

QUICK START

# IDM1xx Hand-held Scanner



Hand-held Line



# SICK

Sensor Intelligence.

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# Introduction

This document provides an easy reference for installing and operating IDM Scanners. A complete documentation for IDM Scanner is provided by the IDM User's Guide available on the Internet at <http://www.sick.com>

The document contains a collection of codes that allow you to configure the IDM hand held readers. 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. Depending on the parameter you also need to convert the values into hex. A hex/ascii table is included in this document. The programming procedure has to be ended by scanning the "FIN (finish) and/or "END" code.

Example one scan configuration:

Operation Mode-just scan the code corresponding to the operation mode required.

Example several codes configuration (without hex/ascii conversion):

Keyboard country-to configure french keyboard country scan "PROGRAMM" code to enter programming mode. Afterwards scan keyboard country code, and then scan option code "0" and option code "1". End this procedure by scanning the "END" code.

Example several codes configuration (with hex/ascii conversion):





Preamble-to configure a preamble of "PR" scan "PROGRAMM" code, then preamble code. Afterwards scan option code "5" and option code "0" (50hex is standing for character P) followed by "5" and "2" (52hex is standing for character R). Then finish by scanning the "FIN" code. To set back preamble to none scan "PROGRAMM", "Preamble", "FIN" and then "END" code.

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## Warranty

The currently released status of SICK General Terms of Delivery Factory Automation and Logistics Automation shall apply.

## Regulatory

	FCC part 15B
	EN55022, EN55024, EN61000-3-2, EN61000-3-3
	CNS13438
	Industry Canada ICES-003
<b>LED Eye Safety</b>	IEC60825-1
<b>RoHS</b>	IDM120 and IDM140 are conform to RoHS standards

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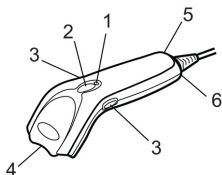
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# Getting familiar with your IDM Scanner

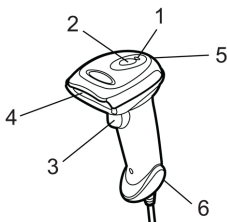
Thank you for choosing SICK IDM Hand Held Scanners. All IDM Hand Held Scanners deliver reliable performance for a broad range of market applications to unleash your productivity.

## IDM120 Series



1. Power Indicator
2. Status Indicator
3. Trigger
4. Scan Window
5. Beeper
6. Cable Release Hole

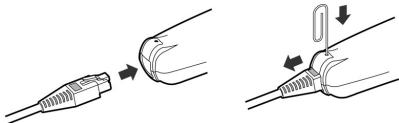
## IDM140 Series



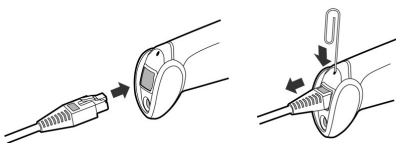
## Connecting/Disconnecting cable

IDM Hand Held Scanners provide PS/2(DOS/V) Keyboard Wedge, RS-232 Serial, USB interfaces capability. To disconnect the cable, please straighten one end of a paper clip, then insert it into the cable release hole and press in. After that, you can release the cable and pull the cable out easily.

### IDM120 Series



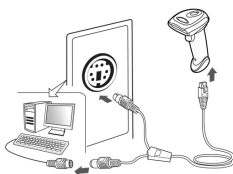
### IDM140 Series



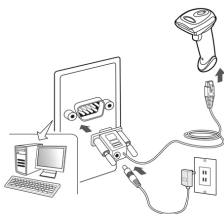
# Connecting host interface

IDM Hand Held Scanners have capability to connect different host devices by PS/2(DOS/V) Keyboard Wedge, RS-232 Serial and USB interfaces. Please choose one of the interface cables to connect your host device by referring to the illustrations below.

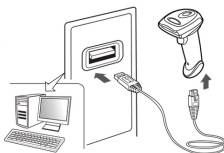
## PS/2(DOS/V) Keyboard Wedge



## RS232 Serial



## USB



## IDM120 and IDM140 cables:

2m, straight PS/2 cable	SICK order number 6036726
1,8m, straight RS232TTL cable	SICK order number 6036727
1,8m, straight USB cable	SICK order number 6036728
Power Supply (needed with RS232TTL cable)	SICK order number 6036722

# Keyboard function code table

No.	ANSI	ASCII	Key Function	No.	ANSI	ASCII	Key Function
00	NUL	00H	RESERVED	16	DLE	10H	F7
01	SOH	01H	CTRL (Left)	17	DC1	11H	F8
02	STX	02H	ALT (Left)	18	DC2	12H	F9
03	ETX	03H	SHIFT	19	DC3	13H	F10
04	EOT	04H	CAPS LOCK	20	DC4	14H	F11
05	ENQ	05H	NUM LOCK	21	NAK	15H	F12
06	ACK	06H	ESC	22	SYN	16H	INS (Insert) (Edit)
07	BEL	07H	F1	23	ETB	17H	DEL (Delete) (Edit)
08	BS	08H	BACK SPACE	24	CAN	18H	HOME (Edit)
09	HT	09H	TAB	25	EM	19H	END (Edit)
10	LF	0AH	F2	26	SUB	1AH	PAGE UP (Edit)
11	VT	0BH	F3	27	ESC	1BH	PAGE DOWN (Edit)
12	FF	0CH	F4	28	FS	1CH	UP (Edit)
13	CR	0DH	ENTER (CR)	29	GS	1DH	DOWN (Edit)
14	SO	0EH	F5	30	RS	1EH	LEFT (Edit)
15	SI	0FH	F6	31	US	1FH	RIGHT (Edit)

# HEX/ASCII reference table

L \ H	0	1	2	3	4	5	6	7
0	NUL	DLE	SPACE	0	@	P	`	p
1	SOH	DC1	!	1	A	Q	a	q
2	STX	DC2	"	2	B	R	b	r
3	ETX	DC3	#	3	C	S	c	s
4	EOT	DC4	\$	4	D	T	d	t
5	ENQ	NAK	%	5	E	U	e	u
6	ACK	SYN	&	6	F	V	f	v
7	BEL	ETB	'	7	G	W	g	w
8	BS	CAN	(	8	H	X	h	x
9	HT	EM	)	9	I	Y	i	y
A	LF	SUB	*	:	J	Z	j	z
B	VT	ESC	+	;	K	[	k	{
C	FF	FS	,	<	L	\	l	
D	CR	GS	-	=	M	]	m	}
E	SO	RS	.	>	N	^	n	~
F	SI	US	/	?	O	_	o	DEL

: High Byte of HEX Value   
  : Low Byte of HEX Value

## Host interface quick set



PS/2 (DOS/V) Keyboard Wedge



USB HID Interface



USB COM Interface (Driver needed)



Keyboard Replacement



RS232 Serial Interface

## Operation mode quick set



Low Power Mode



Presentation Mode



Flash Mode



Toggle Mode



Trigger Mode



Alternative Mode















Force Mode














Diagnostic Mode

# Keyboard interface control











Command	Parameter Selection		Option Code	
<b>Keyboard Layout</b> 	USA ◆ France Germany United Kingdom-UK Canadian French Spain Sweden/Finland Portugal Norway	Latin America Italy Netherlands Denmark Belgium Switzerland-Germany Iceland Japan Universal	00 01 02 03 04 05 06 07 08	09 10 11 12 13 14 15 16 99
<b>Record Suffix</b> 	None RETURN ◆ TAB SPACE	ENTER User define character	0 1 2 3	4 5
<b>Preamble</b> 	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
<b>Postamble</b> 	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
<b>Character Frame Control</b> 	None ◆ 1-99 msec.		FIN (2 digits)	
<b>Intermessage Delay</b> 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
<b>Intercharacter Delay</b> 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
<b>Interfunction Delay</b> 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
<b>Caps Lock Control</b> 	"Caps Lock Off" State ◆ "Caps Lock On" State Auto Detect		0 1 2	
<b>Function Key Emulation</b> 	Enable ASCII 00-31 as KB function code output ◆ Enable ASCII 00-31 as Ctrl-xx output		0 1	
<b>Key Pad Emulation</b> 	Disable key pad emulation ◆ Enable numeric output as key pad output		0 1	
<b>Upper/Lower Case</b> 	Normal case ◆ Inverse case Upper case Lower case		0 1 2 3	






# Serial interface control

Command	Parameter Selection		Option Code	
<b>STX/ETX Control</b> 	Disable STX/ETX transmission ◆ Enable STX/ETX transmission		0 1	
<b>Record Suffix</b> 	None CR ◆ LF CRLF	TAB SPACE User define character	0 1 2 3	4 5 6
<b>Preamble</b> 	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
<b>Postamble</b> 	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
<b>Handshaking Protocol</b> 	None ◆ RTS/CTS ACK/ NAK Xon/Xoff		0 1 2 3	
<b>Intermessage Delay</b> 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
<b>Intercharacter Delay</b> 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
<b>Interfunction Delay</b> 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
<b>Baud Rate (BPS)</b> 	38.4K 19.2K BPS 9600 BPS ◆ 4800 BPS	2400 BPS 1200 BPS 600 BPS 300 BPS	0 1 2 3	4 5 6 7
<b>Data Frame</b> 	8, None, 1 ◆ 8, Odd, 1 8, Even, 1 8, Space, 1 8, Mark, 1 8, None, 2 7, Odd, 1 7, Even, 1	7, Space, 1 7, Mark, 1 7, None, 2 7, Odd, 2 7, Even, 2 7, Space, 2 7, Mark, 2	0 1 2 3 4 5 6 7	8 9 A B C D E
<b>Time Out Control</b> 	None 200 msec. 500 msec. ◆	1 sec. 2 sec. 5 sec. User define value (sec.)	0 1 2	3 4 5 6

# Operation and output control

Command	Parameter Selection		Option Code	
<b>Operation Mode</b> 	Low power mode (Low power triggering) Trigger mode/Serial mode (External triggering) ◆ Presentation mode (Auto detection) Alternative mode (Periodic power off) Flash mode (Pulse driven reading) Force mode (Continued power on) Toggle mode (Repeat reading) Diagnostic mode (Test reading)		0 1 2 3 4 5 6 7	
<b>Inverse Reading</b> 	Disable ◆ Enable		0 1	
<b>Redundancy</b> 	None 1 time ◆ 2 times 3 times 4 times 5 times To prevent potential miss reading.		0 1 2 3 4 5	
<b>Power On Indicator</b> 	Disable Enable ◆		0 1	
<b>Vibrator</b> 	Disable Enable ◆ Optional Function		0 1	
<b>Symbology ID Transmission</b> 	Disable all symbology ID ◆ Enable prefix SICK symbology ID Enable suffix SICK symbology ID Enable both prefix and suffix SICK symbology ID Enable prefix AIM symbology ID Enable suffix AIM symbology ID Enable both prefix and suffix AIM symbology ID		0 1 2 3 4 5 6	
<b>Dollar Sign Output</b> 	Dollar sign output as "\$" ◆ Dollar sign output as "¥" Dollar sign output as "€"		0 1 2	
<b>Good Read Delay</b> 	None ◆ 200 msec. 500 msec.	1 sec. 1.5 sec. 2 sec. 3 sec.	0 1 2	3 4 5 6
<b>Reread Delay</b> 	Disable Immediate time out Short time out ◆ Medium time out	Long time out Force verification	0 1 2 3	4 5
<b>Auto Power Off Duration</b> 	Short ◆ Medium Long Extremely long		0 1 2 3	

# Operation and output control (continued)

Command	Parameter Selection	Option Code
<b>Good Read Duration</b> 	Short Medium ◆ Long Extremely long	0 1 2 3
<b>Hands Free Time-out</b> 	Short ◆ Medium Long Extremely long	0 1 2 3
<b>Buzzer Tone Adjust</b> 	Buzzer tone – mute Buzzer tone – low Buzzer tone – medium ◆ Buzzer tone – high Buzzer tone – extremely high Good-read beep before data transmission ◆ Good-read beep after data transmission Power-on beep ◆ No Power-on beep	0 1 2 3 4 5 6 7 8

## Message string breakdown

### Keyboard interface output (PS/2, DOS/V, USB HID)

Preamble	Data Length	Prefix ID	Scanned Data	Suffix ID	Postamble	Record Suffix
1-15 char.	2-3 digits	1 or 2 char.	Variable	1 or 2 char.	1-15 char.	1 char.

### Serial interface output (RS-232, USB COM)

STX	Preamble	Data Length	Prefix ID	Scanned Data	Suffix ID	Postamble	ETX	Record Suffix
1 char.	1-15 char.	2-3 digits	1 or 2 char.	Variable	1 or 2 char.	1-15 char.	1 char.	1 char.

# Option codes



0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F



# System commands



**PROGRAM**  
(Enter Programming Mode)



**END**  
(Exit Programming Mode)



**System Information**



**Factory Default**



**Save User Default**



**User Default**

The devices also can be configured via the "IDM Set Up Tool". You can download this software for free on sick.com. The code below is important for the communication between scanner and software.



**IDM Set Up Link**

**Australia**

Phone +61 3 9497 4100  
1800 33 48 02 - tollfree

E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66

E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900

E-Mail sac@sick.com.br

**Ceská Republika**

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