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## User Manual

### ScanAvenger Wireless / Bluetooth / USB 1D&2D Barcode Scanners

## Disclaimer

Please read through the manual carefully before using the product and operate it according to the manual. It is advised to keep this manual for future reference.

Do not disassemble the device or remove the seal label from the device as this will void the warranty.

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## Warning sound

If data transmission encounters an issue, the scanner will emit four consecutive alarm sounds. In such cases, please verify the integrity of the connection to ensure proper functionality.

## Reading tips

1. To achieve optimal scanning results, aim the scanner's collimator beam at the center of the barcode. The scanner can read barcodes from any direction.
2. Hold the scanner in front of the barcode and press the button to align the collimator beam with the barcode's center.
3. The distance between the scanner and the barcode affects the size of the aiming beam:
  - a. Small barcodes: Hold the scanner closer to the barcode.
  - b. Large barcodes: Hold the scanner farther away for easier scanning.
4. For highly reflective barcodes (e.g., coated surfaces), adjust the scanner's angle to reduce glare and improve scanning accuracy.



## Safety

The scanner's illumination light is intense. Avoid looking directly into the light or aiming it at your eyes to prevent discomfort or potential injury.



## Description of Led & Buzzer State

| LED Light                                   | Description                       |
|---------------------------------------------|-----------------------------------|
| Left blue LED 1                             | Will flash one time when scanning |
| Right blue LED 2                            | Successful Wireless connection    |
| Red LED                                     | Charging                          |
| Blue 2 off, blue 1 Flash quickly            | 2.4G pairing mode                 |
| Blue 1 off, Blue 2 Flash quickly            | SPP pairing mode                  |
| Blue 1 and Blue2 alternately flash          | HID pairing mode                  |
| Blue 1 and Blue 2 Synchronize flash quickly | BLE pairing mode                  |

Note: The lighting in this section varies slightly according to different product configurations. If you need to know more, you can contact ScanAvenger support.

## Buzzer prompt sound

| Buzzer                                          | Description                                                 |
|-------------------------------------------------|-------------------------------------------------------------|
| A long sound                                    | Power ON/OFF                                                |
| A short sound (low frequency)                   | Scan common barcode, or paired, wireless connection success |
| 3 short sounds (low frequency)                  | Wireless transmission failure                               |
| 5 short sound (low frequency) and stop scanning | Battery out of energy                                       |
| 2 short sounds (low frequency)                  | Wireless pairing disconnected                               |
| 2 short sounds (high frequency)                 | Setup code is not working                                   |

Note: The lighting in this section varies slightly according to different product configurations. If you need to know more, you can contact ScanAvenger support.

## Functional configuration instructions and examples

Before configuring prefixes, suffixes, or modifying the Code ID, ensure that the scanner's language setting supports the characters you intend to add. If you're unsure which keyboard layouts support the desired character(s), scan the barcode for the International Keyboard setting.

For a complete list of language settings, refer to the [Language Settings Table](#).

Note: Enabling the International Keyboard may slightly reduce transmission speed.

### Configuring Prefixes and Suffixes

There are two methods for adding, modifying, and removing a prefix or a suffix on your scanner:

1. Basic Configuration Barcodes
2. Special Configuration Barcodes

These methods operate independently. If you configure a prefix or suffix using one method, you must use the same method to modify or remove it. Switching between methods is not possible; however, you can have configured prefixes and suffixes with two different methods at the same time.

- Basic Configuration Barcodes allow configuration for specific barcode types and are supported by all software versions.
- Special Configuration Barcodes offer a faster and simpler setup, requiring fewer scans. They also enable more advanced configurations, which are explained here: ["Character sets"](#).

## Prefixes and Suffixes with Basic Configuration Barcodes

### How to Create a Prefix

#### Step 1: Identify the HEX Value for the Barcode Type

Consult the [Barcode Type ID Table](#) in the Appendix to find the HEX value for your specific barcode type(s).

- If applying a prefix to, for example, QR codes only, use HEX 51.
- If applying a prefix to all barcode types, use HEX 99.

#### Step 2: Determine the HEX Values for the Prefix Characters

- Identify the characters you wish to use as a prefix (e.g., "X" or "ABC").
- Refer to the [ASCII Visible Characters Table](#) in the Appendix for the HEX values of the characters you want to use.
  - Example: "X" = 58, "ABC" = 414243.

#### Step 3: Program the Prefix

Scan the configuration barcode "Enable Customized prefix output" to allow the scanner to add a prefix.



Enable Customized prefix output

Scan the configuration barcode "Customized Prefix" to enter the configuration mode.

- The scanner should emit two beeps to confirm entry



Customized prefix

Sequentially scan the barcodes (from the [Data and Edit Barcode Appendix](#)) for:

- The HEX value(s) for the barcode type ID (e.g., 51 for QR codes, 99 for all types).
- The HEX value(s) for each character in your prefix (e.g., X=58 and ABC=414243).

Scan the configuration barcode named "Save" to complete the prefix setup.

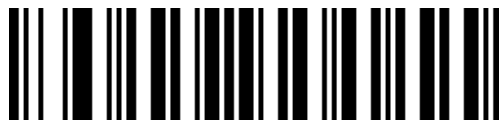


Save

## Modifying or Cancelling Data During the Process

If you need to make changes during the setup process, you must scan the appropriate barcode before scanning the "Save" barcode. This applies to all the following barcodes except the "Disable customized prefix output".

To delete the last scanned data unit, scan "Cancel Previously Scanned Data Unit". Use this option if you made a mistake while scanning a single character or value and need to remove only the most recent entry without affecting the rest of the sequence.



Cancel Previously Scanned Data Unit

To delete the entire scanned sequence, scan "Cancel Previously Scanned Data Sequence". This is useful when you need to start over from the beginning because multiple incorrect values were entered.



Cancel Previously Scanned Data Sequence

To abort the process, scan "Cancel Current Setting", which exits the configuration mode without saving any changes.



Cancel current setting

To disable prefixes entirely, scan "Disable Customized Prefix Output" (factory default), restoring the scanner to its original prefix settings.



Disable customized prefix output

## Example — Applying the Prefix "X" to All Barcode Types

Below is an example illustrating how to configure a prefix of "X" for all barcode types. This is just one scenario. You can find the entire list of barcodes in the [Appendix](#).

Program Sequence:

1. Scan "Enable Customized prefix output".



Enable Customized prefix output

2. Scan "Customized Prefix". (Scanner will beep twice, indicating configuration mode.)



Customized prefix

3. Scan the barcodes corresponding to "9" and "9" (for all barcode types = 99), and then "5" and "8" (for "X" = 58).



9



9



5



8

4. Scan "Save" to finalize the configuration.



Save

NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [Barcode type ID Table](#) and the [ASCII Visible Characters Table](#), as well as the [Data and Edit Barcode Appendix](#).

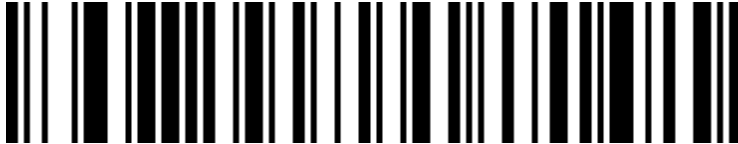


## Example — Applying the Prefix "X" to QR codes

Below is an example illustrating how to configure a prefix of "X" for all barcode types. This is just one scenario. You can find the entire list of barcodes in the Appendix.

Program Sequence:

1. Scan "Enable Customized prefix output".



Enable Customized prefix output

2. Scan "Customized Prefix". (Scanner will beep twice, indicating configuration mode.)



Customized prefix

3. Scan the barcodes corresponding to "5" and "1" (for QR code = 51), and then "5" and "8" (for "X" = 58).



5



1



5



8

4. Scan "Save" to finalize the configuration.



Save

NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [Barcode type ID Table](#) and the [ASCII Visible Characters Table](#), as well as the [Data and Edit Barcode Appendix](#).

## How to remove a customized prefix from all barcodes or a specific type of barcode:

### Step 1: Identify the HEX Value for the Barcode Type

Consult the [Barcode Type ID Table](#) in the Appendix to find either the HEX value for your specific barcode type(s) or for all barcodes.

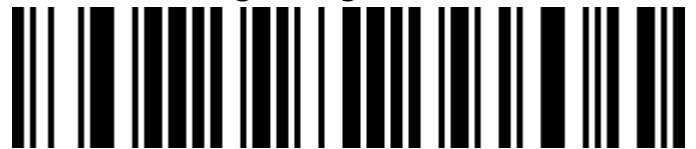
### Step 2: Remove the Prefix

Scan "Enable Customized Prefix output".



Enable Customized prefix output

Scan "Customized Prefix". (Scanner will beep twice, indicating configuration mode.)



Customized prefix

Sequentially scan the barcodes (from the [Data and Edit Barcode Appendix](#)) for the HEX value for the barcode type ID (e.g., 51 for QR codes, 99 for all types).

Scan "Save" to finalize the configuration.



Save

Note:

- If a prefix has been set for all barcodes, removing a specific barcode type's prefix will restore the prefix set for all barcodes.
- To clear prefixes for all barcode types, scan the configuration barcodes labeled "Clear All Customized Prefixes."



Clear all customized prefix

## Example — Remove a Prefix from QR codes

Below is an example illustrating how to remove a prefix from QR codes, and consequently from all barcode types. You can find the entire list of barcodes in the [Appendix](#).

Program Sequence:

1. Scan "Enable Customized Prefix output".



Enable Customized prefix output

2. Scan "Customized Prefix". (Scanner will beep twice, indicating configuration mode.)



Customized prefix

3. Scan the barcodes corresponding to "5" and "1" (for QR code = 51).



5



1

4. Scan "Save" to finalize the configuration.



Save

NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [Barcode type ID Table](#) and the [ASCII Visible Characters Table](#), as well as the [Data and Edit Barcode Appendix](#).

## How to Create a Suffix

### Step 1: Identify the HEX Value for the Barcode Type

Consult the [Barcode Type ID Table](#) in the Appendix to find the HEX value for your specific barcode type(s).

- If applying a prefix to, for example, QR codes only, use HEX 51.
- If applying a prefix to all barcode types, use HEX 99.

### Step 2: Determine the HEX Values for the Suffix Characters

- Identify the characters you wish to use as a prefix (e.g., "X" or "ABC").
- Refer to the [ASCII Visible Characters Table](#) in the Appendix for the HEX values of the characters you want to use.
  - Example: "X" = 58, "ABC" = 414243.

### Step 3: Program the Suffix

Scan the configuration barcode named "Enable Customized Suffix output" to allow the scanner to add a Suffix.



Enable customized suffix output

Scan the configuration barcode "Customized Suffix" to enter the configuration mode.

- The scanner should emit two beeps to confirm entry



Customized Suffix

Sequentially scan the barcodes (from the [Data and Edit Barcode Appendix](#)) for:

- The HEX value(s) for the barcode type ID (e.g., 51 for QR codes, 99 for all types).
- The HEX value(s) for each character in your prefix (e.g., X=58 and ABC=414243).

Scan "Save" to finalize the configuration.

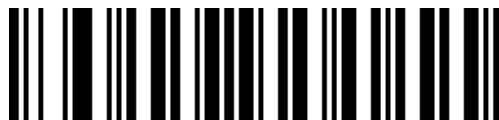


Save

## Modifying or Cancelling Data During the Process

If you need to make changes during the setup process, you must scan the appropriate barcode before scanning the "Save" barcode. This applies to all the following barcodes except the "Disable Customized Suffix Output".

To delete the last scanned data unit, scan "Cancel Previously Scanned Data Unit". Use this option if you made a mistake while scanning a single character or value and need to remove only the most recent entry without affecting the rest of the sequence.



Cancel Previously Scanned Data Unit

To delete the entire scanned sequence, scan "Cancel Previously Scanned Data Sequence". This is useful when you need to start over from the beginning because multiple incorrect values were entered.



Cancel Previously Scanned Data Sequence

To abort the process, scan "Cancel Current Setting", which exits the configuration mode without saving any changes.



Cancel current setting

To disable suffixes entirely, scan "Disable Customized Suffix Output" (factory default), restoring the scanner to its original suffix settings.



Disable customized suffix output (default)

## Example — Applying the Suffix "X" to All Barcode Types

Below is an example illustrating how to configure a suffix of "X" for all barcode types. This is just one scenario. You can find the entire list of barcodes in the [Appendix](#).

Program Sequence:

1. Scan "Enable Customized suffix output".



Enable customized suffix output

2. Scan "Customized Suffix". (Scanner will beep twice, indicating configuration mode.)



Customized suffix

3. Scan the barcodes corresponding to "9" and "9" (for all barcode types = 99), and then "5" and "8" (for "X" = 58).



9



9



5



8



4. Scan "Save" to finalize the configuration.



Save

NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [Barcode type ID Table](#) and the [ASCII Visible Characters Table](#), as well as the [Data and Edit Barcode Appendix](#).

## Example — Applying the Suffix "X" to QR codes

Below is an example illustrating how to configure a prefix of "X" for all barcode types. This is just one scenario. You can find the entire list of barcodes in the [Appendix](#).

Program Sequence:

1. Scan "Enable Customized suffix output".



Enable customized suffix output

2. Scan "Customized Suffix". (Scanner will beep twice, indicating configuration mode.)



Customized Suffix

3. Scan the barcodes corresponding to "5" and "1" (for QR code = 51), and then "5" and "8" (for "X" = 58).



5



1



5



8

4. Scan "Save" to finalize the configuration.



Save

NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [Barcode type ID Table](#) and the [ASCII Visible Characters Table](#), as well as the [Data and Edit Barcode Appendix](#).

## How to remove a customized suffix from all barcodes or a specific type of barcode:

### Step 1: Identify the HEX Value for the Barcode Type

Consult the [Barcode Type ID Table](#) in the Appendix to find either the HEX value for your specific barcode type(s) or for all barcodes.

### Step 2: Remove the Suffix

Scan "Enable Customized suffix output".



Enable customized suffix output

Scan "Customized Suffix". (Scanner will beep twice, indicating configuration mode.)



Customized Suffix

Sequentially scan the barcodes (from the [Data and Edit Barcode Appendix](#)) for the HEX value for the barcode type ID (e.g., 51 for QR codes, 99 for all types).

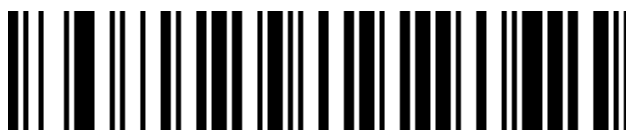
Scan "Save" to finalize the configuration.



Save

Note:

- If a prefix has been set for all barcodes, removing a specific barcode type's prefix will restore the prefix set for all barcodes.
- To clear Suffixes for all barcode types, scan the configuration barcodes labeled "Clear All Customized Suffix."



Clear all the suffix

## Example — Remove a Suffix from QR codes

Below is an example illustrating how to remove a suffix from QR codes, and consequently from all barcode types. You can find the entire list of barcodes in the [Appendix](#).

Program Sequence:

1. Scan "Enable Customized suffix output".



Enable customized suffix output

2. Scan "Customized Suffix". (Scanner will beep twice, indicating configuration mode.)



Customized Suffix

3. Scan the barcodes corresponding to "5," "1" (for 51).



5



1

4. Scan "Save" to finalize the configuration.



Save

NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [Barcode type ID Table](#) and the [ASCII Visible Characters Table](#), as well as the [Data and Edit Barcode Appendix](#).

## Prefixes and Suffixes with Special Configuration Barcodes

### How to add a Prefix

#### Step 1: Determine the HEX Values for the Prefix Characters

- Identify the characters you wish to use as a prefix (e.g., "X" or "ABC").
- Refer to the [ASCII Visible Characters Table](#) in the Appendix for the HEX values of the characters you want to use.
  - Example: "X" = 58, "ABC" = 414243.

#### Step 2: Program the Prefix

Scan the configuration barcode "Enter Setup Mode" to enter the configuration mode.



%%EnterSet



%%EnterSet

Enter Setup Mode

Scan the configuration barcode "Set Prefix" to allow the scanner to add a prefix.



%%SpecCode9A



%%SpecCode9A

Set Prefix

Sequentially scan the barcode(s), from the [Characters' Barcodes Appendix](#), corresponding to the HEX value(s) of the desired character(s):

- For example, scan the barcode with HEX value 58 and for ABC scan the barcodes with HEX values 41, 42, 43.

Scan the "Exit Settings Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Example — Applying the Prefix "X"

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

Below is an example illustrating how to configure a prefix of "X" for all barcode types. This is just one scenario. You can find the entire list of barcodes in the [Appendix](#).

Program Sequence:

1. Scan the configuration barcode "Enter Setup Mode" to enter the configuration mode.



%%EnterSet

Enter Setup Mode



%%EnterSet

2. Scan the configuration barcode "Set Prefix"



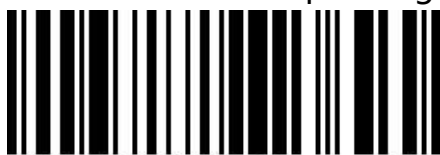
%%SpecCode9A

Set Prefix



%%SpecCode9A

3. Scan the barcode corresponding to the HEX value of X, which is 58.



%%58

58



%%58

4. Scan the "Exit Settings Mode" barcode to save and apply the settings.



%%ExitSet

Exit Setup Mode



%%ExitSet



NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [ASCII Visible Characters Table](#) and the [Characters' Barcodes Appendix](#).

## Remove a Prefix

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

To remove a previously configured prefix, follow these steps:

1. Start the scanner and scan the "Enter Setup Mode" barcode



%%EnterSet

Enter Setup Mode



%%EnterSet

2. Scan the "Set Prefix" barcode.



%%SpecCode9A

Set Prefix



%%SpecCode9A

3. Scan the "Exit Setup Mode" barcode to save and apply the changes.



%%ExitSet

Exit Setup Mode



%%ExitSet

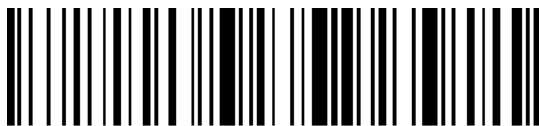
## How to add a Suffix

### Step 1: Determine the HEX Values for the Suffix Characters

- Identify the characters you wish to use as a prefix (e.g., "X" or "ABC").
- Refer to the [ASCII Visible Characters Table](#) in the Appendix for the HEX values of the characters you want to use.
  - Example: "X" = 58, "ABC" = 414243.

### Step 2: Program the Suffix

Scan the configuration barcode "Enter Setup Mode" to enter the configuration mode.



%%EnterSet



%%EnterSet

Enter Setup Mode

Scan the configuration barcode "Set Suffix " to allow the scanner to add a prefix.



%%SpecCode9B



%%SpecCode9B

Set Suffix

Sequentially scan the barcode(s), from the [Characters' Barcodes Appendix](#), corresponding to the HEX value(s) of the desired character(s):

- For adding X, scan the barcode with HEX value 58, and for ABC scan the barcodes with HEX values 41, 42, 43.

Scan the "Exit Settings Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Example — Applying the Suffix "X"

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

Below is an example illustrating how to configure a suffix of "X" for all barcode types. This is just one scenario. You can find the entire list of barcodes in the [Appendix](#).

Program Sequence:

1. Scan the configuration barcode "Enter Setup Mode" to enter the configuration mode.



%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the configuration barcode "Set Suffix"



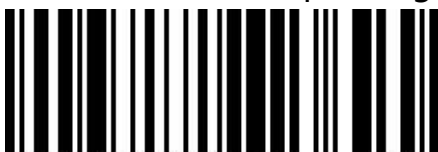
%%SpecCode9B



%%SpecCode9B

Set Suffix

3. Scan the barcode corresponding to the HEX value of X, which is 58.



%%58



%%58

58

4. Scan the "Exit Settings Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

NOTE: This overview and example are meant to demonstrate the general process. For a full list of barcodes and values please see the [ASCII Visible Characters Table](#) and the [Characters' Barcodes Appendix](#).

## Remove a Suffix

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

To remove a previously configured suffix, follow these steps:

Start the scanner and scan the "Enter Setup Mode" barcode



%%EnterSet



%%EnterSet

Enter Setup Mode

Scan the "Set Suffix" barcode.



%%SpecCode9B



%%SpecCode9B

Set Suffix

Scan the "Exit Settings Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

## CODE ID

The CODE ID feature allows you to display an identifier for each scanned barcode. You can choose to:

1. Show the CODE ID before or after the barcode.
2. Customize the CODE ID for specific barcode types.
3. Disable the CODE ID entirely.

## Enabling or Disabling CODE ID Display

To enable or disable the CODE ID display, scan the appropriate configuration barcode:

Scan "Enable CODE ID as prefix" to show the CODE ID before the scanned barcode.



Enable CODE ID as prefix

Scan "Enable CODE ID as suffix" to show the CODE ID after the scanned barcode.



Enable CODE ID as suffix

Scan "Disable CODE ID Output" (factory default) to disable the CODE ID from showing.



Disable CODE ID output



## Customizing the CODE ID

If you want to customize the CODE ID for a specific barcode type, follow these steps:

### Step 1: Identify the HEX Value for the Barcode Type

Consult the [Barcode Type ID Table](#) in the Appendix to find the HEX value for your specific barcode type(s).

- Example: QR Codes = 51, EAN-13 = 64.

### Step 2: Determine the HEX Values

- Identify the characters you wish to use (e.g., "X" or "ABC").
- Refer to the [ASCII Visible Characters Table](#) in the Appendix for the HEX values of the characters you want to use.
  - Example: "X" = 58, "ABC" = 414243.

### Step 3: Program the CODE ID

Scan the configuration barcode "Customized Prefix" to enter the configuration mode.

- The scanner should emit two beeps to confirm entry



Customized CODE ID

Sequentially scan the barcodes (from the [Data and Edit Barcode Appendix](#)) for:

- The HEX value(s) for the barcode type ID (e.g., 51 for QR codes, 64 for EAN-13).
- The HEX value(s) for each character in your prefix (e.g., X=58 and ABC=414243).

Scan "Save" to finalize the configuration.



Save

## Modifying or Cancelling Data During the Process

If you need to make changes during the setup process, you must scan the appropriate barcode before scanning the "Save" barcode. This applies to all the following barcodes except the "Clear All Customized CODE ID" barcode, which can be scanned at any time to remove all custom CODE IDs.

To delete the last scanned data unit, scan "Cancel Previously Scanned Data Unit". Use this option if you made a mistake while scanning a single character or value and need to remove only the most recent entry without affecting the rest of the sequence.



Cancel Previously Scanned Data Unit

To delete the entire scanned sequence, scan "Cancel Previously Scanned Data Sequence". This is useful when you need to start over from the beginning because multiple incorrect values were entered.



Cancel Previously Scanned Data Sequence

To abort the process, scan "Cancel Current Setting", which exits the configuration mode without saving any changes.



Cancel current setting

To clear all customised CODE IDs, scan "Clear all customized CODE ID"



Clear all customized CODE ID

## Example — Changing the CODE ID of QR Codes to "X"

Below is an example of how to customize the CODE ID for QR codes to "X". This is just one scenario and is meant to demonstrate the general process. For a full list of barcodes and values please see the [Barcode type ID Table](#) and the [ASCII Visible Characters Table](#), as well as the [Data and Edit Barcode Appendix](#)

Program Sequence:

Scan "Customized CODE ID". (Scanner will beep twice, indicating configuration mode.)



Customized CODE ID

Scan the barcodes corresponding to "5" and "1" (for QR codes= 51), and then

"5" and "8" (for "X"= 58).



5



1



5



8

Scan "Save" to finalize the configuration.



Save

## Barcode Length Settings

When setting barcode length limits, ensure the following:

- The minimum barcode length must not exceed the currently configured maximum length; otherwise, an error will occur.
- The maximum barcode length must not be less than the currently configured minimum length.

## How to Set Barcode Length Limits

Follow these steps to set the minimum and maximum barcode length for your scanner:

1. Set the Minimum Length (smallest barcode length allowed)
  - a. Scan the "Minimum Length" configuration barcode for the specific barcode type you want to modify.
  - b. Scan a barcode from the [Data and Edit Barcode Appendix](#) to choose the minimum number of characters:
    - i. Example: Scan 4 if you want the scanner to read barcodes that are at least 4 characters long.
    - ii. Example: Scan 5 and 0 if you want to allow barcodes of any length.
  - c. Scan "Save" to finalize the configuration.
2. Set the Maximum Length (largest barcode length allowed)
  - a. Scan the "Maximum Length" configuration barcode for the specific barcode type you want to modify.
  - b. Scan a barcode from the [Data and Edit Barcode Appendix](#) to choose the maximum number of characters:
    - i. Example: Scan 1 and 2 if you want the scanner to read barcodes up to 12 characters long.
    - ii. Example: Scan 5 and 0 if you want to allow barcodes of any length.
3. Scan "Save" to finalize the configuration.

This is just one scenario and is meant to demonstrate the general process. For a full list of barcodes and values please see the [Data and Edit Barcode Appendix](#)

## **Example: Configuring Code 128 to Read Barcodes Between 4 and 12 Characters**

If you want your scanner to read only Code 128 barcodes that are between 4 and 12 characters long, follow these steps:

1. Set Minimum Length
  - a. Scan the "Code 128 Minimum Length" configuration barcode.
  - b. Scan a barcode from the [Data and Edit Barcode Appendix](#) to choose the minimum number of characters:
    - i. Example: Scan 4 to set the minimum barcode length to 4 characters.
    - ii. Example: Scan 5 and 0 if you want to allow barcodes of any length.
2. Scan "Save" to finalize the configuration.

1. Set Maximum Length
  - a. Scan the "Code 128 Maximum Length" configuration barcode.
  - b. Scan a barcode from the [Data and Edit Barcode Appendix](#) to choose the maximum number of characters:
    - i. Example: Scan 1 and 2 to set the maximum barcode length to 12 characters.
    - ii. Example: Scan 5 and 0 if you want to allow barcodes of any length.
2. Scan "Save" to finalize the configuration.

This is just one scenario and is meant to demonstrate the general process. For a full list of barcodes and values please see the [Data and Edit Barcode Appendix](#)

## Specific length configurations Interleaved 2 of 5 barcodes

The Interleaved 2 of 5 barcode types features additional editing options. You can choose to:

1. Direct configuration through default configuration barcodes.
2. Custom configuration by manually editing the length depending on your needs.

### Direct Configuration Option

Scan the barcode according to your needs to set the length directly.



ITF25 adaptive length (6-50 bits) (default)



ITF25 6 bits length



ITF25 8 bits length



ITF25 10 bits length





ITF25 12 bits length



ITF25 14 bits length



ITF25 16 bits length



ITF25 18 bits length



ITF25 20 bits length



ITF25 22 bits length



ITF25 24 bits length

## Custom Configuration Option

If you want to customize the Interleaved 2 of 5 barcode type to a specific length, follow these steps:

### Set Minimum Length:

1. Scan the "Interleaved 2 of 5 minimum length" configuration barcode.



Interleaved 2 of 5 minimum length (0~50 bits)

2. Scan a barcode from the [Data and Edit Barcode Appendix](#) to choose the minimum number of characters:
  - a. Example: Scan 6 to set the minimum barcode length to 6 characters.
  - b. Example: Scan 0 if you want to allow barcodes of any length.
3. Scan "Save" to finalize the configuration.



Save

This is just one scenario and is meant to demonstrate the general process. For a full list of barcodes and values please see the [Data and Edit Barcode Appendix](#).

## Set Maximum Length

1. Scan the "Interleaved 2 of 5 maximum length" configuration barcode.



Interleaved 2 of 5 maximum length (0~50 bits)

2. Scan a barcode from the [Data and Edit Barcode Appendix](#) to choose the maximum number of characters:
  - a. Example: Scan 1 and 2 to set the maximum barcode length to 12 characters.
  - b. Example: Scan 5 and 0 if you want to allow barcodes of any length.
3. Scan "Save" to finalize the configuration.



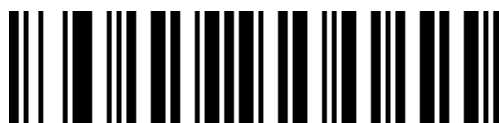
Save

This is just one scenario and is meant to demonstrate the general process. For a full list of barcodes and values please see the [Data and Edit Barcode Appendix](#)

## Modifying or Cancelling Data During the Process

If you need to make changes during the setup process, you must scan the appropriate barcode before scanning the "Save" barcode.

To delete the last scanned data unit, scan "Cancel Previously Scanned Data Unit". Use this option if you made a mistake while scanning a single character or value and need to remove only the most recent entry without affecting the rest of the sequence.



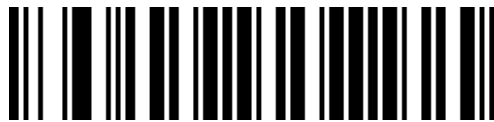
Cancel Previously Scanned Data Unit

To delete the entire scanned sequence, scan "Cancel Previously Scanned Data Sequence". This is useful when you need to start over from the beginning because multiple incorrect values were entered.



Cancel Previously Scanned Data Sequence

To abort the process, scan "Cancel Current Setting", which exits the configuration mode without saving any changes.



Cancel current setting

## Barcode Section Edit

The Data Edit function allows you to customize the barcode content by dividing it into three fields: First, Mid, and End. You can configure the length and transmission settings for the Start and End fields based on your specific needs.

Note: Non-barcode content such as customized suffixes, start characters, end characters, CODE ID, and AIM ID are not affected by the data editing function.



Transmit complete characters (default)



Only transmit First part



Only transmit Mid part



Only transmit End part

## Character length configuration

Use the following barcodes to set the length of the First or End segment. The length is defined in bytes and must be entered using decimal values.



Set First part length



Set End part length

### Example: Setting the Start Segment Length to 10 Bytes (10 digits)

1. Scan the "Set First part length" barcode.



Set First part length

2. Scan the barcodes corresponding to the numbers 1 and 0 (also found in the appendix).



1



0

3. Scan "Save" to finalize the configuration.



Save

## Example: Setting the End Segment Length to 8 Bytes (8 digits)

1. Scan the "Set End part length" barcode.



Set End part length

2. Scan the barcodes corresponding to the numbers 8.



8

3. Scan "Save" to finalize the configuration.



Save

These are just two scenarios and are meant to demonstrate the general process. For a full list of barcodes and values please see the [Data and Edit Barcode Appendix](#)

## Modifying or Cancelling Data During the Process

If you need to make changes during the setup process, you must scan the appropriate barcode before scanning the "Save" barcode.

To delete the last scanned data unit, scan "Cancel Previously Scanned Data Unit". Use this option if you made a mistake while scanning a single character or value and need to remove only the most recent entry without affecting the rest of the sequence.



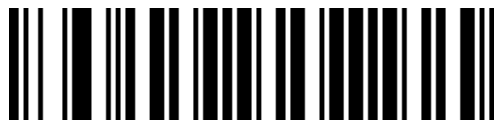
Cancel Previously Scanned Data Unit

To delete the entire scanned sequence, scan "Cancel Previously Scanned Data Sequence". This is useful when you need to start over from the beginning because multiple incorrect values were entered.



Cancel Previously Scanned Data Sequence

To abort the process, scan "Cancel Current Setting", which exits the configuration mode without saving any changes.



Cancel current setting

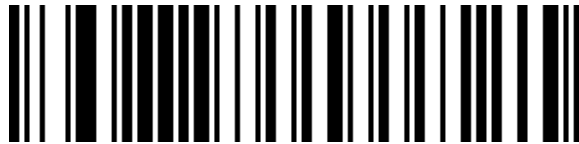


## **Part I: Basic Configuration Barcodes**

## Interface

The scanning device supports USB keyboard, USB serial port (USB - COM), and serial port interface mode.

Scan the barcode below can be configured as USB keyboard.



USB keyboard (Factory default)

Scan the barcode below to configure the scanner to serial mode.



Serial mode

Scan the barcode below to configure the scanner to USB serial mode.

(Requires driver installation)



USB serial (USB -COM)

## Output encoding format

In order to output correctly according to the specified encoding format, you need to specify the output encoding format, such as Simplified Chinese in Notepad / excel output configuration into GBK encoding, in Word and other output configured into UNICODE encoding.

When the output encoding format is configured as English/Latin-1 encoding, the output mode of the USB keyboard is affected by the virtual keyboard function switch. When the output encoding format is configured as GBK encoding / UNICODE encoding, the output mode of the USB keyboard is forced to be the virtual keyboard output.



English/Latin-1 encoding (default)



GBK encoding (Notepad/excel)



UNICODE encoding (Word)

## Serial configuration

Baud rating



Baud 4800



Baud 9600 (default)



Baud 19200



Baud 38400



Baud 57600



Baud 115200

## Serial data bit, stop bit, parity/check digit configuration



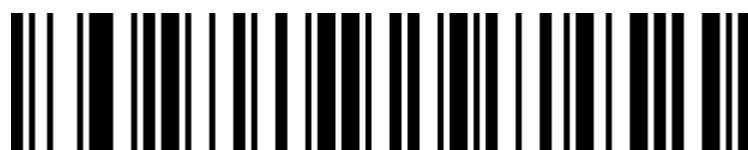
7-bit data, 1 bit stop, no parity/check digit



7-bit data, 1 bit stop, even parity/check digit



7-bit data, 1 bit stop, odd parity/check digit



7-bit data, 2-bit stop, no parity/check digit



7-bit data, 2-bit stop, even parity/check digit



7-bit data, 2-bit stop, odd parity/check digit



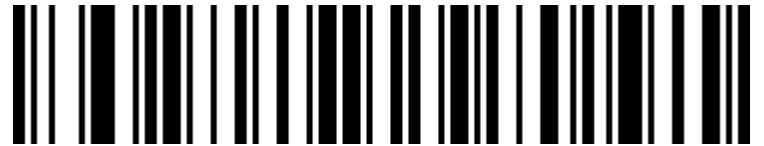
8-bit data, 1 bit stop, no parity/check digit (default)



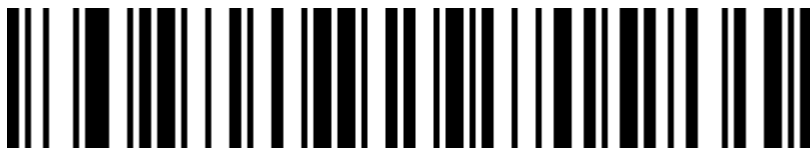
8-bit data, 1 bit stop, even parity/check digit



8-bit data, 1 bit stop, odd parity/check digit



8-bit data, 2-bit stop, no parity/check digit



8-bit data, 2-bit stop, even parity/check digit



8-bit data, 2-bit stop, odd parity/check digit

## GS Control character replacement



No replace (default)



Replace to |



Replace to ^]



Replace to ]



Replace to <GS>

## Scan mode

This scanner is equipped with Auto Sense Mode, which allows for automatic barcode detection without manually triggering the scanner. Use the barcodes below to configure the desired scan mode.

### Disable auto sense mode

When Auto Sense Mode is disabled, the scanner requires you to press the button to initiate a scan. This is the factory default setting.



Disable auto sense (default)

### Enable auto sense mode

When Auto Sense Mode is enabled, the scanner automatically detects, and scans barcodes placed in front of the lens without requiring manual activation.



Enable auto sense



## Same barcode decoding time

This setting configures the interval time for decoding the same barcode, when the scanner is in Auto Sense mode. If the configured interval time is not exceeded, the scanner will scan the same barcode only once. Use the barcodes below to configure the detection interval according to your needs.



Same barcode detection interval 500ms



Same barcode detection interval 750ms (default)



Same barcode detection interval 1s



Same barcode detection interval 2s

## Center mode

When Center Mode is enabled, the scanner will only recognize barcodes located at the center of the scanner's sensor field of view. This can improve accuracy when scanning in environments with multiple barcodes. By default, this mode is disabled.



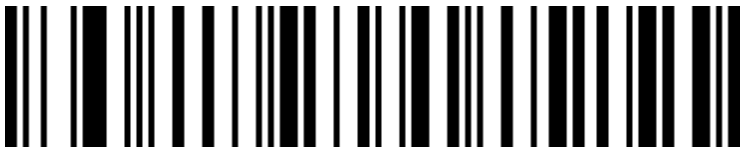
Disable center mode (default)



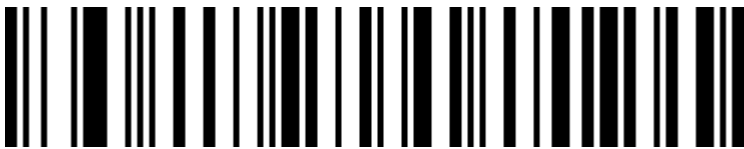
Enable center mode

AIM ID

Here are the barcodes to enable the scanner to show the AIM ID, and you can find the list of all the possible AIM ID values in this [AIM ID Table](#).



Disable barcode AIM (Default)



Enable AIM ID before barcode



Enable AIM ID before barcode

## Inversed barcode option

(Mainly for 1D barcodes/Data Matrix/Aztec)



Only normal barcode



Only inverse barcode



Both normal and inverse barcode

## Barcode type

### Enable / Disable all the barcodes

Enabling all barcode types may result in slower decoding speeds. It is recommended to enable only the barcode types required for your specific application. By default, all barcode types are enabled.

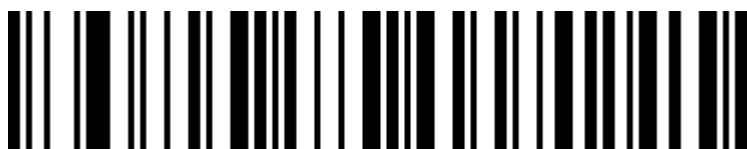


Enable all the barcode types



Disable all the barcode types

### Enable / Disable all the 1D barcodes



Enable all the 1D barcode type



Disable all the 1D barcode type

Enable / Disable all the 2D barcodes



Enable all the 2D barcode type



Disable all the 2D barcode type

## Codabar

Enable/Disable barcode

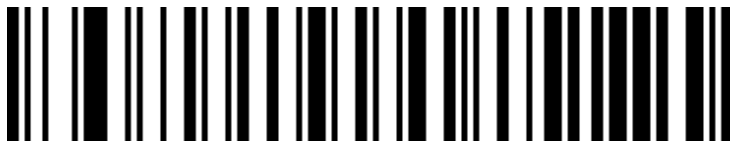


Enable Codabar



Disable Codabar

Codabar Start / End character



Don't send Codabar start/end character (default)



Send Codabar start/end character

Codabar length limited setting



Codabar minimum length (0~50 bits)



Codabar maximum length (0~50 bits)

## Code 39

Enable/Disable barcode



Enable Code 39



Disable Code 39

Code 39 parity



Disable Code 39 parity (default)



Enable Code 39 parity but don't send parity/check digit



Enable Code 39 parity and send parity/check digit



## Code 39 Full ASCII



Enable Full ASCII



Disable Full ASCII (Factory default)

## Code 39 length limited setting



Code 39 minimum length (0~50 bits)



Code 39 maximum length (0~50 bits)

## Code 32 (Need enable code39)

Enable / Disable barcode



Enable Code 32



Disable Code 32

## Interleaved 2 of 5 (ITF25)

Enable / Disable barcode



Enable ITF25

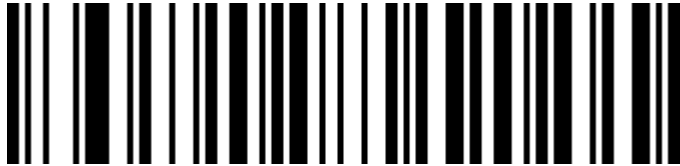


Disable ITF25

Interleaved 2 of 5 (ITF25) parity



Enable ITF25 parity but don't send parity/check digit



Enable ITF25 parity and send parity/check digit

## Industrial 2 of 5

Enable/Disable barcode



Enable Industrial 2 of 5



Disable Industrial 2 of 5

Industrial 2 of 5 length limited setting



Industrial 2 of 5 minimum length (0~50 bits)



Industrial 2 of 5 maximum length (0~50 bits)

## Matrix 2 of 5 (4-24 bits)

Enable / Disable barcode

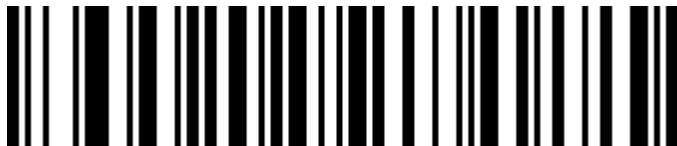


Enable Matrix 2 of 5



Disable Matrix 2 of 5

Matrix 2 of 5 length limited setting



Matrix 2 of 5 minimum length (0~50 bits)



Matrix 2 of 5 maximum length (0~50 bits)

## Code 93

Enable/Disable barcode



Enable Code 93



Disable Code 93

Code 93 length limited setting



Code 93 minimum length (0~50 bits)



Code 93 maximum length (0~50 bits)

## Code 11

Enable / Disable barcode



Enable Code 11



Disable Code 11 (default)

Code 11 length limited setting



Code 11 minimum length (0~50 bits)



Code 11 maximum length (0~50 bits)

## Code 128



Enable Code 128



Disable Code 128

## ISBT-128



Disable ISBT 128



Enable ISBT 128



## GS1-128



Enable GS1-128

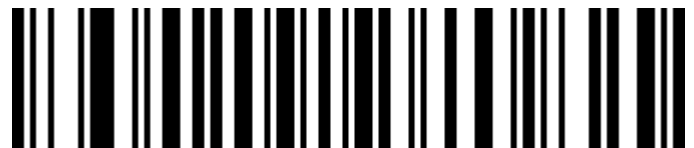


Disable GS1-128

## 128 code length limited setting



128 code minimum length (0~50 bits)



128 code maximum length (0~50 bits)

## UPC-A

Enable / Disable barcode



Enable UPC-A



Disable UPC-A

UPC-A parity



Send UPC-A parity/check digit (default)



Don't send UPC-A parity/check digit

## UPC-A transfer EAN-13



Enable UPC-A transfer EAN-13



Disable UPC-A transfer EAN-13 (default)

## UPC-E

### Enable/Disable barcode



Enable UPC-E



Disable UPC-E

## UPC-E parity



Send UPC-E parity/check digit (default)



Don' t send UPC-E parity/check digit

## UPC-E expand UPC-A

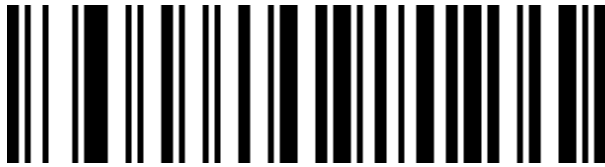


UPC-E expand UPC-A



Disable UPC-E expand UPC-A (default)

## EAN/JAN-8



Enable EAN/JAN-8

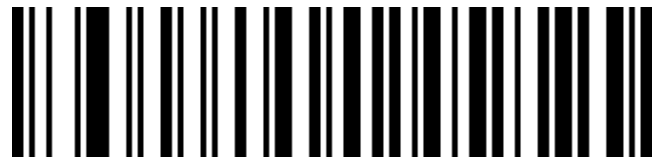


Disable EAN/JAN-8

## EAN/JAN-13



Enable EAN/JAN-13



Disable EAN/JAN-13

## UPC/EAN/JAN Additional code



Ignore UPC/EAN/JAN additional code (default)



Decode UPC/EAN/JAN additional code



Adaptive UPC/EAN/JAN additional code

## **EAN13 transfer ISBN**

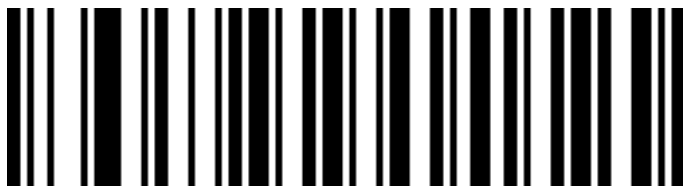


Enable EAN13 transfer ISBN



Disable EAN13 transfer ISBN code (default)

## **EAN13 transfer ISSN**



Enable EAN13 transfer ISSN code



Disable EAN13 transfer ISSN code (default)

## GS1 DataBar (RSS14)

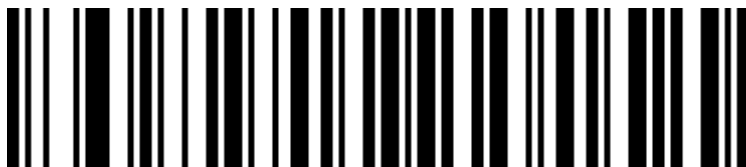


Enable GS1 DataBar



Disable GS1 DataBar

## GS1 DataBar Limited



Enable GS1 DataBar Limited



Disable GS1 DataBar Limited

## GS1 DataBar Expanded



Enable GS1 DataBar Expanded



Disable GS1 DataBar Expanded

## PDF417



Enable PDF417



Disable PDF417



## Micro PDF417



Enable Micro PDF417



Disable Micro PDF417

## QR Code



Enable QR



Disable QR

## Micro QR



Micro QR



Disable Micro QR

## Data Matrix



Enable Data Matrix



Disable Data Matrix

## Aztec Code



Disable Aztec



Enable Aztec

## **Part II: Special Configuration Codes**

## Use instructions

All scanner functions are configured by scanning specific setting barcodes. Follow these steps to configure a function:

1. Enter Setup Mode: Scan the "Enter Setup Mode" barcode to begin.
2. Set Function: Scan the barcode corresponding to the desired function.
3. Exit Setup Mode: Scan the "Exit Setup Mode" barcode to save the configuration and complete the process.

Note: Some frequently used functions can be configured directly by scanning their corresponding barcodes without entering or exiting setup mode. These barcodes are identified with a ★, such as "★ Power Display".



%%EnterSet

Enter Setup Mode



%%EnterSet



%%ExitSet

Exit Setup Mode



%%ExitSet

Note: Wireless Version 1.18D later supports setting without entering or exiting settings.

## Restore Wireless Parameters

If the scanner's functionality is disrupted due to accidentally scanning incorrect function setting codes, you can restore the scanner to its default state by scanning the Restore Wireless Parameters barcode.



%%SpecCode93



%%SpecCode93

Restore Wireless Parameters

### Instructions:

This function is particularly useful in the following scenarios:

1. An error occurred during scanner setup.
2. You cannot recall the previous settings made on the scanner and wish to reset it to default.
3. You enabled unusual or experimental functions and now want to reset the scanner for standard use.

## Setting Custom Default Settings

With custom default settings, you can configure the default wireless parameters of the scanner to suit your specific needs. These settings will replace the original factory defaults and will remain in effect, even if you perform a wireless parameter reset.

Instructions for Setting Custom Default Settings:

1. Enter Settings Mode:
  - a. Scan the "Enter Settings Mode" barcode.
2. Set Wireless Parameters:
  - a. Scan the barcode corresponding to the desired wireless parameter function.
3. Exit Settings Mode:
  - a. Scan the "Exit Settings Mode" barcode to save and finalize the new default settings.

Important:

- Once configured, the new custom defaults cannot be reverted to the factory settings by using the "Restore Wireless Parameters" function.



%%SpecCode92

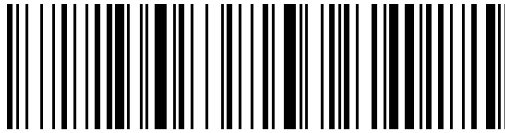


%%SpecCode92

Setting Custom Default Settings

## Version

To display the version information of the scanner, scan the barcode into a text processing app.



%%SpecCode39

Display version information

## Communication mode switching

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the "Enter Setup Mode" bar code

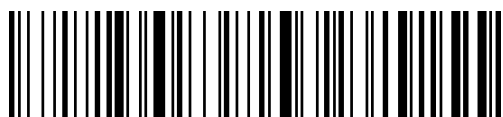


%%EnterSet



%%EnterSet

2. Scan the barcode corresponding to the desired communication mode:



%%SpecCodeA8



%%SpecCodeA8

2.4G Mode



%%SpecCodeA9



%%SpecCodeA9

Virtual Bluetooth Mode



%%SpecCodeAA



%%SpecCodeAA

Bluetooth HID Mode





%%SpecCodeAB



%%SpecCodeAB

Bluetooth SPP Mode



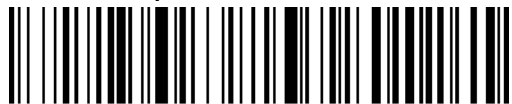
%%SpecCodeAC



%%SpecCodeAC

Bluetooth BLE Mode

3. Scan the "Pair with receiver" barcode. The blue light will start flashing, indicating pairing mode. Alternatively, press the scanner's trigger twice to exit setup mode and return to the previous state.



%%SpecCode99



%%SpecCode99

Pair with receiver

4. Scan the "Exit Setup Mode" barcode to complete the setup.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Scanner Matching Steps

### USB Dongle Pairing (2.4 G)

The following steps outline how to pair the scanner in 2.4G mode. This process supports operating systems such as Windows XP, Win7, Win8, Win10, and others.

1. Start the scanner and scan the "Enter Setup Mode" barcode.



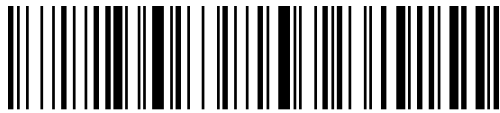
%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the "2.4G Mode" barcode to configure the scanner for 2.4G wireless communication



%%SpecCodeA8



%%SpecCodeA8

2.4G Mode

3. Scan the "Pair with USB Dongle receiver" barcode and enter the pairing state.  
The blue indicator light will begin flashing quickly, indicating the scanner is in pairing mode.

Note: While in pairing mode, the scanner will not emit light when the trigger is pressed.



%%SpecCode99



%%SpecCode99

Pair with USB Dongle receiver

4. Plug the USB Dongle receiver into the computer's USB port. A "beep" sound will confirm successful pairing, and the blue indicator light on the right will remain solid.

5. Scan the "Exit Setup Mode" barcode to complete the pairing process.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Bluetooth terminal matching

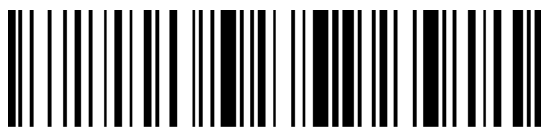
The scanner can connect via Bluetooth to devices running Android, iOS, or PCs with Bluetooth functionality. There are two methods for pairing the scanner in Bluetooth HID mode.

### Method 1: Quick Pairing *(Legacy setting)*

1. Start the scanner and press the button for 8 seconds to enter Bluetooth HID Matching Mode.
    - a. The blue light will flash alternately.
  2. Enable Bluetooth on the target device and search for "Barcode Scanner HID".
  3. Select "ScanAvengerHID" to pair.
  4. Upon successful pairing, you will hear a beep, and the blue light will remain solid.
- Note: this method is disabled by default on new models.

### Method 2: Manual Setup

1. Start the scanner and scan the "Enter Setup Mode" barcode.



%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the "Bluetooth HID Mode" barcode to set the scanner to Bluetooth HID mode



%%SpecCodeAA



%%SpecCodeAA

Bluetooth HID Mode

3. Scan the "Pair with receiver" barcode. The blue light will start flashing, indicating pairing mode. Alternatively, press the scanner's trigger twice to exit setup mode and return to the previous state.



%%SpecCode99



%%SpecCode99

Pair with receiver

4. Turn on Bluetooth and search for "Barcode Scanner HID" in your device's Bluetooth settings.

5. Select "Barcode Scanner HID" to enter pairing mode

6. Beep confirms successful pairing, and the blue light will remain solid.

7. Scan the "Exit Setup Mode" barcode to complete the setup.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Long press 8 seconds into Bluetooth HID search (*Legacy setting*)

The scanner can be configured to quickly initiate Bluetooth HID search mode by holding the button for 8 seconds. Use the steps below to enable or disable this feature.

1. Start the scanner and scan the "Enter Setup Mode" bar code



%%EnterSet



%%EnterSet

Enter Setup Mode

2. Configure the Function



%%SpecCode79



%%SpecCode79

Enable long Press 8 Seconds to Enter Bluetooth HID Search



%%SpecCode78



%%SpecCode78

Disable long Press 8 Seconds to Enter Bluetooth HID Search

3. Scan the "Exit Setup Mode" barcode to finalize the configuration



%%ExitSet



%%ExitSet

Exit Setup Mode

## Bluetooth SPP Mode (Serial Port Profile)

To enable data transmission via SPP, you must install or develop compatible Bluetooth SPP transmission software. This mode is ideal for transferring large amounts of data.

### Bluetooth SPP Pairing Steps:

1. Start the scanner and scan the "Enter Setup Mode" barcode.



%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the "Bluetooth SPP Mode" setup code.



%%SpecCodeAB



%%SpecCodeAE

Bluetooth SPP Mode

3. Scan the "Pair with receiver" barcode. The blue light will start flashing, indicating pairing mode. Alternatively, press the scanner's trigger twice to exit setup mode and return to the previous state.



%%SpecCode99



%%SpecCode99

Pair with receiver

4. Scan the "Exit Setup Mode" barcode to complete the setup.



%%ExitSet



%%ExitSet

Exit Setup Mode

- a. The device will automatically switch to SPP mode and enter the broadcast state.
  - b. The device name "ScanAvengerSPP" will be available for selection in the SPP software.
5. Search for " ScanAvengerSPP" in the SPP transmission software.
6. Select " ScanAvengerSPP" to initiate pairing.
7. Wait for the confirmation signal.
  - a. A beep sound indicates a successful pairing.
  - b. The blue LED will remain steady, confirming the connection.



## Bluetooth BLE Mode (Bluetooth Low Energy)

To enable data transmission via BLE, you must install or develop compatible Bluetooth BLE transmission software. This mode is optimized for low-power, small data transfers.

### Bluetooth BLE Pairing Steps:

1. Start the scanner and scan the "Enter Setup Mode" barcode.



%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the "Bluetooth BLE Mode" setup code.



%%SpecCodeAC



%%SpecCodeAC

Bluetooth BLE Mode

3. Scan the "Pair with receiver" barcode. The blue light will start flashing, indicating pairing mode. Alternatively, press the scanner's trigger twice to exit setup mode and return to the previous state.



%%SpecCode99



%%SpecCode99

Pair with receiver

4. Scan the "Exit Setup Mode" barcode to complete the setup.



%%ExitSet



%%ExitSet

Exit Setup Mode

- a. The device will switch to BLE mode and enter the broadcast state.
  - b. The device name "ScanAvengerBLE" will be available for selection in the BLE software.
5. Search for "ScanAvengerBLE" in the BLE transmission software.
6. Select "ScanAvengerBLE" to initiate pairing.
7. Wait for the confirmation signal.
  - a. A beeping sound indicates a successful pairing.
  - b. The blue LED will remain steady, confirming the connection.

## Set Bluetooth Name

1. Start the scanner and scan the "enter setup mode" barcode



%%EnterSet



%%EnterSet

Enter setup mode

2. Scan "Set Bluetooth Name" Barcode



%%SpecCodeEC



%%SpecCodeEC

Set Bluetooth Name

3. Scan the barcode representing the desired Bluetooth name.

Note: The default name is "ScanAvenger".

A. The complete Bluetooth name includes the name + protocol type (e.g., HID, SPP).  
Changing the name updates all protocol names.

B. The Bluetooth name supports a maximum of 16 bytes. If a barcode exceeds this limit,  
only the first 16 bytes will be used.

Example: If the new Bluetooth name is Scanner, the Bluetooth HID name becomes

Scanner



Scanner



Scanner

Sample Bluetooth Name "Scanner"

4. Scan the "Exit Setup Mode" barcode to save the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Read Bluetooth Name

To check the current Bluetooth name, scan the "Read Bluetooth Name" barcode.



%%SpecCodeED



%%SpecCodeED

Read Bluetooth Name

## Battery level display

To check the current power level of the scanner, please scan the "★Battery Level Display" barcode into a text processing app, where the battery percentage will appear.

This function allows to easily monitor the scanner's power level to ensure uninterrupted operation.



%%SpecCode15



%%SpecCode15

★Battery level display

## Wireless transmission modes

The barcode scanner has two operating modes: manual trigger mode and storage mode.

### Manual trigger mode

By scanning the "Manual trigger mode" barcode, the scanner immediately transmits the scanned data to the connected device when the trigger is pressed.



%%SpecCode10



%%SpecCode10

★Manual trigger mode★

### Storage mode

By scanning the "Storage Mode" barcode, the scanner stores scanned barcode data locally instead of uploading it directly to the connected device. The stored data can be uploaded to the device later as needed, meaning that the scanner can be used in this mode even if temporarily disconnected.



%%SpecCode11



%%SpecCode11

★ Storage mode

## Data Control (Data Processing for Storage Mode)

This section provides instructions for managing stored barcode data in Storage Mode. Use the corresponding barcodes to upload, count, or clear stored data.

### Data upload

To upload the data stored in the scanner to a computer, POS, or mobile device, simply scan the "★Data Upload" barcode, which enables the scanner to transmit all stored barcode data to the connected device.

**Important:** Uploaded data remains stored in the scanner unless cleared using the "Data Clear" function.



%%SpecCode16



%%SpecCode16

★data upload

### Sum of the barcodes scanned

To count and upload the total number of barcodes stored in the scanner, simply scan the "★Total Data" barcode. The scanner will send the total count of stored barcodes to the connected device. This feature is useful for inventory tracking and data analysis.



%%SpecCode17



%%SpecCode17

★Total data

## Data clear

To erase all stored barcode data in the scanner, simply scan the "★Data Clear" barcode. The scanner will permanently delete all stored data.

**Caution:** This action cannot be undone. Ensure that all necessary data has been uploaded before clearing.



%%SpecCode18

★data clear



## Android, iOS system keyboard settings (Bluetooth function)

This section explains how to manage keyboard visibility when using the scanner in Bluetooth HID Mode.

1. To toggle the keyboard display, scan the "★ Hide/Unhide Keyboard" barcode.



%%SpecCode1A

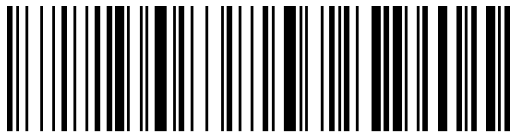


%%SpecCode1A

★ Hide/Unhide Keyboard

2. To use a double trigger press to hide/unhide the keyboard, scan the "★ Enable Double Click to Hide/Unhide Keyboard" barcode.

This setting overrides the "★ Hide/Unhide Keyboard" barcode functionality



%%SpecCode7B



%%SpecCode7B

★ Enable Double click to Hide/Unhide keyboard

3. To deactivate the double trigger press functionality, scan the "★ Disable Double Click to Hide/Unhide Keyboard" barcode.



%%SpecCode7A



%%SpecCode7A

★ Disable Double click to Hide/Unhide keyboard

Android System Keyboard Display:

If the virtual keyboard does not appear on some Android devices, contact the supplier for the Bluetooth input method APP, as this may depend on the device manufacturer.

## Transmission Speed Setting

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the "Enter Setup Mode" barcode



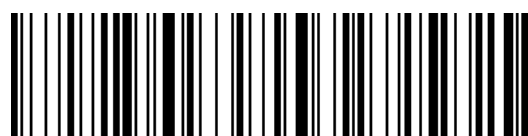
%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the barcode for the desired speed

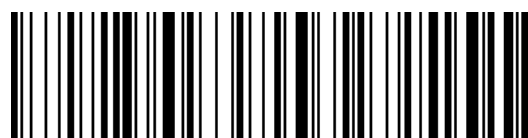


%%SpecCodeB0

Fast



%%SpecCodeB0

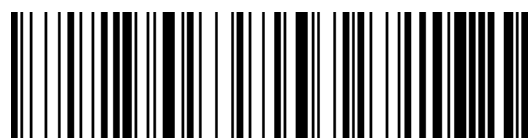


%%SpecCodeB1

Medium



%%SpecCodeB1



%%SpecCodeB2

Low



%%SpecCodeB2



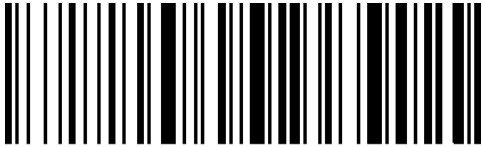
%%SpecCodeB3



%%SpecCodeB3

Very Low

3. Scan the "Exit Setup Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Sound setting

Follow these steps to configure the scanner's sound settings, including volume and buzzer frequency.

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the "Enter Setup Mode" barcode



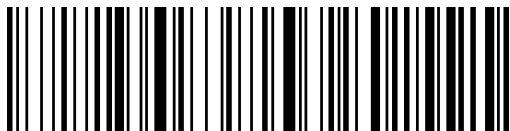
%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the barcode for the desired setting:



%%SpecCode94



%%SpecCode94

turn sound off



%%SpecCode95



%%SpecCode95

Low volume

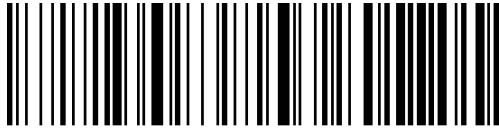


%%SpecCode96



%%SpecCode96

Middle volume



%%SpecCode97



%%SpecCode97

High volume \*



%%SpecCode7C



%%SpecCode7C

Buzzer frequency 2K \*



%%SpecCode7D



%%SpecCode7D

Buzzer frequency 2.7K

3. Scan the "Exit Setup Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

## Vibration setting

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan into the setup mode barcode



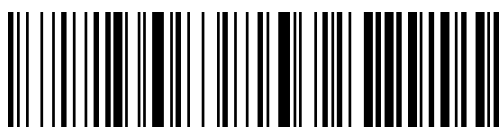
%%EnterSet

Enter Setup Mode



%%EnterSet

2. Scan the barcode for the desired setting

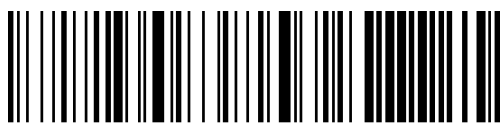


%%SpecCode76

Turn Off Vibration (optional)



%%SpecCode76



%%SpecCode77

Turn On Vibration (optional)



%%SpecCode77

3. Scan the "Exit Setup Mode" barcode to save the settings



%%ExitSet



%%ExitSet

Note: The vibration function is already enabled on certain scanners.

## Sleep time setting

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan into the setup mode barcode



%%EnterSet



%%EnterSet

Enter Setup Mode

2. Select the sleep interval code



%%SpecCode30



%%SpecCode30

Sleep interval 30s



%%SpecCode31



%%SpecCode31

Sleep interval 1min



%%SpecCode32



%%SpecCode32

Sleep interval 2min



%%SpecCode33



%%SpecCode33

Sleep interval 5min



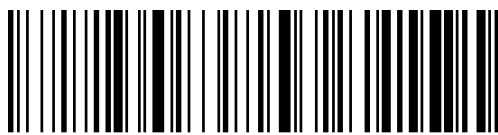
%%SpecCode34

Sleep interval 10min



%%SpecCode35

Sleep interval 30min



%%SpecCode36

Never Sleep



%%SpecCode38

Sleep Immediately



%%SpecCode34



%%SpecCode35



%%SpecCode36



%%SpecCode38

### 3. Scan "Exit Setup Mode" code



%%ExitSet

Exit Setup Mode



%%ExitSet



# Language Settings Table

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the setup mode barcode



%%EnterSet

Enter Setup Mode



%%EnterSet

2. Select the desired keyboard language



%%SpecCode40

English(US)



%%SpecCode40



%%SpecCode41

German



%%SpecCode41



%%SpecCode42

French



%%SpecCode42



%%SpecCode43

Spanish



%%SpecCode43



%%SpecCode44



%%SpecCode44

Italian



%%SpecCode45



%%SpecCode45

Japanese



%%SpecCode47



%%SpecCode47

Belgian French



%%SpecCode48



%%SpecCode48

Portuguese



%%SpecCode49



%%SpecCode49

English (UK)



%%SpecCode4A



%%SpecCode4A

German IOS keyboard



%%SpecCode4B



%%SpecCode4B

Brazilian Portuguese



%%SpecCode4C

Russian



%%SpecCode4C



%%SpecCode4D

Czech



%%SpecCode4D



%%SpecCode4E

142 Italy 142



%%SpecCode4E



%%SpecCode4F

Q (Turkey Q)



%%SpecCode4F



%%SpecCode50

F (Turkey F)



%%SpecCode50



%%SpecCode51

Sweden / Finland



%%SpecCode51



%%SpecCode52

Mexican Spanish



%%SpecCode52



%%SpecCode53



%%SpecCode53

Denmark



%%SpecCode54



%%SpecCode54

Written Norwegian



%%SpecCode55



%%SpecCode55

Croatian/Serbian



%%SpecCode56



%%SpecCode56

Swiss German



%%SpecCode57



%%SpecCode57

Swiss French



%%SpecCode58



%%SpecCode58

Dutch



%%SpecCode59



%%SpecCode59

Hungarian



%%SpecCode5A

Polish



%%SpecCode5A



%%SpecCode5B

Canadian French



%%SpecCode5B



%%SpecCode5C

Argentina (Latin American)



%%SpecCode5C



%%SpecCode5D

Slovak



%%SpecCode5D



%%SpecCode5E

Thai



%%SpecCode5E



%%SpecCode46

International keyboard



%%SpecCode46

3. Scan the "Exit Setup Mode" barcode to save and apply the settings.



%%ExitSet

Exit Setup Mode



%%ExitSet

Note: Enabling the International Keyboard may slightly reduce transmission speed. Additionally, the International General Keyboard supports a wide range of smaller languages commonly used on PC platforms.

## Suffix setting

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the "Enter Setup Mode" barcode



%%EnterSet

Enter Setup Mode



%%EnterSet

2. Scan the appropriate terminator according to your requirements.  
(The default is CR – Carriage return)



%%SpecCode9C

Add CR\*



%%SpecCode9C



%%SpecCode9D

Add LF



%%SpecCode9D



%%SpecCode9E

Add CR+LF



%%SpecCode9E



%%SpecCodeA2



%%SpecCodeA2

Add TAB



%%SpecCode9F



%%SpecCode9F

None

3. Scan the "Exit Setup Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode



## Case conversion settings

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the "Enter Setup Mode" barcode



%%EnterSet



%%EnterSet

Enter Setup Mode

2. Scan the barcode corresponding to your desired setting.



%%SpecCodeA3

Convert to lowercase



%%SpecCodeA3



%%SpecCodeA4

Convert to uppercase



%%SpecCodeA4



%%SpecCodeA6

Case interchange



%%SpecCodeA6



%%SpecCodeA5



%%SpecCodeA5

No Case Conversion (Default)

3. Scan the "Exit Setup Mode" barcode to save and apply the settings.



%%ExitSet



%%ExitSet

Exit Setup Mode

Note: This feature is supported only in firmware versions 1.18D and later.

## Hidden Character GS Replacement Function

This function allows you to replace or restore the GS character bit in a barcode. Follow these steps to configure the settings:

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the "Enter Setup Mode" barcode



%%EnterSet

Enter Setup Mode



%%EnterSet

2. Scan the "Set GS Character" barcode



%%SpecCodeEF

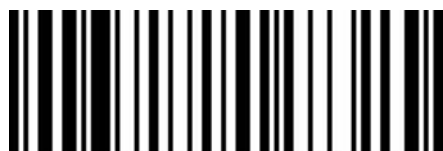
Set GS Character



%%SpecCodeEF

3. From the table "[Characters' Barcodes Appendix](#)", scan the barcode corresponding to the desired replacement character or setting.

Example: If the GS character is not being detected and you need to restore it, scan barcode below after scanning the "Set GS Character" barcode



%%1D



%%1D

4. Scan the "Exit Setup Mode" barcode to save and apply the changes.



%%ExitSet



%%ExitSet

Exit Setup Mode

To disable this functionality, please scan the "Disable Set GS Character"



%%SpecCodeEE



%%SpecCodeEE

Disable Set GS Character

## Hidden Character Settings

This product supports hiding characters from the beginning or end of the barcode. Follow the steps below to configure hidden character settings.

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

1. Start the scanner and scan the "Enter Setup Mode" barcode



%%EnterSet

Enter Setup Mode

2. Choose Hidden Position:

A. To hide characters from the front of the barcode, scan the "-Hide Characters from Barcode Start" barcode.

B. To hide characters from the back of the barcode, scan the "-Hide Characters from Barcode End" barcode.



%%SpecCodeA0

Hide Characters from Barcode Start



%%SpecCodeA1

Hide Characters from Barcode End

3. Scan the barcode corresponding to the number of characters which needs to be hidden.



%%01  
Hide 1 bits



%%02  
Hide 2 bits



%%03  
Hide 3 bits



%%04  
Hide 4 bits

4. Scan the "Exit Setup Mode" barcode to save and apply the settings.



%%ExitSet  
Exit Setup Mode

## Advanced Configurations

### Character sets

To set up a custom key emulation from the "[Character Set Action Appendix](#)", determine:

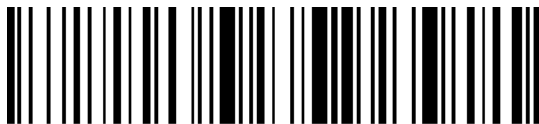
- The keys to emulate
- Their corresponding character set column and HEX values (needed for configuration)

Then, scan the barcode for the required character set from the "[Available Character Sets Appendix](#)."

Note: Use Character Set 3 to receive as output the characters from the "ASCII" column.

Afterwards, follow the following steps:

1. Scan the "Enter Setup Mode" bar code



%%EnterSet

Enter setup mode



%%EnterSet

2. Scan this if you want to add the key(s) as a prefix:



%%SpecCode9A

Set prefix



%%SpecCode9A

3. Scan this if you want to add the key(s) as a suffix:



%%SpecCode9B

Set suffix



%%SpecCode9B

Add Key(s) – Find barcodes matching the key's HEX value in the "[Characters' Barcodes Appendix](#)", then scan them as needed.

4. Scan "Exit Settings Mode" bar code, complete settings



%%ExitSet

Exit setup mode

To reset the configuration, scan the Character Set 0 Barcode (default). Additionally, scan the barcode for prefix or suffix to reset those configurations.



## Control the character escape

To edit the output according to the Control character set (USB keyboard mode), use the barcode below



Enable control the character escape



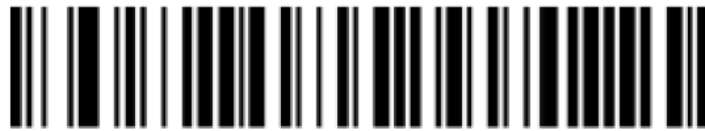
Disable control the character escape (default)

## Factory Reset Steps

### Reset steps for Dongle connection

1. Unplug the USB Dongle.
2. Scan the barcodes below in order.
  - a. No need to print these codes, they can be scanned from the screen.
  - b. The scanner may not make sounds or vibrate while scanning certain codes, this is normal behavior.

Step 1



Step 2



%%SpecCode93

Step 3



%%SpecCode79

Step 4



%%SpecCode77

Step 5



%%SpecCode35

Step 6



%%SpecCode95

Step 7



%%SpecCode7B

Step 8



%%SpecCode9C

Step 9



Step 10



Step 11



%%SpecCode92

Step 12



%%SpecCodeA8

Step 13



%%SpecCode99

3. Plug the Dongle back in.
4. Confirm connection.
  - a. Your scanner will pair with the dongle.
  - b. A solid blue light on the scanner confirms a successful connection.



## Reset steps for Bluetooth connection

1. Remove Existing Connection:
  - a. Go to your device's Bluetooth Settings → Connections.
  - b. Remove "ScanAvenger HID" from the list.
2. Scan the Barcodes Below in Order:
  - a. No need to print these codes, they can be scanned from the screen.
  - b. The scanner may not make sounds or vibrate while scanning certain codes, this is normal behavior.

Step 1



Step 2



%%SpecCode93

Step 3



%%SpecCode79

Step 4



%%SpecCode77

Step 5



%%SpecCode35

Step 6



%%SpecCode95

Step 7



%%SpecCode7B

Step 8



%%SpecCode9C

Step 9



Step 10



Step 11



%%SpecCode92

Step 12



## Step 13



%%SpecCode99

3. Pair the Scanner:
  - a. The scanner light should start flashing blue, indicating it's ready to pair.
  - b. Go to Bluetooth Settings and select "ScanAvengerHID" to pair. If it doesn't appear, refresh the Bluetooth search.
  - c. A solid blue light on the scanner confirms a successful connection.

## Appendix

### Barcode type ID Table

| Barcode type       | HEX | CODE ID<br>(Factory default) |
|--------------------|-----|------------------------------|
| All code types     | 99  | <N/A>                        |
| Codabar            | 61  | a                            |
| Code128            | 6A  | j                            |
| Code32             | 3C  | <                            |
| Code93             | 69  | i                            |
| Code39             | 62  | b                            |
| Code11             | 48  | H                            |
| EAN-13             | 64  | d                            |
| EAN-8              | 64  | d                            |
| GS1 DataBar        | 79  | y                            |
| GS1-128 (EAN-128)  | 6A  | j                            |
| Interleaved 2 of 5 | 65  | e                            |
| Matrix 2 of 5      | 76  | v                            |
| Industry 2 of 5    | 44  | D                            |
| UPC-A              | 63  | c                            |



|               |    |   |
|---------------|----|---|
| UPC-E         | 63 | c |
| ISBN          | 42 | B |
| ISSN          | 6E | n |
| Aztec Code    | 7A | z |
| DataMatrix    | 75 | u |
| PDF417        | 72 | r |
| Micro PDF417  | 53 | S |
| QR Code       | 51 | Q |
| Micro QR Code | 51 | Q |

## ASCII Visible Characters Table

| Decimal system | Hex | Character | Decimal system | Hex | Character | Decimal system | Hex | Character |
|----------------|-----|-----------|----------------|-----|-----------|----------------|-----|-----------|
| 32             | 20  | <SPACE>   | 107            | 6B  | k         | 182            | B6  | ¶         |
| 33             | 21  | !         | 108            | 6C  | l         | 183            | B7  | ·         |
| 34             | 22  | "         | 109            | 6D  | m         | 184            | B8  | ,         |
| 35             | 23  | #         | 110            | 6E  | n         | 185            | B9  | ¹         |
| 36             | 24  | \$        | 111            | 6F  | o         | 186            | BA  | º         |
| 37             | 25  | %         | 112            | 70  | p         | 187            | BB  | »         |
| 38             | 26  | &         | 113            | 71  | q         | 188            | BC  | ¼         |
| 39             | 27  | '         | 114            | 72  | r         | 189            | BD  | ½         |
| 40             | 28  | (         | 115            | 73  | s         | 190            | BE  | ¾         |
| 41             | 29  | )         | 116            | 74  | s         | 191            | BF  | ¿         |
| 42             | 2A  | *         | 117            | 75  | u         | 192            | C0  | À         |
| 43             | 2B  | +         | 118            | 76  | v         | 193            | C1  | Á         |
| 44             | 2C  | ,         | 119            | 77  | w         | 194            | C2  | Â         |
| 45             | 2D  | -         | 120            | 78  | x         | 195            | C3  | Ã         |
| 6              | 2E  | .         | 121            | 79  | y         | 196            | C4  | Ä         |
| 47             | 2F  | /         | 122            | 7A  | z         | 197            | C5  | Å         |
| 48             | 30  | 0         | 123            | 7B  | {         | 198            | C6  | Æ         |
| 49             | 31  | 1         | 124            | 7C  |           | 199            | C7  | Ç         |
| 50             | 32  | 2         | 125            | 7D  | }         | 200            | C8  | È         |
| 51             | 33  | 3         | 126            | 7E  | ~         | 201            | C9  | É         |
| 52             | 34  | 4         | 127            | 7F  | DEL       | 202            | CA  | Ê         |
| 53             | 35  | 5         | 128            | 80  | €         | 203            | CB  | Ë         |

|    |    |   |     |    |        |     |    |   |
|----|----|---|-----|----|--------|-----|----|---|
| 54 | 36 | 6 | 129 | 81 | Unused | 204 | CC | ì |
| 55 | 37 | 7 | 130 | 82 | ,      | 205 | CD | í |
| 56 | 38 | 8 | 131 | 83 | f      | 206 | CE | î |
| 57 | 39 | 9 | 132 | 84 | „      | 207 | CF | ï |
| 58 | 3A | : | 133 | 85 | ...    | 208 | D0 | Đ |
| 59 | 3B | ; | 134 | 86 | †      | 209 | D1 | Ñ |
| 60 | 3C | < | 135 | 87 | ‡      | 210 | D2 | Ò |
| 61 | 3D | = | 136 | 88 | ^      | 211 | D3 | Ó |
| 62 | 3E | > | 137 | 89 | ‰      | 212 | D4 | Ô |
| 63 | 3F | ? | 138 | 8A | Š      | 213 | D5 | Õ |
| 64 | 40 | @ | 139 | 8B | ‹      | 214 | D6 | Ö |
| 65 | 41 | A | 140 | 8C | Œ      | 215 | D7 | × |
| 66 | 42 | B | 141 | 8D | Unused | 216 | D8 | Ø |
| 67 | 43 | C | 142 | 8E | Ž      | 217 | D9 | Ù |
| 68 | 44 | D | 143 | 8F | Unused | 218 | DA | Ú |
| 69 | 45 | E | 144 | 90 | Unused | 219 | DB | Û |
| 70 | 46 | F | 145 | 91 | '      | 220 | DC | Ü |
| 71 | 47 | G | 146 | 92 | '      | 221 | DD | Ý |
| 72 | 48 | H | 147 | 93 | ”      | 222 | DE | þ |
| 73 | 49 | I | 148 | 94 | ”      | 223 | DF | ß |
| 74 | 4A | J | 149 | 95 | •      | 224 | E0 | à |
| 75 | 4B | K | 150 | 96 | —      | 225 | E1 | á |
| 76 | 4C | L | 151 | 97 | —      | 226 | E2 | â |
| 77 | 4D | M | 152 | 98 | ~      | 227 | E3 | ã |
| 78 | 4E | N | 153 | 99 | ™      | 228 | E4 | ä |

|     |    |   |     |    |               |     |    |   |
|-----|----|---|-----|----|---------------|-----|----|---|
| 79  | 4F | O | 154 | 9A | š             | 229 | E5 | å |
| 80  | 50 | P | 155 | 9B | ›             | 230 | E6 | æ |
| 81  | 51 | Q | 156 | 9C | œ             | 231 | E7 | ç |
| 82  | 52 | R | 157 | 9D | <i>Unused</i> | 232 | E8 | è |
| 83  | 53 | S | 158 | 9E | ž             | 233 | E9 | é |
| 84  | 54 | T | 159 | 9F | ÿ             | 234 | EA | ê |
| 85  | 55 | U | 160 | A0 | NBSP          | 235 | EB | ë |
| 86  | 56 | V | 161 | A1 | ı             | 236 | EC | ì |
| 87  | 57 | W | 162 | A2 | ¢             | 237 | ED | í |
| 88  | 58 | X | 163 | A3 | £             | 238 | EE | î |
| 89  | 59 | Y | 164 | A4 | ¤             | 239 | EF | ï |
| 90  | 5A | Z | 165 | A5 | ¥             | 240 | F0 | ð |
| 91  | 5B | [ | 166 | A6 |               | 241 | F1 | ñ |
| 92  | 5C | \ | 167 | A7 | §             | 242 | F2 | ò |
| 93  | 5D | ] | 168 | A8 | ¨             | 243 | F3 | ó |
| 94  | 5E | ^ | 169 | A9 | ©             | 244 | F4 | ô |
| 95  | 5F | _ | 170 | AA | ª             | 245 | F5 | õ |
| 96  | 60 | ` | 171 | AB | «             | 246 | F6 | ö |
| 97  | 61 | a | 172 | AC | ¬             | 247 | F7 | ÷ |
| 98  | 62 | b | 173 | AD | -             | 248 | F8 | ø |
| 99  | 63 | c | 174 | AE | ®             | 249 | F9 | ù |
| 100 | 64 | d | 175 | AF | ¯             | 250 | FA | ú |
| 101 | 65 | e | 176 | B0 | °             | 251 | FB | û |
| 102 | 66 | f | 177 | B1 | ±             | 252 | FC | ü |
| 103 | 67 | g | 178 | B2 | ²             | 253 | FD | ý |

|     |    |   |     |    |   |     |    |   |
|-----|----|---|-----|----|---|-----|----|---|
| 104 | 68 | h | 179 | B3 | ³ | 254 | FE | þ |
| 105 | 69 | i | 180 | B4 | ´ | 255 | FF | ÿ |
| 106 | 6A | j | 181 | B5 | μ |     |    |   |

Data and Edit Barcode Appendix





7



8



9



A



B



C



D



E



F



Cancel current setting



Cancel a previously read



Cancel a previously read string of data

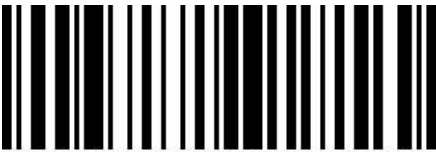


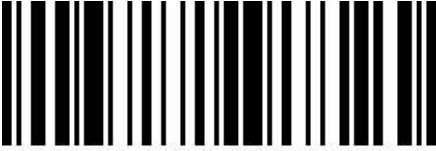
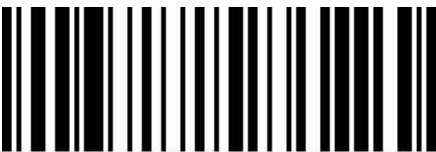
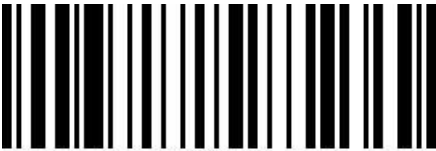
Save



## Characters' Barcodes Appendix

To avoid scanning the wrong code by mistake, it is recommended to cover adjacent codes while scanning the intended one. This ensures accurate setup and prevents unintended changes to the configuration.

| HEX Value | Character                                          | 1D Setup Code                                                                                | 2D Setup Code                                                                                  |
|-----------|----------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 01        | SOH<br>(Character set 3<br>needs to be<br>enabled) | <br>%%01   | <br>%%()1   |
| 02        | STX<br>(Character set 3<br>needs to be<br>enabled) | <br>%%02  | <br>%%()2  |
| 03        | ETX<br>(Character set 3<br>needs to be<br>enabled) | <br>%%03 | <br>%%()3 |
| 04        | EOT<br>(Character set 3<br>needs to be<br>enabled) | <br>%%04 | <br>%%()4 |
| 05        | ENQ<br>(Character set 3<br>needs to be<br>enabled) | <br>%%05 | <br>%%05  |

|    |                                                                 |                                                                                              |                                                                                               |
|----|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 06 | ACK<br>(Character set 3<br>needs to be<br>enabled)              | <br>%%06   | <br>%%06   |
| 07 | BEL<br>(Character set 3<br>needs to be<br>enabled)              | <br>%%07   | <br>%%07   |
| 08 | Back Space                                                      | <br>%%08   | <br>%%08   |
| 09 | Tab (HT)                                                        | <br>%%09  | <br>%%09  |
| 0A | LF                                                              | <br>%%0A | <br>%%0A |
| 0B | NULL<br>(can be used to<br>set "VT" with<br>Character Set<br>3) | <br>%%0B | <br>%%0B |
| 0C | NULL<br>(can be used to<br>set "FF" with<br>Character Set<br>3) | <br>%%0C | <br>%%0C |

0D

CR



0E

F1



0F

F2



10

F3



11

F4



12

F5



13

F6



14

F7



15

F8



16

F9



17

F10



18

F11



19

F12



1A

NULL  
(can be used to  
set "SUB" with  
Character Set  
3)



1B

Esc



1C

FS



1D

GS



1E

NULL  
(can be used  
to set "RS"  
with Character  
Set 3)



1F

NULL  
(can be used to  
set "US" with  
Character Set  
3)



20

Space



21

!



22

"



23

#



24

\$



25

%



26

&



27

'



28

(



29

)



%%29



%%29

2A

\*



%%2A



%%2A

2B

+



%%2B



%%2B

2C

,



%%2C



%%2C

2D

-



%%2D



%%2D

2E

.



%%2E



%%2E

2F

/



%%2F



%%2F

30

0



31

1



32

2



33

3



34

4



35

5



36

6





37

7



38

8



39

9



3A

:



3B

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3C

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3D

=



3E

>



3F

?



40

@



41

A



42

B



43

C



44

D



45

E



46

F



47

G



48

H



49

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4A

J



4B

K



4C

L



4D

M



4E

N



4F

O



50

P



51

Q



52

R



53

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54

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56

V



57

W



58

X



59

Y



5A

Z



5B

[



5C

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5D

]



5E

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5F

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60

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61

a



62

b



63

c



64

d



65

e



66

f



67

g



68

h



69

i



6A

j



6B

k



6C

l



6D

m



6E

n





6F

o



70

p



71

q



72

r



73

s



74

t



75

u



76

v



77

w



78

x



79

y



7A

z



7B

{



7C

|



7D

}



%%7D

7E

~



%%7E

7F

DEL



%%7F

80

€



%%80

81

*Unused*



%%81

82

,



%%82

83

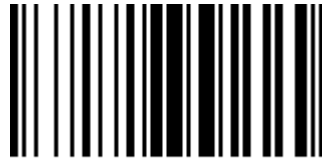
f



%%83

84

„



%%84



%%84

85

...



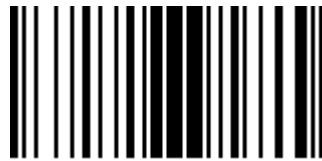
%%85



%%85

86

†



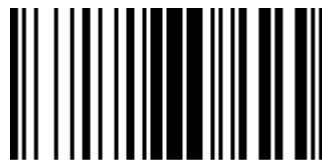
%%86



%%86

87

‡



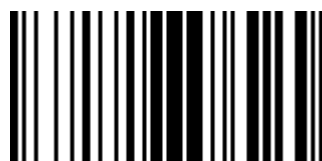
%%87



%%87

88

^



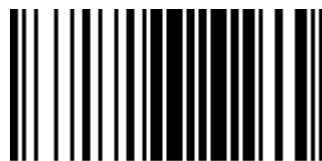
%%88



%%88

89

‰



%%89



%%89

8A

Š



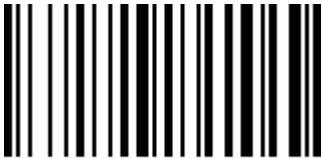
%%8A



%%8A

8B

<



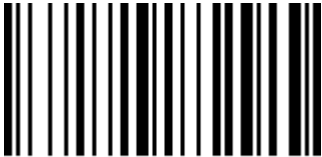
%%8B



%%8B

8C

Œ



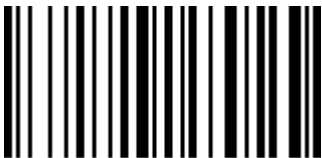
%%8C



%%8C

8D

Unused



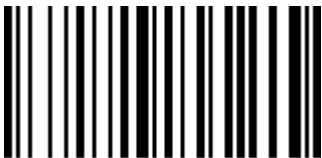
%%8D



%%8D

8E

Ž



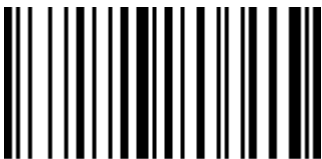
%%8E



%%8E

8F

Unused



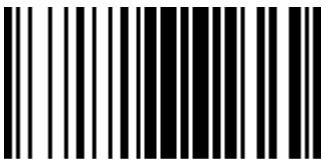
%%8F



%%8F

90

Unused



%%90



%%90

91

,



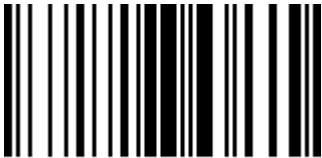
%%91



%%91

92

,



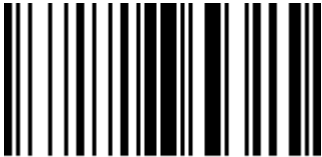
%%92



%%92

93

“



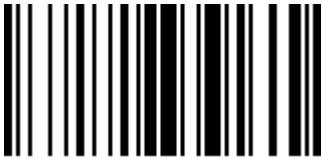
%%93



%%93

94

”



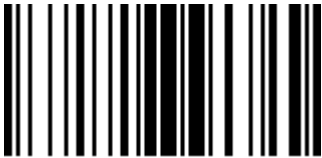
%%94



%%94

95

•



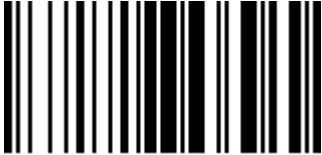
%%95



%%95

96

—



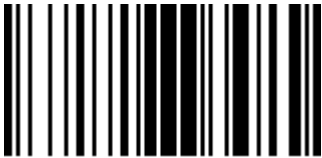
%%96



%%96

97

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%%97



%%97

98

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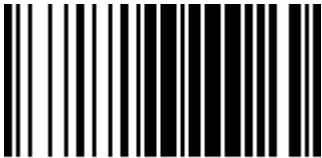
%%98



%%98

99

™



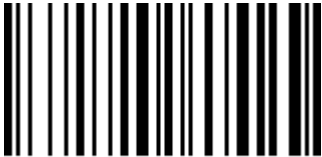
%%99



%%99

9A

š



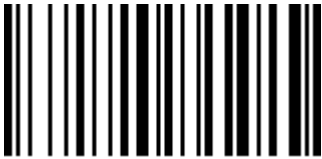
%%9A



%%9A

9B

›



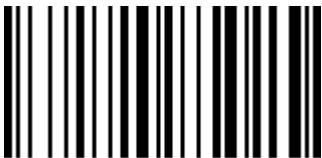
%%9B



%%9B

9C

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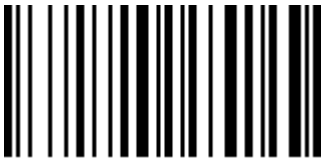
%%9C



%%9C

9D

*Unused*



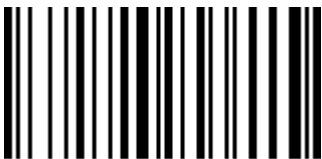
%%9D



%%9D

9E

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%%9E



%%9E

9F

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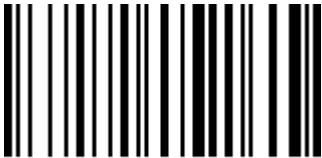
%%9F



%%9F

A0

NBSP



%%A0



%%A0

A1

i



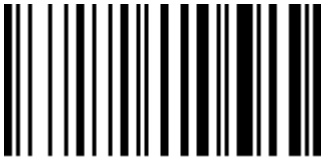
%%A1



%%A1

A2

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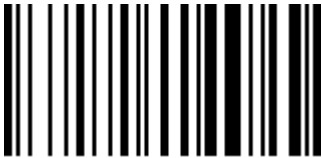
%%A2



%%A2

A3

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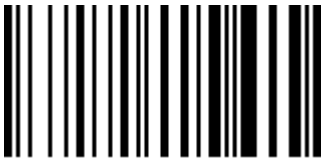
%%A3



%%A3

A4

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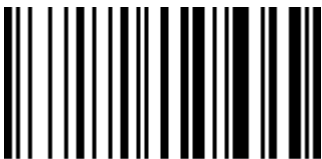
%%A4



%%A4

A5

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%%A5



%%A5

A6

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%%A6



%%A6



A7

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%%A7



%%A7

A8

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%%A8



%%A8

A9

©



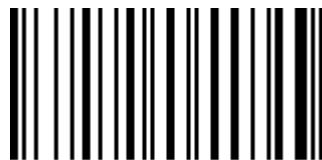
%%A9



%%A9

AA

a



%%AA



%%AA

AB

«



%%AB



%%AB

AC

¬



%%AC



%%AC

AD

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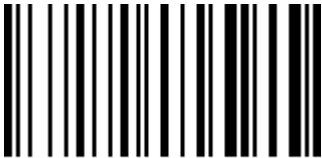
%%AD



%%AD

AE

®



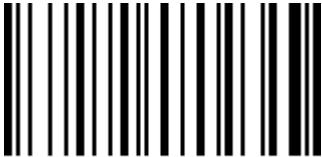
%%AE



%%AE

AF

-



%%AF



%%AF

B0

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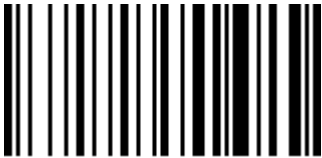
%%B0



%%B0

B1

±



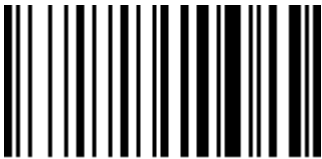
%%B1



%%B1

B2

2



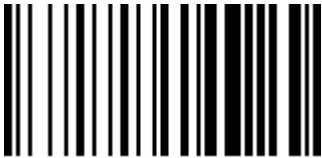
%%B2



%%B2

B3

3



%%B3



%%B3

B4

'



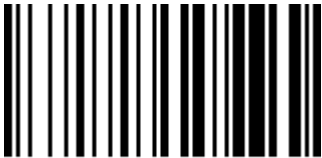
%%B4



%%B4

B5

μ



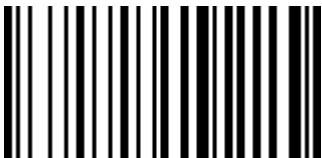
%%B5



%%B5

B6

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%%B6



%%B6

B7

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%%B7



%%B7

B8

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%%B8



%%B8

B9

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%%B9



%%B9

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%%BA



%%BA

BB

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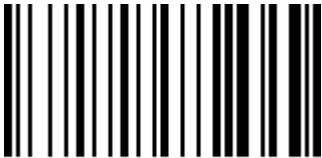
%%BB



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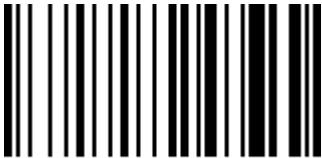
%%C2



%%C2

C3

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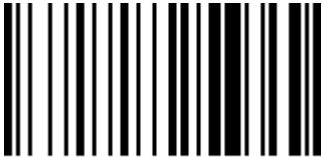
%%C3



%%C3

C4

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%%C4



%%C4

C5

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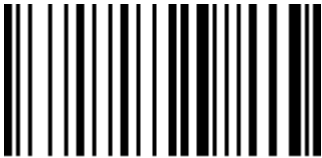
%%C5



%%C5

C6

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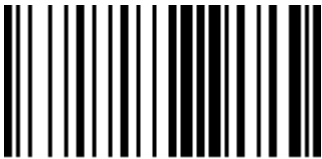
%%C6



%%C6

C7

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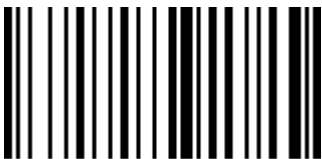
%%C7



%%C7

C8

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%%C8



%%C8

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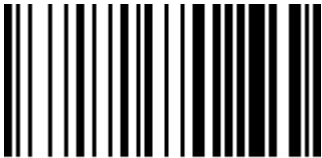
D0

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D1

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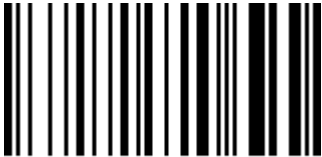
%%D1



%%D1

D2

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%%D2



%%D2

D3

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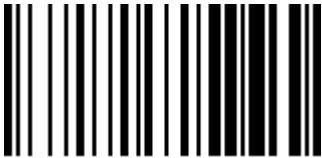
%%D3



%%D3

D4

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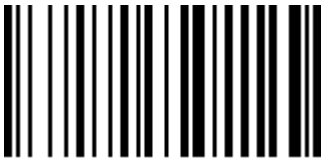
%%D4



%%D4

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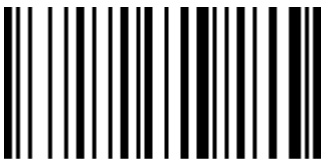
%%D5



%%D5

D6

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%%D6



%%D6

D7

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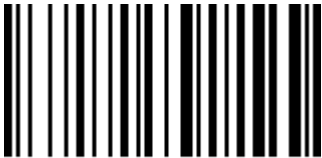
%%D7



%%D7

D8

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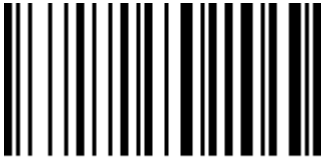
%%D8



%%D8

D9

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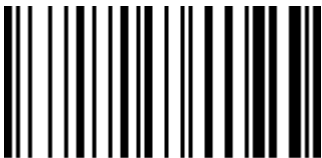
%%D9



%%D9

DA

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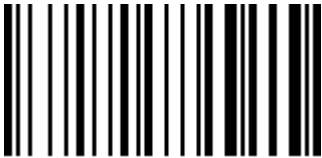
%%DA



%%DA

DB

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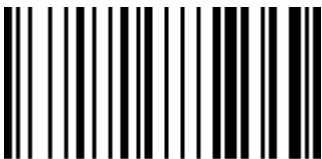
%%DB



%%DB

DC

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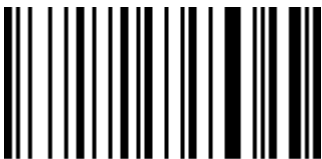
%%DC



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%%DE

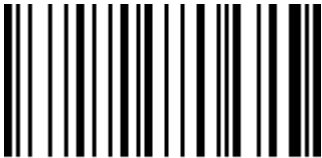


%%DE



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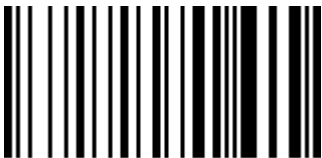
%%E0



%%E0

E1

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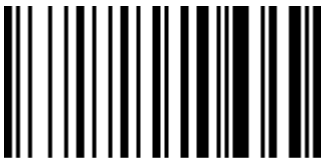
%%E1



%%E1

E2

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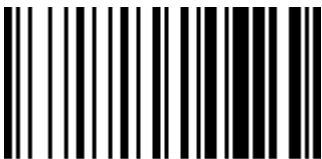
%%E2



%%E2

E3

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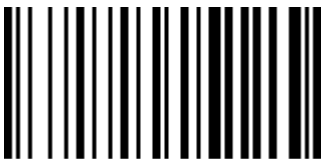
%%E3



%%E3

E4

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%%E4



%%E4

E5

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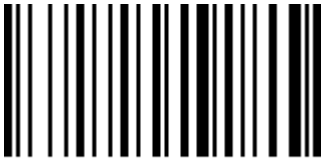
%%E5



%%E5

E6

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%%E6



%%E6

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%%E7

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%%E8

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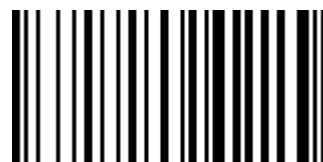
%%F2



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F3

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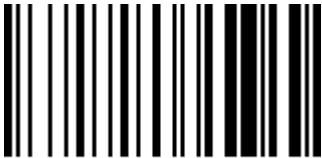
FA

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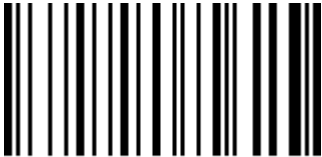
%%FB



%%FB

FC

ü



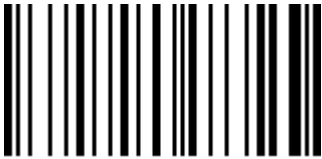
%%FC



%%FC

FD

ý



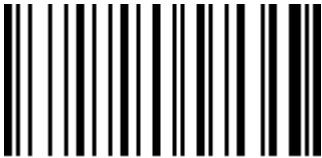
%%FD



%%FD

FE

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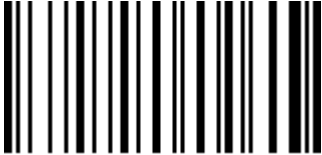
%%FE



%%FE

FF

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%%FF



%%FF

## AIM ID Table

| Barcode type       | AIM ID | instructions        |
|--------------------|--------|---------------------|
| Codabar            | ]Fm    | m: 0~1              |
| Code128            | ]C0    | m: 0, 1, 2, 4       |
| Code32             | ]A0    |                     |
| Code93             | ]G0    |                     |
| Code39             | ]Am    | m: 0, 1, 3, 4, 5, 7 |
| Code11             | ]Hm    | m: 0, 1, 3, 8, 9    |
| EAN-13 / EAN-8     | ]Em    | m: 0, 1, 3, 4       |
| GS1 DataBar        | ]e0    |                     |
| GS1-128 (EAN-128)  | ]C1    |                     |
| Interleaved 2 of 5 | ]Im    | m: 0, 1, 3          |
| Matrix 2 of 5      | ]X0    |                     |
| Industry 2 of 5    | ]S0    |                     |
| UPC-A/ UPC-E       | ]Em    | m: 0, 3             |
| ISBN               | ]X0    |                     |
| ISSN               | ]X0    |                     |
| Aztec Code         | ]z0    |                     |

|                         |     |        |
|-------------------------|-----|--------|
| DataMatrix              | ]dm | m: 0~6 |
| PDF417 / Micro PDF417   | ]Lm | m: 0~5 |
| QR Code / Micro QR Code | ]Qm | m: 0~6 |

## Character Set Action Appendix

Use the table below to find the action you want the scanner to perform with a specific character set:

| HEX | DEC | ASCII | Set 0      | Set 1       | Set 2      | Set 3   | Set 4        |
|-----|-----|-------|------------|-------------|------------|---------|--------------|
| 01  | 1   | SOH   | NULL       | Home        | Ctrl+A     | Alt+001 | Numpad enter |
| 02  | 2   | STX   | Ctrl+B     | End         | Ctrl+B     | Alt+002 | Cap lock     |
| 03  | 3   | ETX   | Ctrl+C     | Up Arrow    | Ctrl+C     | Alt+003 | Right Arrow  |
| 04  | 4   | EOT   | Custom 1   | Down Arrow  | Ctrl+D     | Alt+004 | Up Arrow     |
| 05  | 5   | ENQ   | Custom 2   | Left Arrow  | Ctrl+E     | Alt+005 | NULL         |
| 06  | 6   | ACK   | Custom 3   | Right Arrow | Ctrl+F     | Alt+006 | NULL         |
| 07  | 7   | BEL   | Custom 4   | Shift+Tab   | Ctrl+G     | Alt+007 | Enter        |
| 08  | 8   | BS    | Back Space | Back Space  | Back Space | Alt+008 | Left Arrow   |
| 09  | 9   | HT    | Tab        | Tab         | Tab        | Alt+009 | Tab          |
| 0A  | 10  | LF    | Enter      | Enter       | Ctrl+J     | Alt+010 | Down Arrow   |
| 0B  | 11  | VT    | NULL       | NULL        | Ctrl+K     | Alt+011 | Tab          |
| 0C  | 12  | FF    | NULL       | NULL        | Ctrl+L     | Alt+012 | Delete       |
| 0D  | 13  | CR    | Enter      | Enter       | Enter      | Alt+013 | Enter        |
| 0E  | 14  | SO    | F1         | Page Up     | Ctrl+N     | Alt+014 | Insert       |
| 0F  | 15  | SI    | F2         | Page Down   | Ctrl+O     | Alt+015 | Esc          |
| 10  | 16  | DLE   | F3         | F11         | Ctrl+P     | Alt+016 | F11          |
| 11  | 17  | DC1   | F4         | NULL        | Ctrl+Q     | Ctrl+Q  | Home         |
| 12  | 18  | DC2   | F5         | NULL        | Ctrl+R     | Alt+018 | Print Screen |
| 13  | 19  | DC3   | F6         | NULL        | Ctrl+S     | Alt+019 | Back Space   |



|    |    |     |         |      |        |         |           |
|----|----|-----|---------|------|--------|---------|-----------|
| 14 | 20 | DC4 | F7      | NULL | Ctrl+T | Alt+020 | Shift tab |
| 15 | 21 | NAK | F8      | F12  | Ctrl+U | Alt+021 | F12       |
| 16 | 22 | SYN | F9      | F1   | Ctrl+V | Alt+022 | F1        |
| 17 | 23 | ETB | F10     | F2   | Ctrl+W | Alt+023 | F2        |
| 18 | 24 | CAN | F11     | F3   | Ctrl+X | Alt+024 | F3        |
| 19 | 25 | EM  | F12     | F4   | Ctrl+Y | Alt+025 | F4        |
| 1A | 26 | SUB | NULL    | FS   | Ctrl+Z | Alt+026 | F5        |
| 1B | 27 | Esc | Esc     | F6   | Ctrl+[ | Alt+027 | F6        |
| 1C | 28 | FS  | ALT+028 | F7   | Ctrl+\ | Alt+028 | F7        |
| 1D | 29 | GS  | ALT+029 | F8   | Ctrl+] | Alt+029 | F8        |
| 1E | 30 | RS  | NULL    | F9   | Ctrl+^ | Alt+030 | F9        |
| 1F | 31 | US  | NULL    | F10  | Ctrl+_ | Alt+031 | F10       |

## Available Character Sets Appendix

Your scanner supports multiple character sets for customization. The available sets are:



%%SpecCodeBA0000



%%SpecCodeBA0000

Character Set 0 (Default)



%%SpecCodeBA0001



%%SpecCodeBA0001

Character Set 1



%%SpecCodeBA0002



%%SpecCodeBA0002

Character Set 2



%%SpecCodeBA0003



%%SpecCodeBA0003

Character Set 3



%%SpecCodeBA0004



%%SpecCodeBA0004

Character Set 4

## Control character set (USB keyboard mode)

| <i>Decimal system</i> | <i>Hex</i> | <i>Corresponding key value<br/>(control character escape off)</i>                         | <i>Corresponding key value<br/>(control characters are escaped)</i> |
|-----------------------|------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 0                     | 00         | Keep                                                                                      | Ctrl+@                                                              |
| 1                     | 01         | Insert                                                                                    | Ctrl+A                                                              |
| 2                     | 02         | Home                                                                                      | Ctrl+B                                                              |
| 3                     | 03         | End                                                                                       | Ctrl+C                                                              |
| 4                     | 04         | Delete                                                                                    | Ctrl+D                                                              |
| 5                     | 05         | PageUp                                                                                    | Ctrl+E                                                              |
| 6                     | 06         | PageDown                                                                                  | Ctrl+F                                                              |
| 7                     | 07         | ESC                                                                                       | Ctrl+G                                                              |
| 8                     | 08         | Backspace                                                                                 | Ctrl+H                                                              |
| 9                     | 09         | Tab                                                                                       | Ctrl+I                                                              |
| 10                    | 0A         | Enter (Performance is affected by carriage return and line feed processing configuration) | Ctrl+J                                                              |
| 11                    | 0B         | Caps Lock                                                                                 | Ctrl+K                                                              |
| 12                    | 0C         | Print Screen                                                                              | Ctrl+L                                                              |
| 13                    | 0D         | Enter (Performance is affected by carriage return and line feed processing configuration) | Ctrl+M                                                              |
| 14                    | 0E         | Scroll Lock                                                                               | Ctrl+N                                                              |
| 15                    | 0F         | Pause/Break                                                                               | Ctrl+O                                                              |

|    |    |                 |        |
|----|----|-----------------|--------|
| 16 | 10 | F11             | Ctrl+P |
| 17 | 11 | Direction key ↑ | Ctrl+Q |
| 18 | 12 | Direction key ↓ | Ctrl+R |
| 19 | 13 | Direction key ← | Ctrl+S |
| 20 | 14 | Direction key → | Ctrl+T |
| 21 | 15 | F12             | Ctrl+U |
| 22 | 16 | F1              | Ctrl+V |
| 23 | 17 | F2              | Ctrl+W |
| 24 | 18 | F3              | Ctrl+X |
| 25 | 19 | F4              | Ctrl+Y |
| 26 | 1A | F5              | Ctrl+Z |
| 27 | 1B | F6              | Ctrl+[ |
| 28 | 1C | F7              | Ctrl+\ |
| 29 | 1D | F8              | Ctrl+] |
| 30 | 1E | F9              | Ctrl+^ |
| 31 | 1F | F10             | Ctrl+_ |

## Control character set (serial port and USB virtual serial port)

When connected via serial port, the following characters are shown when the scanner has configured with the corresponding hex values, regardless of which character set has been selected.

| Decimal system | Hex | Character |
|----------------|-----|-----------|
| 0              | 00  | NUL       |
| 1              | 01  | SOH       |
| 2              | 02  | STX       |
| 3              | 03  | ETX       |
| 4              | 04  | EOT       |
| 5              | 05  | ENQ       |
| 6              | 06  | ACK       |
| 7              | 07  | BEL       |
| 8              | 08  | BS        |
| 9              | 09  | HT        |
| 10             | 0A  | LF        |
| 11             | 0B  | VT        |
| 12             | 0C  | FF        |
| 13             | 0D  | CR        |
| 14             | 0E  | SO        |
| 15             | 0F  | SI        |
| 16             | 10  | DLE       |
| 17             | 11  | DC1       |
| 18             | 12  | DC2       |
| 19             | 13  | DC3       |
| 20             | 14  | DC4       |

|    |    |     |
|----|----|-----|
| 21 | 15 | NAK |
| 22 | 16 | SYN |
| 23 | 17 | ETB |
| 24 | 18 | CAN |
| 25 | 19 | EM  |
| 26 | 1A | SUB |
| 27 | 1B | ESC |
| 28 | 1C | FS  |
| 29 | 1D | GS  |
| 30 | 1E | RS  |
| 31 | 1F | US  |