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Serial Commands User's Manual

2D Image Handheld Scaner

This Guide is intended for:

- **2D Image Handheld Scaner:** Z-3102

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	2022-04-29	Initial release

Important Notice

No warranty of any kind is made in regard to this material, including, but not limited to, implied warranties of merchantability or fitness for any particular purpose. We are not liable for any errors contained herein nor for incidental or consequential damages in connection with furnishing, performance or use of this material. We shall be under no liability in respect of any defect arising from fair wear and tear, willful damage, negligence, abnormal working conditions, failure to follow the instructions and warnings, or misuse or alteration or repair of the products without written approval. No part of this document may be reproduced, transmitted, stored in a retrieval system, transcribed, or translated into any human or computer or other language in any form or by any means electronic, mechanical, magnetic, optical, chemical, biological, manual or otherwise, except for brief passages which may be quoted for purposes of scholastic or literary review, without express written consent and authorization. We reserve the right to make changes in product design without reservation and without notification. The material in this guide is for information only and is subject to change without notice. All trademarks mentioned herein, registered or otherwise, are the properties of their various, ill, assorted owners.

General Handling Precautions

Do not dispose the scanner in fire.
Do not put the scanner directly in the sun or by any heat source.
Do not use or store the scanner in a very humid place.
Do not drop the scanner or allow it to collide violently with other objects.
Do not take the scanner apart without authorization

Guidance for Printing

This manual is in A5 size. Please double check your printer setting before printing it out. When the barcodes are to be printed out for programming, the use of a high-resolution laser printer is strongly suggested for the best scan result.

Firmware Notice

To use all functions in this guide please update to the latest firmware.

Table of Contents

The Command via Serial Port

The Protocol of Setting and Reading

The Protocol of Command set:

Data Length (1 Byte)	Transmitting Terminal (1Byte)	Identity Code (1 Byte)	Command (1 Byte)	Data (32 Bytes Max.)	Checksum	
					High Byte (1 Byte)	Low Byte (1 Byte)

Data Length: Excluding the length of Checksum (Minimum 5 Bytes; Maximum 36 Bytes)

Transmitting Terminal: 57 (HEX) means End-Terminal sends data to Decoding device or 52 (HEX) means Decoding device sends data to End-Terminal.

Identity Code: The indntity of command.

Command: The setting/reading command.

Data: The setting data.

The calculation of checksum: 0x10000 – [Data Length] – [Transmitting Terminal] – [Identity Code] – [Command] – [D1 + D2 +D3 +….]

The Response Message

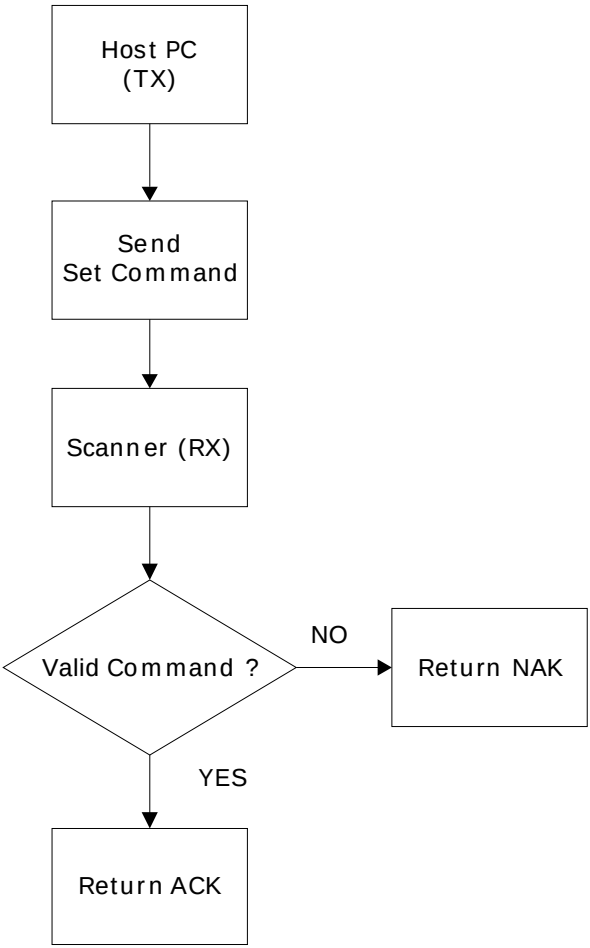
Decoding device will return message with the below protocol after reveiving the command set sent from End-Terminal. This message can show if command set is successful or failed.
If the command set is **successful,** decoding device will send 5 Bytes Data in Hexadecimal **(ACK)** as below to End-Terminal**.**

52	A0	EC	FE	74

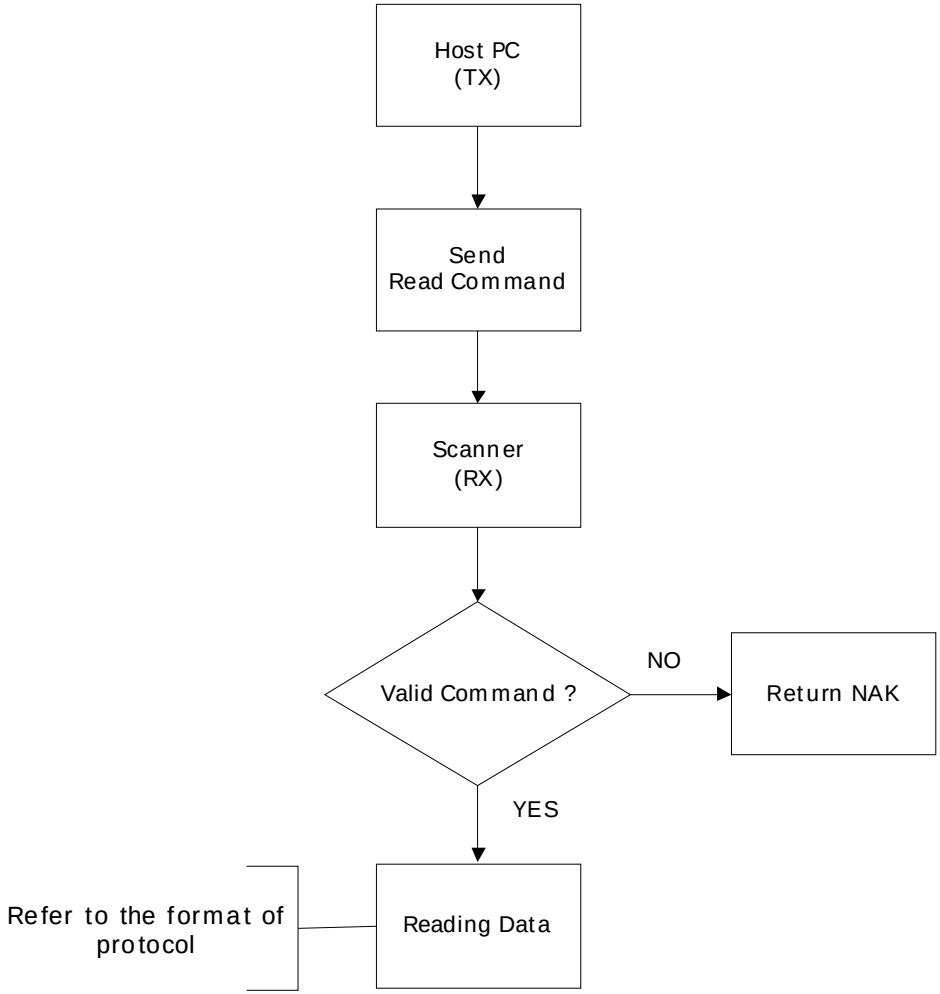
If the command set is **failed**, decoding device will send 5 Bytes Data in Hexadecimal **(NAK)** as below to End-Terminal**.**

52	A0	E0	FE	80

The Flow Chart of Setting Command



The Flow Chart of Reading Data



Examples:

Start Scan

Data Length	Transmitting Terminal	Identity Code	Command	Data	High Byte of Checksum	Low Byte of Checksum
05	**57**	**A0**	**01**	**01**	**FF**	**02**

Checksum = 0x10000 – 0x05 – 0x057 – 0xa0 – 0x01 – 0x01 = 0xFF02 (HEX)

Stop Scan

Data Length	Transmitting Terminal	Identity Code	Command	Data	High Byte of Checksum	Low Byte of Checksum
05	**57**	**A0**	**01**	**00**	**FF**	**03**

Checksum = 0x10000 – 0x05 – 0x057 – 0xa0 – 0x01 – 0x00 = 0xFF03 (HEX)

Activate the ACK response After Scanning

Data Length	Transmitting Terminal	Identity Code	Command	Data	High Byte of Checksum	Low Byte of Checksum
05	**57**	**A0**	**00**	**01**	**FF**	**03**

Checksum = 0x10000 – 0x05 – 0x057 – 0xa0 – 0x00 – 0x01 = 0xFF03 (HEX)

Save Settings

Data Length	Transmitting Terminal	Identity Code	Command	Data	High Byte of Checksum	Low Byte of Checksum
05	**57**	**A0**	**08**	**01**	**FE**	**FB**

Checksum = 0x10000 – 0x05 – 0x057 – 0xa0 – 0x08– 0x01 = 0xFEFB (HEX)

Command Sets

Function		Identity Code	Command	Data
Save Settings		**A0**	**08**	**01**
Check the status of communication		0E	0D	01
Read firmware version		0E	0D	02
Read scan mode		0E	0D	03
ACK / NAK response after Scanning	Activate	A0	00	01
	Deactivate	A0	00	00
ACK / NAK response after sending command	**Activate**	A0	00	10
	Deactivate	A0	00	11
Scan control	Start Scan	A0	01	01
	Stop Scan	A0	01	00
Restore Factory Defaults		A1	01	0F
Save as Custom Defaults		A1	01	08

Restore Custom Defaults		A1	01	CF
RS-232 Baudrate	**9600**	A1	0C	01
	19200	A1	0C	02
	38400	A1	0C	03
	57600	A1	0C	04
	115200	A1	0C	05
Scan Mode	**Level Trigger Mode**	A1	02	01
	Sense Mode	A1	02	02
	Continuous Mode	A1	02	03
Decode Area	**Whole Area**	A1	03	10
	Aiming Bar Code	A1	03	11
Aiming LED	Off	A1	03	00
	Trigger On	A1	03	01
	Always On	A1	03	02
Illumination Mode	Off	A1	04	00

	Trigger On	A1	04	01
	Always On	A1	04	02
	Fade Up	A1	04	03
Illumination Level	Minimum	A1	04	11
	Medium	A1	04	12
	Maximum	A1	04	13
Good Read Beep	**Activate**	A1	05	0E
	Off	A1	05	0D
Good Read Beep Frequency	800 Hz	A1	05	21
	1600 Hz	A1	05	22
	2730 Hz	A1	05	23
	4200 Hz	A1	05	24
Decoding Timeout	Disable	A1	06	00
	5 Seconds	A1	06	01
	10 Seconds	A1	06	02
	20 Seconds	A1	06	03

Time To Standby Mode	Disable	A1	07	00
	1 Second	A1	07	01
	2 Seconds	A1	07	02
	3 Seconds	A1	07	03
	5 Seconds	A1	07	04
	7 Seconds	A1	07	05
	10 Seconds	A1	07	06
	15 Seconds	A1	07	07
Timeout between Decodes (Same Barcode)	Disable	A1	08	00
	50 ms	A1	08	01
	100 ms	A1	08	02
	200 ms	A1	08	03
	300 ms	A1	08	04
	500 ms	A1	08	05
	1 S	A1	08	06
	2 S	A1	08	07
	3 S	A1	08	08

Sensitivity of Sense Mode	Low	A1	0A	01
	Medium	A1	0A	02
	High	A1	0A	03
Decode Redundancy	**Disable**	A1	0B	01
	2 Times	A1	0B	02
	3 Times	A1	0B	03
Code Information	Enable	A2	01	0E
	Disable	A2	01	0D
Code ID	**Disable**	A2	02	00
	AIM ID	A2	02	01
	Custom ID	A2	02	02
Ending Character	None	A2	03	01
	CR/LF	A2	03	02
	CR	A2	03	03
	TAB	A2	03	04
Enable All Symbologies		B0	01	0E
Disable All Symbologies		B0	01	0D
Enable And Only Read All 1D		B0	01	01
Enable And Only Read All 2D		B0	01	02

Disable All 1D Symbologies	B0	01	03
Disable All 2D Symbologies	B0	01	04
Prefix for All Symbologies	B0	50	1 to 8 Characters
Suffix for All Symbologies	B0	53	1 to 8 Characters

Function		Identity Code	Command	Data
USB Country Keyboard Types	US	A1	4B	00
	Belgium	A1	4B	01
	UK	A1	4B	02
	Denmark	A1	4B	03
	France	A1	4B	04
	Germany	A1	4B	05
	Italy	A1	4B	06
	Norway	A1	4B	07
	Portugal	A1	4B	08

	Spain	A1	4B	09
	Sweden	A1	4B	0A
	Switzerland	A1	4B	0B
	Japan	A1	4B	0C
	Hungary	A1	4B	0D
	Czech Republic	A1	4B	0F
	Slovak	A1	4B	0F
	Romania	A1	4B	10

	Croatia	A1	4B	11
	Poland	A1	4B	12
	Turkish Q	A1	4B	13
	Brazil	A1	4B	14
	Russian	A1	4B	15
	Bulgaria	A1	4B	16
	Vietnam	A1	4B	17

Function		Identity Code	Command	Data
Country Code Page	Traditional Chinese Big 5	A1	4C	01
	Traditional Chinese Microsoft Office Word	A1	4C	02
	Korean	A1	4C	03
	Korean Microsoft Office Word	A1	4C	04
	Japanese Shift-JIS	A1	4C	06
	Japanese Microsoft Office Word	A1	4C	07
	West European Latin	A1	4C	08
	Central and East European Latin	A1	4C	09
	Turkish	A1	4C	0A

	Greek	A1	4C	0B
	Hebrew	A1	4C	0C
	Thailand	A1	4C	0D
	Vietnamese	A1	4C	0D

Function			Identity Code	Command	Data
UPC A	**Enable**		B1	01	0E
	Disable		B1	01	0D
	Preamble	**Transmit**	B1	02	0E
		Do Not Transmit	B1	02	0D
	Digit Check	**Enable**	B1	03	0E
		Disable	B1	03	0D
	Convert to EAN-13	Enable	B1	04	0E
		Disable	B1	04	0D
	2-Digit / 5-Digit Add-On Code	Enable	B1	05	0E
		Disable	B1	05	0D
	Add-On Code Required	Enable	B1	06	0E
		Disable	B1	06	0D

	2-Digit Add-On Code	Enable	B1	07	0E
		Disable	B1	07	0D
	5-Digit Add-On Code	Enable	B1	08	0E
		Disable	B1	08	0D
	Prefix for UPC A		B1	50	1 to 8 Characters
	Suffix for UPC A		B1	53	1 to 8 Characters
UPC E	**Enable**		B2	01	0E
	Disable		B2	01	0D
	Preamble	**Transmit**	B2	02	0E
		Do Not Transmit	B2	02	0D
	Digit Check	**Enable**	B2	03	0E
		Disable	B2	03	0D
	Convert to UPC A	Enable	B2	04	0E

		Disable	B2	04	0D
	2-Digit / 5-Digit Add-On Code	Enable	B2	05	0E
		Disable	B2	05	0D
	Add-On Code Required	Enable	B2	06	0E
		Disable	B2	06	0D
	2-Digit Add-On Code	Enable	B2	07	0E
		Disable	B2	07	0D
	5-Digit Add-On Code	Enable	B2	08	0E
		Disable	B1	08	0D
	Prefix for UPC A		B2	50	1 to 8 Characters
	Suffix for UPC A		B2	53	1 to 8 Characters
EAN 8	**Enable**		B3	01	0E
	Disable		B3	01	0D

	Digit Check	**Transmit**	B3	02	0E
		Do Not Transmit	B3	02	0D
	Convert to EAN 13	Enable	B3	03	0E
		Disable	B3	03	0D
	2-Digit / 5-Digit Add-On Code	Enable	B3	04	0E
		Disable	B3	04	0D
	Add-On Code Required	Enable	B3	05	0E
		Disable	B3	05	0D
	2-Digit Add-On Code	Enable	B3	06	0E
		Disable	B3	06	0D
	5-Digit Add-On Code	Enable	B3	07	0E

		Disable	B3	07	0D
	Prefix for UPC A		B3	50	1 to 8 Characters
	Suffix for UPC A		B3	53	1 to 8 Characters
EAN 13	**Enable**		B4	01	0E
	Disable		B4	01	0D
	Digit Check	**Transmit**	B4	02	0E
		Do Not Transmit	B4	02	0D
	ISBN	Enable	B4	03	0E
		Disable	B4	03	0D
	ISSN	Enable	B4	04	0E
		Disable	B4	04	0D
	2-Digit / 5-Digit Add-On Code	Enable	B4	05	0E
		Disable	B4	05	0D
	Add-On Code Required	Enable	B4	06	0E

		Disable	B4	06	0D
	2-Digit Add-On Code	Enable	B4	07	0E
		Disable	B4	07	0D
	5-Digit Add-On Code	Enable	B4	08	0E
		Disable	B4	08	0D
	Beginning with 978 and 192 Required	Enable	B4	09	0E
		Disable	B4	09	0D
	Prefix for UPC A		B4	50	1 to 8 Characters
	Suffix for UPC A		B4	53	1 to 8 Characters
Code 128	**Enable**		B5	01	0E
	Disable		B5	01	0D
	Reading Lengths	**Any Length**	B5	10	00

		One Discrete Length	B5	11	1 byte of Legnths
		Two Discrete Lengths	B5	12	2 bytes of Legnths *1
		Length Within Range	B5	13	2 bytes of Legnths *2
	Prefix for Code 128		B5	50	1 to 8 Characters
	Suffix for Code 128		B5	53	1 to 8 Characters
Code 39	**Enable**		B6	01	0E
	Disable		B6	01	0D
	Enable Full ASCII Conversion		B6	02	0E
	Disable Full ASCII Conversion		B6	02	0D
	Start/Stop Character	Transmit	B6	03	0E
		Do Not Transmit	B6	03	0D

*1 **Data 1**: Fisrt Reading Lengths , **Data 2**: Second Reading Lengths .

*2 **Data 1**: Minimum Reading Lengths , **Data 2**: Maximum Reading Lengths .

Function			Identity Code	Command	Data
Code 39	Check Digit Verification	**Disable**	B6	04	01
		Transmit	B6	04	02
		Do Not Transmit	B6	04	03
	Prefix for Code 39		B6	50	1 to 8 Characters
	Suffix for Code 39		B6	53	1 to 8 Characters
	Reading Lengths	**Any Length**	B6	10	00
		One Discrete Length	B6	11	1 byte of Legnths
		Two Discrete Lengths	B6	12	2 bytes of Legnths *1
		Length Within Range	B6	13	2 bytes of Legnths *2

	Convert to Code 32	Enable	B8	01	0E
		Disable	B8	01	0D
	Prefix for Code 32		B8	50	1 to 8 Characters
	Suffix for Code 32		B8	53	1 to 8 Characters

*1 **Data 1**: Fisrt Reading Lengths , **Data 2**: Second Reading Lengths .

*2 **Data 1**: Minimum Reading Lengths , **Data 2**: Maximum Reading Lengths .

Function			Identity Code	Command	Data
Code 93	**Enable**		B7	01	0E
	Disable		B7	01	0D
	Reading Lengths	**Any Length**	B7	10	00
		One Discrete Length	B7	11	1 byte of Legnths
		Two Discrete Lengths	B7	12	2 bytes of Legnths *1
		Length Within Range	B6	13	2 bytes of Legnths *2
	Prefix for Code 93		B7	50	1 to 8 Characters
	Suffix for Code 93		B7	53	1 to 8 Characters
Code 11	Enable		B9	01	0E
	Disable		B9	01	0D
	Check Digit Verification	**Disable**	B9	02	01

		1-digit	B9	02	02
		2-digit	B9	02	03
	Transmit Check Digit	**Enable**	B9	03	0E
		Disable	B9	03	0D

*1 **Data 1**: Fisrt Reading Lengths , **Data 2**: Second Reading Lengths .

*2 **Data 1**: Minimum Reading Lengths , **Data 2**: Maximum Reading Lengths .

Function			Identity Code	Command	Data
Code 11	Reading Lengths	**Any Length**	B9	10	00
		One Discrete Length	B9	11	1 byte of Legnths
		Two Discrete Lengths	B9	12	2 bytes of Legnths *1
		Length Within Range	B9	13	2 bytes of Legnths *2
	Prefix for Code 93		B9	50	1 to 8 Characters
	Suffix for Code 93		B9	53	1 to 8 Characters
Codabar	**Enable**		BA	01	0E
	Disable		BA	01	0D
	Check Digit Algorithm	**Disable**	BA	02	01

		Transmit	BA	02	02
		Do Not Transmit	BA	02	03
	Start / Stop Character	Transmit	BA	03	0E
		Do Not Transmit	BA	03	0D

*1 **Data 1**: Fisrt Reading Lengths , **Data 2**: Second Reading Lengths .

*2 **Data 1**: Minimum Reading Lengths , **Data 2**: Maximum Reading Lengths .

Function			Identity Code	Command	Data
Codabar	Reading Lengths	**Any Length**	BA	10	00
		One Discrete Length	BA	11	1 byte of Legnths
		Two Discrete Lengths	BA	12	2 bytes of Legnths *1
		Length Within Range	BA	13	2 bytes of Legnths *2
	Prefix for Codabar		BA	50	1 to 8 Characters
	Suffix for Codabar		BA	53	1 to 8 Characters
Plessey	Enable		BB	01	0E
	Disable		BB	01	0D
	Reading Lengths	**Any Length**	BB	10	00
		One Discrete Length	BB	11	1 byte of Legnths
		Two Discrete Lengths	BB	12	2 bytes of Legnths *1

		Length Within Range	BB	13	2 bytes of Legnths *2
	Prefix for Plessey		BB	50	1 to 8 Characters
	Suffix for Plessey		BB	53	1 to 8 Characters

*1 **Data 1**: Fisrt Reading Lengths , **Data 2**: Second Reading Lengths .

*2 **Data 1**: Minimum Reading Lengths , **Data 2**: Maximum Reading Lengths .

Function			Identity Code	Command	Data
MSI	**Enable**		BC	01	0E
	Disable		BC	01	0D
	Check Digit Algorithm	Disable	BC	02	01
		MOD10	BC	02	02
		MOD10/MOD10	BC	02	03
		MOD10/MOD11	BC	02	04
	Check Digit	**Transmit**	BC	03	0E
		Do Not Transmit	BC	03	0D
	Reading Lengths	**Any Length**	BC	10	00
		One Discrete Length	BC	11	1 byte of Legnths

		Two Discrete Lengths	BC	12	2 bytes of Legnths *1
		Length Within Range	BC	13	2 bytes of Legnths *2
	Prefix for MSI		BC	50	1 to 8 Characters
	Suffix for MSI		BC	53	1 to 8 Characters

*1 **Data 1**: Fisrt Reading Lengths , **Data 2**: Second Reading Lengths .

*2 **Data 1**: Minimum Reading Lengths , **Data 2**: Maximum Reading Lengths .

Function			Identity Code	Command	Data
Interleaved 2 of 5	**Enable**		BD	01	0E
	Disable		BD	01	0D
	Check Digit Verification	**Disable**	BD	02	01
		Transmit	BD	02	02
		Do Not Transmit	BD	02	03
	Reading Lengths	**Any Length**	BD	10	00
		One Discrete Length	BD	11	1 byte of Legnths
		Two Discrete Lengths	BD	12	2 bytes of Legnths *1
		Length Within Range	BD	13	2 bytes of Legnths *2
	Prefix for Interleaved 2 of 5		BD	50	1 to 8 Characters

	Suffix for Interleaved 2 of 5	BD	53	1 to 8 Characters
IATA 2 of 5	Enable	BE	01	0E
	Disable	BE	01	0D
	Prefix for IATA 2 of 5	BE	50	1 to 8 Characters
	Suffix for IATA 2 of 5	BE	53	1 to 8 Characters

*1 Data 1: Fisrt Reading Lengths , Data 2: Second Reading Lengths .

*2 Data 1: Minimum Reading Lengths , Data 2: Maximum Reading Lengths .

Function			Identity Code	Command	Data
Matrix 2 of 5	Enable		BF	01	0E
	Disable		BF	01	0D
	Reading Lengths	**Any Length**	BF	10	00
		One Discrete Length	BF	11	1 byte of Legnths
		Two Discrete Lengths	BF	12	2 bytes of Legnths *1
		Length Within Range	BF	13	2 bytes of Legnths *2
	Prefix for IATA 2 of 5		BE	50	1 to 8 Characters
	Suffix for IATA 2 of 5		BE	53	1 to 8 Characters
Straight 2 of 5	Enable		D0	01	0E
	Disable		D0	01	0D
	Prefix for Straight 2 of 5		D0	50	1 to 8 Characters

	Suffix for Straight 2 of 5	D0	53	1 to 8 Characters
Pharmacode	Enable	D1	01	0E
	Disable	D1	01	0D
	Prefix for Pharmacode	D1	50	1 to 8 Characters
	Suffix for Pharmacode	D1	53	1 to 8 Characters

*1 **Data 1**: Fisrt Reading Lengths , **Data 2**: Second Reading Lengths .

*2 **Data 1**: Minimum Reading Lengths , **Data 2**: Maximum Reading Lengths .

Function			Identity Code	Command	Data
GS1 DataBar 14	Enable		D2	01	0E
	Disable		D2	01	0D
	GS1 DataBar 14 Stacked	Enable	D2	02	0E
		Disable	D2	02	0D
	AI（01）Digit	**Transmit**	D2	03	0E
		Do Not Transmit	D2	03	0D
	Prefix for GS1 DataBar 14		D2	50	1 to 8 Characters
	Suffix for GS1 DataBar 14		D2	53	1 to 8 Characters
GS1 DataBar Expanded	Enable		D3	01	0E
	Disable		D3	01	0D

	GS1 DataBar Expanded Stacked	Enable	D3	02	0E
		Disable	D3	02	0D
	AI（01）Digit	**Transmit**	D3	03	0E
		Do Not Transmit	D3	03	0D
	Prefix for GS1 DataBar 14		D3	50	1 to 8 Characters
	Suffix for GS1 DataBar 14		D3	53	1 to 8 Characters

Function			Identity Code	Command	Data
GS1 DataBar Limited	Enable		D4	01	0E
	Disable		D4	01	0D
	AI（01）Digit	**Transmit**	D4	02	0E
		Do Not Transmit	D4	02	0D
	Prefix for GS1 DataBar 14		D4	50	1 to 8 Characters
	Suffix for GS1 DataBar 14		D4	53	1 to 8 Characters
CC-A	Enable		D5	01	0E
	Disable		D5	01	0D
	Prefix for CC-A		D5	50	1 to 8 Characters
	Suffix for CC-A		D5	53	1 to 8 Characters
CC-B	Enable		D6	01	0E
	Disable		D6	01	0D

	Prefix for CC-B	D6	50	1 to 8 Characters
	Suffix for CC-B	D6	53	1 to 8 Characters
CC-C	Enable	D7	01	0E
	Disable	D7	01	0D
	Prefix for CC-C	D7	50	1 to 8 Characters
	Suffix for CC-C	D7	53	1 to 8 Characters

Function			Identity Code	Command	Data
PDF 417	**Enable**		D8	01	0E
	Disable		D8	01	0D
	Prefix for PDF 417		D8	50	1 to 8 Characters
	Suffix for PDF 417		D8	53	1 to 8 Characters
Micro PDF 417	**Enable**		D9	01	0E
	Disable		D9	01	0D
	Prefix for Micro PDF 417		D9	50	1 to 8 Characters
	Suffix for Micro PDF 417		D9	53	1 to 8 Characters
Data Matrix	**Enable**		DA	01	0E
	Disable		DA	01	0D
	Mirror	**Enable**	DA	02	0E

		Disable	DA	02	0D
	Rectangular Data Matrix	**Enable**	DA	03	0E
		Disable	DA	03	0D
	Prefix for Data Matrix		DA	50	1 to 8 Characters
	Suffix for Data Matrix		DA	53	1 to 8 Characters

Function			Identity Code	Command	Data
QR	**Enable**		DB	01	0E
	Disable		DB	01	0D
	Mirror	**Enable**	DB	02	0E
		Disable	DB	02	0D
	Prefix for QR		DB	50	1 to 8 Characters
	Suffix for QR		DB	53	1 to 8 Characters
Micro QR	**Enable**		DC	01	0E
	Disable		DC	01	0D
	Prefix for Micro QR		DC	50	1 to 8 Characters
	Suffix for Micro QR		DC	53	1 to 8 Characters
Aztec	Enable		DD	01	0E

	Disable		DD	01	0D
	Mirror	**Enable**	DD	02	0E
		Disable	DD	02	0D
	Prefix for Aztec		DD	50	1 to 8 Characters
	Suffix for Aztec		DD	53	1 to 8 Characters

Function			Identity Code	Command	Data
MaxiCode	Enable		DE	01	0E
	Disable		DE	01	0D
	Mirror	**Enable**	DE	02	0E
		Disable	DE	02	0D
	Prefix for MaxiCode		DE	50	1 to 8 Characters
	Suffix for MaxiCode		DE	53	1 to 8 Characters

DotCode	Enable	DF	01	0E
	Disable	DF	01	0D
	Prefix for DotCode	DF	50	1 to 8 Characters
	Suffix for DotCode	DF	53	1 to 8 Characters

Sameple Code of Sending Commands with C

```
typedef struct
{
   BYTE Length;
   BYTE Target;
   BYTE OpID;
   BYTE OpCode;
   BYTE OpData;
   BYTE HighByteChecksum;
   BYTE LowByteChecksum;

} CMD_FORMAT;

BOOL    SendCMD ( BYTE dwOpID, BYTE dwOpCode , BYTE dwData )
{
        CMD_FORMAT Tx;
        WORD Chksum;
        DWORD dwBytes;
        Tx.Length = 5;
        Tx.Target = 0x57;
        Tx.OpID = dwOpID;
        Tx.OpCode = dwOpCode;
        Tx.OpData = dwData;
        Chksum =0x10000-(Tx.Length+ Tx.Target+ Tx.OpID+ Tx.OpCode+ Tx.OpData);
        Tx.HighByteChecksum = (BYTE)(chksum>>8);
        Tx.LowByteChecksum    = (BYTE)(chksum&0xff);

        if(WriteFile (hComPort , (PBYTE)&Tx , sizeof(CMD_FORMAT) , &dwBytes ,
```

```
NULL))
        return TRUE;


    return FALSE;
}
BOOL    CheckCommunication (void)
{
     if( SendCMD ( 0x0E, 0x0D , 0x01)==FALSE)
    return FALSE;

    return WaitACK() ? TRUE    : FALSE;
}

BOOL    SetScanMode (BYTE dwMode)
{
     if( SendCMD ( 0xa1, 0x02 , dwMode)==FALSE)
    return FALSE;

    return WaitACK() ? TRUE    : FALSE;
}
```