NUL	F10	Ctrl+_	Alt+031	F10	

5.4 · PREFIX / SUFFIX

Visible Character Table

ASCII 32–57. Scan the adjacent setup code to include the character in the prefix or suffix being programmed.

HEX	CHARACTER	CODE	HEX	CHARACTER	CODE
20	Space	%%20	2D	-	%%2D
21	!	%%21	2E	.	%%2E
22	"	%%22	2F	/	%%2F
23	#	%%23	30	0	%%30
24	$	%%24	31	1	%%31
25	%	%%25	32	2	%%32
26	26 reserved	—	33	3	%%33
27	27 reserved	—	34	4	%%34
28	(	%%28	35	5	%%35
29	)	%%29	36	6	%%36
2A	*	%%2A	37	7	%%37
2B	+	%%2B	38	&	%%26
2C	,	%%2C	39	'	%%27

5.4 · CONTINUED

Visible Character Table (cont.)

ASCII 58–83.

HEX	CHARACTER	CODE	HEX	CHARACTER	CODE
3A	:	%%3A	47	G	%%47
3B	;	%%3B	48	H	%%48
3C	<	%%3C	49	I	%%49
3D	=	%%3D	4A	J	%%4A
3E	>	%%3E	4B	K	%%4B
3F	?	%%3F	4C	L	%%4C
40	@	%%40	4D	M	%%4D
41	A	%%41	4E	N	%%4E
42	B	%%42	4F	O	%%4F
43	C	%%43	50	P	%%50
44	D	%%44	51	Q	%%51
45	E	%%45	52	R	%%52
46	F	%%46	53	S	%%53

5.4 · CONTINUED

Visible Character Table (cont.)

ASCII 84–109.

HEX	CHARACTER	CODE	HEX	CHARACTER	CODE
54	T	%%54	61	a	%%61
55	U	%%55	62	b	%%62
56	V	%%56	63	c	%%63
57	W	%%57	64	d	%%64
58	X	%%58	65	e	%%65
59	Y	%%59	66	f	%%66
5A	Z	%%5A	67	g	%%67
5B	[	%%5B	68	h	%%68
5C	\	%%5C	69	i	%%69
5D	]	%%5D	6A	j	%%6A
5E	^	%%5E	6B	k	%%6B
5F	_	%%5F	6C	l	%%6C
60	`	%%60	6D	m	%%6D

5.4 · CONTINUED

Visible Character Table (cont.)

ASCII 110–127, plus Latin extensions Ç / ç.

HEX	CHARACTER	CODE	HEX	CHARACTER	CODE
6E	n		78	x	
6F	o		79	y	
70	p		7A	z	
71	q		7B	{	
72	r		7C	|	
73	s		7D	}	
74	t		7E	~	
75	u		7F	DEL	
76	v		C7	Ç	
77	w		E7	ç	

APPENDIX A · REFERENCE

Specifications

MODEL	BR212 · BR312
RESOLUTION	640 × 480 px
LIGHT SOURCE	Aimer 625 nm · Illumination white LED
PRINT CONTRAST	≥ 25%
WIRELESS RANGE	Up to 30 m (100 ft) line of sight
SCANS PER CHARGE	Approx. 80,000 scans
OPERATING TEMP.	0°C – 50°C (32°F – 122°F)
HUMIDITY	5% – 95% (non-condensing)
INGRESS RATING	IP54
2D SYMBOLOGIES	QR, Data Matrix, PDF417, Aztec, MaxiCode, Han Xin
WARRANTY	2-year limited

IMAGER	2D CMOS area imager
SCAN ANGLE	Pitch ±60° · Roll ±360° · Skew ±60°
DEPTH OF FIELD	1 mil Code 39: 30–200 mm
HOST INTERFACE	USB HID · USB VCP · 2.4 GHz
BATTERY	Li-ion, rechargeable
CHARGE TIME	3–4 hours
STORAGE TEMP.	-20°C – 60°C (-4°F – 140°F)
DROP SPEC	1.5 m (5 ft) to concrete
1D SYMBOLOGIES	Code 128, Code 39, Codabar, EAN, UPC, GS1 DataBar, & more
REGULATORY	FCC Class B · CE · RoHS · WEEE
SUPPORT	100% U.S.-based phone & chat

APPENDIX B · REFERENCE

Troubleshooting

SYMPTOM	RESOLUTION
Scanner beeps but no data reaches the host.	Confirm the USB receiver is inserted in a powered port. Open a text editor, click into it, and try again. If the scanner was previously in Inventory mode, scan *Upload stored data* (page 10).
Wrong characters appear (e.g. `Z` instead of `Y`).	The scanner keyboard layout does not match the host OS. Scan the correct layout from Keyboard Language on pages 7–8.
Every scan is duplicated in Automatic mode.	Increase the Same-Barcode Re-read Interval on page 16 to 500 ms or 800 ms.
Certain barcodes are ignored.	The symbology may be disabled by default. Enable it in Part IV (pages 19–30).
No confirmation beep on successful scan.	Volume is muted. Scan a higher volume setting in section 1.5 on page 9.
Scanner not responding / frozen.	Connect the USB cable to charge briefly, then trigger. If unresolved, scan *Restore default settings* on page 6.
Receiver (dongle) is lost.	Contact AMBIR Support to order a replacement. Scanners and receivers are factory-paired; a new receiver must be re-paired using the *Force pair with receiver* code in section 1.10 on page 12.
Battery drains quickly.	Shorten the Sleep Timer (page 11) and turn off Vibration. Battery performance degrades after ~500 full charge cycles; contact Support for battery service.

STILL NEED HELP

Call AMBIR Support at **630-530-5400**, Monday–Friday, 8 AM to 5 PM CST. Have your scanner's model and firmware version ready (scan *Display version information* on page 6).

APPENDIX C · REFERENCE

Warranty & Regulatory

Limited Two-Year Warranty

AMBIR Technology, Inc. warrants the BR212 and BR312 barcode scanners to be free from defects in materials and workmanship, under normal use, for a period of **two (2) years** from the original date of purchase. During the warranty period, AMBIR will, at its option, repair or replace any defective unit returned to an authorized service center, freight prepaid by the customer.

This warranty does not cover damage due to accident, misuse, unauthorized modification, or use outside the environmental specifications listed on page 41. Consumables, batteries after 90 days, and cosmetic damage are not covered. AMBIR's total liability is limited to the original purchase price of the product.

Extended service agreements (ESAs) and warranty extensions are available. Contact AMBIR Sales for details.

FCC Compliance Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

Changes or modifications not expressly approved by AMBIR Technology, Inc. could void the user's authority to operate the equipment.

CE / EU Declaration

AMBIR Technology, Inc. declares that the BR212 and BR312 are in compliance with the essential requirements and other relevant provisions of EU Directive 2014/53/EU (RED) and the RoHS Directive 2011/65/EU. Full declarations of conformity are available on request from **www.ambir.com**.

APPENDIX C · CONTINUED

Warranty & Regulatory (cont.)

Disposal (WEEE)

This product should not be disposed of with ordinary household waste. Return it to an authorized electronics-recycling location or to AMBIR for environmentally responsible recycling.

APPENDIX D · REFERENCE

Support

AMBIR's U.S.-based support team is ready to help. Have your model number and firmware version available (scan *Display version information*, page 6) before calling.

Phone · 630-530-5400 · Monday through Friday, 8 AM to 5 PM CST

Website · www.ambir.com

AMBIR TECHNOLOGY, INC.

Wood Dale, IL · The Leader in Healthcare Scanning Solutions.

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