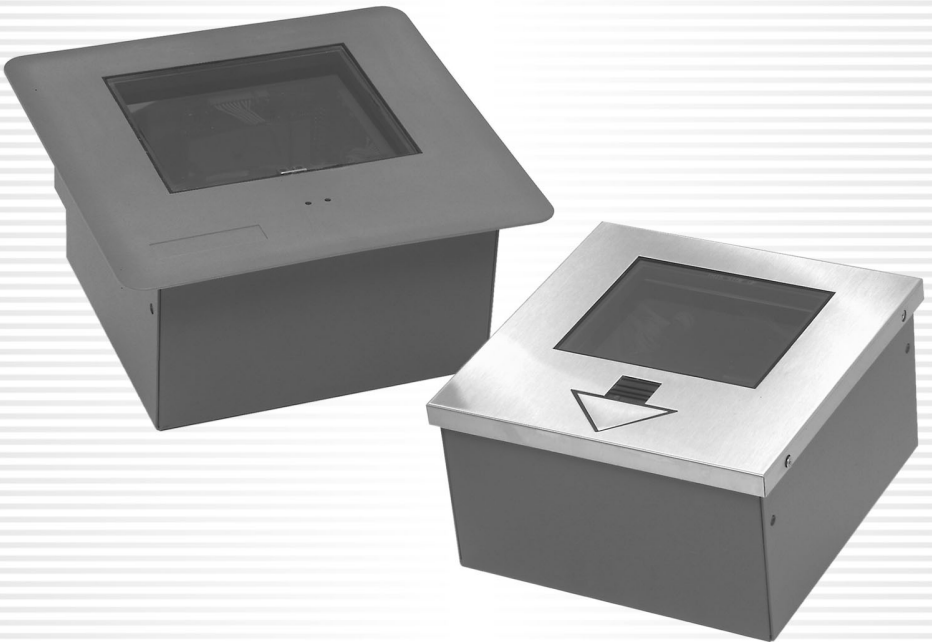




METROLOGIC INSTRUMENTS, INC.
MS860 / MS863 Mini-Slot
Laser Bar Code Scanner
Installation and User's Guide





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INTRODUCTION

Metrologic's MS860 and MS863 laser bar code Scanners are high-speed, aggressive in-counter scanners. Both models have compact, durable housings for use with applications where counter top space is limited.

The MS860 and MS863 autodiscriminate all standard bar codes. Each model includes a code-correcting feature (MECCA[®]) that enables the scanner to decode damaged or truncated codes on the first pass. Both models can be programmed by using the bar code menus from the ScanSelect[®] Programming Guide or by using Metrologic's ScanSet[®] IBM[®] compatible software program.

The MS860 has a brushed stainless steel top plate with an optional universal adapter plate available for purchase that makes it simple to replace older, larger flatbed scanners with the smaller MS860. The MS860 also has a unique "Touch-on" power save mode and easily visible LED indicators mounted on the brushed stainless steel top plate.

The MS863 has a dark gray plastic top instead of the brushed stainless steel of the MS860. The MS863 also uses IR activation. An optional hardened glass window is available for both models.

Metrologic also provides a vertical mounting option, so customers can use the MS860 or MS863 as a projection scanner.

Each version of the MS860 provides three interface options, with full RS-232 protocol available on every scanner. RS-232, OCIA and Light Pen Emulation are consolidated into the standard model. For simple PC connectivity, a keyboard wedge interface is also available. Metrologic also offers a patented Hand-Held Option, which allows users to connect the MS941 Hand-Held Scanner to the MS860 or MS863 for greater scanning versatility.

MODEL		INTERFACE
MS860-1	MS863-1	RS-232, OCIA, Light Pen Emulation
MS860-2	MS863-2	Parallel Output (OCR A/B)
MS860-11	MS863-11	IBM 46XX - RS-485, RS-232, OCIA
MS860-17	MS863-17	Keyboard Wedge, RS-232, Light Pen

SCANNER AND ACCESSORIES

- MS860 or MS863 Laser Bar Code Projection Scanner
- Installation and User's GuideMLPN 00-02202
- ScanSelect® Scanner Programming GuideMLPN 00-02186
- Volume Control CardMLPN 00-02346
- Installation Plate for MS860 models onlyMLPN 45-45471

Optional Accessories

- Power Supply MLPN 00-6114A
- Communication Cable for Version 1 MS860/MS863MLPN 51-51505
- Keyboard Wedge and Adapter Cable for the
MS860-17/MS863-17MLPN 45-45927
- Cloning Cable.....MLPN 51-51544
- Universal Plate for MS860 models only.....MLPN 45-45474
- Vertical Stand.....MLPN 45-45472

If any item is missing or to order additional items, contact the dealer, distributor or call Metrologic's Customer Service Department at 1-800-ID-METRO or 1-800-436-3876.

SCANNER CONNECTIONS TO THE HOST



To avoid potential problems, **do not power up the scanner until the communication cable is secured to the host.**

1. Turn off the host system.
2. Connect the 25-pin D-type connector on the scanner's head cable to the communication cable.
3. Connect the other end of the communication cable to the host device.
4. If the scanner will not receive power from a transformer, skip to Step 5.

If the scanner will receive power from an external power source, check the AC input requirements of the transformer to make sure the voltage matches the AC outlet. The outlet must be installed near the equipment and be easily accessible.

5. Plug the transformer into the side of the female D-type connector located on the communication cable.
6. Plug the transformer into the AC outlet to supply power to the scanner.
7. Power up the host system.

Note: When the scanner first receives power, the LEDs will flash and then the scanner will beep once. After the scanner performs this start up sequence, the green LED will remain *ON* for a specified time indicating that the laser is *ON*.

 **Caution:**

To maintain compliance with applicable standards, all circuits connected to the scanner must meet the requirements for SELV (Safety Extra Low Voltage) according to EN 60950.

To maintain compliance with standard CSA C22.2 No. 950/UL 1950 and norm EN 60950, the power source should meet applicable performance requirements for a limited power source.

CONFIGURATION OF THE SCANNER TO THE HOST SYSTEM

The MS860/MS863 is shipped from the factory programmed to a set of default conditions noted in the *Default Settings* section of this guide and in the *ScanSelect® Scanner Programming Guide* provided. The default settings in the *ScanSelect* guide have an asterisk that appears before the brief definition next to the bar code.

Since each host system is unique, the scanner will need to be configured to match the specific host system's requirements. If using ScanSet®, refer to the ScanSet documentation for information on how to configure the scanner.

To configure the MS860/MS863

1. Connect the scanner to the host system (refer to page 3).
2. Enter program mode by scanning the ENTER/EXIT program mode bar code (the unit will beep three times).
3. Scan the appropriate bar code(s) that appear in the *ScanSelect Scanner Programming Guide*.

Note: Reveal only one bar code to the scanner at a time. With your hand, cover the bar code that is not to be scanned.

4. Exit program mode by scanning the ENTER/EXIT program mode bar code again.

Note: Non-RS-232 interfaces chosen in Section B of the *ScanSelect Programming Guide* do not match the default settings that are loaded when the same interface is selected with ScanSet.

CLONING FEATURE

The cloning feature is used to program several scanners with the same settings.

To clone a scanner:

1. Turn *OFF* the power to both scanners by unplugging the transformers.
2. Connect the cloning cable (MLPN 51-51544) between the two scanners.
3. Turn *ON* the power to both scanners by plugging in the transformers.
4. When each scanner is ready, scan the cloning bar code with the scanner that has the settings that need to be transferred to the other scanner.



VERSION 11 IBM 46XX SCANNER

Output Format: IBM RS-485 serial input/output for the 4680 and 4690 (46XX) point-of-sale terminals

The Version 11 46XX interface can be used in several different ways. Both the 46XX terminal and the scanner must be configured to match each other.

Warning: Power to the scanner and 46XX terminal should be turned off before making physical connection.

The 4680 and 4690 series terminals have different types of physical ports for connecting bar code scanners. Scanner ports include Port 5B, Port 17, and Port 9? (? = A, B, C, or E). A Port 9 type connector is present on all versions of the 46XX families of terminals. That is one reason why it is the normal point of connection for Metrologic scanners. Another reason is that there is enough 12 volt power available to operate many Metrologic scanners. If your terminal configuration requires the use of a different physical port for connecting bar code scanners, contact Metrologic to get particular adapter cable information.

All devices use a common communications bus inside the 46XX terminal, despite what port that is in use for the physical connection. Each device has a different address that it uses when it communicates. The terminal must be configured to look for a device at a logical address.

The IBM 1520 mode/address was selected as a default because it was the first IBM 46XX family scanner to support UPC/EAN, Code 39 and Interleaved 2 of 5 (1 2 of 5). The Version 11 scanner formats Codabar, Code 128, and Code 93 using the Code 39 function code designation supported by the IBM device driver for this scanner type. Other emulation modes currently available are the IBM 3687-2 Port 17 fixed scanner and the Port 9B IBM 4500 CCD hand-held bar code reader. The use one of these other emulation modes may be needed depending on which operating system (4680.OS, 4690.OS, POS/DOS or DOS/RIPPS) is in use at your site.

Note: The IBM 4683 and IBM 4684 terminals have a good proven track record of supplying power to Metrologic scanners. The IBM 4693 and IBM 4694 terminals may be restricted from supplying power to certain scanner models. Specifically, Metrologic currently recommends using an external power supply for the scanner when connecting to an IBM 4694. Metrologic has no recommendations at this time for IBM 4693 terminals.

CONFIGURING THE MS860-11/MS863-11 SCANNER

Located in the Version 11 scanner are two computer boards. One computer board is for decoding and the other for 46XX IO processing. The decode board is configured using ScanSet or ScanSelect while the IO board is configured with an internal DIP Switch bank.

For UPC/EAN scanning, the decode board should be set as follows:

Enable IBM 4680 Communication
Enable UPC/EAN
Beep after Transmit
Enable Communication Timeouts
Transmit UPC-A Check Digit
Transmit UPC-E Check Digit

These settings configure the decode board to beep after transmitting the data to the terminal device driver. If the data does not clear the communications buffer within two seconds, it is discarded without giving the operator a good scan indication. This accommodates newer versions of the IBM device drivers that enable/disable scanning in many different situations.

The default setting of the interface board is to emulate the IBM 1520 hand scanner that supports UPC/EAN and alphanumeric code types. The following is a list of switch settings for the internal interface board that handles the 46XX SIOC communications.

There are eight DIP switches on the board that are both software and hardware switches.

Switch 1	Switch 2	Emulation Mode
OFF	OFF	Port 5B, IBM 1520 Model 2 Laser Scanner (default setting)
OFF	ON	Port 9B, CCD (IBM 4500/Opticon)
ON	OFF	Port 17, IBM 4014 Adapter for 3687-2 to 468X
ON	ON	Reserved

Switch 3	Reserved (Should be OFF)
Switches 4, 5, 6, and 7	Must be ON
Switch 8	Should be OFF (Reserved)

CONFIGURING THE IBM 46XX

The 4683 and 4693 terminals are configured on the store controller. The 4684 and 4694 terminals are typically configured on the individual terminals. Follow the appropriate guide for your type of equipment.

IBM 4683 and 4693 Terminals Driven by a 46XX Store Controller Running 4680.OS or 4690.OS

Access the terminal configuration menu on the store controller. If not already selected, select an IBM 1520 laser hand scanner (4680.OS Port 5B), an IBM 4500 hand-held bar code reader (CCD, 4680.OS Port 9B), or an IBM 3687-2 fixed scanner (4680.OS Port 17) that matches the configuration of your scanner. Regarding the 4690.OS, at the time of this printing, Metrologic does not know exactly which terminal port configuration screen is used for selecting scanners. It should be listed under the Port 9A, 9B, 9C, or 9E sections. The 4693 terminal has a Port 5B that was originally used for the IBM 1520 scanner. While IBM has withdrawn this product, it was not clear how terminal configuration and device driver support would be provided for the installed base of users.

Save the configuration and activate it for the desired terminals. Download the configuration to the terminal(s) per standard procedures.

IBM 4684 and 4694 Systems

Initialize the RIPPS drivers for a hand scanner if hand scanner emulation was selected. Initialize the RIPPS drivers for a "POS scanner" if the 3687-2 scanner has been selected.

VERSION 17 KEYBOARD WEDGE SCANNER

The MS860/MS863 scanner (version 17) provides keyboard emulation by converting the scanned bar code data to the PC keyboard scan code equivalent.

The following are the supported keyboard and country types:

PC Type

- AT (includes IBM PS/2 and compatible models 50, 55, 60, 80)
- XT
- PS/2 (includes IBM PC and compatible models 30, 70, 8556)

Keyboard Country Type

- | | |
|------------------|-----------|
| • USA | • Germany |
| • France | • Spain |
| • Italy | • Belgium |
| • United Kingdom | • Swiss |

With the appropriate communication cable, the scanner will also provide an RS-232 or light pen emulation interface. When configuring the scanner for one interface versus another, change all necessary parameters for that particular interface. For instance, when configuring the scanner for keyboard wedge emulation, recall defaults, select the PC type, keyboard country type and intercharacter delay. For further information, refer to the ScanSelect Scanner Programming Guide or ScanSet Scanner Configuration Guide.

CONNECTION OF A MS860-17 SCANNER TO A PC

1. If the PC is on, exit your application and turn the PC off.
2. Disconnect the keyboard from the PC. Plug the Keyboard Wedge cable to the PC and the keyboard. Use the adapter cable if necessary.
3. Connect the 25-pin D-type connector on the scanner's head cable to the Keyboard Wedge cable.
4. Check the AC input requirements of the transformer to make sure the voltage matches the AC outlet. A socket outlet should be installed near the equipment and be easily accessible.
5. Plug the transformer into the side of the female D-type connector located on the communication cable. Plug the transformer into the AC outlet to supply power to the scanner.
6. Turn the PC on.
7. When the scanner first receives power, the LEDs will flash and the scanner will beep once. After the scanner performs this start up sequence, the green LED will remain on for a specified time indicating the laser is on.

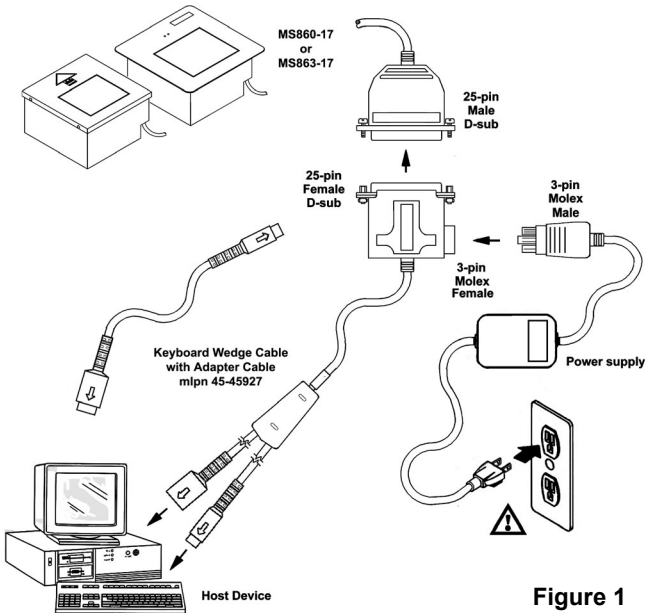


Figure 1

Caution:

To maintain compliance with applicable standards, all circuits connected to the scanner must meet the requirements for SELV (Safety Extra Low Voltage) according to EN 60950.

To maintain compliance with standard CSA C22.2 No. 950/UL 1950 and norm EN 60950, the power source should meet applicable performance requirements for a limited power source.

OPTIONAL IN-COUNTER MOUNTING OPTIONS FOR THE MS860

Metrologic has designed three plates to accommodate in-counter installation of the MS860. Included automatically with the purchase of the MS860 is Metrologic part #45-45471, Installation Plate. The universal and replacement plates are available for an additional charge. Contact the distributor, dealer or Metrologic customer service representative to order one of these plates.

Metrologic Part Number mlpn 45-45471, Installation Plate:

This plate is designed for use in counters with no previous cutouts. No routing is necessary for a flush fit as the stainless steel top is only .60mm (.024") thick. The cut out measurements are 180.34 mm (7.1") L x 175.26 mm (6.9") W. The final cut out must not be greater than 1.5mm (1/16") or less than the exact measurement.

Metrologic Part Number mlpn 45-45474, Universal Plate:

This plate is designed to fit into an existing cut out up to 292.1 mm (11.5") L x 508 mm (20") W.

Metrologic Part Number mlpn 45-45470, Replacement Plate:

This plate is designed to fit into a cut out that previously contained an MS260 or MS362 scanner. This plate fits into the existing 293.62 mm (11.56") L x 245.36 mm (9.66") W.

VERTICAL STAND KIT

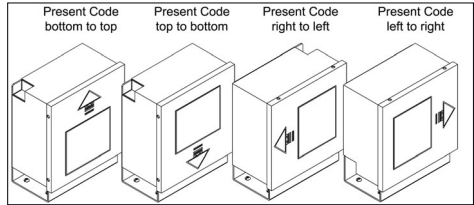
Vertical Stand Kit, MLPN 45-45472 includes:

- | | | |
|-------------------------------------|-------------------|--------|
| a. Vertical Stand | [MLPN 45-45472] | Qty. 1 |
| b. #6-32 x 3/8" Phillips Head Screw | [MLPN 18-18317] | Qty. 2 |
| c. #8 x 1.00" Round Head Wood Screw | [MLPN 18-18057] | Qty. 3 |

Installation

Orientation Note:

The arrow on the top of the scanner indicates the direction that items must be presented to the scanner.



1. Drill four #39 pilot holes into the counter top (See Figure 2).
2. Screw the stand to the counter top with the four #8 wood screws provided.
3. Secure the unit to the stand using the four #6-32 x 3/8" screws provided (See Figure 4).

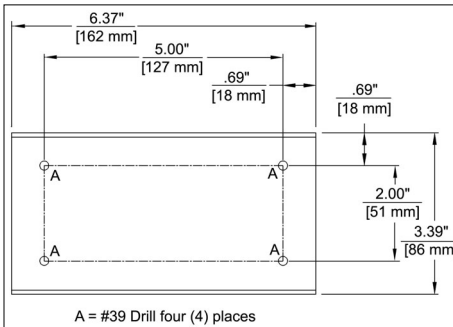


Figure 2

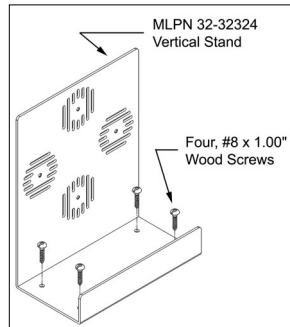


Figure 3

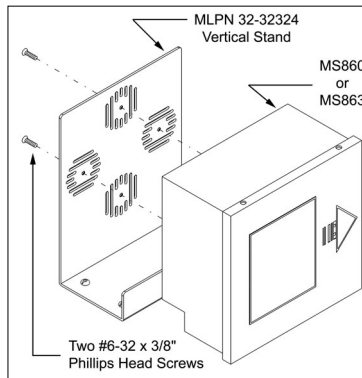


Figure 4

SCANNER PARTS

1

Touch Plate

When a specified time has elapsed without any scanning, the unit will enter a "standby" mode. Touching the touch plate arrow on the top cover will reactivate the scanner.

2

Red LED

When the red LED flashes *ON*, the scanner has read a bar code successfully. When the red light turns *OFF*, communication to the host is complete.

3

Green LED

When the green LED is *ON*, this indicates the unit is receiving power and the laser is *ON*.

4

Output Window

This aperture emits laser light.

5

Head Cable

This cable can be connected directly to the host device or to a communication cable.

6

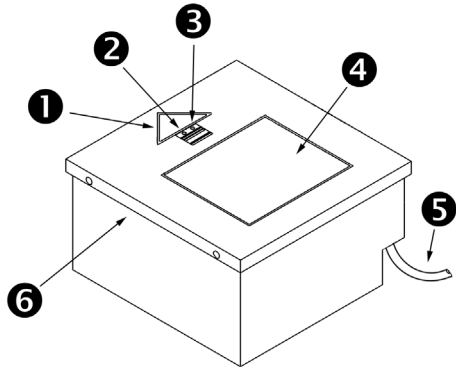
Stainless Steel Top Plate

(On the MS860 only.)

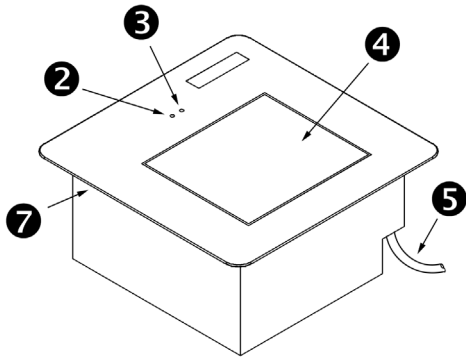
7

Dark Grey ABS Top Plate

(On the MS863 only.)



MS860i



MS863

Figure 5: MS860 & MS863 Scanner Parts

The MS860 TOUCH PLATE

The MS860 will enter "standby" when it remains dormant for a time. When the scanner's computer is on "standby," touching the touch plate will "wake up" the scanner and activate the laser. When the green LED comes on, the scanner is powering up for full operation. After approximately three seconds, the scanner will be ready to operate.

The default touch plate timeout is ten minutes. However, this can be changed through ScanSet or by scanning a bar code in Section C of the ScanSelect Programming Guide. The available times are two minutes, thirty minutes or no timeout.

Plaque de palpeur

Le scanner passe en mode 'Stand-by' quand il n'est pas utilisé pendant une certaine période. Si le calculateur du scanner se trouve en mode 'Stand-by', le contacte de la plaque de palpeur "réveille" le scanner et active le laser. L'allumage de la diode verte indique que le scanner se met en service en attente d'utilisation. Au bout d'environ 3 secondes, le scanner est prêt à servir.

La temporisation standard de plaque de palpeur est de 10 minutes. Ceci peut toutefois être modifié avec ScanSet ou par lecture d'un code barres au chapitre C du manuel de programmation ScanSelect. Les durées disponibles sont deux minutes, trente minutes ou même aucune temporisation.

Sensorplatte

Der Scanner tritt in den 'Stand-by'-Modus ein, wenn er für einen bestimmten Zeitraum untätig geblieben ist. Befindet sich der Rechner des Scanners im 'Stand-by'-Modus, "weckt" die Berührung der Sensorplatte den Scanner und aktiviert den Laser. Das Aufleuchten der grünen Leuchtdiode zeigt an, daß der Scanner sich für volle Betriebsbereitschaft einschaltet. Nach etwa drei Sekunden ist der Scanner betriebsbereit.

Der Standard-Sensorfeld-Timeout liegt bei zehn Minuten. Dies kann jedoch geändert werden durch ScanSet oder Einlesen eines Barcodes in Abschnitt C des ScanSelect Programmierhandbuchs. Die verfügbaren Zeiträume sind zwei Minuten, dreißig Minuten oder gar kein Timeout.

Piastra sensore

Se lo scanner è rimasto disattivato per un determinato periodo esso passa in modalità 'stand-by'. Quando il calcolatore dello scanner si trova in modalità 'stand-by', occorre toccare la piastra sensore per "svegliare" lo scanner ed attivare il laser. L'accensione del diodo luminoso verde indica che lo scanner si accende per diventare completamente pronto. Dopo circa tre secondi lo scanner ha raggiunto la condizione "pronto".

Il timeout standard della zona sensore è regolato su dieci minuti. Questo valore può, però, essere modificato con lo ScanSet oppure con la lettura di un codice a barre, come descritto nella sezione C del Manuale di programmazione ScanSelect. Gli intervalli possibili sono due minuti, trenta minuti oppure nessun timeout.

VISUAL INDICATORS

There is a red and green LED at the top of the scanner. When the scanner is on, the flashing or stationary activity of the LEDs indicates the status of the scan and scanner.

Steady Green

When the laser is on, the green LED is also on. This occurs when the touch plate has been touched. The green LED will remain on until the touch plate timeout elapses or until the scanner turns off.

Steady Green; Red Flash

When the scanner successfully reads a bar code, the red LED will flash then beep once. If this does not happen, then the bar code has not been successfully read.

Steady Red and Green

After a successful scan, the scanner transmits the data to the host device. When the host is not ready to accept the information, the scanner's red LED will remain on until the data can be transmitted.

Alternating Red and Green

This indicates the scanner is in program mode.

Steady Red

This indicates the scanner is in ScanSet mode.

No Red or Green LED

There are two reasons why the LEDs will not be illuminated. First, if the scanner is receiving power and the LEDs are not on, then the scanner has remained dormant for a specified time and the laser has turned off. To reactivate the unit, touch the touch plate. Secondly, if the scanner is not receiving power from the host or transformer, then the LEDs will not turn on.

Flashing Red

This indicates the scanner has experienced a laser subsystem failure. Return the unit for repair at an authorized service center.

VISUAL INDICATORS

Signaux optiques

Sur la partie supérieure du scanner se trouvent une diode LED rouge et une diode LED verte. Quand le scanner est sous tension, les diodes rouge et verte clignotantes ou allumées vous informent sur l'état du scanner.

Ni la diode rouge, ni la diode verte n'est allumée

Il existe deux raisons possibles pour que les diodes ne s'allument pas. Premièrement: si le scanner reçoit de l'énergie sans que les diodes ne s'allument, le scanner est resté sans servir pendant une certaine période et le laser est désactivé. Pour le réactiver, touchez le palpeur infrarouge. Deuxièmement: quand le scanner ne reçoit de l'énergie ni de l'ordinateur central, ni du transformateur, les diodes restent éteintes.

Diode verte reste allumée

Quand le laser est en service, la diode verte s'allume également. C'est le cas quand vous avez touché le palpeur. La diode verte reste allumée tant que la temporisation de l'infrarouge dure ou jusqu'à ce que le scanner soit désactivé.

Diode verte reste allumée; diode rouge clignotante

Après lecture avec succès d'un code barres par le scanner, la diode rouge se met à clignoter, suivie d'un bip sonore unique. Si la diode rouge ne clignote pas ou quand aucun bip sonore n'est émis, cela signifie que le code barres n'a pas pu être lu avec succès.

Diode rouge et verte reste allumées

Une fois le palpage effectué avec succès, le scanner transmet les données à l'ordinateur central. Si ce dernier n'est pas prêt à recevoir les données, la diode rouge du scanner s'allume jusqu'à ce que les données puissent être transmises.

Diode rouge et verte en alternance

Indique que le scanner se trouve en mode de programmation.

Diode rouge reste allumée

Indique que le scanner se trouve en mode ScanSet.

Diode rouge clignotante

Indique une panne de laser pendant le palpage. Veuillez envoyer votre appareil chez un concessionnaire pour réparation.

VISUAL INDICATORS

Optische Anzeigen

Auf dem Scanner befinden sich eine rote und eine grüne Leuchtdiodenanzeige. Bei eingeschaltetem Scanner geben Ihnen die blinkenden oder feststehenden Leuchtdiodenanzeigen Aufschluß über den Abtast- und Scannerstatus.

Weder rote noch grüne Leuchtdiodenanzeige

Es gibt zwei mögliche Gründe, weshalb die Leuchtdiodenanzeigen nicht aufleuchten. Erstens: Wenn der Scanner mit Strom versorgt wird und die Leuchtdiodenanzeigen nicht aufleuchten, so ist der Scanner für einen bestimmten Zeitraum untätig geblieben und der Laser ist abgeschaltet. Berühren Sie das Sensorfeld zur Reaktivierung der Einheit. Zweitens: Wenn der Scanner weder vom Hostrechner noch vom Transformator Energie erhält, leuchten die Leuchtdiodenanzeigen ebenfalls nicht auf.

Feststehende grüne Anzeige

Wenn der Laser eingeschaltet ist, leuchtet die grüne Leuchtdiodenanzeige ebenfalls auf. Dies ist der Fall, wenn das Sensorfeld berührt wurde. Die grüne Leuchtdiodenanzeige leuchtet solange auf, bis das Sensorfeld-Timeout abgelaufen ist oder bis der Scanner abgeschaltet wird.

Feststehende grüne Leuchtanzeige; rote Blinkanzeige

Nach erfolgreichem Lesen eines Barcodes durch den Scanner blinkt die rote Leuchtdiode auf, gefolgt von einem einmaligen Piep-Signal. Blinkt die rote Leuchtdiodenanzeige nicht auf oder sendet der Scanner kein einmaliges Piep-Signal aus, so konnte der Barcode nicht erfolgreich gelesen werden.

Feststehende rote und grüne Leuchtanzeige

Nach erfolgreichem Abtasten überträgt der Scanner die Daten an das Hostgerät. Falls das Hostgerät zur Datenannahme nicht bereit ist, leuchtet die rote Leuchtdiodenanzeige solange auf, bis die Daten übertragen werden können.

Alternierende rote und grüne Leuchtanzeige

Zeigt an, daß sich der Scanner im Programmiermodus befindet.

Feststehende rote Leuchtanzeige

Zeigt an, daß sich der Scanner im ScanSet-Modus befindet.

Aufblinkende rote Leuchtanzeige

Zeigt an, daß beim Scanner ein Laserausfall vorliegt. Bringen Sie das Gerät zur Reparatur in ein Vertragsservicecenter.

Segnali ottici

Sullo scanner si trovano due diodi luminosi: uno rosso e uno verde. Quando lo scanner è inserito, i diodi luminosi, che possono o essere accesi in continuazione o lampeggiare, Vi informano sullo stato della scansione e dell'apparecchio.

Né il diodo luminoso rosso né quello verde sono accesi

Vi sono due possibili cause se i diodi luminosi non sono accesi. Prima causa: se lo scanner viene alimentato e i diodi luminosi non sono accesi, lo scanner è rimasto disattivato per un determinato periodo e il laser è spento. Per riattivare l'unità dovrete toccare la zona sensore. Seconda causa: se lo scanner non viene alimentato né dal calcolatore host né dal trasformatore, i due diodi luminosi non sono accesi.

Il diodo luminoso verde è acceso

Quando il laser è inserito, è acceso anche il diodo luminoso verde. Questo si ha quando la zona sensore è stata toccata. Il diodo luminoso verde è acceso fino al raggiungimento del timeout della zona sensore oppure fino allo spegnimento dello scanner.

Il diodo luminoso verde è acceso; quello rosso lampeggia

Dopo la lettura riuscita di un codice a barre da parte dello scanner il diodo luminoso rosso lampeggia e quindi viene emesso un unico segnale beep. Se il diodo luminoso rosso non lampeggia oppure lo scanner non emette un segnale beep unico, ciò significa che la lettura del codice a barre non è riuscita.

Sono accesi sia il diodo luminoso rosso che quello verde

Dopo la scansione riuscita lo scanner trasmette i dati all'host. Se l'host non è pronto per accettare i dati, il diodo luminoso rosso dello scanner è acceso fino a che i dati possono essere trasmessi.

Il diodo luminoso rosso e quello verde sono accesi in alternanza

Ciò indica che lo scanner si trova nella modalità di programmazione.

Il diodo luminoso rosso è acceso

Ciò indica che lo scanner si trova nella modalità ScanSet.

Il diodo luminoso rosso lampeggia

Ciò indica che lo scanner ha un guasto a livello del laser. Fate riparare l'apparecchio da un centro di assistenza autorizzato.

VOLUME SETTINGS

There are four volume settings available: low, medium, high and no volume. The operator can *temporarily* change the volume of the scanner by scanning the bar codes on the volume control card. To change the volume of the scanner *permanently*, enter program mode and scan the appropriate volume setting bar code in Section C of the ScanSelect® Programming Guide or use ScanSet®.

IMPORTANT! KEEP THIS CARD WITH THE SCANNER



SCAN FOR LOUDER VOLUME. SAVE THIS CARD.
LEES CODE VOOR LUIDER VOLUME. KAART BIJHOUDEN.
DIESER CODE ERHÖHT DIE LAUTSTÄRKE. BITTE KARTE AUFHEBEN.
LIRE CE CODE POUR AUGMENTER LE VOLUME. CONSERVER CETTE CARTE.
LEER CODIGO PARA AUMENTAR VOLUME. GUARDAR ESTA CARTA.
QUESTO CODICE AUMENTA IL VOLUME. CONSERVATE LA CARTA.
LER O CÓDIGO PARA VOLUME MAIS ALTO. GUARDAR ESTE CARTÃO.
Просканируйте этот код для повышения громкости.
Сохраните эту карточку.

扫描高音 保留卡片

音量増大にはこのカードをスキャンして
下さい。



North American (HQ)

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90 Coles Road
Blackwood, NJ 08012
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Email: info@br.metrologic.com

MLPN 2346
February 2000

IMPORTANT! KEEP THIS CARD WITH THE SCANNER



SCAN FOR SOFTER VOLUME. SAVE THIS CARD.
LEES CODE VOOR STILLER VOLUME. KAART BIJHOUDEN.
DIESER CODE VERRINGERT DIE LAUTSTÄRKE. BITTE KARATE AUFHEBEN.
LIRE CE CODE POUR BAISSER LE VOLUME. CONSERVER CETTE CARTE.
LEER CONDIGO PARA BAJAR VOLUME. GUARDAR ESTA CARTA.
QUESTO CODICE DIMINUISCE IL VOLUME. CONSERVATE LA CARTA.
LER O CÓDIGO PARA VOLUME MAIS BAIXO. GUARDAR ESTE CARTÃO.
Просканируйте этот код для понижения громкости.
Сохраните эту карточку.

扫描低音 保留卡片

音量減少にはこのカードをスキャンして
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LABELS

There is one label located inside the window of the scanner noting that the device is a CDRH Class IIa laser product and IEC 825 LASERKLASSE 1.. Another label, located on the back of the unit, shows the model number, date of manufacture, and serial number. The following are samples of these labels:

<p>Metrologic® Metrologic Instruments, Inc. Blackwood, New Jersey, USA Contains no user servicable components. Warranty void if case is opened.</p> <p>Complies with FCC and ICES-003 Class A. See manual.</p> <p>Manufactured Blackwood, NJ. September 2001 (L)</p> <p>Model : MS860i-1 Barcode Scanner Serial # : 0000000000</p> <p>SAMPLE</p> <p>See User's Guide for patent coverage.</p>	<p> LR 66345</p> <p> US LISTED 94J8 I.T.E.</p> <p></p> <p>RS232/OCIA/LTPN</p> <p>11-30V^{max}</p>	<p>This product complies with US DHHS Standard 21 CFR Chapter 1 Subchapter J. Class IIa Laser Product. Avoid long-term viewing of direct laser light.</p> <p>nach EN 60825/09.91 Eviter toute exposition prolongee de la vue au rayonnement laser direct. Appareil laser Classe IIa.</p> <p></p> <p>"Made in U.S.A."</p> <p>CAUTION: Laser light when opened. DO NOT STARE INTO BEAM.</p>
---	--	---

Complies with 21 CFR
Chapter 1 subchapter
J. Class IIa laser
product. Avoid long-
term viewing of direct
laser light. oo

LASERKLASSE 1

Figure 5: Labels

DEPTH OF FIELD

Through the glass at the front of the scanner, safe, low powered laser beams are projected in a complex pattern that resembles a spider web. Each of the five scan fields that generate the scan pattern extend to a range of 127mm (5.0"). This range begins from the face of the scanner window and extends from the unit for a distance of 127mm (5.0") measured along the scanning beam at the center of each scan segment. This 0.0mm - 127mm (0" - 5") range is the depth of field for the MS860i scanner (see figure 6).

The scan pattern is projected at an angle away from the touch plate (approximately 20 degrees, overall). As the scan fields move outward, they expand. Like an image expands from a film projector as it moves toward the screen at a movie theater, the scan pattern projects out to a well-defined region. Any label that is facing toward the scanner can be read at any point within the scanning field.

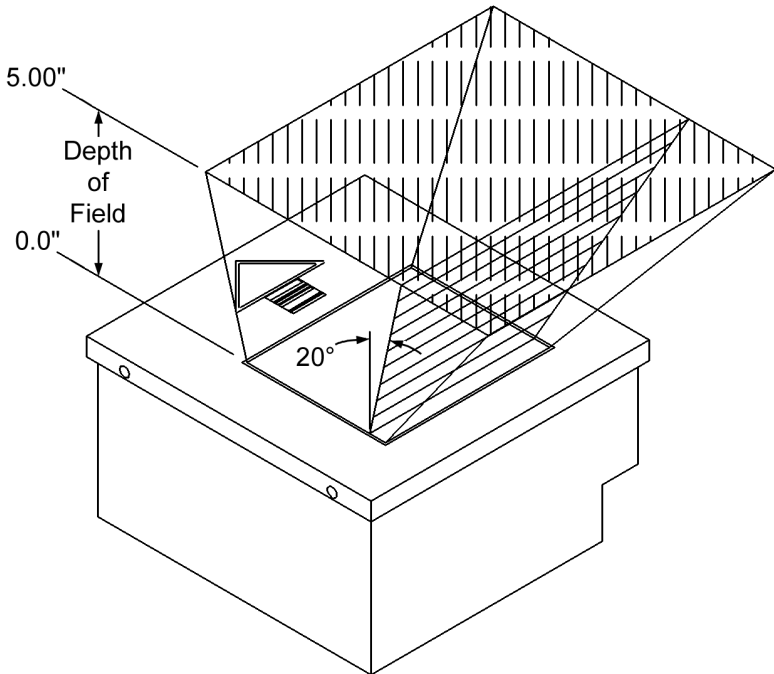
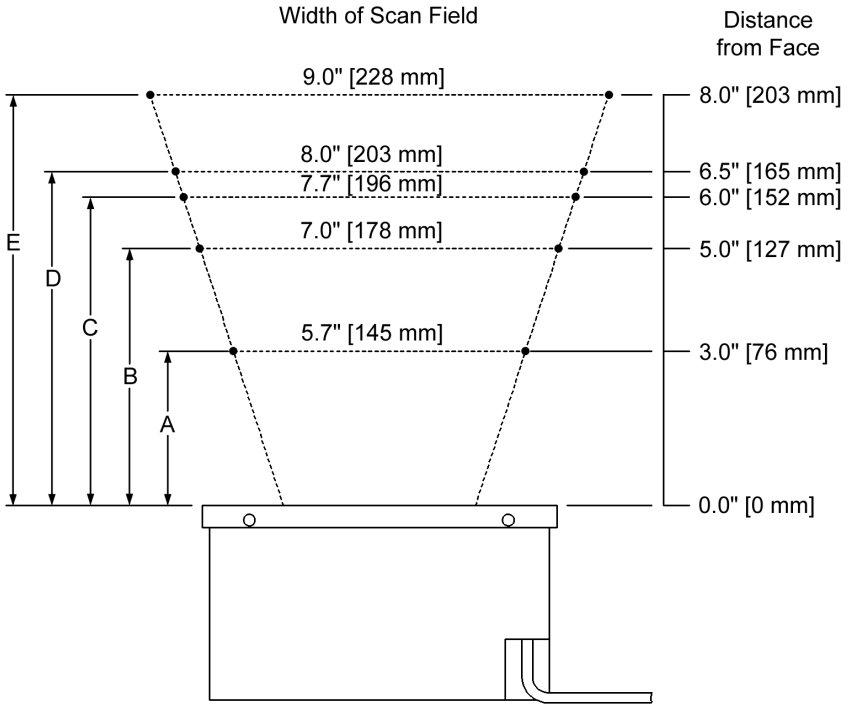


Figure 6: Depth of Field

DEPTH OF FIELD AND SYMBOL SPECIFICATION

CODE TYPE	MINIMUM SMALL ELEMENT MIL. (1/1000)	CODE DENSITY	DEPTH OF FIELD
UPC/EAN	10.4	80%	0" - 5"
UPC/EAN	13.0	100%	0" - 6.5"
Code 39	7.5	High	0" - 3"
Code 39	12.0	Medium	0" - 6"
Code 39	21.0	Low	0" - 8"
I 2 of 5	7.5	High	0" - 3"
I 2 of 5	12.0	Medium	0" - 6"
I 2 of 5	21.0	Low	0" - 8"
Codabar	6.5	High	0" - 3"
Codabar	9.8	Medium	0" - 5"
Codabar	13.0	Low	0" - 6.5"
Code 93	10.4	80%	0" - 5"
Code 93	13.0	100%	0" - 6.5"
Code 128	10.4	80%	0" - 5"
Code 128	13.0	100%	0" - 6.5"

DEPTH OF FIELD AND SYMBOL SPECIFICATION



MINIMUM BAR CODE ELEMENT WIDTH					
	A	B	C	D	E
mm	.19	.25	.31	.33	.53
mils	7.5	10	12	13	21

Figure 7: Depth of Field and Symbol Specification

MAINTENANCE

Smudges and dirt can interfere with the proper scanning of a bar code. Therefore, the output window will need occasional cleaning.

1. Spray glass cleaner onto lint free, non-abrasive cleaning cloth.
2. Gently wipe the scanner window.

SPECIFICATIONS

MS860 AND MS863 SPECIFICATIONS	
Application:	In-Counter Laser Bar Code Scanner
Light Source:	VLD 650 ± 10 nm
Laser Power	0.525 mW (peak)
Laser Class	CDRH: CLASS IIa; EN60825-1:1994/A11:1996 Class 1
UL/CSA/TUV:	UL Listed, UL 1950; CSA certified, C22.2 No. 950; TUV certified, GS Mark, and EN 60950
EMC:	FCC, ICES-003 & EN 55022 Class A
MECHANICAL	
Dimensions:	175 mm (6.9")L x 173 mm (6.8")W x 97 mm(3.8")H
Weight:	2.45 kg (5.4 lbs.)
Orientation:	May be used in any orientation
Top Cover:	MS860: Brushed stainless steel
	MS863: ABS Plastic
Cable:	1.8 m (6'); contact a Metrologic customer service representative for additional cable options
ELECTRICAL	
Power:	8.4 W, host system or desk transformer
Input Voltage:	11-30VDC ± 0.50VDC
Operating Current:	350 mA @ 20VDC
Standby Current:	175 mA @ 20VDC
DC Transformers:	Class 2; 20VDC @ 750 mA

Specifications subject to change without notice.

SPECIFICATIONS (CONT.)

MS860 AND MS863 SPECIFICATIONS	
OPERATIONAL	
Depth of Field:	0 mm - 203 mm (0" - 8"), programmable
Minimum Bar Width:	0.191 mm (7.5 mil)
Scan Speed:	2000 scan lines per second
Scan Pattern:	5 fields of 4 parallel lines (omnidirectional)
Exit Angle:	70°
Indicators (LED):	Green = laser on, ready to scan Red = good read
Beeper Operation:	3 tones or no beep; 3 volume settings
Maintenance:	Clean window periodically
Decode Capability:	Autodiscriminates all standard bar codes; for other symbologies call Metrologic
System Interfaces:	RS232, OCIA, OCR A/B Parallel, IBM [□] 468X/469X, Light Pen Emulation, Point to Point RS422, Keyboard Wedge
Print Contrast:	35% minimum reflectance difference
Roll, Pitch, Yaw:	360°, 60°, 60°
ENVIRONMENTAL	
Storage Temperature:	-40°C - 60°C (-40°F - 140°F)
Operating Temperature:	0°C - 40°C (32°F - 104°F)
Humidity:	5% - 95% relative humidity, non-condensing
Light Levels:	Up to 4842 Lux (450 footcandles)
Ventilation:	None required
Shock:	100g for 1ms
ESD:	8 kV IEC 801-2
Contaminants:	Sealed to resist airborne particulate contaminants

Specifications subject to change without notice.

DEFAULT SETTINGS

Many function of the scanner can be “programmed” - that is, enabled or disabled. The scanner is shipped from the factory programmed to a set of default conditions. The default parameter of the scanner has an asterisk (*) in the charts on the following pages. If an asterisk is not in the default column then the default setting is OFF or DISABLED. Every communication does not support every parameter. If the communication supports a parameter listed in the charts on the following pages, a check mark will appear.

PARAMETER	DEFAULT	OCIA	IBM 46XX	KEYBOARD WEDGE	RS-232*	PARALLEL	LIGHT PEN
UPC/EAN	*	✓	✓	✓	✓	✓	✓
Code 128	*	✓	✓	✓	✓		✓
Code 93	*	✓	✓	✓	✓		✓
Codabar	*	✓	✓	✓	✓		✓
Interleaved 2 of 5 (ITF)	*	✓	✓	✓	✓		✓
MOD 10 Check on ITF		✓	✓	✓	✓		✓
Code 11		✓	✓	✓	✓		✓
Code 39	*	✓	✓	✓	✓		✓
Full ASCII Code 39		✓	✓	✓	✓		✓
MOD 43 Check on Code 39		✓	✓	✓	✓		✓
MSI Plessey		✓	✓	✓	✓		✓
MSI Plessey 10/10 Check Digit		✓	✓	✓	✓		✓
MSI Plessey MOD 10 Check Digit	*	✓	✓	✓	✓		✓
UK Plessey		✓	✓	✓	✓		
Airline 2 of 5		✓	✓	✓	✓		
Telepen		✓	✓	✓	✓		
MECCA		✓	✓	✓	✓	✓	✓

DEFAULT SETTINGS (CONT.)

PARAMETER	DEFAULT	OCIA	IBM 46XX	KEYBOARD WEDGE	RS-232*	PARALLEL	LIGHT PEN
Paraf Support		✓	✓	✓	✓		✓
Matrix 2 of 5		✓	✓	✓	✓		
EAN-8	*	✓	✓	✓	✓	✓	✓
EAN-13	*	✓	✓	✓	✓	✓	✓
UPC-E	*	✓	✓	✓	✓	✓	✓
UPC-A	*	✓	✓	✓	✓	✓	✓
ITF Symbol Lengths	Var.	✓	✓	✓	✓	✓	✓
Minimum Symbol Length	04	✓	✓	✓	✓	✓	✓
Symbol Length Lock	None	✓	✓	✓	✓	✓	✓
SWEDA	*					✓	
Fujitsu						✓	
OMRON						✓	
IBM Parallel						✓	
Bars High as Code 39	*						✓
Spaces High as Code 39							✓
Bars High as Scanned							✓
Spaces High as Scanned							✓
DTS/SIEMENS		✓					
DTS/NIXDORF	*	✓					
NCR F		✓					
NCR S		✓					
Poll Light Pen Source							✓
Light Pen Extra Transition Before Bar Code							✓

DEFAULT SETTINGS (CONT.)

PARAMETER	DEFAULT	OCIA	IBM 46XX	KEYBOARD WEDGE	RS-232 ⁺	PARALLEL	LIGHT PEN
Multi-drop Address							
Beeper Tone	Normal	✓	✓	✓	✓	✓	✓
Fast Beep		✓	✓	✓	✓	✓	✓
Volume Setting	Loudest	✓	✓	✓	✓	✓	✓
Beep/Transmit Sequence	Before	✓	✓	✓	✓	✓	✓
Communication Timeout	None	✓	✓	✓	✓	✓	✓
Razzberry Tone on Timeout		✓	✓	✓	✓	✓	✓
Three Beeps on Timeout		✓	✓	✓	✓	✓	✓
No Beeps on Timeout		✓	✓	✓	✓	✓	✓
Touch Plate Timeout	10 Min.	✓	✓	✓	✓	✓	✓
No Same Symbol Timeout		✓	✓	✓	✓	✓	✓
Infinite Same Symbol Timeout		✓	✓	✓	✓	✓	✓
Same Symbol Rescan Timeout: 100 msec		✓	✓	✓	✓	✓	✓
Same Symbol Rescan Timeout: 200 msec		✓	✓	✓	✓	✓	✓

DEFAULT SETTINGS (CONT.)

PARAMETER	DEFAULT	OCIA	IBM 46XX	KEYBOARD WEDGE	RS-232*	PARALLEL	LIGHT PEN
Same Symbol Rescan Timeout: 500 msec	*	✓	✓	✓	✓	✓	✓
Same Symbol Rescan Timeout: 1250 msec		✓	✓	✓	✓	✓	✓
Same Symbol Rescan Timeout: 2000 msec		✓	✓	✓	✓	✓	✓
Scanability	Off				✓		
Scan Count Mode	Off				✓		
Normal Depth of Field	*	✓	✓	✓	✓	✓	✓
Intercharacter Delay	1 msec	✓		✓	✓	✓	
Scan Buffer	1	✓	✓	✓	✓	✓	✓
Transmit UPC-A Check Digit	*	✓	✓	✓	✓	✓	
Transmit UPC-E Check Digit		✓	✓	✓	✓	✓	
Expand UPC-E		✓	✓	✓	✓	✓	
Convert UPC-A to EAN-13		✓	✓	✓	✓	✓	
Transmit Lead Zero on UPC-E		✓	✓	✓	✓	✓	
Convert EAN-8 to EAN-13		✓	✓	✓	✓	✓	
Transmit EAN-13 Check Digit	*	✓	✓	✓	✓	✓	

DEFAULT SETTINGS (CONT.)

PARAMETER	DEFAULT	OCIA	IBM 46XX	KEYBOARD WEDGE	RS-232*	PARALLEL	LIGHT PEN
Transmit EAN-8 Check Digit	*	✓	✓	✓	✓	✓	
Transmit UPC-A Number System	*	✓	✓	✓	✓	✓	
Transmit Codabar Start/Stop Characters		✓	✓	✓	✓	✓	
Transmit Mod 43 Check Digit on Code 39		✓	✓	✓	✓		
Transmit Code 39 Stop/Start Characters		✓	✓	✓	✓		
Transmit Mod 10/ITF		✓	✓	✓	✓		
Transmit Code 11 Check Digit		✓	✓	✓	✓		✓
Transmit MSI Plessey Check Digits		✓	✓	✓	✓		
Transmit UK Plessey Check Digits		✓	✓	✓	✓		
Parity	Space				✓		
Baud Rate	9600				✓		
8 Data Bits					✓		
7 Data Bits	*				✓		
Transmit Sanyo ID Characters				✓	✓		
Shell Schulmberger Formatting				✓	✓		
SNI Beetle Mode				✓	✓		

DEFAULT SETTINGS (CONT.)

PARAMETER	DEFAULT	OCIA	IBM 46XX	KEYBOARD WEDGE	RS-232*	PARALLEL	LIGHT PEN
CLSI Editing		✓	✓	✓	✓		
French PC Term					✓		
Transmit AIM ID Characters				✓	✓		
Nixdorf ID				✓	✓		
UPC Prefix				✓	✓		
UPC Suffix				✓	✓		
STX Prefix				✓	✓		
ETX Suffix				✓	✓		
Carriage Return	*			✓	✓		
Line Feed	*			✓	✓		
Tab Prefix				✓	✓		
Tab Suffix				✓	✓		
"DE" Disable Command					✓		
"FL" Laser Enable Command					✓		
DTR Handshaking Support					✓		
RTS/CTS Handshaking					✓		
Character RTS/CTS	*				✓		
Message RTS/CTS					✓		
XON/XOFF Handshaking					✓		
ACK/NAK					✓		
5 Retries on ACK/NAK Time-out					✓		
Keyboard Country Type	USA			✓			

DEFAULT SETTINGS (CONT.)

PARAMETER	DEFAULT	OCIA	IBM 46XX	KEYBOARD WEDGE	RS-232*	PARALLEL	LIGHT PEN
Keyboard Type	AT			✓			
Caps Lock				✓			
Alt Mode				✓			
Inter Scan Code Delay	800 μ sec			✓			
Transmit F0H Break Code (AT and PS/2 keyboards)	*			✓			
Special Software is required for the following:							
Two Digit Supplements		✓	✓	✓	✓		✓
Five Digit Supplements		✓	✓	✓	✓		✓
Bookland		✓	✓	✓	✓		✓
977 (2 digit) Supplemental Requirement		✓	✓	✓	✓		✓
Supplements are not Required	*	✓	✓	✓	✓		✓
Two Digit Redundancy	*	✓	✓	✓	✓		✓
Five Digit Redundancy		✓	✓	✓	✓		✓
200 msec to Find Supplement		✓	✓	✓	✓		✓
100 msec to Find Supplement	*	✓	✓	✓	✓		✓
Code 128 Coupon Extended Code		✓	✓	✓	✓		
Code 128 JC1 Extended Code Format		✓	✓	✓	✓		

SCANNER PINOUT CONNECTIONS

Version “1” Pin Assignments for RS-232, OCIA and Light Pen Emulation

The version “1” scanner head cable is terminated with a male 25-pin D-type connector. Connecting the scanner to the host device may require a communication cable. The communication cable may include a connection for a transformer or it may be designed to draw power directly from the host device. This can be ordered when the scanner is purchased.

The version “1” scanner is designed to be used for RS-232, OCIA or Light Pen Emulation communication.

The following is a list of the pin assignments. The pin numbers are impressed on the head cable's connector.

PIN	FUNCTION
1	AC Shield Ground
2	RS-232 Receive Input
3	RS-232 Transmit Output
4	CTS Input
5	RTS Output
6	Reserved
7	Signal Ground
8 - 12	Reserved
13	Earth Ground
14	Power Ground 1
15	Light Pen Source
16	Light Pen Data
17	OCIA Clock In Return
18	OCIA Clock In
19	Power (11 - 30 volts) DC
20	DTR Input
21	OCIA Clock Out
22	OCIA Clock Out Return
23	OCIA RDATA
24	OCIA RDATA Return
25	Power Ground 2

SCANNER PINOUT CONNECTIONS

Version “2” Pin Assignments for Parallel Communication

The version “2” scanner head cable is terminated with a male 25-pin D-type connector. Connecting the scanner to the host device may require a communication cable. The communication cable may include a connection for a transformer or it may be designed to draw power directly from the host device. This can be ordered when the scanner is purchased.

The version “2” scanner is designed to be used for Parallel communication.

The following is a list of the pin assignments. The pin numbers are impressed on the head cable’s connector.

PIN	FUNCTION
1	AC Shield Ground
2	RS-232 Receive Input
3	RS-232 Transmit Output
4	CTS Input
5	RTS Output
6	Reserved
7	Signal Ground
8	Reserved
9	Edit Check
10	EOT
11	Data Ready
12	Adaptor Ready
13	Earth Ground
14	Power Ground 1
15	Light Pen Source
16	Light Pen Data
17	Data 1
18	Data 2
19	Power (11 - 30 volts) DC
20	DTR Input
21	Data 3
22	Data 4
23	Data 5
24	Data 6
25	Power Ground 2

SCANNER PINOUT CONNECTIONS

Version “11” Pin Assignments for RS-485

The version “11” scanner head cable is terminated with a male 25-pin D-type connector. Connecting the scanner to the host device may require a communication cable. The communication cable may include a connection for a transformer or it may be designed to draw power directly from the host device. This can be ordered when the scanner is purchased.

The version “11” scanner is designed to be used primarily with IBM 46XX series of electronic cash registers. It can also be configured to communicate using the full RS-232 and OCIA protocol.

The following is a list of the pin assignments. The pin numbers are impressed on the head cable’s connector.

PIN	FUNCTION
1	AC Shield Ground
2	RS-232 Receive Input
3	RS-232 Transmit Output
4	CTS Input
5	RTS Output
6	Reserved
7	Signal Ground
8 - 12	Reserved
13	Earth Ground
14	Power Ground 1
15	468X -B
16	468X +A
17	OCIA Clock In Return
18	OCIA Clock In
19	Power (11 - 30 volts) DC
20	DTR Input
21	OCIA Clock Out
22	OCIA Clock Out Return
23	OCIA RDATA
24	OCIA RDATA Return
25	Power Ground 2

SCANNER PINOUT CONNECTIONS

Version “17” Pin Assignments for Keyboard Wedge, RS-232 and Light Pen Emulation

The version “17” scanner head cable is terminated with a male 25-pin D-type connector. Connecting the scanner to a PC, requires a communication cable and a transformer. Connecting the communication cable to a PC, may require an adapter cable.

The version “17” scanner is designed to be used as a keyboard wedge. With the appropriate communication cable, the scanner will also provide an RS-232 or light pen emulation interface. When configuring the scanner for an interface it is necessary to set the correct parameters for that interface. For further information on configuring interfaces, refer to the *ScanSelect Scanner Programming Guide* or *ScanSet Scanner Configuration Guide*.

The following is a list of the pin assignments. The pin numbers are impressed on the head cable's connector.

PIN	FUNCTION
1	AC Shield Ground
2	RS-232 Receive Input
3	RS-232 Transmit Output
4	CTS Input
5	RTS Output
6	Reserved
7	Signal Ground
8 - 10	Reserved
11	PC +5 Volts DC
12	Ground
13	Earth Ground
14	Power Ground 1
15	Light Pen Source
16	Light Pen Data
17	PC Data
18	PC Clock
19	Power (11 - 30 volts) DC
20	DTR Input
21	Keyboard Clock
22	Keyboard Data
23 - 24	Reserved
25	Power Ground 2

Limited Warranty

The MS860 and MS863 scanners are manufactured by Metrologic at its Blackwood, New Jersey, U.S.A. facility. The MS860 and MS863 scanners have a two (2) year limited warranty from the date of manufacture. Metrologic warrants and represents that all MS860 and MS863 scanners are free of all defects in material, workmanship and design, and have been produced and labeled in compliance with all applicable U.S. Federal, state and local laws, regulations and ordinances pertaining to their production and labeling.

This warranty is limited to repair, replacement of Product or refund of Product price at the sole discretion of Metrologic. Faulty equipment must be returned to the Metrologic facility in Blackwood, New Jersey, U.S.A. or Puchheim, Germany. To do this, contact Metrologic's Customer Service/Repair Department to obtain a Returned Material Authorization (RMA) number.

In the event that it is determined the equipment failure is covered under this warranty, Metrologic shall, at its sole option, repair the Product or replace the Product with a functionally equivalent unit and return such repaired or replaced Product without charge for service or return freight, whether distributor, dealer/reseller, or retail consumer, or refund an amount equal to the original purchase price.

This limited warranty does not extend to any Product which, in the sole judgement of Metrologic, has been subjected to abuse, misuse, neglect, improper installation, or accident, nor any damage due to use or misuse produced from integration of the Product into any mechanical, electrical or computer system. The warranty is void if the case of Product is opened by anyone other than Metrologic's repair department or authorized repair centers.

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NOTICES

Notice

This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense. Any unauthorized changes or modifications to this equipment could void the users authority to operate this device.

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

Notice

This Class A digital apparatus complies with Canadian ICES-003.

Remarque

Cet appareil numérique de la classe A, conforme à la norme NMB-003 du Canada.

Caution

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure. Under no circumstances should the customer attempt to service the laser scanner. Never attempt to look at the laser beam, even if the scanner appears to be nonfunctional. Never open the scanner in an attempt to look into the device. Doing so could result in hazardous laser light exposure. The use of optical instruments with the laser equipment will increase eye hazard.

Atención

La modificación de los procedimientos, o la utilización de controles o ajustes distintos de los especificados aquí, pueden provocar una luz de láser peligrosa. Bajo ninguna circunstancia el usuario deberá realizar el mantenimiento del láser del escáner. Ni intentar mirar al haz del láser incluso cuando este no esté operativo. Tampoco deberá abrir el escáner para examinar el aparato. El hacerlo puede conllevar una exposición peligrosa a la luz de láser. El uso de instrumentos ópticos con el equipo láser puede incrementar el riesgo para la vista.

Attention

L'emploi de commandes, réglages ou procédés autres que ceux décrits ici peut entraîner de graves irradiations. Le client ne doit en aucun cas essayer d'entretenir lui-même le scanner ou le laser. Ne regardez jamais directement le rayon laser, même si vous croyez que le scanner est inactif. N'ouvrez jamais le scanner pour regarder dans l'appareil. Ce faisant, vous vous exposez à une rayonnement laser qu'est dangereux. L'emploi d'appareils optiques avec cet équipement laser augmente le risque d'endommagement de la vision.

Achtung

Die Verwendung anderer als der hier beschriebenen Steuerungen, Einstellungen oder Verfahren kann eine gefährliche Laserstrahlung hervorrufen. Der Kunde sollte unter keinen Umständen versuchen, den Laser-Scanner selbst zu warten. Sehen Sie niemals in den Laserstrahl, selbst wenn Sie glauben, daß der Scanner nicht aktiv ist. Öffnen Sie niemals den Scanner, um in das Gerät hineinzusehen. Wenn Sie dies tun, können Sie sich einer gefährlichen Laserstrahlung aussetzen. Der Einsatz optischer Geräte mit dieser Laserausrüstung erhöht das Risiko einer Sehschädigung.

NOTICES (CONT.)

Attenzione

L'utilizzo di sistemi di controllo, di regolazioni o di procedimenti diversi da quelli descritti nel presente Manuale può provocare delle esposizioni a raggi laser rischiose. Il cliente non deve assolutamente tentare di riparare egli stesso lo scanner laser. Non guardate mai il raggio laser, anche se credete che lo scanner non sia attivo. Non aprite mai lo scanner per guardare dentro l'apparecchio. Facendolo potete esporVi ad una esposizione laser rischiosa. L'uso di apparecchi ottici, equipaggiati con raggi laser, aumenta il rischio di danni alla vista.

European Standard

Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Funkstöreigenschaften nach EN 55022:1998

Warnung!

Dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchführen.

Standard Europeo

Attenzione

Questo e' un prodotto di classe A. Se usato in vicinanza di residenze private potrebbe causare interferenze radio che potrebbero richiedere all'utilizzatore opportune misure.

Attention

Ce produit est de classe "A". Dans un environnement domestique, ce produit peut être la cause d'interférences radio. Dans ce cas l'utilisateur peut être amené à prendre les mesures adéquates.

PATENTS

Patent Information

This METROLOGIC product may be covered by one or more of the following U.S. Patents:

U.S. Patent No. 4,360,798; 4,369,361; 4,387,297; 4,460,120; 4,496,831; 4,593,186; 4,607,156; 4,673,805; 4,736,095; 4,758,717; 4,816,660; 4,845,350; 4,896,026; 4,923,281; 4,933,538; 4,960,985; 4,992,717; 5,015,833; 5,017,765; 5,059,779; 5,081,342; 5,117,098; 5,124,539; 5,130,520; 5,132,525; 5,140,144; 5,149,950; 5,180,904; 5,200,599; 5,216,232; 5,229,591; 5,247,162; 5,250,790; 5,250,791; 5,250,792; 5,260,553; 5,262,628; 5,280,162; 5,280,164; 5,304,788; 5,321,246; 5,324,924; 5,396,053; 5,396,055; 5,408,081; 5,410,139; 5,436,440; 5,449,891; 5,468,949; 5,479,000; 5,532,469; 5,545,889; 5,557,093; 5,627,359; 5,637,852; 5,777,315; 5,789,731

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NOTES

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