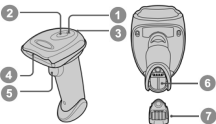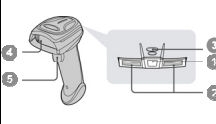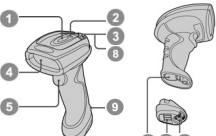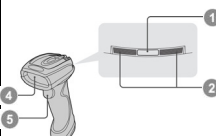# IDM Bluetooth
# Hand-held Scanners
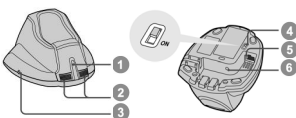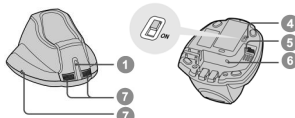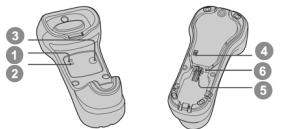
**SICK**

Sensor Intelligence.

# 1. How to use this guide

This document provides a quick reference for installation and operation of IDM Bluetooth scanners. A complete user guide can be found on *www.sick.com*. The document contains a collection of codes that allow you to configure the IDM. Factory default values are marked with a ◆ symbol. To configure the device scan one or in some cases a sequence of codes. In some cases you also need to scan option codes contained in the back of this quick start guide.

*Eine deutsche Version der Kurzanleitung steht auf www.sick.com zur Verfügung – for german version of quick start, check www.sick.com.*

# 2. Getting familiar with your IDM BT scanner

## IDM Bluetooth Scanner



| | |
|---|---|
| 1 | Link Indicator |
| 2 | Status Indicator |
| 3 | Beeper |
| 4 | Scan Window |
| 5 | Trigger |
| 6 | Battery Cavity |
| 7 | End Cap |
| 8 | Tether Plate |
| 9 | Lanyard catch |
| 10 | Retaining screw |

IDM141 Series
IDM241 Series
IDM161 Series
IDM261 Series

## IDM Bluetooth Cradles



IDMx41 Smart Cradle
IDMx4x Charging Cradle
IDMx61 Smart Cradle
IDMx6x Charging Cradle

| | | | |
|---|---|---|---|
| 1 | Power Indicator | 5 | Host interface port |
| 2 | Status Indicators | 6 | DC Power Jack |
| 3 | Paging/ reset button | 7 | Reserved |
| 4 | USB Bus Power Switch | | |

# 3. Preparations before Using

## Battery installation



1 Ensure the battery contacts of the battery pack are facing the charging contacts inside the battery cavity.

2 Slide the battery pack into the battery cavity until hearing a click sound before locking it with the end cap. The scanner will give 4 beeps when the battery pack is installed properly if the battery pack still has power.

3 Secure the end cap with the screw provided (IDMx4x series) or via turning the integrated thumb wheel (IDMx6x series)

You can use the overlapping battery label to pull out the battery if needed.
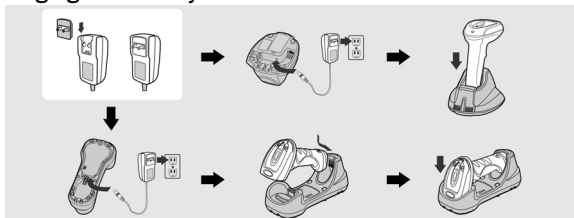
## Charging the Battery



1 Choose an appropriate plug and slot it into the power adapter cavity until it is locked. Then plug the AC power plug into the appropriate AC wall socket.

2 Plug the DC power cord of the power supply unit into the DC power jack of the cradle. The smart cradle emits the power-on beeps and the power indicator gives one blue blink. If you use the charging cradle, the power indicator turns steady blue.

3 Place the scanner on the cradle. The status indicator of scanner will turn steady red if the battery is not fully charged. When the battery is fully charged, the status indicator of scanner turns steady green.

Please charge the new battery pack for 8 hours prior to the first use.

## Use USB Bus Power



1 If USB 3.0 is available, both battery charging and regular operation can be supported by the USB Bus Power without using external power supply.

2 If you want to use this feature, please slide the USB bus power switch to "ON". Then connect the cradle and host device via USB cable. For USB 2.0 the external power supply unit is needed.

Ensure that the cable is pushed all the way into the RJ inlet of the base cradle!

Correct:

Not correct:

# 4. Radio Link Mode

The IDM Bluetooth scanners provide several radio link modes to communicate with the host device. When the Bluetooth-enabled host device is not available, the scanner can work with the smart cradle in PAIR mode (peer-to-peer connection) or PICO mode (multiple connections) to provide a plug-and-play cordless migration of your existing non-Bluetooth devices. Moreover, you are able to use the scanner to work with Bluetooth-enabled host devices via SPP mode or HID mode.

When the radio link is disconnected, the scanner is capable of reconnecting the radio link automatically when it returns to the communication coverage. Please note that this feature is not available in SPP slave mode. If you would like to change the radio link mode, please scan the "Uninstall" command to reset the scanner to the uninstall state.

## PAIR Mode - 1 scanner connected to 1 cradle

If the Bluetooth device is not available in your existing system, PAIR mode is the simplest plug-and-play solution. In this mode, a smart cradle can only work with one scanner. The smart cradle not only provides the Bluetooth radio link with the scanner, but also offers the legacy cabled interfaces to the host device, including USB HID, USB COM, PS/2(DOS/V) Keyboard Wedge and RS-232 serial.

## PICO Mode – up to 7 scanners connected to 1 cradle

For the requirement of multiple connections, up to 7 scanners can be connected to one smart cradle concurrently. If you would like to un-pair all scanners paired with the smart cradle, please press and hold the paging/reset button of the smart cradle for more than 5 seconds. If you just want to un-pair part of the paired scanners, please take those paired scanners and scan the "Uninstall" command.

## HID Mode - HID communication directly to Bluetooth host without cradle

Through the HID service, the scanner can work as a Bluetooth Keyboard. In this mode, the scanner will be discoverable by the radio connection request issued by the remote host device. In some cases, you may be requested to enter the Passkey (PIN) to establish the Bluetooth connection for security purpose.

## SPP Master/Slave Mode - Serial communication directly to Bluetooth host without cradle

Through the standard SPP service, the scanner can work as a Bluetooth Serial Device. In SPP Master Mode, the scanner initiates the radio connection request to the remote slave device. In SPP slave mode, the scanner will be discoverable by the radio connection request issued by the remote host device.

# 4.1 Using IDM BT in PAIR Mode

**1** Ensure the battery is fully charged. You may refer to the section of Preparations before Using for details.

**2** Choose the interface cable, plug it into the smart cradle and connect it to the host device.



USB    PS/2    RS-232
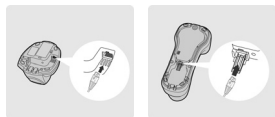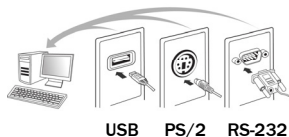
**3** Turn on the power of your host device.

**4** Note that if the scanner is shipped together with a smart cradle, they are pre-paired already. You will see the link indicator of the scanner gives 1 blue blink per 2.5 seconds and the power indicator of the smart cradle turns steady blue. If the scanner and smart cradle just give alternative red and green blinks ("Uninstall" state), please follow step 5 to establish the connection between scanner and smart cradle.

**5** Scan the "PAIR mode" command. The status indicator of the scanner will turn steady red immediately.



Uninstall



PAIR Mode

Place the scanner into the smart cradle. You will hear one short beep to indicate the activation of the pairing process. The scanner will emit continuous short clicks and the link indicator of the scanner will flash blue quickly during the pairing process. When you hear 4 beeps in ascending tone, the pairing process is completed. You will see that the link indicator of the scanner gives 1 blue blink per 2.5 seconds and the power indicator of the smart cradle turns steady blue.

If the scanner pairing process failed or if the scanner is not placed into the smart cradle within 20 seconds, you will hear 2 "Di-do Di-do" beeps to warn the failure of pairing. The scanner will return to the uninstall state automatically.

**6** Scan the corresponding host interface quick set command to complete the installation.

📝 The default host interface of smart cradle is USB HID. If you want to set the interface to USB COM, you have to install the USB virtual COM software driver (available on www.sick.com) into your host device before using the scanner. All host interface quick set codes can be found on page 12 of this guide.

# 4.2 Using IDM BT in PICO Mode

**1** Ensure the battery is fully charged. Choose the interface cable, plug it into the smart cradle and connect it to the host device.



USB    PS/2    RS-232

**2** Turn on the power of your host device.

**3** Ensure the status indicators of the smart cradle give alternative red and green blinks ("Uninstall" state). If the smart cradle is paired with other scanners press and hold the paging/ rest button for more than 5 seconds to un-pair all paired scanners. This way the smart cradle will return to uninstall state automatically.

**4** Prepare the scanners you would like to pair with the smart cradle. Ensure that the status indicator of each scanner gives alternative red and green blinks ("Uninstall state"). If the scanner is no in the "Uninstall state", scan the "Uninstall" command to un-pair the scanner, then scan the "PICO Mode" command. The status indicator of the scanner will turn steady red.



Uninstall



PICO Mode

Place the scanner into the smart cradle. You will hear one short beep to indicate the activation of the pairing process. The scanner will emit continuous short clicks and the link indicator of the scanner will flash blue quickly during the pairing process. When you hear 4 beeps in ascending tone, the pairing process is completed. You will see that the link indicator of the scanner gives 1 blue blink per 2.5 seconds. The power indicator of the smart cradle turns steady blue and the status indicators turn steady green.

If the scanner pairing process failed or if the scanner is not placed into the smart cradle within 20 seconds, you will hear 2 "Di-do Di-do" beeps to warn the failure of pairing. The scanner will return to the uninstall state automatically.

**5** Scan the corresponding host interface quick set command to complete the installation. Repeat the same procedure to pair other scanners (up to seven scanners in total) with the smart cradle.

📝 **For your convenience, the smart cradle automatically assigns ID numbers to each scanner. Once you completed all pairing processes, please scan the "System Information" code to check the assigned ID number of each scanner.**

# 4.3 Using IDM BT in HID Mode

**1** Ensure the battery is fully charged. Power on the scanner within radio range and ensure the status indicator of the scanner gives alternating red and green blinks ("Uninstall" state). If the scanner is not in uninstall state, please scan the "Uninstall" command first.


Uninstall

If your remote host is equipped with the latest Bluetooth drivers or if it is an iOS or Android device we recommend to use "HID Mode" for quick pairing. If necessary you may use "HID Mode with Passkey" to establish a more secure connection. If you experience problems in "HID Mode" try "HID Legacy Mode" instead.


HID Mode


HID Legacy Mode


HID Mode with Passkey

Once you scan one of the above commands the link indicator of the scanner will give 3 blue blinks per 2 seconds during the searching process. You have to execute the Bluetooth Discovery procedure to find available Bluetooth devices. Select "IDMxxx".

**2** If you use "HID Mode", please go to step 5.

**3** If you use "HID Mode with Passkey" you will be requested to enter the passkey (PIN) on the remote host. Please enter the passkey (PIN) accordingly by scanning the "Option Codes" (page 13) and then scan "FIN (Finish)" to end the passkey entry. Continue with step 5.

**4** If you scan "HID Legacy Mode" the passkey (PIN) may be requested. Please enter "00000000" (default setting). You will see "Keyboard on IDMxxx". Double-click this HID service to establish the connection between the scanner and the remote host device.

**5** The scanner will emit 4 beeps in ascending tone to indicate the radio is connected. At the same time, the link indicator of the scanner will give 1 blue blink per 2.5 seconds to indicate the scanner is in radio-connected state.
Please note that if the scanner is not connected to the host device within 1 minute after scanning the above command, the scanner will go to sleep automatically. You can just press the trigger to wake up the scanner to continue the installation.

✍ The above procedures are based on popular Windows environment. However, the installation procedure may vary depending on different remote host devices, operating systems and the Bluetooth drivers.

## 4.4 Using IDM BT in SPP Mode

### Establish SPP Master Connection

1 Ensure the battery is fully charged. Open the folder "Hardware" located in Bluetooth Advanced Setting of the remote host device to check its device MAC address. Then prepare a 12-character Code 128 barcode of the remote host device MAC address, or follow the step 4 to input MAC address by scanning 12 option codes.

2 Ensure a virtual COM port is available in your remote host for connecting the scanner. If not, please open the folder "Local Services" located in Bluetooth Advanced Setting. Click the "Add Serial Services" to add one more Bluetooth COM port.

3 Power on the scanner within radio coverage and ensure the status indicator of the scanner gives alternative red and green blinks ("Uninstall" state). If the scanner is not in uninstall state, please scan the "Uninstall" command first, then scan the "SPP Master Mode" command. The status indicator of the scanner will turn steady red immediately.


Uninstall


SPP Master Mode

4 Scan a 12-character MAC address barcode, or scan 12 option codes and "FIN" command to confirm your inputs. The scanner will emit continuous short clicks and the link indicator of the scanner will flash blue quickly during the radio connecting process. If the PIN Code or Passkey is requested, please enter "00000000" (default setting).

5 The scanner will emit 4 beeps in ascending tone to indicate the radio is connected. At the same time, the link indicator of the scanner will give 1 blue blink per 2.5 seconds to indicate the scanner is in radio-connected state.

Please note that if the scanner failed to connect to the host device within 30 seconds, the link indicator will give 3 blue blinks per 2 seconds. But the scanner is still continuing to discover the host device for another 30 seconds before go to sleep. In the interim, you still can scan the "Uninstall" command to revert the scanner to uninstall state. If the scanner is already in sleep mode, you just need to press the trigger to wake up the scanner to continue the installation.

✍ The above procedures are based on popular Windows environment. However, the installation procedure may vary depending on different remote host devices, operating systems and the Bluetooth drivers.

## Establish SPP Slave Connection

**1** Ensure the battery is fully charged and a virtual COM port is available in your remote host for connecting the scanner. If not, please open the folder "Client Applications" located in Bluetooth Advanced Setting. Click the "Add COM Port" to add one more Bluetooth COM port.

**2** Power on the scanner within radio coverage and ensure the status indicator of scanner gives alternative red and green blinks (in "Uninstall" state). If the scanner is not in uninstall state, please scan the "Uninstall" command first. Then scan the "SPP Slave Mode" command, and the link indicator of scanner will give 3 blue blinks per 2 seconds during searching process.


Uninstall


SPP Slave Mode

**3** Execute the Bluetooth Discovery procedure to find all available Bluetooth device list in your remote host. You will see "IDMxxxx" is shown in the list if the scanner is successfully discovered.

**4** Double click the "IDMxxx" on the discovered Bluetooth devices. If the PIN Code or Passkey is requested for security connection, please enter "00000000" (default setting). You will see "Serial Port on IDMxxx". Please double click this SPP service to establish the connection between scanner and remote host device.

**5** The scanner will emit 4 beeps in ascending tone to indicate the radio is connected. At the same time, the link indicator of the scanner will give 1 blue blink per 2.5 seconds to indicate the scanner is in radio-connected state.

Please note that if the scanner is not connected to the host device within 1 minute after scanning the "SPP Slave Mode" command, the scanner will go to sleep mode automatically. You can just press the trigger to wake up the scanner to continue the installation.

*The above procedures are based on popular Windows environment. However, the installation procedure may vary depending on different remote host devices, operating systems and the Bluetooth drivers.*

## 5. Out-of-range Scanning

When the radio connection is established between scanner and remote host device, the scanner will transmit each scanned code content right after scanning the barcode. However, the scanner is preset not to scan any barcode data when it loses the radio connection with the remote host device.

If you enable the Out-of-Range scanning function, the scanner can continue scanning barcode data while it is out of radio coverage. All scanned data will be temporarily stored in the memory buffer until radio link resumed.


**Enable Out-of-range Scanning**


**Disable Out-of-range Scanning** ◆

If the scanner is out of radio coverage, you will hear 4 beeps in descending tone to indicate the loss of radio connection. The link indicator of the scanner will give 3 blue blinks per 2 seconds. Once the scanner is back to radio coverage, you will hear 4 beeps in ascending tone to indicate the radio connection is rebuilt and the scanner will give 1 blue blink per 2.5 seconds. At the same time, all stored scanned data will be transmitted automatically right after the radio link is resumed.

## 6. Presentation Scanning

The Presentation Scanning is designed for hand-free applications. If the "Presentation Scanning Auto-sense" function is enabled, the scanner is capable of automatically switching to presentation mode as soon as you place the scanner onto the Presentation Stand or into Smart Cradle. (Presentation scanning on cradle is only available for IDMx41 series.)


**Enable Auto-sense**


**Disable Auto-sense** ◆

## 7. Sleep Mode & Power Off

The scanner is preset to enter "Sleep Mode" if the scanner is not used after time-out duration. When the scanner is under sleep mode, it is preset to enter "Power Off" automatically if it will not be waked up after time-out duration.

If you want your scanner to enter "Sleep Mode" or "Power Off" immediately, please scan the "Sleep Mode" or "Power Off" command. The scanner can be waked up by pressing the trigger button.


**Sleep Mode**


**Power Off**

# 8. Batch Scanning (Inventory Mode)

With the help of the Batch Scanning function, the scanner is capable of storing the barcode data of up to 100,000 EAN-13 barcodes. This functionality is often used for inventory applications.

Once you scan the "Enter Batch Scanning" command to activate this function, all scanned barcode data will be stored into the memory storage and the status indicator of scanner will give green blink at regular interval during batch scanning. You can scan and store the barcode data till the memory storage is full. If the storage is full, you will hear 2 long beeps and the status indicator will give 2 red blinks to indicate out of storage. To terminate the batch scanning, please scan the "Exit Batch Scanning" command.


Enter Batch Scanning


Exit Batch Scanning

## How to Transmit Stored Data

The scanner is preset to transmit all the stored data by scanning the "Transmit Stored Data" command. During the transmission, the scanner will emit continuous short clicks and the link indicator will blink blue. Then the scanner will give two short beeps after data transmission is completed.


Transmit Stored Data

You are still able to set the scanner to transmit the stored data by placing the scanner onto the cradle as well.

 Transmit Stored Data by
Scanning Barcode Command ◆

 Transmit Stored Data by
Placing Scanner onto Cradle

 Transmit Stored Data by
Scanning Barcode or Placing Scanner onto Cradle

If a wrong barcode was scanned, the "Delete Last Scanned Data'' command is helpful to recover mistakes. By scanning the ''Delete Last Scanned Data'' command, the last stored data can be deleted.


Delete Last Scanned Data

✍ **For using the quantity feature and changing the output format please refer to the complete user's manual available on www.mysick.com.**

# 9. DPM functionality

If you own a DPM model (IDMxxx-x**2**xx) you can enable or disable the DPM code reading functionality by scanning one of the following barcode commands.


Enable DPM functionality ◆


Disable DPM functionality

In order to verify if the DPM functionality is enabled, please scan the following barcode. If you can read this barcode, the DPM functionality is enabled.



If you scan „factory default" the DPM functionality is not disabled.
**However please note that if you take out the battery of the scanner, the DPM functionality will be disabled automatically.**

**If you disable the DPM functionality the performance of reading printed 1D and 2D codes will be improved.**

# 10. Link Mode Quick Set

**PAIR Mode**

**UNINSTALL**

**PICO Mode**

**SPP Master Mode**

**HID Mode**

**SPP Slave Mode**

**HID Legacy Mode**

**HID Mode with Passkey**

# 11. Host Interface Quick Set

(Working with Smart Cradle only)

**RS232 Serial**

**USB HID Standard Mode ◆**

**PS/2 (DOS/V) Keyboard Replacement**

**PS/2 (DOS/V) KBW Standard Mode**

**USB HID Turbo Mode**

**USB Com Port Emulation**

**PS/2 (DOS/V) KBW Turbo Mode**

# 12. Keyboard Layout Quick Set

**USA ◆**

**United Kingdom-UK**

**Latin America**

**France**

**Canadian French**

**Nertherlands**

**Germany**

**Spain**

**Japan**

# 13. System Commands

Paging

System Information

Master Default

Sleep

IDM Set Up Link

Save Configuration

Power Off

Factory Default

Clone

**Paging**: helps to locate the paired smart cradle or scanner. If you would like to page the paired smart cradle, you can scan the "Paging" command. If you would like to page the paired scanner, you can press the paging/rest button of the smart cradle no longer than 5 seconds.

# 14. Operation Mode Quick Set

Trigger Mode ◆

Presentation Mode

# 15. Option Codes

0

8

1

4

9

C

2

5

A

D

3

6

B

E

7

F

FIN (Finish)

END (Exit)

# 16. Indications

## Scanner Indications

| Description | Link indicator | Beeper |
|---|---|---|
| Radio connection | 1 blue blink per 2.5 sec. | Off |
| Radio disconnection | 3 blue blinks per 2 sec. | Off |
| During connection | Quick blue blinks | Short clicks |
| Radio connection built | 1 blue blink per 2.5 sec. | 4 beeps in ascending tone |
| Radio connection lost | 3 blue blinks per 2 sec. | 4 beeps in descending |
| Data Transmission | Quick blue blink | Short clicks |
| **Description** | **Status Indicator** | **Beeper** |
| Under charging (on cradle) | Steady red | Off |
| Fully charged (on cradle) | Steady green | Off |
| Under batch scanning | 1 green blink per 2.5 sec. | Off |
| Pair failure | Steady red | 2 Di-do Di-do beeps |
| Out of memory | 2 red blinks | 2 long beeps |
| Battery power low | 1 red blink at regular interval | 1 beep at regular interval |
| Battery power extremely low | 8 red blinks | 8 beeps |
| Good read | 1 green blink | 1 good read beep |
| Under Configuration | Steady red | Off |
| Uninstall state | Alternative red and green | Off |
| Upgrade state | Steady red | Short click |
| Time out warning | Off | 3 long beeps |
| Paged by smart cradle | Off | 6 page beeps |
| Sleep state / Battery no | Off | Off |
| Power Off | Off | Off |

## IDM Smart Cradle Indications



1 Power Indicator

2 Status Indicator(s)
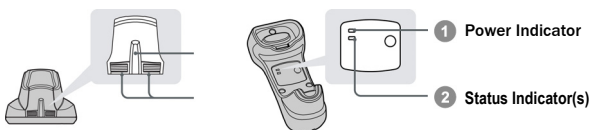
| Description | | Indicators | | Beeper |
|---|---|---|---|---|
| | | Power | Status | |
| Power on | | 1 blue blink | Off | Power on beeps |
| Smart Cradle Upgrade State | | Off | Steady red | Short clicks |
| Uninstall state | | Off | Alternative red-green blinks | Off |
| PICO Mode | Radio Connected | Steady blue | Steady Green | Off |
| | Radio Disconnected | Off | Steady red | Off |
| PAIR Mode | Radio Connected | Steady blue | Off | Off |
| | Radio Disconnected | Off | Steady red | Off |
| Smart cradle paged | PICO Mode | Steady blue | Steady green | 6 page beeps |
| | PAIR Mode | Steady blue | Off | 6 page beeps |

## IDM Charging Cradle Indication

| Description | Power Indicator | Beeper |
|---|---|---|
| Power on | Steady blue | Off |

**Australia**
Phone  +61 3 9457 0600
         1800 33 48 02 – tollfree
**Belgium/Luxembourg**
Phone  +32 (0)2 466 55 66
**Brasil**
Phone  +55 11 3215-4900
**Canada**
Phone  +1 905 771 14 44
**Česká republika**
Phone  +420 2 57 91 18 50
**China**
Phone  +86 4000 121 000
         +852-2153 6300
**Danmark**
Phone  +45 45 82 64 00
**Deutschland**
Phone  +49 211 5301-301
**España**
Phone  +34 93 480 31 00
**France**
Phone  +33 1 64 62 35 00
**Great Britain**
Phone  +44 (0)1727 831121
**India**
Phone  +91–22–4033 8333
**Israel**
Phone  +972-4-6801000
**Italia**
Phone  +39 02 27 43 41
**Japan**
Phone  +81 (0)3 5309 2112
**Magyarország**
Phone  +36 1 371 2680
**Nederland**
Phone  +31 (0)30 229 25 44
**Norge**
Phone  +47 67 81 50 00

**Österreich**
Phone  +43 (0)22 36 62 28 8-0
**Polska**
Phone  +48 22 837 40 50
**România**
Phone  +40 356 171 120
**Russia**
Phone  +7-495-775-05-30
**Schweiz**
Phone  +41 41 619 29 39
**Singapore**
Phone  +65 6744 3732
**Slovenija**
Phone  +386 (0)1-47 69 990
**South Africa**
Phone  +27 11 472 3733
**South Korea**
Phone  +82 2 786 6321/4
**Suomi**
Phone  +358-9-25 15 800
**Sverige**
Phone  +46 10 110 10 00
**Taiwan**
Phone  +886-2-2375-6288
**Türkiye**
Phone  +90 216 528 50 00
**United Arab Emirates**
Phone  +971 (0) 4 8865 878
**USA/México**
Phone  +1(952) 941-6780
         1 800-325-7425 – tollfree

Detailed addresses and additional
representatives and agencies
at **www.sick.com**

# SICK
Sensor Intelligence.

SICK AG  |  Waldkirch  |  Germany  |  www.sick.com