



Newland

SCANNING MADE SIMPLE



SERIAL PROGRAMMING COMMANDS

manual

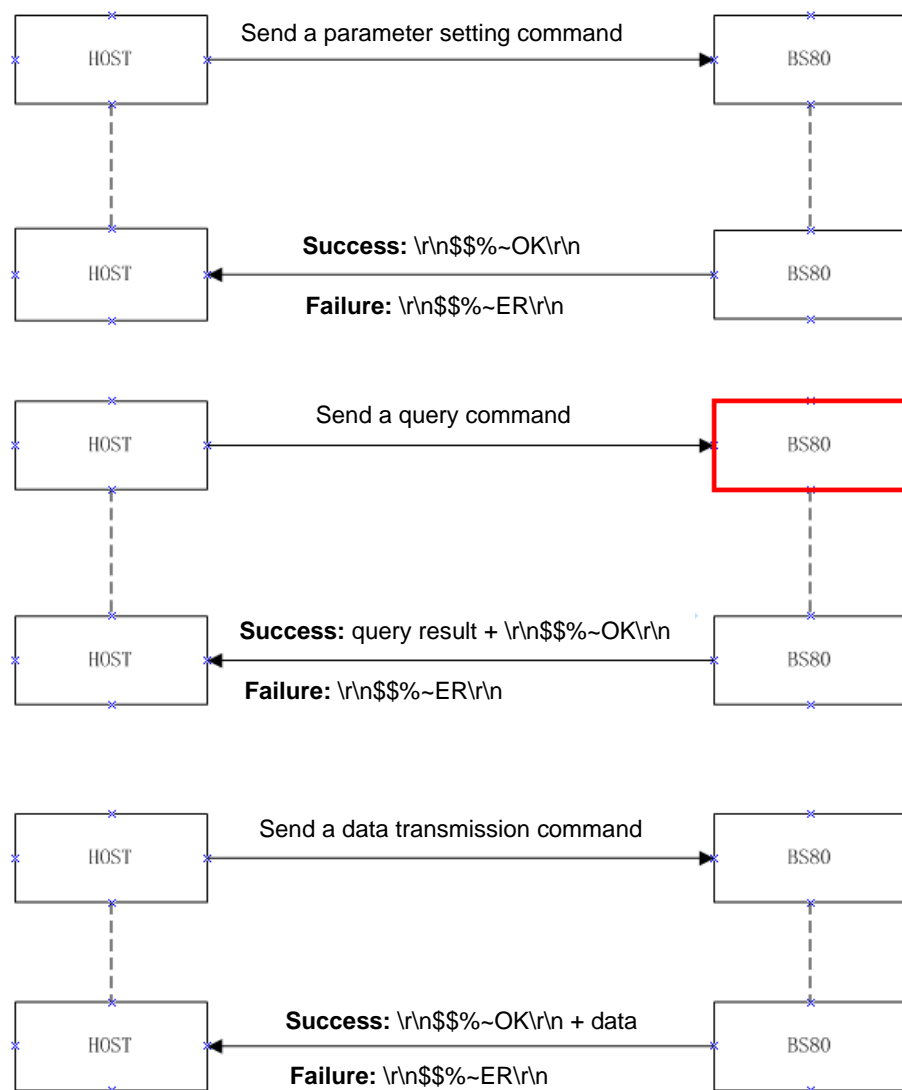
Revision History

Version	Description	Date
V1.0.0	Initial release.	September 27, 2016
V1.0.1	Added the serial command for setting the Inter-Character Delay for Bluetooth HID in the “Serial Programming Command Table”.	February 7, 2017
V1.0.2	Added the serial commands for setting the Bluetooth Device Name, Barcode Separator, Packet Mode, ACK/NAK Retry Count, ACK/NAK Timeout and the features regarding Data Formatter, modified the options for Inter-Keystroke Delay for KBW, in the “Serial Programming Command Table”.	June 23, 2017
V1.0.3	Added the serial commands for enabling/disabling Response for Invalid Host Data in the “Serial Programming Command Table”.	January 4, 2019

The serial programming commands can be used to set NLS-BS80 barcode scanner, query parameters and transmit stored data from the scanner to host device. For the detailed descriptions of each serial programming command, refer to **Serial Programming Command Table** in this manual.

The scanner must be set to Bluetooth SPP/BLE or USB COM Port Emulation. The commands can be sent to the scanner via a PC COM port. CDC-Virtual COM Driver is required.

The following illustrates what reply the host device can expect to get from the scanner to indicate success or failure when a serial command is sent.



Serial Programming Command Table

Parameter Settings (** indicates default)		Serial Command
Factory Defaults	Restore Factory Defaults	\$\$\$^1207
Manual Power-Off	Manual Power-Off	\$\$\$^5300
Auto Power-Off Timer	Set the Auto Power-Off Timer (Send \$\$\$^5301 then the command representing a digit (0-5)) 0-5 corresponds to 5 minutes, 10 minutes, 20 minutes, **30 minutes, 60 minutes and permanent respectively. e.g. To set the timer to 60 minutes, send \$\$\$^5301 then \$\$\$^0004	\$\$\$^5301
Operating Modes	**Bluetooth Mode	\$\$\$^0100
	USB Mode	\$\$\$^0101
	**Bluetooth HID or USB HID-KBW	\$\$\$^0200
	Bluetooth SPP or USB COM Port Emulation	\$\$\$^0201
	Bluetooth BLE	\$\$\$^0202
	**Bluetooth Synchronous Transmission	\$\$\$^0601
	Bluetooth Asynchronous Transmission	\$\$\$^0600
	Bluetooth Batch Transmission	\$\$\$^0207
	**USB Asynchronous Transmission	\$\$\$^0209
	USB Batch Transmission	\$\$\$^0208
	Verify Receipt of Data	\$\$\$^1208
	**Do Not Verify Receipt of Data	\$\$\$^1209
Inter-Character Delay for Bluetooth HID	Set the delay to 0 milliseconds	\$\$\$^540108
	Set the delay to 5 milliseconds	\$\$\$^540100
	**Set the Delay to 15 milliseconds	\$\$\$^540101
	Set the Delay to 25 milliseconds	\$\$\$^540102
	Set the Delay to 35 milliseconds	\$\$\$^540103
	Set the Delay to 45 milliseconds	\$\$\$^540104
	Set the Delay to 55 milliseconds	\$\$\$^540105
	Set the Delay to 65 milliseconds	\$\$\$^540106
	Set the Delay to 75 milliseconds	\$\$\$^540107
Delete Bluetooth Pairing	Delete Bluetooth Pairing	\$\$\$^5404
Time Stamp	Enable	\$\$\$^0300
	**Disable	\$\$\$^0301
Vibration Notifications	On	\$\$\$^0400
	**Off	\$\$\$^0401
Sound Notifications	**On	\$\$\$^0500
	Off	\$\$\$^0501

Date & Time	**Format 3: yyyy/mm/dd	\$\$\$^1000
	Format 2: dd/mm/yyyy	\$\$\$^1001
	Format 1: mm/dd/yyyy	\$\$\$^1002
	Set date & time (xxxx: the desired date & time in the format of YYYY-MM-DD,W;HH:MM:SS) W stands for day of week. e.g. \$\$\$^112016-09-23,5;15:15:03	\$\$\$^11[xxxx]
Serial Number	Enable	\$\$\$^1400
	**Disable	\$\$\$^1401
Delete Stored Data in Flash	Clear All Stored Data	\$\$\$^1200
AIM ID Prefix	Enable	\$\$\$^1300
	**Disable	\$\$\$^1301
Keyboard Types	**US English	\$\$\$^2201
	Belgium	\$\$\$^2202
	Brazil	\$\$\$^2203
	Canada	\$\$\$^2204
	Czech	\$\$\$^2205
	Danmark	\$\$\$^2206
	Finland	\$\$\$^2207
	France	\$\$\$^2208
	Germany, Austria	\$\$\$^2209
	Greece	\$\$\$^2210
	Hungary	\$\$\$^2211
	Israel	\$\$\$^2212
	Italy	\$\$\$^2213
	Latin America, South America	\$\$\$^2214
	Netherland	\$\$\$^2215
	Norway	\$\$\$^2216
	Poland	\$\$\$^2217
	Portugal	\$\$\$^2218
	Romania	\$\$\$^2219
	Russia	\$\$\$^2220
	Slovakia	\$\$\$^2221
	Spain	\$\$\$^2222
	Sweden	\$\$\$^2223
	Switzerland	\$\$\$^2224
	Turkey_F	\$\$\$^2225
	Turkey_Q	\$\$\$^2226
	UK	\$\$\$^2227

	Japan	\$\$\$^2228
Character Encoding	**ISO-8859-1	\$\$\$^2240
	UTF-8	\$\$\$^2241
Convert Case	**No Case Conversion	\$\$\$^2230
	Convert All to Upper Case	\$\$\$^2231
	Convert All to Lower Case	\$\$\$^2232
	Invert Upper and Lower Case Characters	\$\$\$^2233
Emulate ALT+Keypad	**Disable	\$\$\$^2244
	Mode 1	\$\$\$^2245
	Mode 2	\$\$\$^2246
	Mode 3	\$\$\$^2247
Function Key Mapping	Enable	\$\$\$^2251
	**Disable	\$\$\$^2252
Emulate Numeric Keypad	Enable	\$\$\$^2248
	**Disable	\$\$\$^2249
Code Page	**Windows 1252 (Latin I)	\$\$\$^2242
	Windows 1251 (Cyrillic)	\$\$\$^2243
Inter-Keystroke Delay for KBW	Set Inter-Keystroke Delay (Send \$\$\$^2250 then the command representing a digit (0-F)) 0-F corresponds to **0ms-15ms respectively. e.g. To set the delay to 15ms, send \$\$\$^2250 then \$\$\$^0017	\$\$\$^2250
Change Bluetooth Device Name	The Bluetooth device name for a BS80 scanner combines the model name with the last 4 characters of the MAC address xx: the hexadecimal value of each character contained in the desired model name, up to 20 characters e.g. To set the model name to "NLS1" (HEX: 0x4E, 0x4C, 0x53, 0x31), send \$\$\$^54094E4C5331	\$\$\$^5409xx
Response for Invalid Host Data	**Enable	\$\$\$^7100
	Disable	\$\$\$^7101
Barcode Separator	Enable	\$\$\$^5600
	**Disable	\$\$\$^5601
	Set barcode separator (xx: the hexadecimal value of each character contained in the desired separator, up to 10 characters) e.g. To set the barcode separator to "A" (HEX: 0x41), send \$\$\$^560241	\$\$\$^5602xx
	Query barcode separator	\$\$\$^5603
Packet Mode	On	\$\$\$^5500
	Off	\$\$\$^5501

	Query Packet mode settings Returning “15” indicates Packet mode on; returning “15” indicates Packet mode off.	*
	Set NAK/ACK Retry Count (xx: the desired number of retries, 1-8 retries, default: 2 retries) e.g. set NAK/ACK retry count to 2, send \$\$\$%^55032	\$\$\$%^5503xx
	Set NAK/ACK Timeout (xx: the desired timeout, 1-15,000ms) e.g. set NAK/ACK timeout to 200ms, send \$\$\$%^5504200	\$\$\$%^5504xx
Add a Data Format	Add a data format (xx: See the “Programming with Serial Commands” section in the “BS80 User Guide” for the details) e.g. To program format_0 using formatter command type 6, Code 128 containing 10 characters applicable, send all characters followed by “A”, send \$\$\$%^5917069990020010F141	\$\$\$%^5917xx
Query Data Formats	Query Data Formats	\$\$\$%^5918
Clear All Data Formats	Clear All Data Formats	\$\$\$%^5919
Data Formatter	**Disable Data Formatter	\$\$\$%^5900
	Enable Data Formatter, Required, Keep Prefix/Suffix	\$\$\$%^5901
	Enable Data Formatter, Required, Drop Prefix/Suffix	\$\$\$%^5902
	Enable Data Formatter, Not Required, Keep Prefix/Suffix	\$\$\$%^5903
	Enable Data Formatter, Not Required, Drop Prefix/Suffix	\$\$\$%^5904
Enable Data Format	**Format_0	\$\$\$%^5905
	Format_1	\$\$\$%^5906
	Format_2	\$\$\$%^5907
	Format_3	\$\$\$%^5908
Change Data Format for a Single Scan	Single Scan – Format_0	\$\$\$%^5909
	Single Scan – Format_1	\$\$\$%^5910
	Single Scan – Format_2	\$\$\$%^5911
	Single Scan – Format_3	\$\$\$%^5912
Non-Match Error Beep	**On	\$\$\$%^5913
	Off	\$\$\$%^5914
Digits	0	\$\$\$%^0000
	1	\$\$\$%^0001
	2	\$\$\$%^0002
	3	\$\$\$%^0003
	4	\$\$\$%^0004
	5	\$\$\$%^0005
	6	\$\$\$%^0006
	7	\$\$\$%^0007

	8	\$\$\$^0010
	9	\$\$\$^0011
	A	\$\$\$^0012
	B	\$\$\$^0013
	C	\$\$\$^0014
	D	\$\$\$^0015
	E	\$\$\$^0016
	F	\$\$\$^0017

Query	Serial Command
Query the Firmware & Hardware Versions of Product	\$\$\$^5200
Query the Serial Number of Product	\$\$\$^5202
Query the Manufacture Date of Product	\$\$\$^5204
Query the Firmware Version of Embedded Scan Engine	\$\$\$^5206
Query the Firmware & Hardware Versions of Bluetooth Module	\$\$\$^5400
Query the signal strength of Bluetooth	\$\$\$^5407
Query the Auto Power-Off Timer	\$\$\$^5302
Query the Inter-Character Delay for Bluetooth HID	\$\$\$^5402
Query Current Date & Time	\$\$\$^1003
Query Date Format	\$\$\$^1004
Query the Number of Stored Barcodes	\$\$\$^1203

Data Transmission	Serial Command
Transmit Stored Data	\$\$\$^0206



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