

User's Manual

BCP-6000 Series

Portable Data Collector

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1. Introduction

BCP-6000 is a compact-sized, battery-operated, hand-held portable memory laser diode barcode scanner with elegant and high-quality aluminum housing design. The device equips with easy to eyes LCD display and tactile keys for data editing and navigation. The easy to use utility and built-in programs provide best solutions to various data collecting applications such as warehouse management, attendance tracking, and inventory taking.

1.1 Features

- Light weight with elegant aluminum housing design
- Battery operated and easy replacement
- Hardware password protection
- 224KB flash memory stores up to 10,000 records of 15-character barcodes and 6 bytes timestamp
- Portable or tethered available
- Data retained even if battery removed
- Low battery, memory near full and memory full warnings
- All scans are time stamped
- Only valid scans are logged
- Easy-to-use upload, configuration and pre-defined jobs utility

1.2 Unpacking

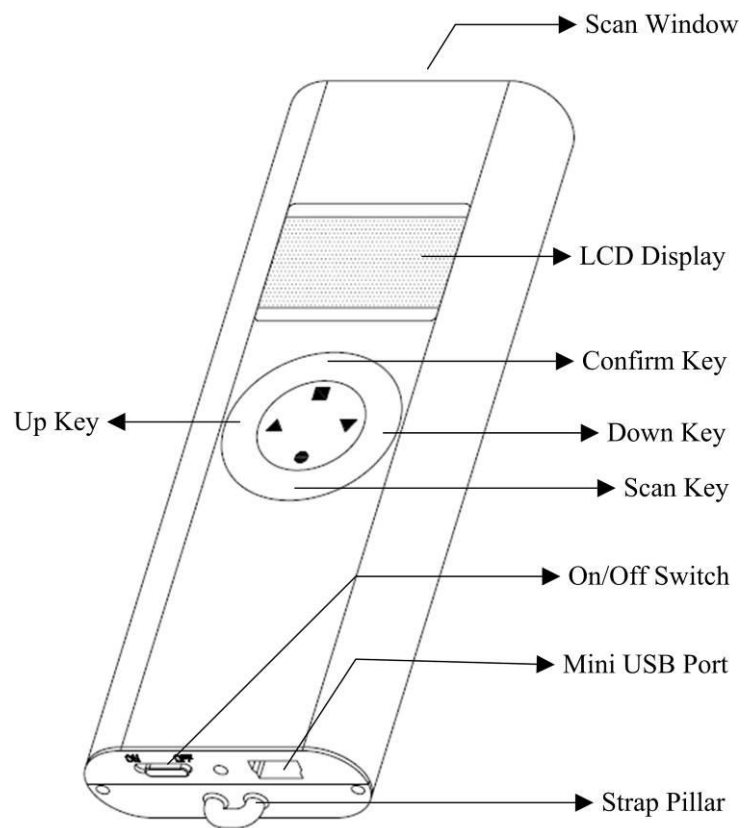
Standard Package

- BCP-6000 x 1
- USB Charging/Communication Cable x 1
- Support CD x 1

Note:

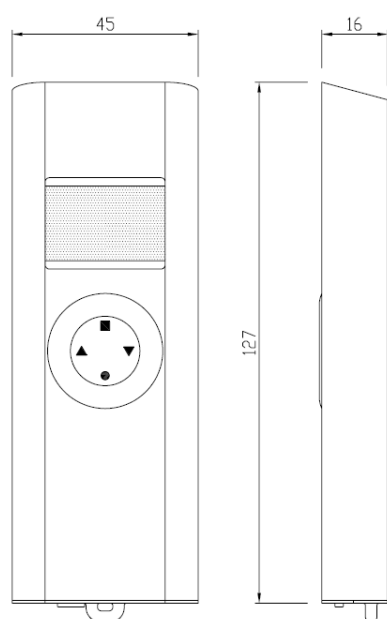
- If there's any physical damage or missing parts, please contact your supplier immediately.
- Please keep all packing material as it should be used when you need to ship back BCP device for service.

1.3 Overview



1.4 Specifications

Operation	
Nominal Scan Rate	100 scans/sec.
Wavelength	650nm±10nm
Maximum Pitch	±65°
Minimum Skew	±50°
Minimum Bar Width	4 mil
Scan Pattern	Single scan line
Buffer Capacity	224KB for data retention
Display	LCD graphic 128 x 64 dot matrix panel with back light 18 characters x 4 lines; 7 x 16 dot matrix display pattern
Communication Cable	USB cable
Readable Barcode Symbolologies	EAN, UPC, I 2 of 5, Codabar, Code 39, Code 128, China Postage, Code 32, Code 11, MSI-Plessy, Code 4, RSS-14
Electricity	
Working Voltage	3.2V to 4.2V
Power Consumption	Operating: 90mA; Power on without scanning: 30mA; Power Off: 0.5mA
Battery Type	Lithium-Ion
Battery Capacity	900mAh good for 40,000 scans per recharge
Charge	By USB cable
Time of Charge	About 4 hours
Environment	
Operation Temperature	0°C~45°C (32°F~113°F)
Storage Temperature	-20°C~65°C (-18°F~149°F)
Relative Humidity	5%~95% non-condensing
EMI	FCC class A
Ambient Light	4,000~80,000 lux



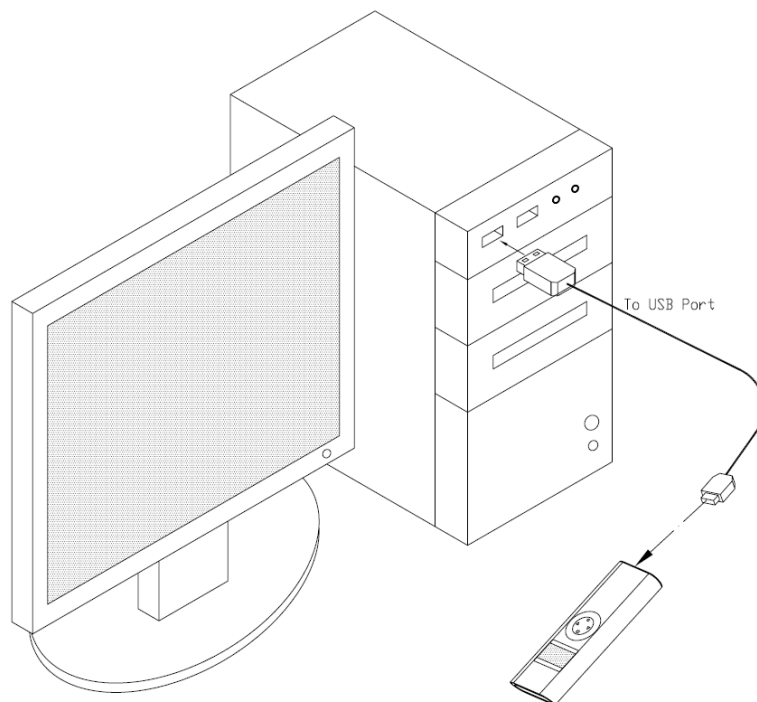
2. Battery Care

Each BCP unit was pre-charged at the factory, but getting the battery fully charged before the first use is strongly recommended.

2.1 Recharge

BCP-6000 can be charged via USB cable. Follow the steps below to charge the BCP-6000.

- Make sure the on/off switch of BCP-6000 is set to on.
- Plug the mini USB connector of the cable into the mini USB port of the BCP-6000, and connect the USB A type connector of the cable to computer's USB port.
- Press the scan key for 5 seconds without reading any barcodes. The prompt of "Charging..." will show on the screen indicating the BCP-6000 enters charging mode.
- Full recharge takes around 4 hours from low battery status. The prompt of "Charging Completed!!!" will show on the screen after the BCP-6000 is fully charged. Turn off then on the BCP-6000 to leave charging mode.



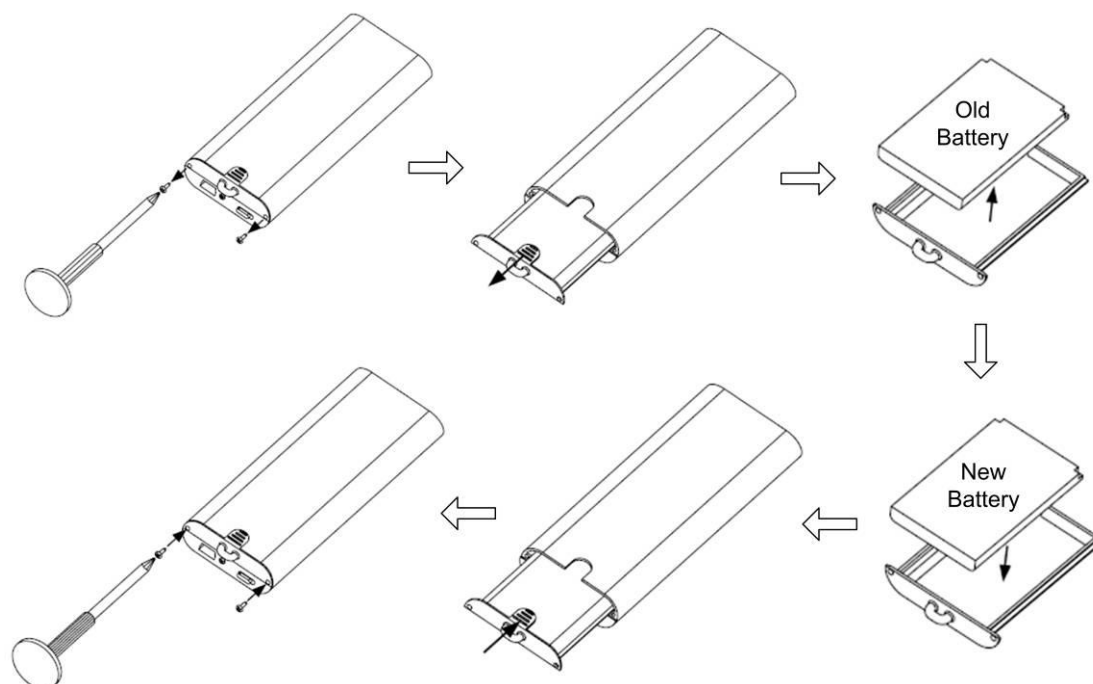
2.2 Low Battery Warning

When the battery power drops low, the prompt of “Battery Low!!!” will show on the screen. More than 100 scans can be made after the warning. Get the BCP unit charged immediately as the warning message appears. **If the BCP unit is not charged and the battery power keeps dropping to some extent, the Real Time Clock will be turned off and all settings will return to the default values.**

2.3 Replace Battery

In case you need to replace the battery on your own, follow the steps below. Use the recommended battery only.

- Loosen the screw x 2 on the battery cell.
- Push the arc area in a down direction to take the battery cell out.
- Detach the old battery and attach a new battery with attention to the direction of the battery.
- Replace the battery cell and tighten the screws.

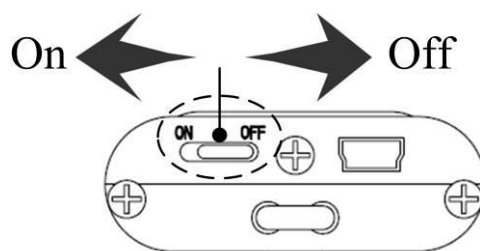


3. Get Started

3.1 Scan & Store Data

3.1.1 Power On/Off

Slide the on/off switch to the left/right to turn on/off the BCP-6000, and the LCD will be turned on/off.



3.1.2 Scan Data

Press the scan key, and a red light will emit from the scan window. Aim the red scan light at the barcode to scan, and a beep will emit with a successful read. If the scan key is pressed for 2 seconds without a successful read, the red scan light will turn off to save power consumption. Press the scan key and aim at a barcode to read again.

3.1.3 Browse Data

Press ▲ or ▼ to scroll up or down to browse data. A beep emits as pressing the ▲ or ▼ key.

3.1.4 Delete Data

Press ■ while navigating to a record that needs to be deleted. When the “Delete?” line shows on the screen, press ▲ & ▼ keys together to delete the designated record, or press ■ to quit the mode. There’s a message “Data-Deleted!!!” with the deleted record and it won’t be uploaded to the computer.

3.1.5 Enter Numbers

Number entering is required at job mode 1 (e.g. enter a Q’ty). When you need to enter numbers, press the ▼ key continuously till the Arabic numeral 0~9 rotates to the assigned number. The input number begins with higher order digits. Press ▲ to shift to the next number. Then press ■ to finish the number entering and the scanner is ready for the next scan.

For example, if you want to enter “75”, press ▼ till the number rotates to 7. Press ▲ to shift to the next number; then press ▼ again till the number rotates to 5. Press ■ to finish the key-in.

3.2 Memory near Full & Memory Full Warnings

3.2.1 Memory near Full Warning

When the BCP-6000's memory is near full (available memory under 4 KB), the message "Memory Near Full!" shows on the screen, and in response to a barcode scanning, a short beep emits with a successful scan beep.

Upload and erase data in the BCP unit as soon as the warning is given. (Refer to Section 4.4.4 Upload Data From BCP and Erase Data in BCP)

3.2.2 Memory Full Warning

When the memory is full, the message "Memory Full!!!" shows on the screen, and scanning barcodes, browsing and deleting data are not available. Uploading and erasing data in the BCP-6000 are required to make the scanner rework. (Refer to Section 4.4.4 Upload Data From BCP and Erase Data in BCP)

4. Communication/Utility

4.1 Connecting the BCP-6000 to the Computer

To download settings to the BCP-6000 or upload data from the unit, follow the steps below to connect the BCP-6000 to the computer.

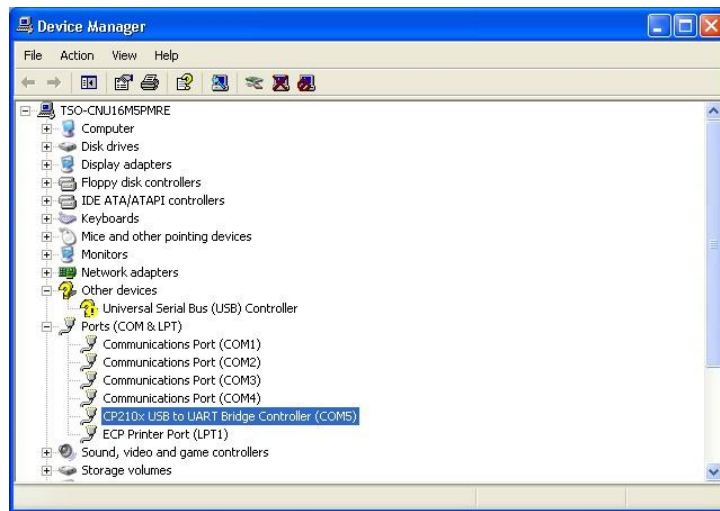
- Connect the mini USB end of the USB cable to the BCP-6000.
- Connect the USB-A male end of the cable to a free USB port on the computer.

4.2 Installing the Utility & USB Driver

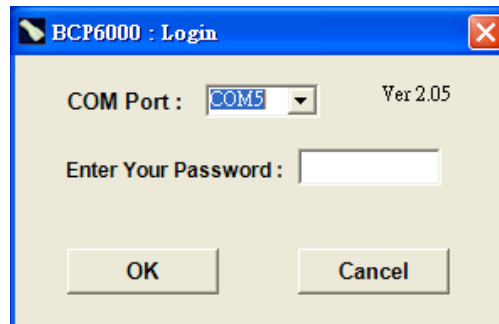
Insert the bundled support CD into an available CD-ROM on the computer. Windows will prompt you to install a device driver for the newly detected hardware when plugging in the USB interface cable to the computer for the first time. Specify the path to the USB driver folder and Windows will complete the driver installation in a few seconds. The driver only needs to be installed once.

4.3 Login

USB driver assigns a virtual serial port for communications. Execute Start\Control Panel\System\Hardware\Device Manager\Ports (Com & LPT) to identify the port number.



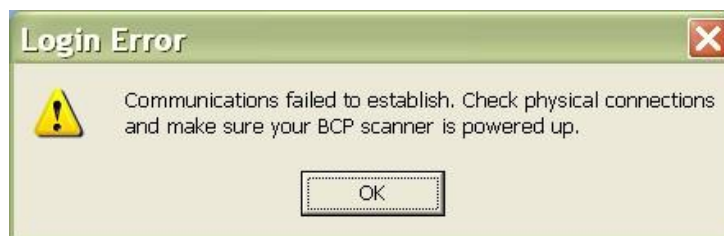
Select the COM Port accordingly and enter your password. On the first access simply press **OK** to log in since no default password is set.



Possible errors:

If the Login Error box pops up, check the items below.

- Is the BCP-6000 connected properly to the computer?
- Is the COM Port properly assigned?
- Is the BCP-6000 powered up?
- Is the record input completed (e.g. Q'ty has been entered)?





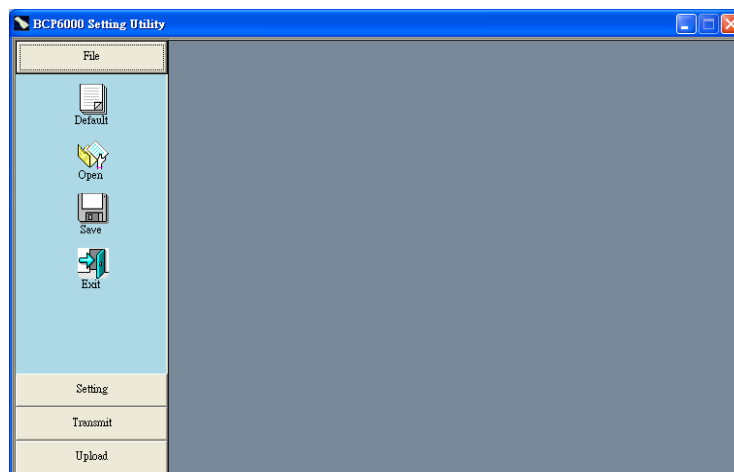
Press the OK button to close the Login Error box. Select the correct COM port and/or reenter a valid password to log in again. Note the password is case sensitive. See also “Change Password” section in 4.4.4.

4.4 Main Menu

If any changes are made, executing Transmit in the Transmit submenu is required to download the new settings to the BCP-6000.

4.4.1 File

File menu contains 4 items: Default, Open, Save, and Exit



Default

Reset all configurable parameters to factory default values.

Open

Open the existing configuration file.

Save

Save current settings to file.

Exit

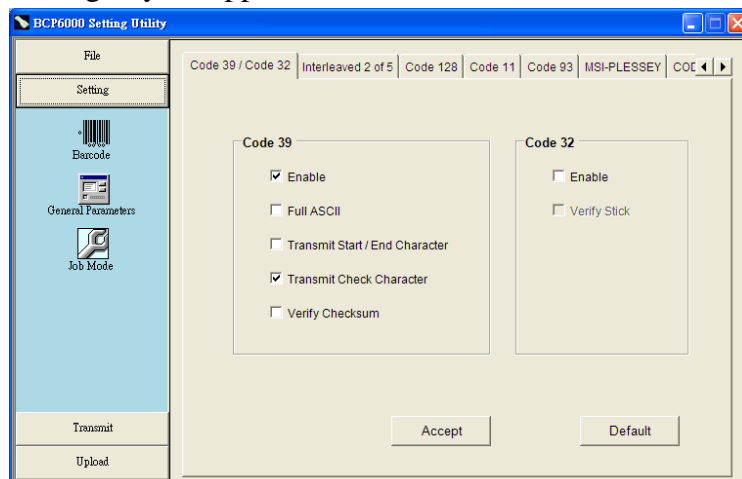
Exit and close the utility.

4.4.2 Setting

Setting menu contains 3 items: Barcode, General Parameter, and Job Mode.

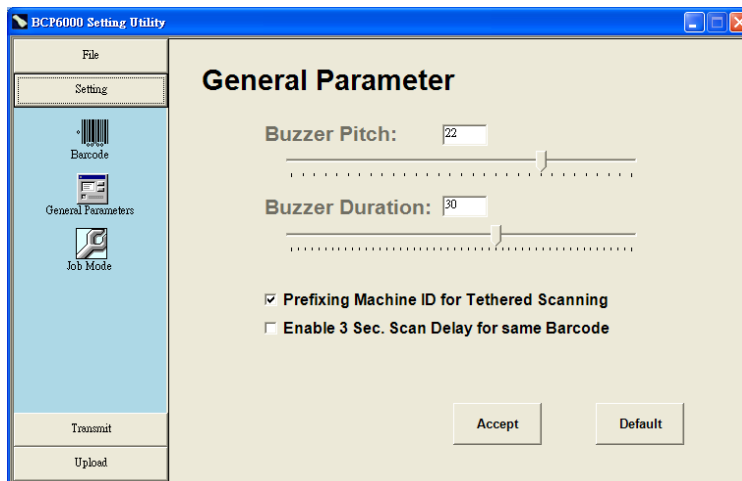
Barcode

Click this item to enable/disable barcode symbologies and to configure each symbology according to your applications.



General Parameter

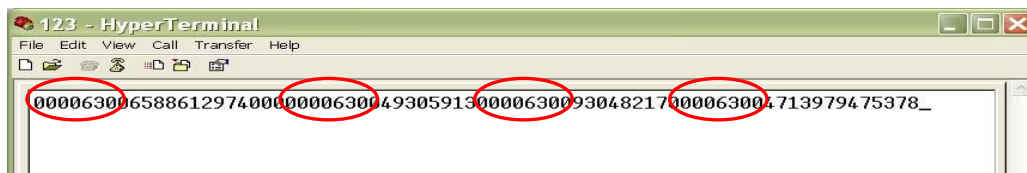
Click this item to set Buzzer pitch and Duration. Higher value means higher pitch and/or longer duration.



- Prefixing machine ID for Tethered Scanning

Select this item to enable/disable prefixing scanned barcodes with Machine ID when the BCP unit is tethered to the computer. This option is useful to distinguish one BCP unit from another while multiple units are attached to the same host terminal.

(See also Section 5. On-line/Tethered Mode)

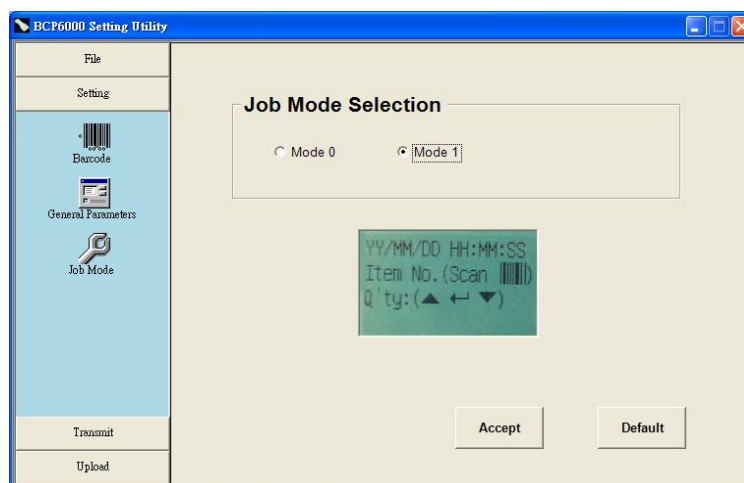
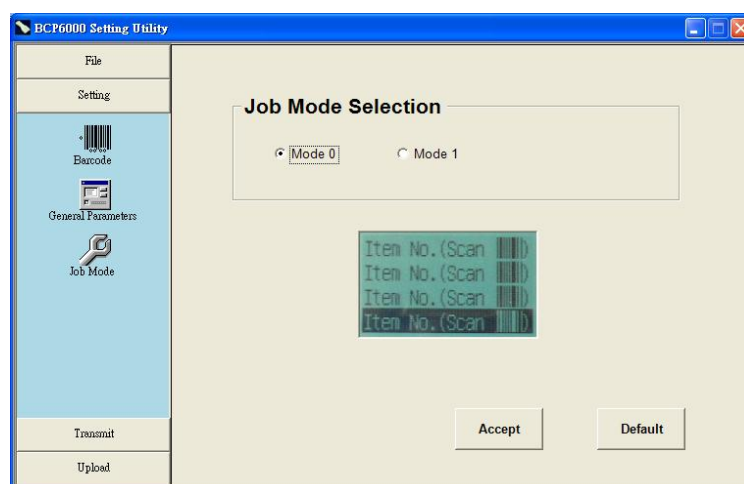


- Enable 3 Sec. Scan Delay for Same Barcode

This option helps you prevent accidental scan of the same barcode twice. Once the function is on, you need to wait 3 seconds to scan an identical barcode again. The 3 sec. delay only applies to scanning exactly the same barcode. You can scan different barcodes smoothly without delay.

Job Mode

BCP provides 2 Job Modes for various applications. Each Job Mode corresponds to a format shown on the BCP unit's LCD display. For example, at Mode 0 the scanner's screen shows 4 barcodes, while at Mode 1 the screen shows one barcode with Time and Q'ty. Appoint a Job Mode and click **Accept** to switch to the new mode.

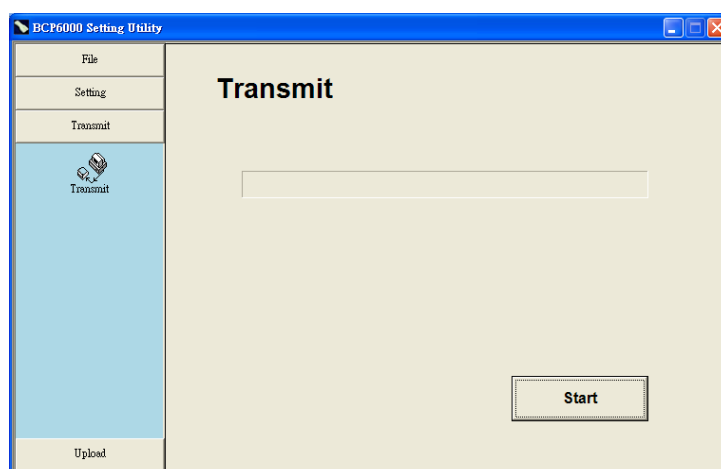


The following 7 Job Modes are additional options which are available if required.

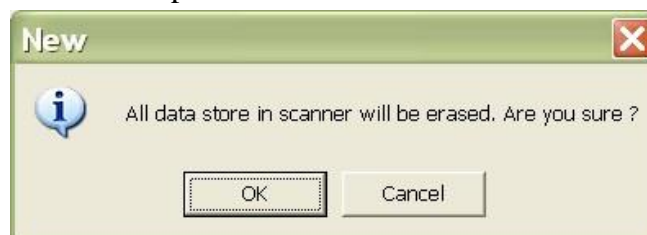
Item No. (Scan ) Q' ty : (▲ ◀ ▼) Site (Scan )	YY/MM/DD HH : MM : SS Item No. (Scan ) Site (Scan )	Item No. (Scan )
YY/MM/DD HH : MM : SS Item No. (Scan ) YY/MM/DD HH : MM : SS Item No. (Scan )	YY/MM/DD HH : MM : SS Item No. (Scan )	Item No. (Scan ) Item No. (Scan )
YY/MM/DD HH : MM : SS Item No. (Scan ) Q' ty : (▲ ◀ ▼)		

4.4.3 Transmit

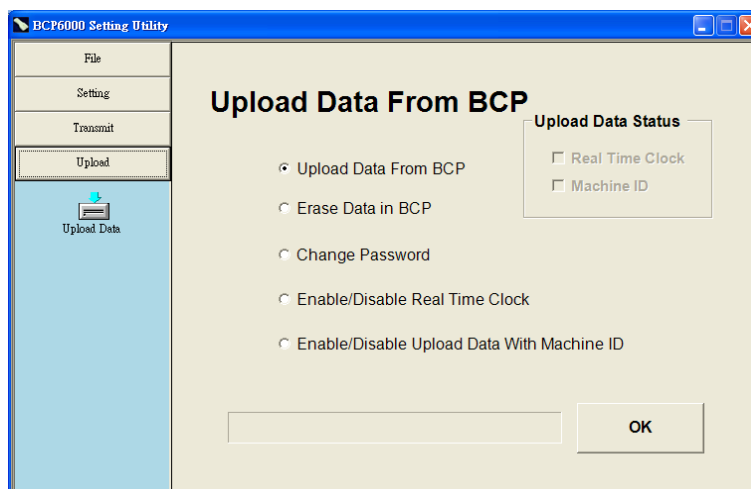
Click **Start** after finishing any setting changes to download the new settings to the BCP-6000. **If Transmit is not executed, the new settings won't be saved in the BCP-6000.**



After clicking the Start button, a box pops up to remind you that all data store in scanner will be erased. Back up the needed data first.

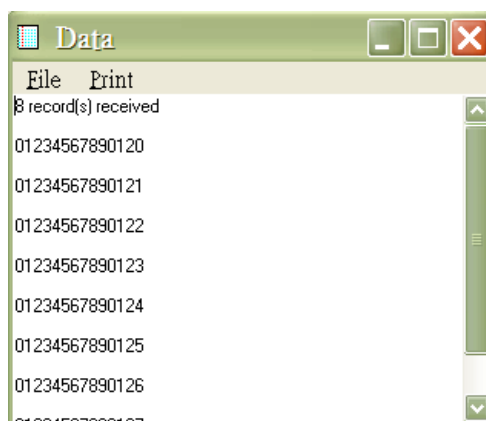


4.4.4 Upload



- Upload Data From BCP

Select this item to upload the data stored in the BCP-6000 to the computer. A notepad window containing the uploaded data will pop up for you to view, edit, print, or save to file.



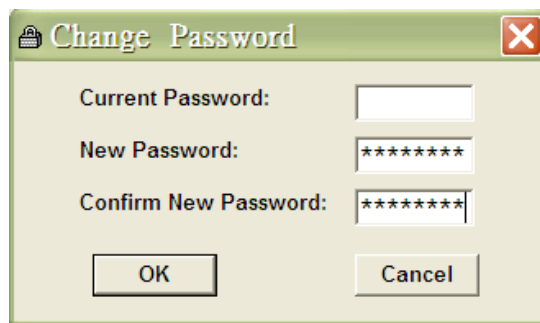
- Erase Data in BCP

Select this item to erase/delete all data stored in the BCP-6000. The erased data cannot be recovered. Back up the needed data first.

- Change Password

Fill in the blanks accordingly. The password contains up to 8 alphanumeric characters, including lower-case a ~ z, upper case A ~ Z, and 0 ~ 9. The password would be changed only after the current password is verified.

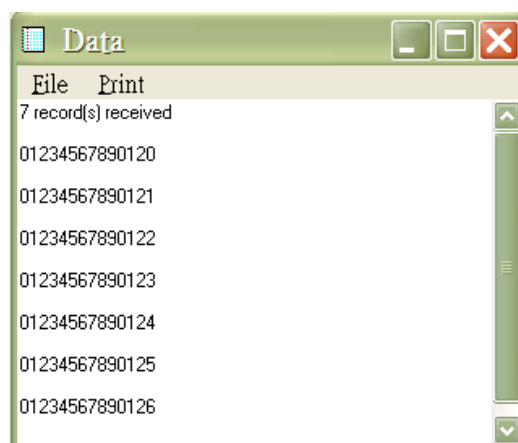
Note that there's no default password. While setting up a password for the first time, leave the Current Password field blank, and fill in the New Password field and the Confirm New Password field directly.



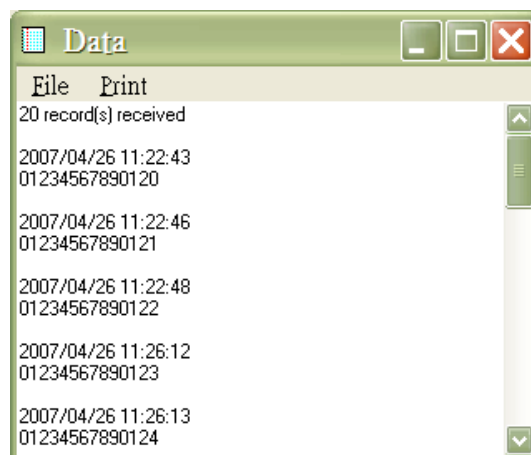
- Enable/Disable Real Time Clock

The date and time of a successful scan are logged in the BCP-6000. This item allows you to include/exclude the timestamp to be displayed in the output window of the upload operation.

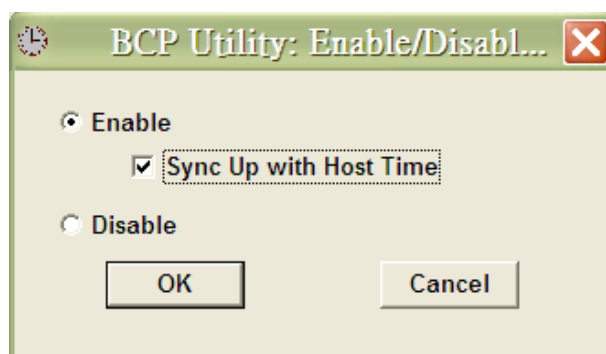
When **Disable** is selected, each record in the upload output window will not be time stamped.



When **Enable** is selected, each record in the upload output window will be prefixed with the date and time of the scan. Note that the real time clock in the BCP-6000 is not initialized at factory. You will need to do it by selecting the sync-up option when you first enable the RTC. Also note that you need to reinitialize the RTC each time a new battery is installed or when the power drops so low that the RTC is turned off.



When RTC is enabled, a timestamp in the format of Year/Month/Day Hour : Minute : Second (e.g., 2007/04/26 11:22:43) will show before each data record.



- Enable/Disable Uploaded Data with Machine ID

Each BCP unit comes with a unique Machine ID (an eight-digit number) from factory. The Machine ID is stored inside the firmware and cannot be modified without removing the IC. This menu item allows you to include/exclude the Machine ID to be displayed in the output window of the upload operation for identification purpose. This option is useful when multiple BCP units are being used to collectively capture barcode data.

Machine ID tagging with real-time data (tethered scanning) is associated with each single record (Refer to "Prefixing machine ID for Tethered Scanning" Section in 4.4.2), while Machine ID tagging with batch data uploaded from BCP memory pertains to the entire data file (as Fig. 1).

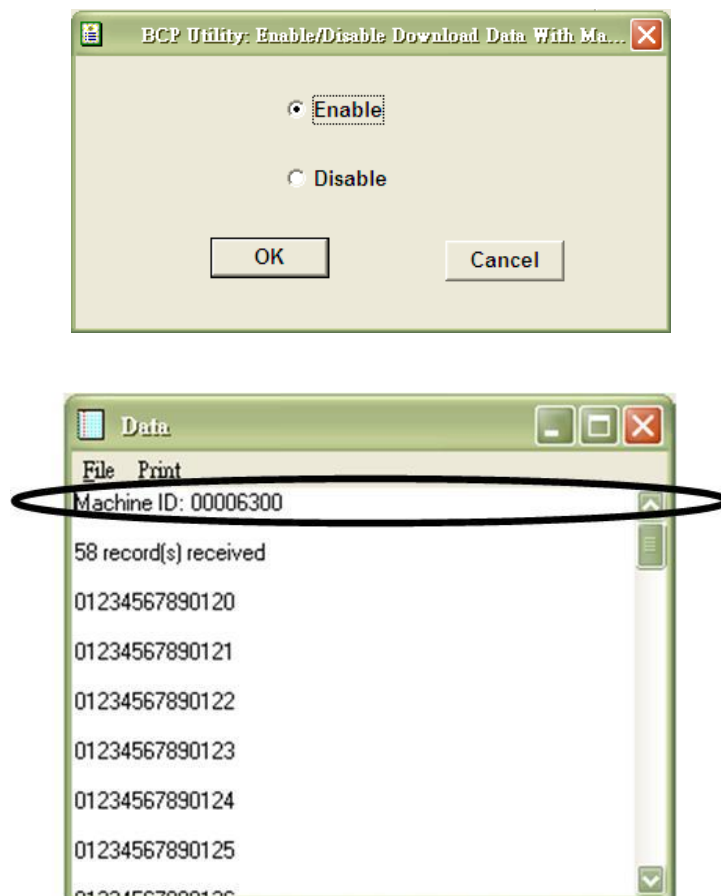


Fig. 1

5. On-line/Tethered Mode

BCP-6000 enables On-line/Tethered mode. At this mode, the scanned data shows on the “Hyper Terminal” window on the computer simultaneously with every scanning, which allows immediate reviewing. The scanned data is stored in the BCP-6000 as well. **Note that the utility cannot be operated at this mode.**

Follow the steps below.

- Run the BCP Setting Utility. Execute Default to set all configurable parameters to factory default values and execute Transmit to save the setting in the BCP unit.
- Connect the BCP-6000 to the computer. (Refer to 4.1)
- Execute Start\All Programs\Accessories\Communications\Hyper Terminal.
- Enter a name, select the first icon, and press **OK**.



- Select the COM Port accordingly and press **OK**. (Refer to Section 4.3 on how to identify the port number)



- Set Bits per second to **9600**, Data bits to **8**. Parity to **None**, Stop bits to **1**, Flow control to **Hardware**. Then press **OK** to finish the setting.



- Read a barcode and the barcode will show on the window simultaneously for you to view, edit, print, and save to file.

