



# **Programming**

## **HW-310A**

### **User's Manual**

**Ver. 1.1**

## **Product Features**

1. The built-in “2M Large memory” storage of this product has the inventory counting function. Its maximum storage amount can save 103714 “EAN13” Bar codes to satisfy daily inventory checking. Inventory content and parameters setting can be retained after power off.
2. Transmission feature is intelligent including real-time transmission, storage then upload and in memory mode at out of connection region.
3. The” memory mode at out of connection then transmission” is intelligent. It can store the data at out of connection region and it will automatically switch to real-time transmit the data while back to the connection range.
4. The product including total storage barcode numbers display, alarm at out of connection range and the ID number of scanners display.
5. The product supports “one cradle to one scanner” or “one cradle to many scanners” multifunction performance. One cradle can support many scanners.
6. The transmission distance is 200 Meter in open space.
7. The product has low power consumption feature which can be standby long time and it is built-in 1150MA high-capacity Lithium battery which can work about 6 hours depending the reading barcode type after full charging.

## **Installation methods:**

### **Connect the Cradle to the computer**

1. Connecting the Cradle to the computer by USB Data Cable.
2. When the USB is installed and ready, the Cradle is finish installation.
3. If the installation is failed, removing the cradle with USB Connector from the computer, and re-plug USB data cable to the computer

## Sound indication for wireless data transmission:

Data transfer Successful	Buzzer Sound
Yes	One beep
No	Three beeps

## Charging

Putting the Scanner on the Cradle and connect the Cradle to the Computer through USB data cable. The time of full charging is about 4 hours, the red LED of Scanner will turn off when charging is complete.

## Operation Instructions:



### Factory Default (Pairing)

## Back Default Pair Method:

1. The Cradle is properly connected to the computer through USB data cable.
2. Putting Scanners on the Cradle.
3. Pressing the Channel button of the Cradle t about 3 seconds. The channel will be reverted to default "00".
4. And then press the Pair button of Cradle about 3 seconds for finish default pair.

**Note:** While many units of HW310 work in the same environment, in order to avoid interference, we suggest to make different channel value for each HW310 according to the following setting method.

### Different Channel Value setting:

1. Pressing Channel button about 1 second for RFCH NO.=01 setting, Pressing Channel button about 1 second again for RFCH NO.=02 setting. And so on.
2. After finish Channel selection setting , pressing the Pair button about 3 seconds for finish pairing. The scanners have 2 beeps sound for successful pairing and transmit “RF CH set OK” on TEXT file.

When the pairing is failed, the scanners have 3 beeps sound and transmit “ RF CH set fail” on TEXT file.

**Before scanning, please make sure** the Scanner has enough power.

### Mode Selection:



Normal mode

(Real-time Transmission) **Default**



Memory mode

(Data Storage)



Memory mode in out of  
connection range

(Data Storage during scanner is out  
of connection range + Real-time  
transmission in connection range)



Data upload



Show total data storage  
numbers in the memory

(Memory mode)



Erase all data in the  
memory (Memory Mode)

- The Cradle and the computer are connected by the data (USB) cable.
- All the connection to the Cradle is firm.

## Feature settings

### Scanner ID Number Setting for One Cradle to Many Scanners:



Enter ID Settings



Display ID



Hide ID



Scanner ID + space  
+ barcode  
(Setting Separator of  
“space” between Scanner  
ID and barcode data)  
**(Default)**



Scanner ID + - + Barcode

(Setting Separator of “-“  
between Scanner ID  
and barcode data)



Scanner ID + Tab  
+ Barcode  
(Setting Separator of “tab”  
between Scanner ID  
and barcode data)

### Setting methods:

1. Reading the “Enter ID Setting” first
2. Reading the parameter value bar code you want.  
For example: Setting the Scanner ID to “01”.
  1. Reading “ enter the ID settings
  2. Reading parameter value of “0” then "1" .  
(The default of Scanner ID is “00”, Scanner ID can  
be set from”00” to “99”)

**Displays / Hide ID method:** Scanner ID can display or Hide  
by reading barcode setting of “Display ID” and “Hide ID”.

## Interface Selection:



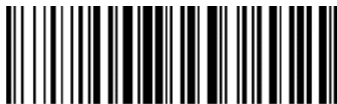
%%USB\_COM



%%USB\_HID

**default**

## Keyboard Wedge Function:



%%NumLock



%%Esc%%



%%CapsLock

## Keyboard Wedge Settings:



**%%Emulation**









ALT Mode ON



**%%QWERTY**

ALT Mode OFF

**Keyboard Language Settings** (ALT Mode must be OFF):

 %%CZ <b>Czech</b>	 %%FR <b>French</b>
 %%GE <b>Germany</b>	 %%EN <b>USA</b>
 %%PT <b>Portugal</b>	 %%TK <b>Turkey</b>
 %%ES <b>Spanish</b>	 %%IT <b>Italian</b>



# Parameter Value Barcode



0



1



2



3



4



5



6



7



8



9

## Stand by time setting



Enter Standby time setting



20 seconds (**Default**)



30 seconds



60 seconds



2 minutes



5 minutes



10 minutes



20 minutes



Never Sleep

### Setting method:

1. Reading the barcode setting of "Enter standby time"
2. Reading standby time barcode.

## ASCII Tabl(Under Function Off)



\*Function OFF

### ASCII Table

	0	1	2	3	4	5	6	7
0	NUL	DLE	SP	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

## Function key Table(Under Function on)



### Function ON

	0	1
0	NULL	CTRL
1	UP	F1
2	DOWN	F2
3	LEFT	F3
4	RIGHT	F4
5	PAGE UP	F5
6	PAGE DOWN	F6
7		F7
8	BS	F8
9	TAB	F9
A		F10
B	HOME	ESC
C	END	F11
D	ENTER	F12
E	INSERT	ALT
F	DELETE	SHIFT

## Battery Power display



### Battery Power display

Description: Reading the barcode setting of Battery Power display to output present battery power status on the screen.

(Note : When the Battery is low power, the Buzzer will keep 1 seconds long beep.)

Start Configuration((+SETF))



For the following part of the codes (pages 14-41), you must first read the **Start Configuration** code in the page header, then the configuration code(s) and finally the **End Configuration** code in the page footer.

---

### Chap.1 System Information



Set All default((+RETF))



S/W Version((+SFUR))

---

### 2.1 Message Terminator

---



None((+C9A))



<CR>((+C9C))



TAB((+C9E))



CR+LF((+C9B))

End Configuration((+ENDF))





## 2.2 Character Installation

The preamble and postamble character: You can put 10 ASCII at most in front of the barcode data. When the installation is “0” that means you don’t need to add the first and last character. Please find the format as below:

Preamble Character	Barcode	Postamble Character
--------------------	---------	---------------------

The process for adding the first and last character to the barcode:

1. Scan the barcode of “Start Configuration” and “The Preamble Character Installation”.
2. Check the ASCII table to get the ASCII code of the first and last character.
3. Scan the barcode of ASCII in the Appendix.
4. Scan the “End Configuration”.

G1/G2 character Insertion: You can put 10 ASCII at most in front of the barcode data. When the installation is “0” that means you don’t need to add the first and last character.

1. Scan the barcode of the “Start Configuration” and “G1 Insert Character”.
2. Check the ASCII table to get the ASCII code of the first and last character.
3. Scan the barcode of ASCII in the Appendix.
4. Scan the “End Configuration”.
5. Repeat the same process to the G2 insertion.
6. Scan the “End Configuration”.

The position of G1/G2 character insertion: To select a character insert to the barcode. You can’t insert any character while the installation is “0”

1. Scan the barcode of the “Start Configuration” and “G1 character insertion position”
2. Check the ASCII table to get the corresponding ASCII code of the insertion position.
3. Scan the “End Configuration”.
4. Repeat the same process to the G2 character insertion position.
5. Scan the “End Configuration”.



Start Configuration((+SETF))



Code Transmission: If your application needs to transmit the code (barcode type ID), you have to set “ON” for this feature and the format is ID + Barcode data.

**The Preamble Installation (Default:00)**



Appendix A((+E4A))

**The Postamble Installation (Default:00)**



Appendix A((+E5A))

**G1 Character Insertion (Default:00)**



Appendix A((+E6A))

**G2 Character Insertion (Default:00)**



Appendix A((+E7A))

**G1 Character Insertion Position (Default:00)**



Appendix A((+E8A))

**G2 Character Insertion Position (Default:00)**



Appendix A((+E9A))

**Code ID Transmission**



<OFF>((+EAB))



ON((+EAA))

End Configuration((+ENDF))





Start Configuration((+SETF))



## 2.5 Buzzer Set-up

You can pitch the buzzer tone and adjust the buzzer time. Besides, you can set the voice of boot and decoding..

### Frequency(Default: 09H)



Appendix A(00-10H)((+E2A))

### Adjust Buzzer Tone (Default: 04H)



Appendix A(00-10H)  
((+E3A))

### Power On Tone



<ON>((+EBA))



OFF((+EBB))

### Good read Beep



<ON>((+ECA))



OFF((+ECB))

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### Chap.3 BAR-CODE INSTALLATION

#### 3.1 UPC-A

##### Reading



OFF((+F1A))



<ON>((+F1B))

##### Code ID (Default:F)



<20H-7EH>((+F2A))

##### UPC-A convert to EAN-13



<OFF>((+F3A))



ON((+F3B))

##### Transmit Check Character



OFF((+F4A))



<ON>((+F4B))

##### Truncate Leading Zero



<OFF>((+F5A))



ON((+F5B))

---

##### Truncate Leading Digit(Default:00)



<00H-0DH>((+F6A))

---

##### Truncate Last Digit(Default:00)



<00H-0DH>((+F7A))

---

##### Select Insertion(Default:00)



<00H-02H>((+F9A))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



### 3.1 UPC-A

#### Add-On 2/5



<None>((+F8A))



2 digit((+F8B))



5 digit((+F8C))



2 or 5 digit((+F8D))



AUTO\_Enable  
((+F8E))

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.2 UPC-E

#### Reading



OFF((+G1A))



<ON>((+G1B))

#### Code ID (Default: G)



<20H-7EH>((+G2A))

#### UPC-E Convert to UPC-A



<OFF>((+G3A))



ON((+G3B))

#### Transmit Check Character



OFF((+G4A))



<ON>((+G4B))

#### Truncate Leading Zero



<OFF>((+G7A))



ON((+G7B))

---

#### Truncate Leading Digit(Default:00)



<00H-08H>((+G5A))

---

#### Truncate Last Digit(Default:00)



<00H-08H>((+G6A))

---

#### Select Insertion(Default:00)



<00H-02H>((+G9A))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.2 UPC-E

#### Add-On 2/5



<None>((+G8A))



2digit((+G8B))



5digit((+G8C))



2 or 5 digit((+G8D))



AUTO\_Enable  
((+G8E))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.3 EAN-13

#### Reading



OFF((+H1A))



<ON>((+H1B))

#### Code ID (Default: H)



<20H-7EH>((+H2A))

#### Transmit Check Character



OFF((+H3A))



<ON>((+H3B))

---

#### Truncate Leading Digit (Default:00)



<00H-0DH>((+H4A))

---

#### Truncate Last Digit (Default:00)



<00H-0DH>((+H5A))

---

#### Select Insertion (Default:00)



<00H-02H>((+H8A))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.3 EAN-13

#### Add-On 2/5



<None>((+H6A))



2 Digit((+H6B))



5 Digit((+H6C))



2 or 5 Digit((+H6D))



AUTO\_Enable  
((+H6E))

---

### ISBN/ISSN Convert



<OFF>((+H7A))



ON((+H7B))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.4 EAN-8

#### Reading



OFF((+I1A))



<ON>((+I1B))

#### Code ID (Default: 1)



<20H-7EH>((+I2A))

#### Transmit Check Character



OFF((+I3A))



<ON>((+I3B))

---

#### Truncate Leading Digit (Default:00)



<00H-08H>((+I4A))

---

#### Truncate Last Digit (Default:00)



<00H-08H>((+I5A))

---

#### Select Insertion (Default:00)



<00H-02H>((+I7A))

---

End Configuration((+ENDF))





Start Configuration((+SETF))



---

**Add-On 2/5**



<None>((+I6A))



2 digit((+I6B))



5 digit((+I6C))



2 or 5 digit((+I6D))



AUTO\_Enable

((+I6E))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



### 3.5 Code 39

#### Reading



OFF((+J1A))



<ON>((+J1B))

#### Code ID (Default: J)



(20H-7EH)((+J2A))

#### Verification



<OFF>((+J3A))



ON((+J3B))

#### Transmit Check Character



OFF((+J4A))



<ON>((+J4B))

#### Min. Length (Default:01)



<01H-50H>((+J6A))

#### Max. Length

(Default:50H)



<01H-50H>((+J7A))

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.5 Code 39

#### Format



<Standard Code39> ((+J9A))



Full ASCII Code39  
((+J9B))



Trioptic CODE39  
((+J9C))

---

#### Transfer Start / End

##### Character



<OFF>((+JDA))



ON((+JDB))

---

#### Code 39 Concatenation



<OFF>((+JFA))



ON((+JFB))

---

#### Truncate Leading Digit(Default:00)



<00H-32H>((+JAA))

---

#### Truncate Last Digit(Default:00)



<00H-32H>((+JBA))

---

#### Select Insertion(Default:00)



<00H-02H>((+JCA))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.6 Codabar

#### Reading



OFF((+K2A))



<ON>((+K1B))

#### Code ID (Default: K)



<20H-7EH>((+K2A))

#### Verification



<OFF>((+K3A))



ON((+K3B))

#### Transmit Check Character



<OFF>((+K4A))



ON((+K4B))

---

#### Truncate Leading Digit(Default:00)



<00H-7EH>((+K6A))

---

#### Truncate Last Digit(Default:00)



<00H-7EH>((+K7A))

---

#### Select Insertion (Default:00)



<00H-02H>((+KCA))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.6 Codabar

#### Start / End Character Type



<ABCD/ABCD>((+K8A))



abcd/abcd((+K8B))



abcd/tn\*e((+K8C))

---

#### Transmit Start / End

##### Character



OFF((+K9A))



<ON>((+K9B))

##### Min. Length (Default:06)



<01H-50H>((+KAA))

##### Max. Length (Default:50H)



<01H-50H>((+KBA))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.7 Code93

#### Reading



OFF((+L1A))



<ON>((+L1B))

#### Code ID (Default: L)



<20H-7EH>((+L2A))

#### Verification



OFF((+L3A))



<ON>((+L3B))

#### Transmit Check Character



<OFF>((+L4A))



ON((+L4B))

---

#### Select Insertion (Default:00)



<00H-02H>((+L9A))

---

#### Truncate Leading Digit (Default:00)



<00H-7EH>((+L7A))

---

#### Truncate Last Digit (Default:00)



<00H-7EH>((+L8A))

---

#### Min. Length(Default:03)



<01H-50H>((+L5A))

Max.  
Length(Default:50H)



<01H-50H>((+L6A))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.8 Code 128

#### Reading



OFF((+M1A))



#### Code ID (Default: M)



<20H-7EH>((+M2A))

<ON>((+M1B))

#### Verification



OFF((+M3A))



#### Transmit Check Character



<OFF>((+M4A))

<ON>((+M3B))



ON((+M4B))

---

#### Truncate Leading Digit(Default:00)



<00H-7FH>((+M8A))

---

#### Truncate Last Digit(Default:00)



<00H-7FH>((+M9A))

---

#### Select Insertion(Default:00)



<00H-02H>((+MCA))

---

#### Min. Length(Default:03)



<01H-50H>((+MAA))

#### Max.

#### Length(Default:50H)



<01H-50H>((+MBA))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

**UCC/EAN128**



<OFF>((+M6A))



ON((+M6B))

---

**Application ID transmit**



01 & Terminator ((+MDD))



OFF & Terminator  
((+MDC))



01 Transmit((+MDA))



(01) Transmit ((+MDB))

---

**Application ID Terminator**



<00H-7EH>((+MEA))

---

End Configuration((+ENDF))





Start Configuration((+SETF))



---

**IATA Code**



<OFF>((+V1A))



ON((+V1B))

---

**3.9 Interleaved 2 of 5**

**Reading**



OFF((+N1A))



<ON>((+N1B))

**Code ID (Default: N)**



<20H-7EH>((+N2A))

**Verification**



<OFF>((+N3A))



ON((+N3B))

**Transmit Check Character**



OFF((+N4A))



<ON>((+N4B))

---

**Truncate Leading Digit(Default:00)**



<00H-7EH>((+N5A))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



**Truncate Last Digit(Default:00)**



<00H-7EH>((+N6A))

**Select Insertion(Default:00)**



<00H-02H>((+N9A))

**Min. Length(Default:06)**



<01H-50H>((+N7A))

**Max.  
Length(Default:50H)**



<01H-50H>((+N8A))

### 3.10 Industrial 2 of 5

**Reading**



<OFF>((+O1A))



ON((+O1B))

**Code ID (Default: 0)**



<00H-7EH>((+O2A))

**Verification**



<OFF>((+O7A))



ON((+O7B))

**Transmit Check Character**



<OFF>((+O8A))



ON((+O8B))

**Truncate Leading Digit(Default:00)**



End Configuration((+ENDF))



Start Configuration((+SETF))



<00H-32H>((+O5A))

**Truncate Last Digit(Default:00)**



<00H-32H>((+O6A))

**Select Insertion (Default:00)**



<00H-02H>((+O9A))

**Min. Length (Default:06)**



<01H-50H>((+O3A))

**Max.**

**Length(Default:50H)**



<01H-50H>((+O4A))

### 3.11 Matrix 2 of 5

**Reading**



<OFF>((+P1A))



ON((+P1B))

**Code ID (Default: P)**



<20H-7EH>((+P2A))

**Verification**



<OFF>((+P3A))



ON((+P3B))

**Transmit Check Character**



<OFF>((+P4A))



ON ((+P4B))

**Truncate Leading Digit(Default:00)**

End Configuration((+ENDF))



Start Configuration((+SETF))



<00H-50H>((+P5A))

**Truncate Last Digit(Default:00)**



<00H-50H>((+P6A))

**Select Insertion(Default:00)**



<00H-02H>((+P9A))

**Min. Length(Default:06)**



<01H-50H>((+P7A))

**Max.**

**Length(Default:50H)**



<01H-50H>((+P8A))

### 3.12 China Post Code

**Reading**



<OFF>((+Q1A))



ON((+Q1B))

**Code ID (Default: Q)**



<20H-7EH>((+Q2A))

**Verification**



<OFF>((+Q3A))



ON((+Q3B))

**Transmit Check Character**



<OFF>((+Q4A))



ON((+Q4B))

End Configuration((+ENDF))



Start Configuration((+SETF))



---

**Truncate Leading Digit(Default:00)**



<00H-50H>((+Q5A))

---

**Truncate Last Digit(Default:00)**



<00H-50H>((+Q6A))

---

**Select Insertion(Default:00)**



<(00H-02H)>((+Q9A))

---

**Min. Length(Default:06)**



<01H-50H>((+Q7A))

**Max.  
Length(Default:50H)**



<01H-50H>((+Q8A))

---

### 3.13 MSI / Plessey

**Reading**



<OFF>((+R1A))



ON((+R1B))

**Code ID (Default: R)**



<20H-7EH>((+R2A))

**Verification**



<OFF>((+R3A))



MOD 11/10((+R3D))



MOD 10((+R3B))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



**Transmit Check Character**

MOD 10/10((+R3C))



OFF((+R4A))



<ON>((+R4B))

**Truncate Leading Digit (Default:00)**



<00H-3CH>((+R5A))

**Truncate Last Digit (Default:00)**



<00H-3CH>((+R6A))

**Select Insertion (Default:00)**



<00H-02H>((+R9A))

End Configuration((+ENDF))



Start Configuration((+SETF))



---

**3.13 MSI / Plessey**

**Min. Length (Default:06)**



<01H-50H>((+R7A))

**Max. Length**

**(Default:50H)**



<01H-50H>((+R8A))

---

End Configuration((+ENDF))



Start Configuration((+SETF))



---

### 3.14 CODE32

#### Reading



<OFF>((+S1A))



ON((+S1B))

#### Code ID (Default: S)



<20H-7FH>((+S2A))

#### Verification



<OFF>((+S3A))



ON((+S3B))

#### Transmit Check Character



<OFF>((+S4A))



ON((+S4B))

---

#### Truncate Leading Digit( Default:00)



<00H-0AH>((+S5A))

---

#### Truncate Last Digit(Default:00)



<00H-0AH>((+S6A))

---

#### Select Insertion (Default:00)



<00-02H>((+S7A))

---

#### Transmit "A"



<OFF>((+S8A))



ON((+S8B))

---

End Configuration((+ENDF))





Start Configuration((+SETF))



---

### 3.15 Code 11

#### Reading



<OFF>((+T1A))



ON((+T1B))

#### Code ID (Default: T )



<20H-7EH>((+T2A))

#### Verification



<OFF>((+T3A))



ON((+T3B))

#### Transmit Check Character



<OFF>((+T4A))



ON ((+T4B))

---

#### Truncate Leading Digit (Default:00)



<00H-50H>((+T5A))

---

#### Truncate Last Digit (Default:00)



<00H-50H>((+T6A))

---

#### Select Insertion(Default:00)



<00H-02H>((+T9A))

---

#### Min. Length (Default:06)



<01H-50H>((+T7A))

#### Max. Length (Default:50H)



<01H-50H>((+T8A))

---

End Configuration((+ENDF))



---

APPENDIX A -- ASCII CODE



0



1



2



3



4



5



6



7



8



9



A



B



C



D



E



F



Y



N

---

APPENDIX A -- ASCII Table

	0	1	2	3	4	5	6	7
0	NUL	DLE	SP	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