



METROLOGIC INSTRUMENTS, INC.

**Area Imaging Bar Code
Supplemental Configuration Guide**

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Presentation and Trigger Modes

There are four configurable modes for scanning: the presentation mode, the multi-try trigger mode, the continuous trigger mode, and the single-trigger mode. These modes can be configured separately for in-stand and out-of-stand scanner operation.

In-Stand

* Presentation Mode
In-Stand



Multi-Try Trigger Mode
In-Stand



Continuous Trigger Mode
In-Stand



Single Trigger Mode
In-Stand



* *Factory Default Configuration*

Presentation and Trigger Modes

Out-of-Stand

◆ Presentation Mode
Out-of-Stand



* Multi-Try Trigger Mode
Out-of-Stand



Continuous Trigger Mode
Out-of-Stand



Single Trigger Mode
Out-of-Stand



In-Stand/Out-of-Stand Mode Match

Set In-Stand Mode to Match
Out-of-Stand Mode



* *Factory Default Configuration for the MS1690, MS1890 and the MS1633*

◆ *Factory Default Configuration for the IS1650*

Omnidirectional and/or Linear Scanner Modes

The unit can be configured to operate as an omnidirectional scanner, or a linear scanner, or a combination of both. Trigger and presentation operations can be configured separately for Omnidirectional and Linear scan modes.

- *When configured to operate as an omnidirectional scanner*, all 1D and 2D barcodes are scanned omnidirectionally (except Code 128 scanner configuration labels, which have to be linearly aligned for successful scanning).
- *When configured to operate as a linear scanner*, the 1D barcodes have to be linearly aligned for successful scanning while the 2D barcodes cannot be scanned.
- *When configured to operate as both the linear and omnidirectional scanner*, the 1D barcodes have to be linearly aligned for successful scanning while the 2D barcodes are scanned omnidirectionally.

By default, the scanner is configured to omnidirectional scanning for trigger and presentation operations.

Enable Linear Only
in *Trigger Operations*



Disable Linear Only
in *Trigger Operations*



Enable 1D Linear Only
in *Trigger Operations*



Disable 1D Linear Only
in *Trigger Operations*



* *Factory Default Configuration*

Omnidirectional and/or Linear Scanner Modes

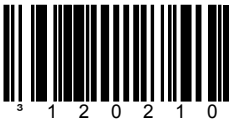
Enable Linear Only
in *Presentation Operations*



Disable Linear Only
in *Presentation Operations*



Enable 1D Linear Only
in *Presentation Operations*



Disable 1D Linear Only
in *Presentation Operations*



* *Factory Default Configuration*

Aiming and Illumination

Trigger and presentation operations can be configured separately to use the unit's linear illumination as an aiming instrument.

* Enable Aiming in
Trigger Operations



Disable Aiming in
Trigger Operations



* Enable Aiming in
Presentation Operations



Disable Aiming in
Presentation Operations



* Enable
Auto Illumination



Disable
Auto Illumination



* *Factory Default Configuration*

Aiming and Illumination

* Enable Auto Gain



Disable Auto Gain



Data Output

* Enable Data Output



Disable Data Output



* *Factory Default Configuration*

Character Suppression

Enable the
Suppression of 1 Character



* Disable the
Suppression of 1 Character



To suppress 1 character:

1. Scan the *Enter/Exit Configuration Mode* bar code, on page 31.
2. Scan the *Enable the Suppression of 1 Character* bar code.
3. Scan the *Character 1* bar code (*below left*).
4. Scan the three code bytes that represent the character to be suppressed, on page 8.
5. Scan the *Enter/Exit Configuration Mode* bar code, on page 31.

Enable the
Suppression of 2 Characters



* Disable the
Suppression of 2 Characters



To suppress 2 characters:

1. Scan the *Enter/Exit Configuration Mode* bar code, on page 31.
2. Scan the *Enable the Suppression of 2 Character* bar code above.
3. Scan the *Character 1* bar code (*below left*).
4. Scan the three code bytes, on page 8, that represent the 1st character to be suppressed.
5. Scan the *Character 2* bar code (*below right*).
6. Scan the three code bytes, on page 8, that represent the 2nd character to be suppressed.
7. Scan the *Enter/Exit Configuration Mode* bar code, on page 31.

Character 1



Character 2



* *Factory Default Configuration*

Character Suppression (Code Bytes 0 – 9)



For additional information on Code Bytes, refer to the *Code Bytes Usage* section of the MetroSelect Configuration Guide (MLPN 00-02544).



Code Byte 0



Code Byte 1



Code Byte 2



Code Byte 3



Code Byte 4



Code Byte 5



Code Byte 6



Code Byte 7



Code Byte 8



Code Byte 9

Same Symbol Timeouts

Retain Same Symbol
Timeout on Trigger



The same-symbol timeout is not restarted when the trigger is pulled.

* Reset Same Symbol
Timeout on Trigger



The same-symbol timeout is restarted when the trigger is pulled.

* *Factory Default Configuration*

Power Save Modes††

Enable
Trigger Power-Save



When enabled, the MS1633 will enter sleep mode after the trigger is held for 10 seconds.

* Disable
Trigger Power-Save



Enable
IR Power-Save



When enabled, the MS1633 will enter sleep mode after the IR has been activated 5 times without a successful decode.

Disable
IR Power-Save



* *Factory Default Configuration*

†† *These features are not for use with the MS1690, MS1890 or the IS1650.*

RangeGate® Mode††

Enable
RangeGate



When enabled, the MS1633 will store scanned bar codes into non-volatile memory if the Bluetooth connection has been interrupted.

Disable
RangeGate



RangeGate and Inventory Mode are mutually exclusive. If both are enabled, Inventory mode takes priority.

RangeGate Delay = 1 sec.



The MS1633 will pause 1 sec. between transmitting individual barcodes in RangeGate mode.

RangeGate Delay = 500 ms



The MS1633 will pause 500 ms. between transmitting individual barcodes in RangeGate mode.

RangeGate Delay = 0 sec.



The MS1633 will not pause between transmitting individual barcodes in RangeGate mode.

†† These features are not for use with the MS1690, MS1890 or the IS1650.

Bluetooth Firmware and Address††

Transmit the Bluetooth
Firmware Version



Transmit the Bluetooth
Address of the Scanner



†† These features are not for use with the MS1690, MS1890 or the IS1650.

Inventory Mode††

In Inventory mode, there is a quantity field associated with each barcode. When an item's barcode is scanned, the MS1633 automatically stores the bar code data in its non-volatile memory with a quantity field set to 1. The quantity field can then be modified using the quantity barcodes on page 14 . The bar code data is not automatically transmitted to the host. To transmit the stored data, the *Transmit All Records* bar code (*below*) must be scanned.

Enable
Inventory Mode



* Disable
Inventory Mode



RangeGate and Inventory Mode are mutually-exclusive.
If both are enabled, Inventory mode takes priority.

Transmit
Quantity Field



The item's bar code data will be stored and transmitted once with a user selectable numerical quantity added to the end of the data string. *See page 14 for information on quantity input.* If a quantity is not entered, the quantity will default to 1.

* Do Not Transmit
Quantity Field



The item's bar code data will be stored and transmitted as many times as the quantity indicates.

If a quantity is not entered, the quantity will default to 1.

Transmit All Records



Transmits all stored data records.

†† These features are not for use with the MS1690, MS1890 or the IS1650.

Inventory Mode††

The following bar codes enable the user to enter a quantity for the last item scanned. The item's bar code data will be stored and transmitted as many times as the quantity indicates. If the *Transmit Quantity Field* feature (on page 15) has been enabled then the bar code data will be stored and transmitted once with a numerical quantity added to the end of the data string.

If a quantity is not entered, a value of 1 will be entered as the default.

The quantity maximum value is 9999. Quantity digits are shifted from right to left so if a 5th digit is scanned the 1st digit scanned will be discarded and the 2nd, 3rd and 4th digits will be moved to the left to accommodate the new digit.

For example, if the Quantity 5 barcode is scanned after the quantity has been set to 1234 then the 1 will be dropped and the quantity will become 2345.

Examples

To add a quantity of 5

1. Scan the item's bar code
2. Scan the **Quantity 5** bar code (on page 15)

To add a quantity of 1,500

1. Scan the item's bar code
2. Scan the **Quantity 1** bar code (on page 15)
3. Scan the **Quantity 5** bar code (on page 15)
4. Scan the **Quantity 0** bar code (on page 15)
5. Scan the **Quantity 0** bar code (on page 15)

To correct an incorrect quantity using the quantity codes, scan the Quantity 0 bar code to replace the incorrect digits then scan the correct Quantity bar codes located on page 15.

Example

To change a quantity of 103 to 10 using the quantity codes

1. Scan the **Quantity 0** bar code to change the quantity to 1030
2. Scan the **Quantity 0** bar code to change the quantity to 0300
3. Scan the **Quantity 1** bar code to change the quantity to 3001
4. Scan the **Quantity 0** bar code to change the quantity to 0010

The *Delete Last Record* bar code, on page 17, can also be used to delete the incorrect record and quantity. Just re-scan the bar code with the correct quantity after using the *Delete Last Record* bar code.

†† These features are not for use with the MS1690, MS1890 or the IS1650.

Inventory Mode^{††}

Quantity 0



Quantity 5



Quantity 1



Quantity 6



Quantity 2



Quantity 7



Quantity 3



Quantity 8



Quantity 4



Quantity 9



^{††} These features are not for use with the MS1690, MS1890 or the IS1650.

Inventory Mode††

Transmit
Entry Counter



Optional field transmitted with the bar code data that is a count of the number of transmissions used to transmit the entire buffer.

* Do Not
Transmit Entry Counter



Transmit
Number of Records



Will transmit the number of records and the number of bar codes currently stored as a 5-digit number separated by a space.

Transmit
Inventory Records LIFO



Data is transmitted on a last-in, first-out basis.

* Transmit
Inventory Records FIFO



Data is transmitted on a first-in, first out basis.

†† These features are not for use with the MS1690, MS1890 or the IS1650.

Inventory Mode††

Enable Inventory Beep



When enabled MS1633 will beep after transmitting each inventory record.

* Disable Inventory Beep



Delete Last Record



When scanned, this bar code will delete the last bar code stored.

Clear Inventory Records



When scanned, this bar code will clear all stored bar code data in memory.

†† These features are not for use with the MS1690, MS1890 or the IS1650.

Data Matrix

Enable Normal Color
Data Matrix Decoding



Enable Inverse Color
Data Matrix Decoding



Enable Normal **and** Inverse
Color Data Matrix Decoding



* Disable
Data Matrix Decoder



Enable Rectangular
Data Matrix Symbol
Decoding



* Disable Rectangular
Data Matrix Symbol
Decoding



* *Factory Default Configuration*

Data Matrix

Enable Low-Contrast
Data Matrix Decoding[†]



Improves decoding[†] of
low-contrast Data
Matrix symbols.

* Disable Low-Contrast
Data Matrix Decoding



Enable Data Matrix
Non-Square Modules[†]



Improves decoding[†] of
Data Matrix symbols
when individual modules
in the symbol are non-
square.

* Disable Data Matrix
Non-Square Modules



Enable Data Matrix
Shifted Tiles[†]



Improves decoding[†] of Data
Matrix symbols when the
upper tiles in the symbol are
shifted in the symbol
relative to the bottom tiles.

* Disable Data Matrix
Shifted Tiles



* *Factory Default Configuration*

† *Enabling these options will increase decoding time for all bar codes.*

Data Matrix

* Enable Data Matrix,
Normal Size



The following bar codes improve decoding of Data Matrix symbols when the length of a symbol size is small. To disable either of these options scan the *Enable Data Matrix Normal Size* bar code above.

Enable Data Matrix,
Small Size[†]



Enable Data Matrix
Very Small Size[†]



* *Factory Default Configuration*

† *Enabling these options will increase decoding time for all bar codes.*

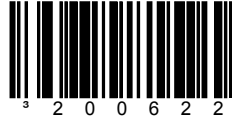
CODE TYPES AND DECODE RULES

QR Code

Enable Normal
Video QR Code



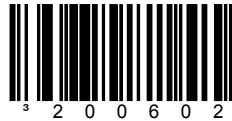
Enable Inverse
Video QR Code



Enable
Normal **and** Inverse QR Code



* Disable QR Code



MaxiCode

Enable MaxiCode



* Disable MaxiCode



** Factory Default Configuration*

CODE TYPES AND DECODE RULES

Aztec

Enable Normal
Video Aztec Decoding



* Disable Normal
Video Aztec Decoding



Enable Inverse
Video Aztec Decoding



* Disable Inverse
Video Aztec Decoding



* *Factory Default Configuration*

CODE TYPES AND DECODE RULES

Aztec

Enable Aztec Structure
Append Decoding



* Disable Aztec Structure
Append Decoding



When this feature is enabled, Aztec barcodes with a structured append header will be stored in the scanner's memory buffer. The scanner will transmit the concatenated message once every component of the structured append barcode has been read. Up to 16 components can be stored.

If this feature is disabled, Aztec barcodes with structured append header will be read as normal Aztec barcodes. However, in this case, the structured append header will be sent as part of the barcode data.



Code Select and structured append features cannot be used concurrently. If both CodeSelect and structured append are enabled, CodeSelect feature will not work.

The *CodeSelect timeout* setting determines how much time will be allowed between individual components of the same barcode (similar to CodeSelect operation).

By default, the scanner will emit an *intermediate beep* when each component is scanned. When only one scan buffer is enabled, the user will be required to release the trigger after reading each barcode component.

* Enable
Intermediate Beep



Disable
Intermediate Beep



If the "intermediate beep" is disabled and the number of scan buffers is increased (compare buffers in MetroSet[®]) – all components of a structured append barcode can be read with a single trigger activation, and only one audible beep will be produced, as if a regular barcode was scanned.

* *Factory Default Configuration*

CODE TYPES AND DECODE RULES

Postal

Enable
Australia Post



* Disable
Australia Post



Enable Japan Post



* Disable Japan Post



Enable KIX Code



* Disable KIX Code



** Factory Default Configuration*

CODE TYPES AND DECODE RULES

Postal

Enable
PLANET Code



* Disable
PLANET Code



Enable
POSTNET Code



* Disable
POSTNET Post



Enable B & B'
Fielded POSTNET



* Disable B & B'
Fielded POSTNET



* *Factory Default Configuration*

CODE TYPES AND DECODE RULES

Postal

Enable
UPU Decoding



* Disable
UPU Decoding



Enable
Royal Mail 4 Code



* Disable
Royal Mail 4 Code



Enable
Zero-FCC Australia Post



* Disable
Zero-FCC Australia Post



* *Factory Default Configuration*

Codablock Options

Enable
Codablock A



* Disable
Codablock A



Enable
Codablock F



* Disable
Codablock F



PDF Options

Enable
Transmit \ as \



* Enable
Transmit \ as \



* *Factory Default Configuration*

Software Handshaking

Enable
JV Handshaking



An “JV” response from the host indicates reception of scanner data.

Disable
JV Handshaking



Multifunctional USB/IBM Interface[†]

Dual Interface Defaults[†]



[†] This feature is not for use with the MS1633.

Additional Interfaces[†]

Enable Beeper
ON/OFF Commands



Enables beeper on/off commands with internal USB and IBM interfaces.

* Disable Beeper
ON/OFF Commands



3rd Generation
IBM 46xx Defaults



For this feature to function properly, scan IBM Reserved Code #2 after scanning the 3rd Generation IBM 46xx Default bar code.

IBM Reserved Code #2



Scan IBM Reserve bar code above after scanning the 3rd Generation IBM 46xx Default bar code.

* *Factory Default Configuration*

† *These features are not for use with the MS1633.*

Additional Interfaces†

IBM 46xx-SIOC RS485 Interface

Send 30H for Last Block
Label Identifier 4680



For PDF
codes only.

* Send 00 for Last Block
Label Identifier 4680



For PDF
codes only.

IBM-OEM USB Interface

Send 30H for Last Block
Label Identifier USB



For PDF
codes only.

* Send 00 for Last Block
Label Identifier USB



For PDF
codes only.

Full Speed USB Keyboard Interface

Enable Full Speed USB
Keyboard Interface Defaults



* *Factory Default Configuration*

† These features are not for use with the MS1633.

ENTER/EXIT CONFIGURATION MODE BAR CODE

Enter Exit Configuration Mode



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