

**Introduction**

- The L-22X is a hand-held 2D scanner that can read 1D codes, 2D codes and OCR.
- Read this quick start guide carefully before installing and/or using this product.
- Keep this quick start guide for future reference and store in a safe place.

**Notice**

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**Caution and Warning** (Refer to the specification manual and instruction guide for details)

1. LED light
  - Do not stare into the LED light from the scan window. It may damage your eyes.
2. Handling
  - Do not disassemble this product.
  - Do not put heavy items on the product or apply any shock to it.
  - Do not use this product near combustible materials.
  - Do not swing the product around by the cable. It may cause injury or damage to the device.
  - Keep the product out of the reach of small children.
  - Do not insert objects or substances into this product.
  - Do not store this product in dusty environments and in extremely high humidity.
  - Do not use this product near water or other liquids.
  - If perchance condensation formed on the product, abstain from the use of it until moisture has evaporated to prevent malfunctions.
  - Avoid static electricity and do not put the product near a radio or a TV. Excessive static electricity may cause malfunctions.
  - Do not use or store this product in dusty and/or humid environments, nor in extremely cold or hot places. Also avoid exposure to direct sunlight for long periods of time.
  - When cleaning this product, rub gently with either a soft dry cloth or a damp cloth with mild detergent.

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**What's in the Box**

Confirm that you have the following items before getting started. Please contact your dealer if items are damaged or missing.

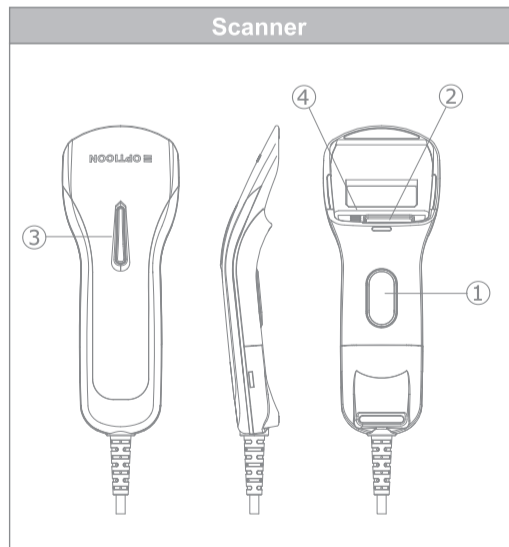
**USB-HID Keyboard / USB-COM Interface**

No.	Item	Model	Function
1	Scanner	L-22X	Hand-held 2D imager scanner
2	Stand (Option)	STD-22X	Auto trigger stand
3	Quick Start Guide	-	Provides brief instructions on how to use and configure the L- 22X

**RS-232C Interface**

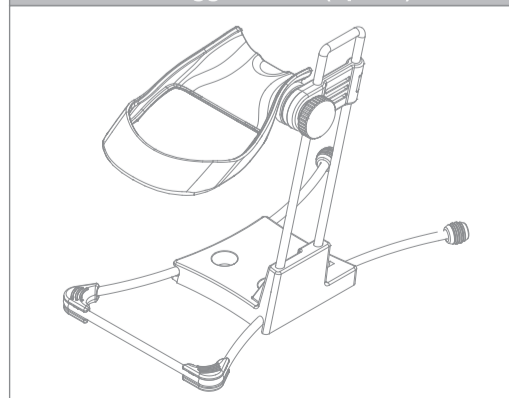
No.	Item	Model	Function
1	Scanner	L-22X	Hand-held 2D imager scanner
2	Stand (Option)	STD-22X	Auto trigger stand
3	RS-232C AC Adapter	-	AC adapter with interchangeable plugs
4	Quick Start Guide	-	Provides brief instructions on how to use and configure the L-22X

**Detailed View**



No.	Name	Description
①	Trigger Key	Press this key to start reading barcodes
②	Scan Window	Light path of the imager, LED illumination and aiming. Ensure that it is free from dust and dirt before scanning.
③	Status LED	This LED shows the operating status of the scanner.
④	Buzzer Holes	Sound from the built-in buzzer comes out through these holes. The sound varies depending on the settings. Do not cover these holes to clearly hear the sound.

**Auto trigger Stand (option)**



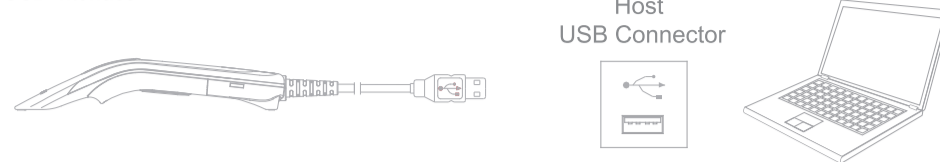
No.	Name	Description
⑤	Stand	This stand allows the user to operate the scanner hands - free. When the scanner is placed into this stand, it will switch to 'auto trigger' mode so that it will automatically detect and scan barcodes that are held within the field of view. While placed in the stand, the status LED on the scanner will light up dark blue to indicate it is in auto trigger mode and ready to scan.

**Connection and Operation Check**

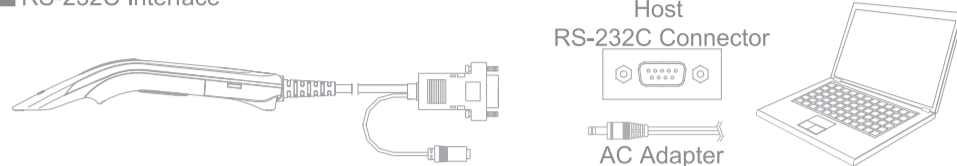
**Connect to the Host**

Connect the interface cable to the appropriate connector on the host side as shown below. When connected, the startup buzzer will sound and the status LED at the top of the scanner will light up to indicate that it is now ready to scan.

**USB Interface**

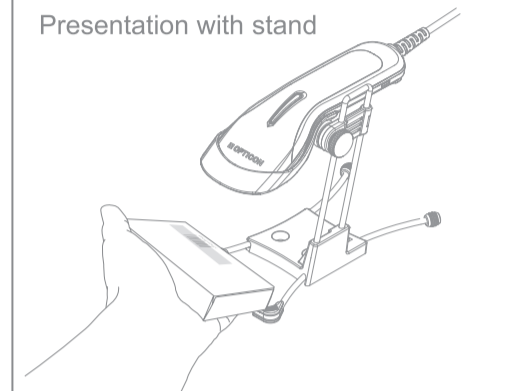


**RS-232C Interface**



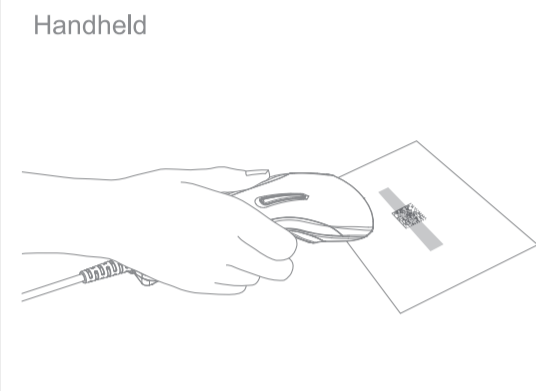
**Basic Operation and Cable Exchange**

**Presentation with stand**



Present a barcode in front of the scanner (within approx. 40 mm) to start reading automatically. If the scanner can not read the barcode smoothly, move and adjust the position of the code

**Handheld**



Press the trigger key to start scanning. The scanner will then enable its white illumination LED and show a green aiming bar. This bar helps you to aim the scanner accurately at the target barcode.

**How to exchange the cable**

**STEP1**

Push the locks inward to release the cable cover ①

**STEP2**

Slide the cable cover down ② and lift the cover up ③.

**STEP3**

While pushing location A to unlock the connector, pull the connector out in the direction of B\*.

**STEP4**

Put the new cable in and make a loop in the cable before the cover is closed\*

**Warning**  
Make sure the locks are released before opening. If you open it forcibly the locks may break.

\*While removing the cable, do not pull on the wires. Pull on the connector only.

**Basic Product Specifications**

Interface		Physical																											
Interface	USB ( HID/COM ), RS-232C	Weight	Approx. 77g (Excluding cable)																										
Input voltage	4.5~5.5V	Dimensions	165.3(D) ×62.2(W) ×31.4(H) mm																										
Cable	2.0m straight standard (removable)	<b>Regulatory &amp; Safety</b>																											
Connector	USB : USB-A Plug RS-232C : D-sub 9pin female	RoHS	RoHS compliant																										
Enclosed item	AC adapter ( For RS-232C )	LED Safety	IEC 62471:2006 Exempt risk group																										
<b>Optical Specifications</b>		EMI/RFI	VCCI/EN55032/FCC Class-B (For residential, commercial and light-industry environments)																										
Scan method	CMOS area sensor (Maximum 100fps)	<b>Depth of Field</b>																											
Light source	Warm white LED																												
Aiming	Single line green LED																												
Operating indicators	Upper case single line 3-color LED, Buzzer, Vibration(option)	[ unit: mm ]																											
Image format	Windows Bitmap, JPEG	<table border="1"> <thead> <tr> <th>Code</th> <th>Resolution (mm)</th> <th>Near (mm)</th> <th>Far (mm)</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1D</td> <td>Code 39</td> <td>0.127</td> <td>0</td> <td>73</td> </tr> <tr> <td>Code 39</td> <td>0.254</td> <td>0</td> <td>184</td> </tr> <tr> <td>UPC/EAN</td> <td>0.33</td> <td>0</td> <td>238</td> </tr> <tr> <td rowspan="2">2D</td> <td>Data Matrix</td> <td>0.169</td> <td>11</td> <td>65</td> </tr> <tr> <td>QR Code</td> <td>0.381</td> <td>0</td> <td>197</td> </tr> </tbody> </table>		Code	Resolution (mm)	Near (mm)	Far (mm)	1D	Code 39	0.127	0	73	Code 39	0.254	0	184	UPC/EAN	0.33	0	238	2D	Data Matrix	0.169	11	65	QR Code	0.381	0	197
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	QR Code	0.381	0	197																									
Supported symbologies (1D barcode)	JAN-13/8, EAN-13/8, EAN Add-on, UPC-A/E, UPC Add-on, Code 39, Tri-Optic, Code 128, Codabar, Industrial 2 of 5, Interleaved 2 of 5, S-Code, Code 93, IATA, MSI/Plessey, UK/Plessey, Telepen, Code 11, Matrix 2 of 5, GS1-128, GS1 DataBar, Postal Code	*The depth of field values mentioned are the typical values measured at an ambient temperature of 25°C.																											
Supported symbologies (2D barcode)	PDF417, MicroPDF417, GS1 Composite, Codablock F, QR Code, Micro QR Code, Data Matrix ( ECC 200 ), MaxiCode, Aztec Code, Chinese-sensible Code	*The PCS value of test charts is 0.9 or higher.																											
Supported symbologies (OCR)	Machine Readable Travel Documents, ISBN(OCR-B)																												
Minimum resolution	1D barcode : 0.1mm 2D code : 0.169mm																												
PCS	0.2 or more																												
Reading angle	Pitch/Skew: ±65° Tilt: 360°																												
Motion Tolerance	2.54m/s (0.33mm EAN/UPC @100mm )																												
<b>Durability</b>																													
Operation Temperature/Humidity	-5~50°C/ 5~90%RH ( no condensation, no frost )																												
Storage Temperature/Humidity	-30~60°C/5~90%RH ( no condensation, no frost )																												
Ambient light immunity	Sunlight : 100,000 lx or less Incandescent light : 10,000 lx or less 1.8m (concrete floor)																												
Drop test	Drop the scanner 15 times (5 faces x 3)																												
Protection rate	IP42 compliance																												

\*This document was created in October 2017.

\*The contents of this document are subject to change without prior notice due to technical improvements.

## Default setting

### • USB-HID Keyboard Interface

USB-HID keyboard interface default  
Make sure the USB cable is connected to the scanner when using the USB-HID keyboard interface.

Change interface to USB-HID and reset to factory default



[Keyboard Language]

Basic setting for USB-HID Keyboard Interface

	USA		German
UK		Danish	
	Finnish		Norwegian
French		French (Mac)	
	Italian		Russian Cyrillic
Russian English		Hungarian	
	Portuguese		Swiss French
Swiss German		Brazilian	
	Chinese Simplified		Chinese Traditional
Spanish		Czech	
	Belgian		Korea
Swedish		Turkish	
	Dutch		Japanese

[Adjustment of the output data rate]

The transmission rate of the output data can be changed. When the data transmission rate is too fast, host system may not be able to receive all of the character.

	1ms		2ms
4ms		10ms	

[Suffix setting]

Set whether or not to add an "Enter Key" to the end of the output data.

	None		Enter
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### • USB-COM Interface

USB-COM interface default  
Make sure the USB cable is connected to the scanner when using the USB-COM interface.

Change interface to USB-COM and reset to factory default



\* USB-COM driver must be installed for the use of USB-COM.

### • RS-232C Interface

RS-232C interface default  
Read the below menu code with the USB cable still connected and then change to an RS-232C cable. If there only is an RS-232C cable, then keep the trigger switch pressed while powering up and hold it pressed for at least 10 seconds. Then the menu code can be read. Make sure the RS-232C cable with D-SUB connector is connected to the scanner when using the RS-232C interface.

Change interface to RS-232C and reset to factory default



## Basic Operation Settings

### • Read Options

Central reading  
Only read a code at the center of green aiming bar.

	Enable		Disable
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[Trigger repeat]

When the trigger key is pressed, the green aiming bar is shown but the scanner does not yet decode. As soon as the trigger key is released, the code will be decoded. This helps the user to aim a target barcode in situations where multiple barcodes are printed close to each other.

	Enable		Disable
--	--------	--	---------

### • Readable Code Options

Positive and Negative 1D barcode  
Positive(black on white) and Negative(White on Black) barcode can be read.

	Positive only		Positive and Negative
Negative only			

\* Enabling both positive and negative barcodes increases the probability on misreads.  
\* Both positive and negative QR Code and Data Matrix can be read by default.

ICAO Machine Readable Travel Documents OCR-B

5 kinds of ICAO OCR such as passport can be read.

	Enable		Disable
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\* Please contact OPTICON in case other types of OCR-B should be read.  
\* Enabling several OCR-B types plus 1D and 2D barcodes may reduce scanning performance.



## Setting for the Indicators

Buzzer

[Buzzer Loudness]

	Minimum		Loud
Medium		Maximum	

[Buzzer Duration]

	50ms		75ms
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[Buzzer Tone]

Set the good Read buzzer tone.

	High		Low
Middle		2-Tone High to Low	

[Enable/Disable Startup buzzer]

Set whether to activate buzzer after the scanner is supplied with power.

	Enable		Disable
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Indicator LED

[Indicator LED Duration]

Set the Indicator LED duration.

	100ms		200ms
400ms		800ms	

[Auto trigger indicator color]

The color of the Indicator LED while the scanner is placed in the stand.

	Blue		Green
White		Off	

[Enable/Disable Startup Indicator LED]

Controls whether to activate the indicator LED after the scanner is supplied with power.

	Enable		Disable
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[Enable/Disable good read aiming]

When reading is successful, the green aiming LED lights twice toward the target code.

	Enable		Disable
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\* Gray frame is default.

## Select the Opticon office

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