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# FuzzyScan

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**MBC-6890**

**Cordless Scanning Family**

**Quick Reference**

International Edition, Rev. FSQR-A31204

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## **Federal Communications Commission (FCC) Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## **Regulatory information / Disclaimers**

Install and use of this Fuzzy Scan device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the User's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cable and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulation arising from failing to comply with these guidelines.

## **FCC RF Radiation Exposure Statement:**

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. (for FCC ID: SBC-ADB100)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## Getting Started

Welcome to the FuzzyScan world Cordless Scanning Family, the most professional high quality cordless bar code liner imagers available in the market. In order to work with various needs, the Long Distance and Short Distance Bluetooth connections are available for both Long Range and High Density bar code linear imagers.

The FuzzyScan Cordless family is designed to read various poor-printing bar codes with superior tolerance. Aside from the outstanding reading performance, the MBC6890 cordless linear imager is implemented with the latest Bluetooth technology for the reliable as well as cost-effective cordless solution.

# FuzzyScan MBC-6890

*The long distance/short distance, long-range/high-density bar code linear imager for mobile reading or cable replacement*

## The Cordless Communication

MBC6890 achieves the real-time cordless data transmission to the host through the most contemporary Bluetooth module.



## The Maximized Freedom of Scanning

MBC6890 can free the operators from standing behind the desk, so they can move around and scan the bar code labels on bulky items without any difficulty.

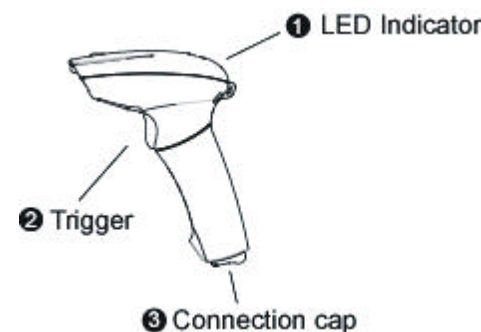
## The Reliable Plug & Play Solution

In order to guarantee the accuracy of data transmission, the auto acknowledgement will feedback from the Smart Cradle to scanner. Therefore, the bar code scanning can be processed more freely, efficiently and correctly.

## The Embedded “FuzzyScan” Scan Engine

Applied to the latest innovative linear imaging technology, the FuzzyScan MBC-6890 linear imager is designed to capture bar code image up to 12” in snapshot (300 scans per second). Thanks to the ergonomic gun-shape and no moving part designs, this reader is the best choice to replace traditional laser scanner with lower cost.

Both “**Long-range**” and “**High-density**” models are provided for reading alternatives of different resolution bar codes. Usually, the long-range model can read most popular bar codes up to 4-mil (0.01mm) resolution. Once the very fine resolution bar code capture is needed, you may choose the high-density model that is fully optimized to capture bar codes up to 3-mil (0.075mm) resolution.

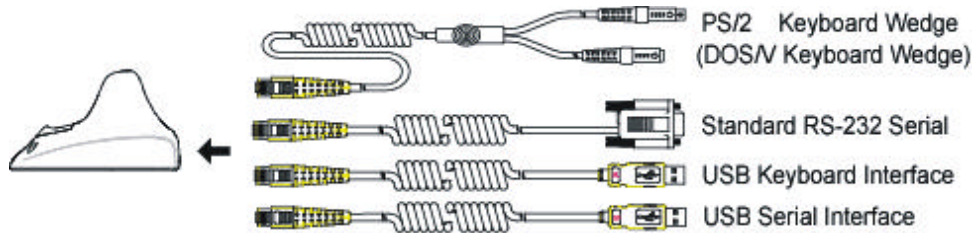


1. LED Indicator - 2 colors LED indicator shows scanner status.
2. Trigger - scanning trigger.
3. Connection cap - the connection to smart cradle and protection for scanner.

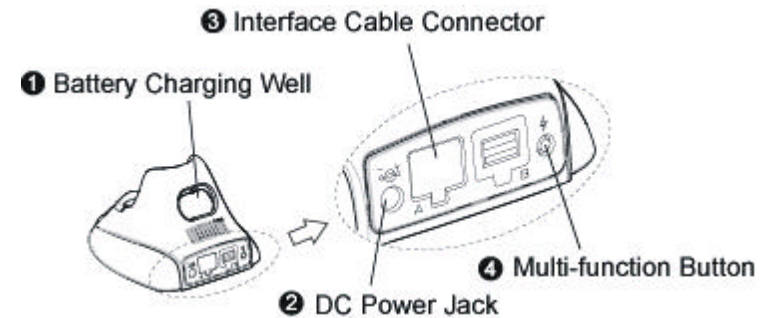
## The Smart Cradle for MBC6890

### Interface Cable

An improved *Snap-in* cable design allows user to change whole interface cable with ease. Please refer to below for the list of compatible interface cables.



### Battery Charging & Multi-function Button



1. Battery Charging Well – for spare battery fast charge.
2. DC Power Jack – connect to the external power adaptor DC outlet.
3. Interface Cable Connector – supports PS/2 Keyboard, RS232 Serial, USB Keyboard, USB Serial interface cables.
4. Multi-function Button:
  - (1) Short press (press and release immediately) for paging and battery discharging functions – To page the paired scanner and discharge the battery which loaded into battery charging well..
  - (2) Long press (press and hold for over 3 seconds) for “Uninstall” and “Battery Discharge” functions – To un-pair with the paired scanner then turn both scanner and Smart Cradle into uninstall state. At same time it will discharge the battery which loaded into battery charging well.

**Caution !** Both Short press and Long press will cause discharging the battery which is loaded into battery charging well.



## Using Your MBC6890

Before using the scanner, it should be already paired with a particular Smart Cradle and programmed. If not, please refer to the following sections to understand how to set the scanner working with your existing system within minutes. For most applications, the factory default setting and quick setting can meet your common requirements. If not, consult the appropriate FuzzyScan Bar Code Programming Manual for your specific needs. For further assistance, please contact your local supplier or visit our web site - **[www.cino.com.tw](http://www.cino.com.tw)**.

# Install Your MBC6890

To use your MBC6890, please follow the instruction step by step as below:

## 1. Charge battery for at least 4 hours for the first time.

- Connect the power to Smart Cradle.
- Load battery pack into the battery charging well for at least 4 hours. (for the first time only)



## 2. Install Smart Cradle

- Power off Host computer.
- Connect the power to Smart Cradle.
- Connect desired interface cable between Smart Cradle and host computer.
- Power on Host computer.
- Make sure the COM port is not occupied by other host application if RS232 Serial cable is used.



## 3. Install Scanner

- Place battery pack into scanner and close battery cover.
- Add connection cap at the end of scanner holder.



## 4. Pairing process

- Please inspect the scanner is doing red-green flashing which identify it is under “Uninstall” state. If the scanner is already under “Uninstall” state, the next step can be by passed.
- Scan “Uninstall” barcode. The scanner will give 3 short beeps, then its LED gives red-green flashing.
- Scan “Pair Mode” barcode. The scanner will give 3 short beeps then its LED lights on red.
- Place the scanner on cradle within 10 seconds. The pairing process will automatically start.
- Scanner LED lights on red and gives continuous short beeps during pairing process.
- You will hear a special “pairing OK tone” and scanner LED goes off. Now the pairing process is completed.



## 5. Interface Cable Setting

- Scan the “Quick Set Command” barcode in the end of this document to set up the desired type of interface cable. The LED indicator will light on red during the setting, and goes off when the setting is completed.
- Ready to use.



# LED Display and Beeping Reference Table

Please refer to the table below for the list of LED display and beeping in different conditions

	Scanner				Cradle			
	LED Light		Beeping		LED Light		Beeping	
	Green	Red	Long	Short	Green	Red	Long	Short
Battery low		Flashing		continues				
Bluetooth Disconnect			2 (after triggered)			on	2	
Bluetooth Re-Connect	Flash once			2	Flash once			2
Transmission Error		Flash once	1 (after triggered)			Flash once		
Scan “Uninstall” barcode		On		3				
Un-pair condition	Green-Red continues flashing			4	Green-Red continues flashing			4
Scan “pair” barcode		On		3				
Scanner on cradle				1		on		1
During Pairing process		On		continues		on		
Pairing OK			special					
Scan Interface Cable Setting “Quick Set command barcode”		On (During setting)	special					
Good Read	Flash once		special					
Scanner page Smart Cradle		Flash once		1				5
Smart Cradle page Scanner		Flash once		5				1

# Uninstall / Pairing Command

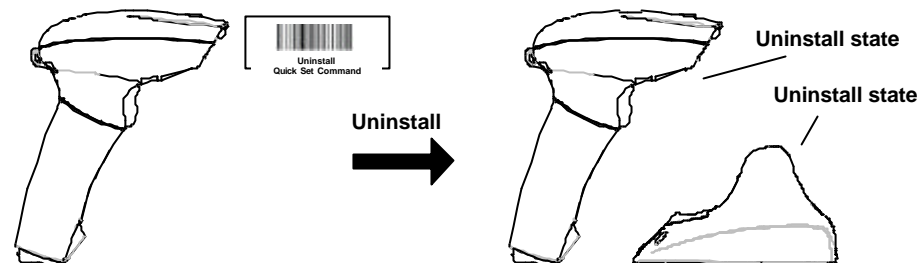
## Uninstall

In order to make sure that a scanner can always connect to its paired smart cradle, you will not be able to pair a cradle with another scanner when that cradle is being connected to a previously-paired scanner. Please scan “Uninstall” Quick Set Command to stop the connection between scanner and smart cradle, and turn both into “Uninstall” state. Afterwards, the scanner can be paired with other cradle; the cradle can also be paired with other scanner, without causing user any confusion.

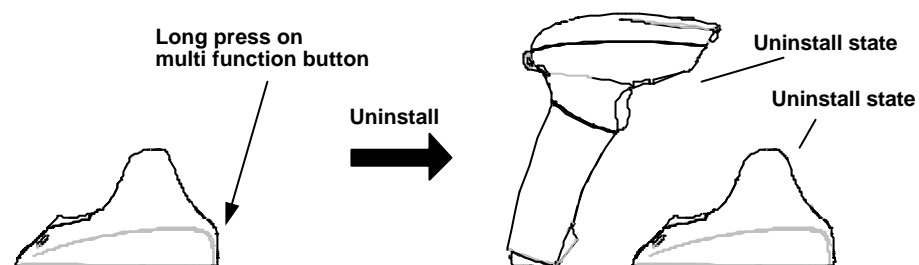


Note:

The long press (press and hold for 3 seconds) of multi function button at rear of paired Smart Cradle provides the same function of “Uninstall”.

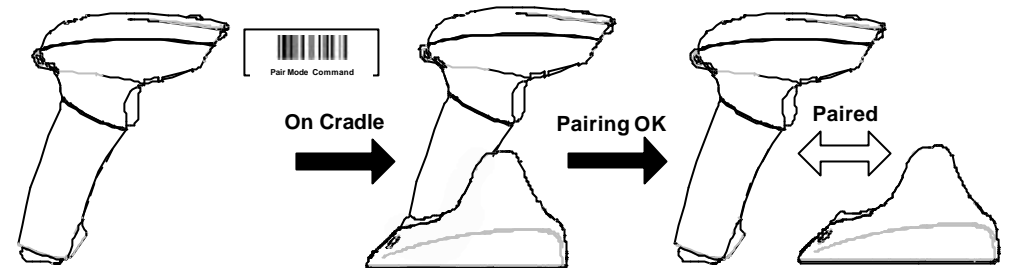


OR



## Pair Mode Command

Before the scanner is able to work with the selected smart cradle, you need to do the pairing process. Please scan “Pair Mode” Quick Set Command then place the scanner on Smart Cradle within 10 seconds. The pairing process will automatically start. The pairing process is finished when the Red LED indicator goes off and a special pairing OK tone is heard.

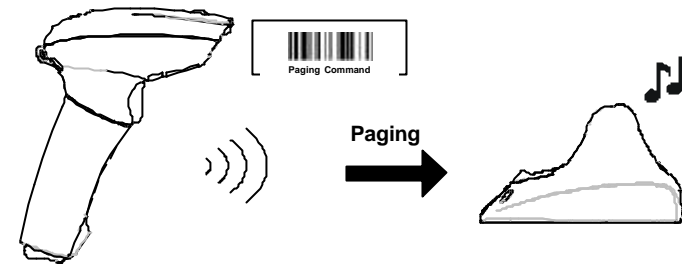


# Paging Command

This Quick Set Command is specially designed for locating paired Smart Cradle. After scan this barcode, the particular paired Smart Cradle will give 5 short beeps. The user can therefore easily find the specific paired Smart Cradle.



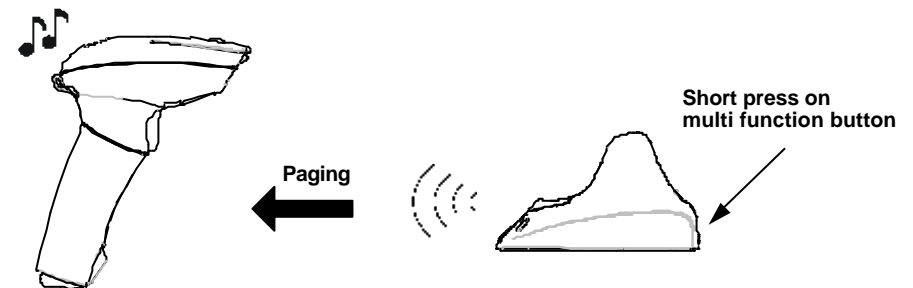
## Scanner page Smart Cradle:



## Note:

The Short press (press and release immediately) on multi function button at rear of Smart Cradle will page the paired scanner. The scanner will give 5 short beeps when paged by the paired Smart Cradle.

## Smart Cradle page Scanner:



# Interface Cable Setting

## Keyboard Wedge Setting

Keyboard wedge solution is the most popular and convenient way to use bar code reading device. This solution allows data transmission from the scanner to the host through the existing keyboard port as traditional keyboard input. For keyboard wedge application, the MBC6890 must work with the existing keyboard concurrently. You may treat the reader or imager as the second keyboard as well.

Among the various keyboard wedge interfaces, the PS/2 (DOS/V) keyboard wedge is the most popular one. To set or recover all related parameters of keyboard wedge to factory default value, you may scan the following bar code system command for quick setting.



If you want to link the MBC6890 to computer's or notebook PC's keyboard port without the existing keyboard, please scan the "Keyboard Replacement Quick Set Command" at the last page.

## Standard RS232 Interface Setting

Standard RS-232 serial interface is among one of the most popular interface for applications of bar code scanners.

To set or recover all related parameters of standard RS-232 serial interface, you may scan the following bar code system command for quick setting.



## USB Keyboard Interface Setting

The USB interface is one of the common and popular peripheral interfaces for today's computer system. All MBC6890 USB keyboard models scanners have already implemented USB Keyboard interface for host linking. Please refer the following chart for the outlook of USB keyboard Interface cable.

To set or recover all USB keyboard interface related parameters, you may scan the following bar code system command for convenience.



## USB Serial Interface Setting

The USB Serial interface is one of the common standard peripheral interfaces for today's computer system. All MBC6890 scanners have already implemented USB Serial interface for host linking. Please refer the following chart for the outlook of USB Serial Interface cable.

To set or recover all USB Serial interface related parameters, you may scan the following bar code system command for convenience.



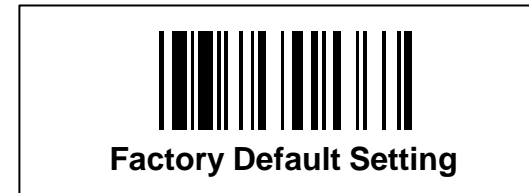
## System Information List

To scan this bar code command, the MBC6890 will output the product related information for reference, including product model no., revision no, and so on.



## Factory Default Setting

To scan this bar code command, the MBC6890 will reset all user settings to factory default value.



## Trouble Shooting

Please follow the operating instructions listed below when your MBC6890 does not work:

1. Check the battery power. The battery need to be charged if the scanner red light on and beeping continually.
2. Check for loose cable connections between smart cradle and host computer.
3. Make sure the selected host interface is suitable for your host machine connection.
4. Make sure the interface setting is correct.
5. Make sure the type of bar code you are trying to scan is set correctly.
6. Make sure you are inside the Bluetooth working range.

If the MBC6890 still does not work, please contact the technical person in charge of scanning or your local supplier.

## Safety Precautions for Batteries

1. Do not place batteries in fire or heat the batteries.
2. Do not store batteries near fire or other high temperature locations.
3. Do not store or carry batteries together with metal objects.
4. Do not expose batteries to water or allow the batteries to get wet.
5. Do not connect (short) the positive and negative terminals, of the batteries, to each other with any metal object.
6. Do not pierce, strike or step on batteries or subject batteries to strong impacts or shocks.
7. Do not disassemble or modify batteries.

### **Caution!**

Danger of explosion if batteries are incorrectly replaced. Replace only with the battery supplied by manufactory.

## Appendix



To scan following commands will reset related settings to factory default, which may be different to your current settings. Please consult the technical person in charge of scanning or your local supplier before scanning the following bar codes.



**PC/AT, PS/2 Keyboard Wedge  
Quick Set Command**



**Keyboard Replacement  
Quick Set Command**



**System Information List  
(SYSLIST)**



**RS-232 Serial Interface  
Quick Set Command**



**Paging  
Quick Set Command**



**Factory Default Setting  
(M\_DEFAULT)**



**USB Keyboard Interface  
Quick Set Command**



**Uninstall  
Quick Set Command**



**FuzzyScan PowerTool  
Host Link Command**



**USB Serial Interface  
Quick Set Command**



**Pair Mode  
Quick Set Command**