User's Manual

BCP-1100/BCP-4100

Portable Memory Barcode Scanner

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Specifications subject to change without notice
Version 1.3 dated September 6, 2005

1. Unpacking

The following parts list is for reference only. Due to different options, the contents in the package may be different. If any of the items are damaged or missing, please contact your supplier immediately. Please keep the packing materials for future usage, in case you need to ship back the unit for service.

Standard Package

- BCP unit x 1
- USB interface cable x 1
- RS-232 interface cable x 1
- Power adapter x 1
- Utility/driver CD x 1
- User's manual x 1 (on CD)

2. Overview

2.1 Introduction

BCP is a compact-sized, battery-operated, hand-held Portable Memory Barcode Scanner. It is ideal for the portable data collecting applications, such as warehouse management, attendance tracking, inventory taking, and many more.

BCP can also be used as a tethered scanner to transmit barcode readout immediately to your computer without saving it to its internal memory.

2.2 Features

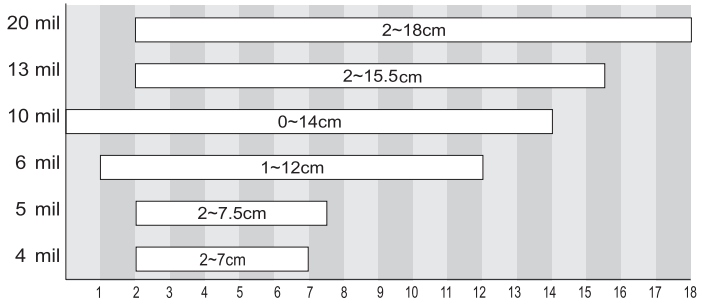
- Outstanding price/performance and superior quality
- Battery operated and easy replacement
- Hardware password protection
- Two-in-one connectivity: USB or RS-232
- USB or A/C adapter rechargeable
- 256 KB Flash memory stores up to 12,000 records of 15-character barcode and 6-bit timestamp
- Portable or tethered
- Data retained even if battery removed
- Dual-color LED for operation and charging status
- Low battery warning
- Low memory and memory full warning
- All scans are time stamped
- Only valid scans are logged
- Easy-to-use download and configuration utility

2.3 Features

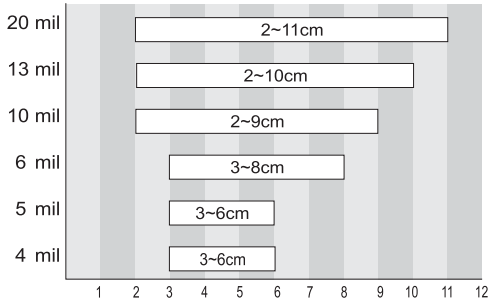
- Processor : 80C31 8-bit CPU
- Memory Capacity : 256KB Flash
- Scan Engine : CCD (BCP-1100) / Laser Diode (BCP-4100)
- Power Consumption : 180 mA max (operating)
- Battery Usage : 500 mAh Lithium-Ion rechargeable battery good for 25,000 scans when full
- Symbology : Code 39, Full ASCII Code 39, UPC/EAN/JAN, Codabar, Interleaved 2/5, Code 11, Code 93, MSI/Plessey, Code 128, RSS-14 (optional)
- Housing : ABS
- Color : Black
- Weight : 100g
- Operating Temperature : 0˚C to 45˚C
- Storage Temperature : -10˚C to 60˚C
- Relative Humidity : 0% to 95% (non-condensing)
- USB Cable : Mini USB to USB-A male
- RS-232 Cable : Mini USB to DB9 female with power jack
- Operating System : Windows 98, 2000, XP

Scan Zone (Based on 90% Code 39):

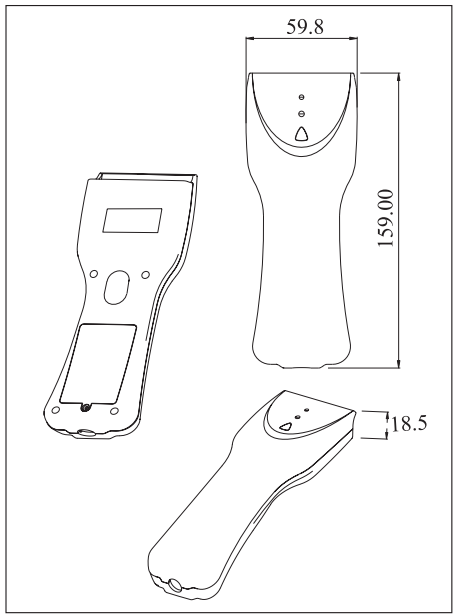
Scan Zone for BCP-4100



Scan Zone for BCP-1100



Dimensions:



3. Getting Started

3.1 BCP Installation

Follow the steps below to interconnect BCP to your PC:

1. Power off your PC.
2. Connect the mini USB end of the interface cable (USB or RS-232) to BCP.
3. For USB interface, connect the USB-A male end of the cable to a free USB port on your system. For RS-232 interface, connect the DB9F end of the cable to a free serial port on your system, and then plug the A/C adapter into the power jack and into an electrical outlet.
4. Power on your PC.

USB Interface Connection

RS-232 Interface Connection

3.2 Utility and USB Driver Installation

There are two subfolders on the utility/driver CD - BCP Utility and USB Driver. Run Setup.exe from the BCP Utility folder and follow the instructions to complete the utility installation.

Windows will prompt you to install a device driver for the newly detected hardware when you plug in the USB interface cable to your host PC the first time. Specify the path to the USB Driver folder and Windows will complete the driver installation in a few seconds. You only need to run the driver installation once. Windows will load the driver automatically the next time around.

Note that USB driver assigns a virtual serial port for communications. Control Panel > System > Hardware > Device Manager > Ports (COM & LPT) will lead you to identify the port number.

3.3 LED Status Indicator

BCP uses a dual-color (green and red) LED to show operation as well as charging status.

3.3.1 Green LED

The green LED will flash once together with a beep to indicate a successful scan. The green LED will keep blinking while download operation is in progress and switch itself off upon completion. The green LED stays on when charging completes.

3.3.2 Red LED

When BCP is connected to an external power source (USB or A/C adapter), the red LED will keep blinking to indicate the power-on status.

While the unit is powered on, if you hold the scan button for 6-8 seconds without making any scan, the red LED will stay on with the green LED flashing constantly to indicate the unit is now charging. In charging mode, you can continue to use the unit. Unplug the external power source to terminate charging.

3.3.3 Low Battery Warning (Double Beep)

When the battery power drops below its threshold, BCP will beep twice in response to a scan press.

3.3.4 Low Memory Warning (Green LED + Triple Beep):

When the unused memory falls under 4KB, in response to a scan press, the green LED will flash twice together with three beeps.

3.3.5 Memory Full Warning (Red LED + Continuous Beep):

When the internal memory reaches its full capacity, in response to a scan press, the red LED will start flashing together with continuous beeps.

You must download then erase the captured data at this point in order to resume your operation.

3.4 Real Time Clock (RTC)

A timestamp in the format of YYYY/MM/DD HH:MM:SS is also stored in BCP along with each data entry. You can enable or disable downloading of the timestamps through the bundled utility. Note that the RTC is not initialized at factory. You need to set it up when you use the unit the first time and each time you install a new battery.

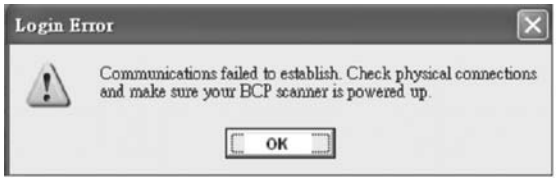
4. Operation Guide

4.1 Login

Upon startup of the BCP utility, you will be prompted to log in to the unit. Select the COM port which matches your settings and enter your correct password. Note that there is no default password preset at factory. When you access the BCP unit the very first time, you can simply press the OK button to log in.

Two possible errors might occur at login. When the communications error window pops up, check the following:

- Is the scanner connected to your PC?
- Is the COM port selection correct?
- Is the scanner powered up (USB or A/C adapter)?



Note that password is case sensitive. Make sure the Caps Lock key is not on when you enter your password.

Press the OK button to close the error window. Select the correct COM port and/or reenter a valid password to log in to the scanner again.

4.2 Main Menu

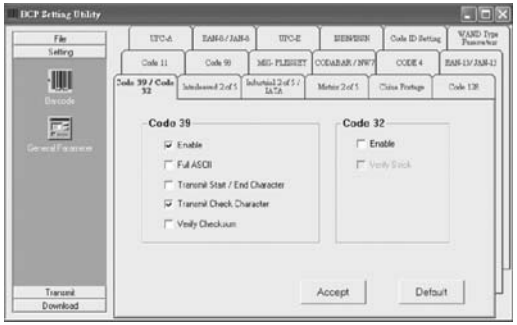
Upon successful login, you are presented with the main menu containing 4 submenus - File, Setting, Transmit, and Download.

4.2.1 File

File menu contains 4 items - Default, Open, Save and Exit.

Default: When you select Default, all the configurable parameters will be reset to default values. Note that all the setting changes you made are stored in the cache of the utility. You must run Transmit from the Transmit submenu to transfer the new settings to the BCP unit in order to complete the configuration.
Open: Open existing configuration file.
Save: Save current settings to file.
Exit: Exit and close the utility.

4.2.2 Setting



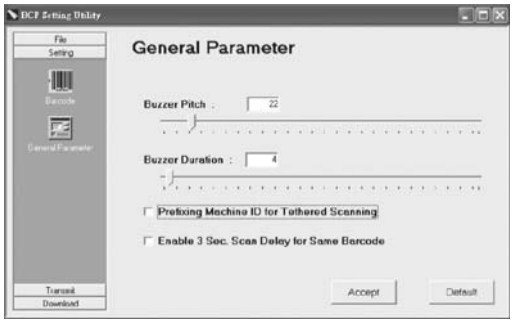
Setting menu contains 2 items - Barcode and General Parameter.

Barcode:

Select this option to enable/disable the barcode symbologies of your choice and to configure each symbology to meet the requirements of your application.

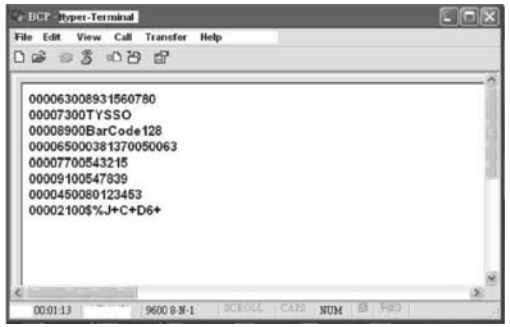
General Parameter:

Select this option to set Buzzer pitch and Duration. The higher the value, the higher the pitch and longer the duration will be.



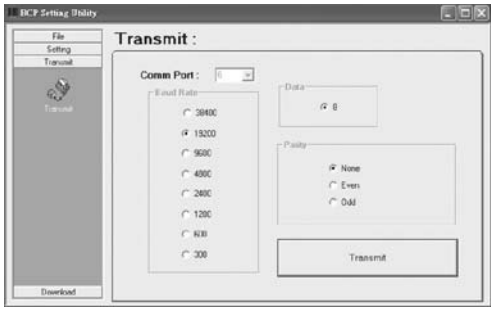
Prefixing Machine ID for Tethered Scanning:

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



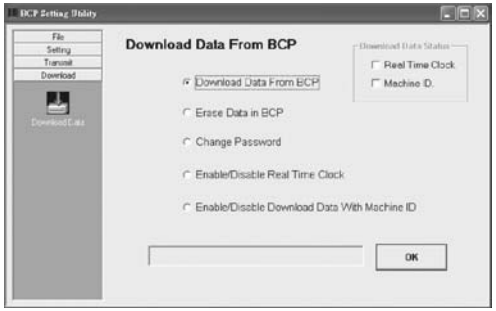
Enable 3 Sec. Scan Delay for Same Barcode:
Select this option to prevent accidental scan of the same barcode twice. When you enable this option, you must wait 3 seconds to scan an identical barcode again. The 3-second delay only applies to the exact same barcode. You are able to scan one barcode after another without any delay as long as they are different.

4.2.3 Transmit



When you are done with all your changes, you must select Transmit and click the Transmit button to transfer the new settings to BCP; otherwise, the new settings will not be saved on the unit.

4.2.4 Download



Download Data from BCP

Select this option to transfer the data stored in the BCP unit to your host PC. A notepad window containing the downloaded data will pop up for you to view, edit, print, or save to file.

Erase Data in BCP

Select this option to erase/delete all the data stored in the BCP unit. Please note the erased data cannot be recovered. To be on the safe side, you may want to back up your data prior to executing this command.

Change Password

The utility allows you to change to a new password only if it successfully verifies your current password. Your password can contain at most 8 alphanumeric characters, including lower-case a ~ z, upper-case A ~ Z, and 0 ~ 9.
Note that there is no default password preset at factory. When you set up your password for the first time, leave out the Current Password field and only fill in the New Password field and the Confirm New Password field.

Enable/Disable Real Time Clock

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

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

When **Enable** is selected, each record in the download output window will be prefixed with the date and time of the scan. Note that the real time clock in the BCP unit 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 you install a new battery.

When RTC is enabled, a timestamp in the format of Year/Month/Day Hour:Minute:Second (e.g., 2005/07/07 09:37:46) will be appended in front of each data record.

Enable/Disable Download 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 download operation for identification purpose. This option is useful when multiple BCP units are being used to collectively capture barcode data.

Note that Machine ID tagging with real-time data (tethered scanning) is associated with each single record; whereas Machine ID tagging with batch data (downloaded from BCP memory) pertains to the entire data file. Refer to the Hyper Terminal example in Section 4.2.2 and the Download Data example in Section 4.2.4 for comparison.