QUICK START

IDM Corded Hand-held Scanners

SICK
Sensor Intelligence.

1. How to use this guide

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**

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

Warranty

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

Regulatory

FC
CE
RoHS IDM120, IDM140, IDM160, IDM240 and IDM260 conform to RoHS standards

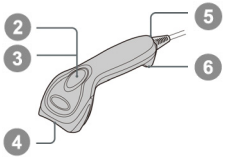
2. Electrical Specifications

Scanner	Input Voltage	Current consumption (Operating)	Current consumption (Standby)
IDM120	5 V DC (+/- 5%)	Typical 170 mA	Typical 75 mA
IDM140		Typical 180 mA	Typical 80 mA
IDM160		180 mA (Vibrator disabled) 230 mA (Vibrator enable)	Typical 80 mA
IDM240		Typical 285 mA	Typical 160 mA
IDM260		Max. 285 mA (Vibrator disabled) Max. 335 mA (Vibrator enable)	Max. 150 mA

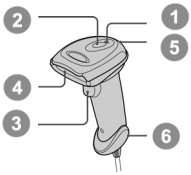
3. Getting Familiar with your IDM Scanner

Scanner description:

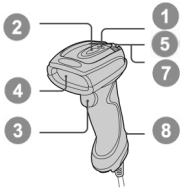
IDM120 Series



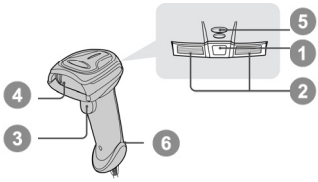
IDM140 Series



IDM160/260 Series



IDM240 Series



1. Power Indicator
2. Status Indicator
3. Trigger Switch
4. Scan Window
5. Beeper
6. Cable Release Hole
7. Tether Plate
8. Lanyard Catch

SICK order numbers for IDM120, IDMx40 and IDMx60 cables

Depending on scanner model different cables have to be used.

			IDM120, IDMx40, IDMxx1,	IDMx60	IDMx42 IDMx62
USB	straight	1.8 m	6036728	6045195	6036728
	spiral	3.8 m	6039158	6045232	6039158
RS-232	straight	1.8 m	6041540	6045196	-
	spiral	3.8 m	6039156	6045233	-
PS/2	straight	2.0 m	6036726	6045194	-
	spiral	3.8 m	6039155	6045231	-
Power Supply	needed for operation with RS-232 cables, Bluetooth and Wifi		6036722		

4. IDM Set Up Tool Software

The IDM Set Up Tool is a Windows based configuration software for IDM scanners. You can download the IDM Set up software for free on www.sick.com. For detailed description how to do configuration with IDM Set Up Tool please look at the IDM user guide.

5. Connecting/Disconnecting cable

IDM Hand Held Scanners provide PS/2(DOS/V) Keyboard Wedge, RS-232 TTL Serial and USB interfaces capability. To disconnect the cable, please straighten one end of a paper clip, then insert into the cable release hole and press in. After that, you can release the cable and pull the cable out easily. For IDMx60 series you need to push down the bracket of the enclosure clip and pull out the cable.

IDM120 Series **IDMx40 Series** **IDMx60 Series**

6. 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 HID & USB COM

- **USB HID (Human Interface Device)**
  The scanner works as a generic USB keyboard.
- **USB COM Port Emulation**
  The scanner works as a legacy RS232 serial device. You have to install the USB COM software driver (available on www.sick.com) before using.
  Note: If USB devices are not connected as USB HID (human interface device) but as VCP (virtual com port), Windows API does not control the connection and does not perform automatic re-connections in case of connection losses. Connection control management has to be realized within the application software which is using the com port as data input source (e.g. within driver access layer).

7. 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 scan "factory default" and afterwards disconnect the scanner from your host device, 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.

8. Keyboard Interface Quick Set

To quickly change the record suffix when using keyboard interface (USB or PS/2) you can use codes below. How the keyboard output string looks like can be seen below as well. Please note that the other parts of the string, e.g. pre- or postamble can be configured via the configuration codes in chapter "Keyboard Interface Control".

Preamble	Data Length	Prefix ID	Scanned Data	Suffix ID	Postamble	Record Suffix
1-15 char.	2-4 digits	1 or 3 char.	Variable	1 or 3 char.	1-15 char.	1 char.

- Record Suffix -

None

TAB

ENTER

RETURN ◆

SPACE

- Keyboard Layout -

The default value is a North American keyboard layout. To change to your desired country please scan one of the codes below.

USA ◆

Germany

Canadian French

Spain (Latin America)

Japan

France

United Kingdom-UK

Spain

Nertherlands

Sweden/Finland

9. Serial Interface Quick Set

To quickly change the record suffix when using serial interface (RS232 or USB Com Port) you can use codes below. How the serial output string looks like can be seen below as well. Please note that the other parts of the string, e.g. pre- or postamble can be configured via the configuration codes in chapter “Serial Interface Control”.

STX	Preamble	Data Length	Prefix ID	Scanned Data	Suffix ID	Postamble	ETX	Record Suffix
1 char.	1-15 char.	2-4 digits	1 or 3 char.	Variable	1 or 3 char.	1-15 char.	1 char.	1 char.

- Record Suffix -


None


LF


TAB


CR ◆


CRLF


SPACE

- Baud Rate -


115.2K BPS


19.2K BPS


4800 BPS


57.6K BPS


9600 BPS ◆


2400 BPS


38.4 BPS


1200 BPS

- Data Frame -


8, None, 1 ◆


8, None, 2


7, None, 2


8, Odd, 1


7, Odd, 1


7, Odd, 2


8, Even, 1


7, Even, 1


7, Even, 2


8, Space, 1


7, Space, 1


7, Space, 2


8, Mark, 1


7, Mark, 1


7, Mark, 2

10. Operation Modes

All IDM scanners support various operation modes. By scanning the codes below, operation mode can be changed. There are more operation modes available than listed below. Please check IDM user guide (download from www.sick.com) for more information.

IDM1xx	Operation Mode	IDM2xx
	**Trigger Mode◆** (manual & serial trigger)	
	**Presentation Mode** (scanner turns on when code is presented)	
	**Flash Mode** (scanner LEDs flash regularly)	-
	**Force Mode** (scanner LEDs are constantly shining)	

11. Host Interface Quick Set

The default setting of every IDM scanner is USB HID. If you want to set the scanner to a different interface please scan one of the codes below.

RS232 Serial

Keyboard Replacement

PS/2 (DOS/V) KBW Standard Mode

PS/2 (DOS/V) KBW Turbo Mode

USB HID Standard Mode ◆

USB HID Turbo Mode

USB Com Port Emulation

12. System Commands

System Information

Master Default

IDM Set Up Link

(needed for configuration via software)

User Default

Factory Default

Save User Default

- **Factory Default:** After scanning" Factory Default", all parameters will return to factory default value.
- **Master Default:** After scanning "Master Default", the scanner will remain the pre-set parameters of **Host Interface Selection**, **Keyboard Interface Control** (except Record Suffix; Preamble; Postamble), **Serial Interface Control** (except Record Suffix; Preamble; Postamble), and **Wand/Laser Emulation Control**, the rest of parameters will be returned to default value.
- **User Default:** After configuring the scanner you can store your configuration via scanning "Save User Default". When scanning "User Default" the scanner will load the configurations that you've saved before. Please note when scanning "Master or Factory Default" the user default values will be deleted.

13. Programming Commands

Option Codes

14. Keyboard Interface Control

Command	Parameter Selection		Option Code	
Keyboard Layout 	USA ◆ France Germany United Kingdom-UK Canadian French Spain Sweden/Finland Portugal Norway	Latin America Italy Netherlands Denmark Belgium Switzerland-Germany Iceland Japan Czech	00 01 02 03 04 05 06 07 08	09 10 11 12 13 14 15 16 17
Record Suffix 	None RETURN ◆ TAB SPACE	ENTER User define character	0 1 2 3	4 5
Preamble 	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
Postamble 	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
Intermessage Delay 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
Intercharacter Delay 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
Interfunction Delay 	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
Caps Lock Control 	"Caps Lock Off" State ◆ "Caps Lock On" State Auto Detect		0 1 2	
Caps Lock Release Control 	"Caps Lock On, Caps Off" ◆ "Caps Lock On, Shift Off"		0 1	
Function Key Emulation 	Enable ASCII 00-31 as KB function code output ◆ Enable ASCII 00-31 as Ctrl-xx output		0 1	
Key Pad Emulation 	Disable key pad emulation ◆ Enable numeric output as key pad output		0 1	
Upper/Lower Case 	Normal case ◆ Inverse case Upper case Lower case		0 1 2 3	

15. Serial Interface Control

Command	Parameter Selection		Option Code	
STX/ETX Control	Disable STX/ETX transmission ◆ Enable STX/ETX transmission		0 1	
Record Suffix	None CR ◆ LF CRLF	TAB SPACE User define character	0 1 2 3	4 5 6
Preamble	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
Postamble	None ◆ 1-15 characters		FIN [00-7F], [FIN]	
Handshaking Protocol	None ◆ RTS/CTS ACK/ NAK Xon/Xoff		0 1 2 3	
Intermessage Delay	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
Intercharacter Delay	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
Interfunction Delay	None ◆ 1-99 (x5) msec.		FIN (2 digits)	
Serial Response Time-out	None 200 msec. 500 msec. ◆ 800 msec. 1 sec. 2 sec.	3 sec. 4 sec. 5 sec. 8 sec. 10 sec. 15 sec.	0 1 2 3 4 5	6 7 8 9 A B
NAK Retry Count	3 times ◆ 0~255 times		FIN (3 digits)	

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.	2-4 digits	1 or 3 char.	Variable	1 or 3 char.	1-15 char.	1 char.

Serial interface output (RS-232, USB COM Port Emulation)

STX	Preamble	Data Length	Prefix ID	Scanned Data	Suffix ID	Postamble	ETX	Record Suffix
1 char.	1-15 char.	2-4 digits	1 or 3 char.	Variable	1 or 3 char.	1-15 char.	1 char.	1 char.

16. Operation and Output Control

Command	Parameter Selection	Option Code
Buzzer Tone Adjust 	Buzzer tone – mute Buzzer tone – low Buzzer tone – medium ◆ Buzzer tone – high Buzzer tone – extremely high Power–on beep ◆ No Power–on beep	0 1 2 3 4 5 6
Good Read Indicator 	Disable Enable ◆	0 1
Vibrator Control 	Disable Enable ◆ Optional function, only available for IDMx60.	0 1
Dollar Sign Control 	Dollar sign output as " $ " ◆ Dollar sign output as " ¥ " Dollar sign output as " € " Dollar sign output as " £ " Dollar sign output as "¢ "	0 1 2 3 4
Redundancy 	None Level 1 ◆ Level 2 Level 3 Level 4 Level 5 To prevent potential miss reading.	0 1 2 3 4 5
1D Barcode Inverse Reading 	Disable ◆ Enable	0 1
Good Read Delay 	None ◆ 200 msec. 500 msec. 1 sec. 1.5 sec. 2 sec. 3 sec.	0 1 2 3 4 5 6
Hand Free Time-out 	Short ◆ Medium Long Extremely long Disable	0 1 2 3 4
Good Read Duration 	Short Medium ◆ Long Extremely long Extremely short	0 1 2 3 4

17. Keyboard Function Code Table

No.	ANSI	ASCII	Key Function	Ctrl Output	No.	ANSI	ASCII	Key Function	Ctrl Output
00	NUL	00H	RESERVED	Ctrl + @	16	DLE	10H	F7	Ctrl + P
01	SOH	01H	CTRL (Left)	Ctrl + A	17	DC1	11H	F8	Ctrl + Q
02	STX	02H	ALT (Left)	Ctrl + B	18	DC2	12H	F9	Ctrl + R
03	ETX	03H	SHIFT	Ctrl + C	19	DC3	13H	F10	Ctrl + S
04	EOT	04H	CAPS LOCK	Ctrl + D	20	DC4	14H	F11	Ctrl + T
05	ENQ	05H	NUM LOCK	Ctrl + E	21	NAK	15H	F12	Ctrl + U
06	ACK	06H	ESC	Ctrl + F	22	SYN	16H	INS (Insert) (Edit)	Ctrl + V
07	BEL	07H	F1	Ctrl + G	23	ETB	17H	DEL (Delete) (Edit)	Ctrl + W
08	BS	08H	BACK SPACE	Ctrl + H	24	CAN	18H	HOME (Edit)	Ctrl + X
09	HT	09H	TAB	Ctrl + I	25	EM	19H	END (Edit)	Ctrl + Y
10	LF	0AH	F2	Ctrl + J	26	SUB	1AH	PAGE UP (Edit)	Ctrl + Z
11	VT	0BH	F3	Ctrl + K	27	ESC	1BH	PAGE DOWN (Edit)	Ctrl + [
12	FF	0CH	F4	Ctrl + L	28	FS	1CH	UP (Edit)	Ctrl + \
13	CR	0DH	ENTER (CR)	Ctrl + M	29	GS	1DH	DOWN (Edit)	Ctrl +]
14	SO	0EH	F5	Ctrl + N	30	RS	1EH	LEFT (Edit)	Ctrl + 6
15	SI	0FH	F6	Ctrl + O	31	US	1FH	RIGHT (Edit)	* see note

The last character in the Ctrl Output column is varied for different countries.

18. HEX/ASCII Reference Table

H / L	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

Example: ASCII "A"→ HEX "41"; ASCII "a"→ HEX "61"

: High Byte of HEX value : Low Byte of HEX value

8015904/YIT8/2015-03-02 · DD_8M · sw int43

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 AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.