

Winson wireless barcode scanner user manual

Launch date : 2019-5-29

1、 Ver : V3.8

Revision record

2019/5/29 Rev 3.8

- 1. Remove the settings that do not match the code.**
- 2. The version specification is revised based on Src-0085 V3.4 and Src-0083 V3.4.**

2018/11/30

- 1. Classification character output setting code**

2017/8/9 Rev 3.3

- 1. Add wireless channel setting code**

20017/9/14 rev 3.4

- 1. Modify the input and output character format setting code**

20170915 Rev 3.5

- 1. Increase keyboard case detection settings**
- 2. Increase the small keyboard switch settings**

20170125 Rev3.6

- 1. Increase proximity matching**

1 . Comprehensive settings

1.1 Setting instruction description

1. The setting bar code is uniformly printed with Code128 type CODE B set bar code.
2. An asterisk (*) in the description part indicates the factory default parameters. (1) Scan: Enter setting mode “@SET”. After enter setting, it will exit the setting mode if next setting command is not scan within 20s.
 - (2) Scan: the relevant setting barcode. In this step, you can scan one or more setting barcode commands.
 - (3) Scan: Exit and save “@END”.
 - (4) The setting of some functions can directly scan the corresponding quick setting bar code. Such as: pairing barcode, unpairing barcode, etc.

3.2 Set command data format

Table 3.3-1 Setting command data format table①

| Prefix | Setting goals | Type | Parameter |
|--------|---------------|-----------------------------------|-----------|
| WN- | T-/R-/W- | Refer to "Set Barcode Type Table" | ***** |

Notice ①This format does not include instructions for entering settings and saving and exiting settings.

Table 3.3-2 Set instruction data format analysis

| Format | Data | Description |
|---------------|----------|--|
| Prefix | WN- | Fix prefix symbol |
| Setting goals | T-/R-/W- | T-:Means to set the barcode directly to the sender end. R-:Means to set the barcode directly to the receiver end, and the setting bar code of the receiving end needs to be forwarded by the sending end through wireless transmission. W-:The sender end and receiver end work at the same time |
| Type | | Refer to "Set Barcode Type Table" |
| Parameter | | The parameter is 4 characters in the range of "0~9" |



3.4 Set barcode type table

Table 3.4-1 Set barcode type table

| Type | Description |
|------|--|
| A | Wireless pairing/unpairing |
| B | Multi-language settings |
| C | View firmware information/Modify frequency |
| D | Infrared sensor trigger switch |
| F | Real-time mode / inventory mode / inventory mode data operation |
| G | Sleep time |
| H | Restore default setting |
| I | Data transmission form, start symbol mode setting, custom start symbol |
| K | Sending/receiving end firmware upgrade command |
| L | USB wired output switch |

3.5 “Enter setting” and “Save and exit”



Command:

| Function | Command | barcode | Remark |
|---------------|---------|---|--|
| Enter setting | @SET |  | Enter the setting prompt sound, effective time of 20 seconds |
| Save and exit | @END |  | Save and exit settings prompt sound |

Note☆: 1. For the setting of non-quick setting commands, it must first scan to enter the setting command, then scan the corresponding parameter setting command, and finally scan to save and exit the setting command.











4. Setting barcode type

4.1 Pairing command★

| Function | Command | barcode | Remark |
|---------------|---------------|--|------------------------|
| Start pairing | @.WN-T-A0001/ |  | Can be paired remotely |
| Close pairing | @.WN-T-A0002/ |  | Only allow pairing |

- Note☆: 1. The effective time of pairing is within 20S from the moment the receiver is powered on (the LED is flashing). After 20s, the LED is always on and cannot be paired. **(This method is for the receiver without buttons)**
2. Press the receiver button, the receiver will automatically enter the pairing state, during this period it can be paired normally. (This method is for the receiver with buttons).
3. 2.4G stops flashing after pairing successfully.

4.2 HID-KEYBOARD multi langue setting★

| Function | Command | barcode | Remark |
|----------|------------|---|---------------|
| | @SET |  | |
| *USA | WN-W-B1000 |  | |
| FRENCH | WN-W-B1001 |  | |
| GEMRAN | WN-W-B1002 |  | |
| TUKISH | WN-W-B1003 |  | |
| BELGIUM | WN-W-B1004 |  | |
| BRAZIL | WN-W-B1005 |  | |
| CRZCH | WN-W-B1006 |  | |
| SPANISH | WN-W-B1007 |  | Latin America |
| | @END |  | |

Note★: This setting code is valid for both the receiving end (Tx) and the sending end (Rx). If multiple languages are set when the wireless transmission connection is disconnected, the sending end language setting will be successful, but the receiving end language will not change.







4.4 Check parameter

| Function | Command | barcode | Remark |
|----------------------------|------------|---|--|
| Output parameter of system | WN-W-C1000 |  | 1> Firmware version 2> Battery level 3> Wireless channel |

Explanation ☆: The command to view the parameters is sent to the receiver along with the system parameters, and each parameter is separated by a terminator, such as:

PKT {protocol field|WN-W-B1001|parameter 1+0x0D|parameter 2+0x0D |.....} (the content of the data packet in {})

4.5 Operation mode★

| Function | Command | barcode | Remark |
|------------------------|---------------|---|---|
| *Real-time mode | @.WN-T-F0000/ |  | Scan and transfer, fail alarm |
| Cache mode | @.WN-T-F1000/ |  | On the basis of real-time mode, increase the buffer data after transmission failure. The system will automatically upload the cached data after detecting that the device has not been operated for three seconds. If the cached data is not uploaded when the machine is turned off, the system will continue to detect the upload after the next startup until the transmission is completed. |
| Inventory mode | @.WN-T-F2000/ |  | The barcode data is automatically stored, and it is uploaded once after scanning "Upload Data"; scanning "Clear Data" to clear the data in the memory "Scan "Data Total" to view the total number of data in the memory After scanning the barcode, the data is directly stored in the barcode scanner, and the data will not be deleted until the [Clear Data] is scanned. During this period, you can scan [upload data] to send the data to the receiver or directly upload to the PC |
| Upload data | @.WN-T-F2001/ |  | Upload barcode data |
| Data sum | @.WN-T-F2002/ |  | Upload the sum of barcode |
| Clear data | @.WN-T-F2003/ |  | Clear the barcode data in the inventory mode |

Notice☆:1. Six command in operation mode are all quick setting command, the setting is successful when scan them successful.

2. Upload data, data amount, clear data in inventory mode, these three operation setting command is unavailable when enter setting mode, if it is already in setting mode, must save

and setting before using these three operation setting command.

3. New 433 and 2.4G solution (model number : WNI-xxx2, WNI-xxx3, WNC-xxx2, WNC-xxx3)
storage data description:

Inventory mode: storage length is 30 Byte data will be able to store 49,000pcs

storage length is 13Byte data will be able to store 104,500pcs

Cache mode: storage length is 30 Byte data will be able to store 14,200pcs

storage length is 13Byte data will be able to store 30,300pcs

4.6 Character input/output/keyboard format setting








4.6.1 Case control and keypad switch

| Function | Command | barcode | Description |
|--|---------------|---------|--|
| *Uppercase key (CapsLK) detect on | @.WN-W-F3201/ | | Turn on uppercase detection, keyboard Caps will not affect the output example: barcode content:123ABCdef Turn on Caps output: 123ABCdef Turn off Caps output:123ABCdef |
| Uppercase key(CapsLK) detect off | @.WN-W-F3202/ | | After turn off the caps detection, the keyboard Caps lock will affect the output example: barcode content :123ABCdef Turn on Caps output:123abcDEF Turn off Caps output:123ABCdef |
| Turn on Numeric keyboard | @.WN-W-F3203/ | | After turn on, it need to set the output to GBK format. If the language is German at this time, it needs to be set to English, and other languages do not need to be set. |

4.6.2 Out put format and function key setting




| Function | Command | barcode | Test instruction |
|---------------------|---------------|---------|---|
| *GBK output | @.WN-W-F3001/ | | 1.Support txt and Excel output 2.Use WDI2000 module, set to GBK output 3.Open txt or Excel , scan the code to transmit data normally |
| Unicode output | @.WN-W-F3002/ | | 1.Support Word output; 2.Use WDI2000 module, set to UTF-8 output |
| Function key output | @.WN-W-F3005/ | | 1.Support testing in Excel file; 2.Add function key suffix: For example: set the "→" function key as a suffix, after outputting data in Excel, the cursor will point to the right cell |

4.7 Sleep times setting★

| Function | Command | barcode | Remark |
|-----------|------------|---|--------|
| | @SET |  | |
| 1 min | WN-T-G0001 |  | |
| | | | |
| *5min | WN-T-G0005 |  | |
| | | | |
| 15min | WN-T-G0015 |  | |
| | | | |
| 45min | WN-T-G0045 |  | |
| | | | |
| non-sleep | WN-T-G0000 |  | |
| | | | |
| | @END |  | |

Instructions☆: The calculation method of sleep time: $60 * x = n$ (s) , X is two decimal values after the barcode

4.8 Restore the factory settings★






| Function | Command | barcode | Remark |
|-------------------------|------------|--|---|
| | @SET |  | |
| Factory Default setting | WN-W-H0000 |  | 1> autoSetFactory remains unchanged 2> The current spectrum constant 3> Matching the address remains the same 4> The wireless channel is constant 5> Locking band logo remains the same 6> Data output way remains the same 7> The keyboard language remains the same 8> Buzzer sound remains the same |
| | @END |  | |

4.9 0x0A filter

Turning on will filter out the 0x0A (newline character) in the middle of the string, and the 0x0A at the end of the string (the first and second to last) will not be filtered.

| Function | Command | barcode | Remark |
|-----------------------------|---------------|--|---|
| *Turn on 0x0A filter | @.WN-W-F3301/ |  | After turn on, the newline character 0x0A in the middle of the string will be filtered. |
| Turn off 0x0A filter | @.WN-W-F3302/ |  | If there is a newline character in the data after closing, it will be output normally |





4.12 Out put way (USB/USB VCP) ★

| Function | Command | barcode | Remark |
|--------------------|------------|---|---|
| Start setting | @SET |  | Enter setting mode |
| *USB output | WN-W-L1000 |  | USB interface |
| VCP output | WN-W-L1001 |  | USB virtual serial port need to install the serial port (USB) driver can be normal use |
| RS232 output | WN-R-L1002 |  | 1. a serial port output function only in support of a serial port output devices (hardware) can use, now only RF433 receive support serial output 2. optimizes the transmission way of new products. USB and RS232 serial port transmission can automatically identify, do not need to set up a serial port output |
| End setting | @END |  | Save and exit setting |





Notice★ :

1. The default for USB and RS232 serial Port output, the system will automatically choose the USB or RS232 serial Port output according to the hardware, without setting
2. When switching USB and Virtual serial Port (Virtual COM Port) need to scan settings to change, but it don't need to plug the receiver.





4. 14 Auto trigger

| Function | Command | Barcode | Remark |
|----------------------|------------|--|------------------------------------|
| | @SET |  | |
| Enable auto trigger | WN-T-D0000 |  | Enable infrared induction trigger |
| Disable auto trigger | WN-T-D0001 |  | Disable infrared induction trigger |
| | @END |  | |



4.9 The command of firmware upgrade

| Function | Command | Barcode | Remark |
|------------------|------------|--|---|
| | @SET |  | |
| Receiver upgrade | WN-R-K0000 |  | <ol style="list-style-type: none"> 1. Receive PC via USB way connection, and in the case of pairs, scanning the barcode after Saul, receiving end after receiving the plug again 2. Receive a PC via RS232 serial interface mode connection, scanning the barcode after Saul, receiving end after receiving the plug again 3. Receive a PC via a serial port connection, hold down the button at the bottom for 8 s after system in upgrade mode |
| Sender upgrade | WN-T-K0000 |  | <ol style="list-style-type: none"> 1. The PC via USB cable connection, and then send the upgrade barcode, upgrade equipment to restart after testing |
| | @END |  | |

4.10 Wireless connectivity detection(★Note: this function only in a scanner connected to a receiver)

| Function | Command | barcode | Remark |
|---------------------------------|------------|---|--|
| | @SET |  | |
| Enable connection test | WN-T-C0001 |  | This setting only in a scanner connected to a receiver |
| *Disable connection test | WN-T-C0002 |  | When more than a scanner connected a receiving a case, need to close the connection test, factory default is close the connection test |
| | @END |  | |

4.11 The sender wired output

| Function | Command | Barcode | Remark |
|----------------------------------|------------|---|--|
| | @SET |  | |
| * Enable USB wired output | WN-T-L0000 |  | <ol style="list-style-type: none"> 1. After open the sender after the PCB via USB cable connection, connection can be directly through the normal USB transmission, do not use the wireless |

| | | | |
|--------------------------|------------|---|--|
| | | | transmission |
| Disable USB wired output | WN-T-L0001 |  | Shut down after insert USB cable only allows charging, only through wireless data transmission |
| | @END |  | |

Note☆:USB wired output is used only for the sender

4.13 Serial port setting ★

| Function | Command | barcode | Remark |
|-------------------------------|------------|--|--------|
| | @SET |  | |
| 3.10.1 Baud rate | | | |
| 2400 | WN-R-D0000 |  | |
| 4800 | WN-R-D0001 |  | |
| *9600 | WN-R-D0002 |  | |
| 19200 | WN-R-D0003 |  | |
| 38400 | WN-R-D0004 |  | |
| 57600 | WN-R-D0005 |  | |
| 115200 | WN-R-D0006 |  | |
| 3.10.2 The length of the data | | | |
| 7 Data Bits | WN-R-D1002 |  | |
| *8 Data Bits | WN-R-D1001 |  | |
| 3.10.3 Stop bit | | | |
| *1 Stop Bit | WN-R-D1003 |  | |
| 2 Stop Bit | WN-R-D1004 |  | |
| 3.10.4 Parity bit | | | |
| *No Parity | WN-R-D1005 |  | |
| Odd Parity | WN-R-D1006 |  | |
| Even Parity | WN-R-D1007 |  | |
| | @END |  | |

Note★: The serial port setting can be used normal on support serial output equipment only





4.15 Start symbol mode setting(Prefix) ★

| Function | Command | barcode | Remark |
|------------------------------|------------|--|--------|
| | @SET |  | |
| *No start symbol | WN-T-I0000 |  | |
| Custom start symbol+bar code | WN-T-I0002 |  | |
| | @END |  | |

The sample of start symbol mode setting: To set a start symbol "#Ab9" in barcode "1234567", The barcode data will be "#Ab91234567".




- 1.Scan 【@SET】 barcode.
- 2.Scan 【Custom start symbol + bar code】
- 3.Scan the following symbol 【#】、【A】、【b】、【9】 in turn.
- 4.Scan 【@END】 barcode.
5. Max 10 digits for the prefix

4.16 End symbol mode setting(Suffix)

| Function | Command | barcode | Remark |
|-----------------------------------|------------|--|--|
| | @SET |  | |
| No end symbol(suffix) | WN-T-I1000 |  | No suffix |
| *Custom end symbol(Suffix) | WN-T-I100A |  | Custom suffix can be composed of ASCII codes of any character, customers can set according to need |
| | @END |  | |




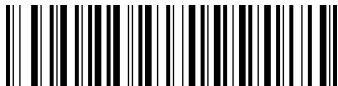
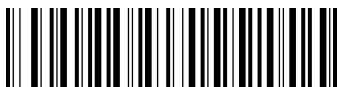

The sample of end symbol mode setting: To set a start symbol "%B" in barcode "1234567", The barcode data will be "1234567%B".

- 1.Scan 【@SET】 barcode ->2.Scan 【Custom end symbol】 barcode ->3. Scan the following symbol 【%】、【B】、 in turn
- 4.Scan 【Exit&Save】 barcode
5. End symbol of factory reset: 0x0D(Enter)
6. End symbol of commonly used symbols: 0x0D(Enter), 0x0A, 0x09(Tab)
7. Suffix max 10 digits.

| | | |
|---|---|---|
|  |  |  |
| 0x0D(Enter) | 0x0A(newLine) | 0x09(Tab) |

4.17 Sender end Prompt sound selection at the sender

When the wireless code scanner is in normal use, there are two prompt sounds. The first sound is the sound of successful code reading, and the second sound is the sound of successful wireless transmission.

| Function | Command | barcode | Remark |
|---|------------|---|--------|
| | @SET |  | |
| Enable turn on sound | WN-T-E0001 |  | |
| | | | |
| *Disable turn on sound | WN-T-E0002 |  | |
| | | | |
| Enable transmit successful sound | WN-T-E1001 |  | |
| | | | |
| *Disable transmit successful sound | WN-T-E1002 |  | |
| | | | |
| | @END |  | |

Note: This function is mainly for the use of modules. Most modules have their own startup sound and code scanning sound, so the motherboard's startup sound and wireless transmission sound are turned on. The two sounds overlap. So the added sound switch setting can cope with the module. The group voice is repeated and the voice is mixed.

5 Information instructions:

5.1 Receiver end instructions system

| Serial number | The type of status indicators | The type of status indicators | State of the LED |
|----------------------|-------------------------------------|---|--|
| Boot to detect hints | | | |
| 1 | Wireless module to detect anomalies | Short three beeps(high frequency) | Red light blinks three times |
| 2 | External storage module abnormal | Long two beeps (high frequency) | Red light blinks twice |
| 3 | Power on | Short Four beeps (high / mid / low frequency) | Green light continuous on |
| 配对状态提示 | | | |
| 4 | Start the wireless pairing | One short beeps (high frequency) | LED light blinks once |
| 5 | Wireless pairing period | None | Red light blinks |
| 6 | Wireless pairing failure | None | Red light continuous on, Green light off |

| | | | |
|--------------------------------|----------------------------|---|---|
| 7 | Wireless pairing success | three long beeps (high / mid / low frequency) big difference | Green light continuous on |
| Setting state instructions | | | |
| 8 | Enter setting mode | long one beep and short two beeps (high / mid / low frequency) | Green light blinks once |
| 9 | Exit & Save | Long one beep and short two beeps (high / mid / low frequency) | Green light blinks once |
| 10 | Setting command state | Long one beep and short one beep (high / low frequency) | Green light continuous on |
| 11 | Effective command | Long one beep and two short long (high / mid / low frequency) | Green light blinks once |
| 12 | Non-effective command | Long one beep (low frequency) | Green light blinks once & Red light blink once |
| Instructions of Inventory mode | | | |
| 13 | Data uploaded successfully | short one beep(high frequency) | Green light blinks once |
| 14 | Data uploaded failure | short three beeps(Intermediate frequency) | Red light blinks three times |
| 15 | Data Overflow | long two beeps(high frequency) | Red light blinks twice |
| Real-time mode | | | |
| 17 | Upload data successfully | Short one beep(high frequency) | Green light blinks once |
| 18 | Upload data failde | beeps(Intermediate frequency) | Red light blinks three times |
| Power status indicators | | | |
| 20 | Charging status | None | Blue light on |
| 21 | Charging completed | None | Blue light off, Green light on |
| 22 | Sleep / power off | Long one beep(Intermediate frequency) | Light off |
| 23 | Low battery tips | None | Red light on (does not affect the green light to red light) |
| Quick command indicators | | | |
| 24 | Quick instructions | Long one beep and short two beeps (high / mid / low frequency) | Green light blink once |
| Data Overflow | | | |
| 25 | Data Overflow | Long one beep(Low frequency) | Red light blink once |

5.2.1 Receiver end LED light indicator

| Serial number | System state | Buzzer announce | Indicator light |
|-----------------------------------|--------------|-----------------|-----------------|
| 2.4G & 433 USB adapter | | | |

| | | | |
|--------------|--|---------------|--------------------------|
| 1 | power on within 30 seconds | --- | Green light blink slowly |
| 2 | Boot after 30 seconds | --- | Green light normally on |
| 3 | Receive the packet | --- | Green light blink once |
| | | | |
| | | | |
| 433 receiver | | | |
| 1 | Electricity boot | Boot ringtone | |
| 2 | power on within 30 seconds | None | Green light blink slowly |
| 3 | 30 seconds later | None | Green light normally on |
| 4 | Press the button to enter matching state | None | Green light blink slowly |

6 2.4G Wireless sending and receiving data packet format

6.1 bk2425 Infinite packet format

| The statement field | Size | Description |
|---------------------|------------|--|
| U8 pkt_len | 1byte | The length of the barcode |
| U8 pkt_check | 1 byte | [[7] Address pairing indication marks [6] 0: command package 1: The packet [5] Barcode transmission complete indication marks 0: Transfer to complete 1: unfinished [4] Whether to show ID 0: ID hide 1: ID show [3:0] system working mode 0:real-time mode 1:Inventory mode 2:Cache mode |
| u8 pkt_part | 1 byte | Long subcontract send number barcode data |
| u8 payload[29] | Max 29byte | Effective data area (Data of barcode) |
| | | |

7、 Inventory mode to save and read data packet format :

| The statement field | Size | Description |
|---------------------|--|----------------------------------|
| u16 len | 2byte | The length of the barcode |
| u8 barcode_buf[520] | The size of the data of effective barcode data | Effective barcode data |

7.1 Inventory model management information storage format:

| Type | Fields | Length | Description |
|------|---------------------|--------|--|
| u8 | sequence | 1Byte | The order of the information stored in the management sector |
| u16 | barcode_count | 2Byte | The number of barcode in the inventory model of storage |
| U16 | mode2_barcode_count | 2Byte | Cache barcode number |

| | | | |
|-----|------------------|-------|---|
| u32 | write_addr | 4Byte | The initial address of can be written (Inventory mode) |
| u32 | read_addr | 4Byte | The initial address of can be read(Inventory mode) |
| u32 | mode2_write_addr | 4Byte | Initial address of can be written in the buffer(Cache mode) |
| u32 | mode2_read_addr | 4Byte | Initial address of can be read in the buffer(Cache mode) |

8、433 wireless data packet







The packet format




















| The statement field | Size | Description |
|---------------------|------------|---|
| U8 pkt_length | 1byte | The length of the packet (The entire packet length, contains the length of byte) |
| u8 pkt_part | 1 byte | Long subcontract send number barcode data |
| U16 src_addr | 2byte | source address |
| U32 dst_addr | 2byte | destination address |
| U8 pkt_check | 1 byte | [7] Address pairing indication marks [6] 0: command package 1: The packet [5] Barcode transmission complete indication marks 0: Transfer to complete 1: unfinished [4] Whether to show ID 0: ID hide 1: ID show [3:0] Reserved[0~7] |
| U8 pkt_repeat | 1byte | Packets duplicate detection |
| u8 pkt_payload [56] | Max 56byte | Effective data area (Data of barcode)(Plan to increase to120Bytes) |
| | | |




















ACK packet format






















| The statement field | Size | Description |
|---------------------|--------|--|
| U8 pkt_length | 1byte | The length of the packet (The entire packet length, contains the length of byte) |
| U8 pkt_check | 1 byte | [7] Address pairing indication marks [6] 0: command packet 1: Data packet [5] Bar code transmission complete indication marks 0: Transmission complete 1: Transmission failure [4] Whether to showID 0: ID hide 1: ID show [3:0] Reserved[0~7] |
| U16 src_addr | 2byte | source address |
| U32 dst_addr | 2byte | destination address |
| U16 cmd | 2byte | The command of ACK return |






















Symbol table




















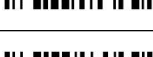

| Control symbol | Hex | |
|----------------|-----|---|
| ^@ (NULL) | 00 |  |
| ^A (SOH) | 01 |  |
| ^B (STX) | 02 |  |
| ^C (ETX) | 03 |  |
| ^D (EOT) | 04 |  |
| ^E (ENQ) | 05 |  |
| ^F (ACK) | 06 |  |
| ^G (BEL) | 07 |  |
| ^H (BS) | 08 |  |
| ^I (HTab) | 09 |  |
| ^J (LF) | 0A |  |
| ^K (VTab) | 0B |  |
| ^L (FF) | 0C |  |
| ^M (CR) | 0D |  |
| ^N (SO) | 0E |  |
| ^O (SI) | 0F |  |
| ^P (DLE) | 10 |  |
| ^Q (DC1) | 11 |  |
| ^R (DC2) | 12 |  |




















| | | |
|---------------|------------|---|
| ^S (DC3) | 13 |  |
| ^T (DC4) | 14 |  |
| ^U (NAK) | 15 |  |
| ^V (SYN) | 16 |  |
| ^W (ETB) | 17 |  |
| ^X (CAN) | 18 |  |
| ^Y (EM) | 19 |  |
| ^Z (SUB) | 1A |  |
| ^[(ESC) | 1B |  |
| ^\ (FS) | 1C |  |
| ^] (GS) | 1D |  |
| ^^ (RS) | 1E |  |
| ^_ (US) | 1F |  |
| SPC | 20 |  |
| | | |
| Symbol | Hex | |
| ! | 21 |  |
| " | 22 |  |
| # | 23 |  |
| \$ | 24 |  |
| % | 25 |  |

| | | |
|---|----|---|
| & | 26 |  |
| ' | 27 | |
| (| 28 | |
|) | 29 |  |
| * | 2A |  |
| + | 2B |  |
| , | 2C |  |
| - | 2D |  |
| . | 2E |  |
| / | 2F |  |
| 0 | 30 |  |
| 1 | 31 |  |
| 2 | 32 |  |
| 3 | 33 |  |
| 4 | 34 |  |
| 5 | 35 |  |
| 6 | 36 |  |
| 7 | 37 |  |
| 8 | 38 |  |
| 9 | 39 |  |
| : | 3A |  |


| | | |
|---|----|---|
| ; | 3B |  |
| < | 3C |  |
| = | 3D |  |
| > | 3E |  |
| ? | 3F |  |
| @ | 40 |  |
| A | 41 |  |
| B | 42 |  |
| C | 43 |  |
| D | 44 |  |
| E | 45 |  |
| F | 46 |  |
| G | 47 |  |
| H | 48 |  |
| I | 49 |  |
| J | 4A |  |
| K | 4B |  |
| L | 4C |  |
| M | 4D |  |
| N | 4E |  |
| O | 4F |  |

| | | |
|---|----|---|
| P | 50 |  |
| Q | 51 |  |
| R | 52 |  |
| S | 53 |  |
| T | 54 |  |
| U | 55 |  |
| V | 56 |  |
| W | 57 |  |
| X | 58 |  |
| Y | 59 |  |
| Z | 5A |  |
| [| 5B |  |
| \ | 5C |  |
|] | 5D |  |
| ^ | 5E |  |
| _ | 5F |  |
| ` | 60 |  |
| a | 61 |  |
| b | 62 |  |
| c | 63 |  |
| d | 64 |  |

| | | |
|---|----|---|
| e | 65 |  |
| f | 66 |  |
| g | 67 |  |
| h | 68 |  |
| i | 69 |  |
| j | 6A |  |
| k | 6B |  |
| l | 6C |  |
| m | 6D |  |
| n | 6E |  |
| o | 6F |  |
| p | 70 |  |
| q | 71 |  |
| r | 72 |  |
| s | 73 |  |
| t | 74 |  |
| u | 75 |  |
| v | 76 |  |
| w | 77 |  |
| x | 78 |  |
| Y | 79 |  |

| | | |
|----------------------|------------|---|
| z | 7A |  |
| { | 7B |  |
| | 7C |  |
| } | 7D |  |
| ~ | 7E |  |
| DEL | 7F |  |
| | | |
| Function keys | Hex | |
| F1 | 80 |  |
| F2 | 81 |  |
| F3 | 82 |  |
| F4 | 83 |  |
| F5 | 84 |  |
| F6 | 85 |  |
| F7 | 86 |  |
| F8 | 87 |  |
| F9 | 88 |  |
| F10 | 89 |  |
| F11 | 8A |  |
| F12 | 8B |  |
| Backspace | 8C |  |

| | | |
|------------------------|----|---|
| Tab | 8D |  |
| Return (ENTER) | 8E |  |
| Enter (Numeric Keypad) | 8F |  |
| Esc | 90 |  |
| Arrow Down | 91 |  |
| Arrow up | 92 |  |
| Arrow right | 93 |  |
| Arrow left | 94 |  |
| Insert | 95 |  |
| Home | 96 |  |
| End | 97 |  |
| Page up | 98 |  |
| Page down | 99 |  |
| Left Shift | 9A |  |
| Left Ctrl | 9B |  |
| Left Alt | 9C |  |
| Left GUI | 9D |  |
| Right Shift | 9E |  |
| Right Ctrl | 9F |  |
| Right Alt | A0 |  |
| Right GUI | A1 |  |

| | | |
|-----------|----|---|
| Caps Lock | A2 |  |
|-----------|----|---|