

BHT-300
and standard program
Users Manual



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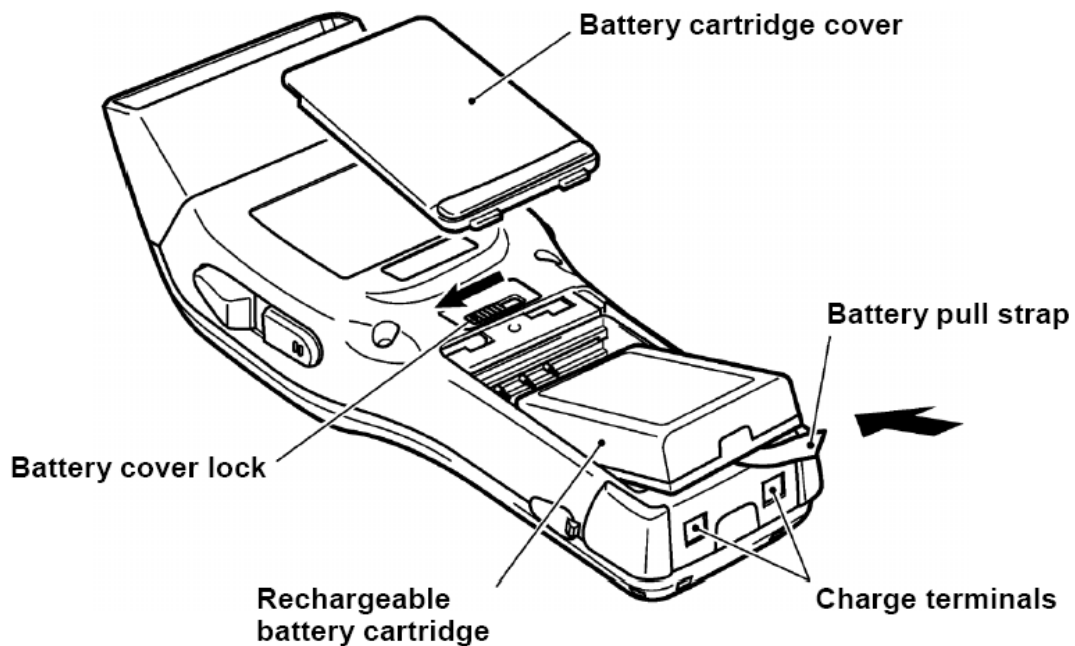
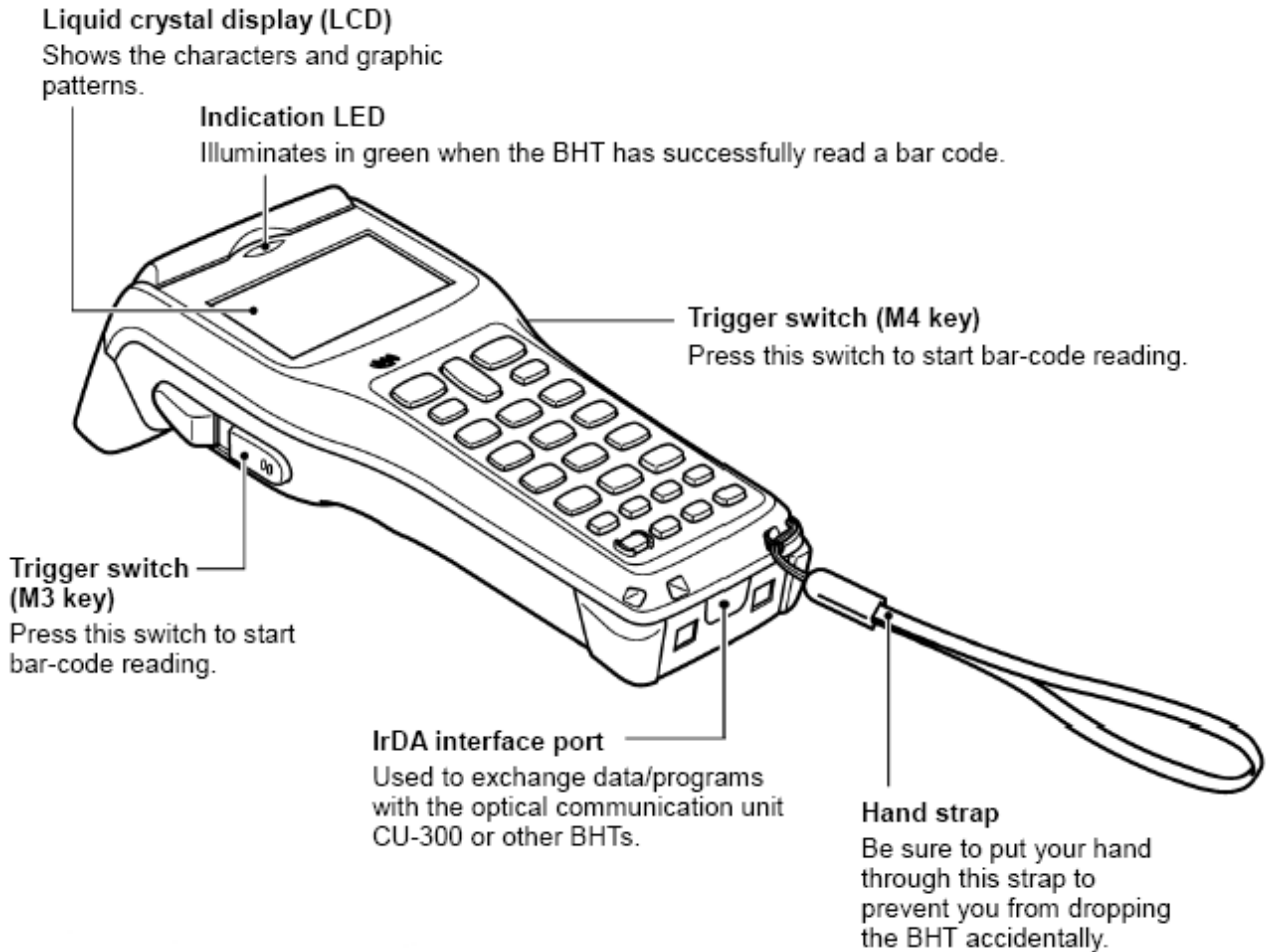
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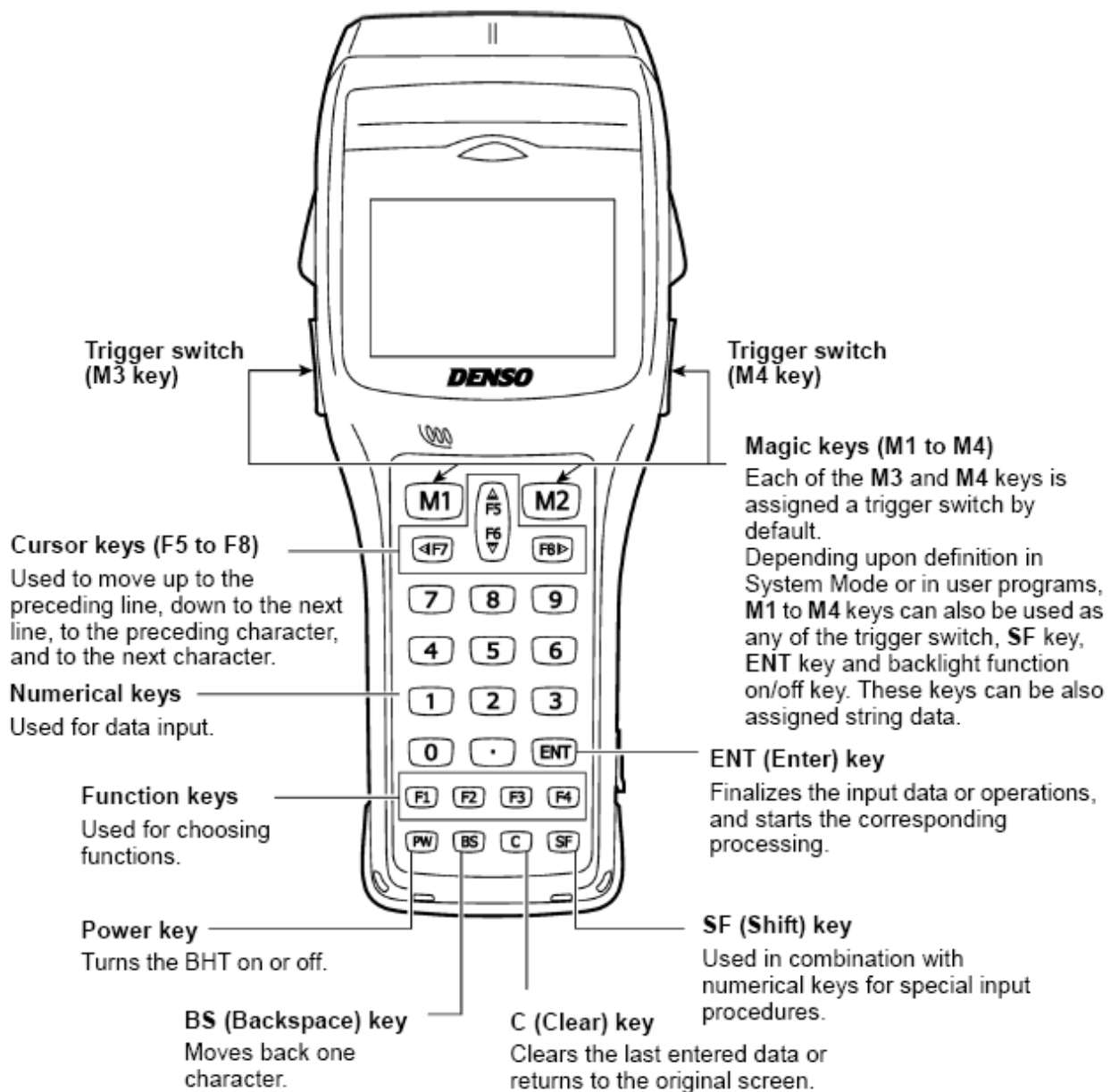
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Welcome to the BHT-300

The diagrams on this page and the next show the main components of the BHT-300 terminal.





Turning the BHT-300 on and off

To turn your BHT-300 on, simply press and release the orange PW key at the bottom left of the keyboard. The screen will briefly display a "Testing" message, then the loaded program will start.

To turn your BHT-300 off, press the orange PW button and hold it down for about two seconds, then release it - a brief (or accidental) press of the PW button will not turn the unit off.

Note: it is very important that the BHT-300 shutdown procedure is allowed to complete properly. If you are going to remove the batteries, make sure that you turn the unit off first, and **do not under any circumstances** remove the batteries until the screen is blank.

Using the standard program

Because the program loaded into the BHT-300 controls the way it works, it's difficult to describe operation of the unit without also describing the program. So, this section of the manual is based on ASP's standard BHT-300 program. Most of the information presented will also apply to other programs, but you should also read any extra information supplied with your program.

Most programs behave in a similar way – there will usually be a **Main Menu**, where you can select what you want to do. With ASP's standard BHT-300 program, the Main Menu looks like this.

```
BHT300 program V1.0

1 Collect Data
2 Download Data
3 Memory Status
4 Configuration
```

Just press the number shown on the left of each menu entry to perform the required function. For example, to collect data, just press the **1** key. Or, to download data, press the **2** key.

Because it affects how the program works, we'll have to come back to the **Configuration menu**, but for now we'll assume that the program is set to its default of prompting for, and storing, just a barcode and a quantity.

Press the **1** key to begin collecting data – the display will be similar to that shown on the right.

```
BHT300 Program V1.0

Barcode: █
ENT = Main Menu
```

The second bottom line of the screen shows a **Barcode:** prompt with a black square cursor. At this prompt, the operator can scan or type in the barcode number (see *Keypad Input* on page 8 for more information).

The line at the very bottom of the screen displays what happens if the operator presses just the **ENT** key without typing anything else at the prompt. In this example, pressing just ENT will take the operator back to the Main Menu. This is how data collection is ended.

To scan a barcode label at this prompt, press and hold down one of the trigger buttons at the sides of the BHT-300, or press and hold the **M1** or **M2** keys on the keypad. A broad beam of red light will shine from the front of the unit – move this beam to the barcode label, holding the unit about 3 to 10cm away from the label.

When the BHT-300 has read the barcode label successfully, a beep will sound and the indicator LED will flash briefly. See *Reading Barcodes* on page 7 for more information on barcode scanning.

After a barcode has been scanned, or typed in the barcode number and pressed **ENT**, the next data collection screen will be displayed, as shown on the right, where the operator is being prompted to enter a quantity.

As an aid to the operator, the barcode that was scanned or entered is displayed at the top of the screen, below the program title.

The message at the bottom of the screen shows that if the operator just presses **ENT** instead of scanning or entering a quantity, the program will go back to the previous **Barcode:** prompt so a new barcode can be entered, discarding the already entered barcode and not storing it in memory. This would be done if the operator realised they had scanned the wrong barcode, for example.

After the quantity has been scanned or entered, the barcode and quantity are stored as a record in the memory of the BHT-300, and the data collection process continues with the operator prompted to scan or enter the next barcode and quantity.

To finish data collection and return to the main menu, just press **ENT** at the **Barcode:** prompt.

To check how many records are currently stored in the BHT-300, select item **3 Memory Status** from the main menu, to display a screen similar to that shown on the right. In this example, there are 55 records stored in memory, and enough room for 32712 more. Note that the exact number of records that can be stored will depend on the size of the memory in your BHT-300.

To download the collected data to your PC, select item **2 Download Data** from the main menu, to bring up a screen as shown on the right.

Ensure that the BHT Transfer Utility is running on your PC, and that either the direct connect download cable is attached, or the BHT-300 is placed into

```
BHT300   Program V1.0
Bar: ABC123
```

```
Quantity: █
ENT = New Barcode
```

```
BHT300   Program V1.0
```

```
Memory Status
```

```
File: ASP.TXT
```

```
Free: 32712
```

```
Used: 55
```

```
Press any key...
```

```
BHT300   Program V1.0
```

```
Data Download
```

```
File: ASP.TXT
```

```
Press F8 to download,
any other key to quit
```

a properly connected cradle, then press the F8 key to start download the collected data.

While the data download is taking place, a counter is displayed on the screen of the BHT-300. When the download operation has successfully completed, the two numbers displayed will be the same, and you will be prompted to press a key to continue. The BHT-300 will next prompt you to delete the data file, with several confirmations to make sure you realise that once you've deleted the data from the BHT-300, it is gone forever.

Meanwhile, on the PC screen, the BHT Transfer Utility will pop up a window that tells you that the data transfer is finished, and reminds you to delete the data file from the BHT-300. Just click on the OK button to close this reminder.

If you choose not to delete the data file, this same data will be transferred again next time you download data to the PC.

Configuring the program

Press the **4** key at the main menu to display the **Configuration menu**, as shown on the right below.

From this menu, you can press the **1** key to set the data fields that the program will prompt for and save, or the **2** key to set the various program options. Press the **3** key to set the time and/or date, the **9** key to delete the data file, or the **0** key to return to the main menu.

```
Configuration
0 Back to Main Menu
1 Set data fields
2 Set options
3 Set Time/Date
9 Delete data file
```

The **Set Data Fields** menu item is used to select the data fields that the program prompts for and stores. There are three fields that can be prompted for, along with date and time that can be stored.

When you go into the **Set Data Fields** function, the screen shown on the right will be displayed.

The first field is **Location**, and in the screen on the right, this field is currently turned off. To change this setting, press the **F8** key, otherwise press any other key to move on to the next field.

```
Location field is
currently turned OFF
```

```
Press F8 to change,
any other key to keep
```

If you press **F8**, the screen changes to that shown on the right. Press the **0** key to turn off the Location field, the **1** key to turn it on, or the **ENT** key to keep the current setting. After you've pressed the **0**, **1**, or **ENT** key, you will be returned to the screen shown above, with the current setting displayed.

```
Location field
```

```
0 = Off
```

```
1 = On
```

Using the same procedure, and via similar screens, you can elect to enable **Barcode** and/or **Quantity** prompts.

You can also configure the program to store the **Date** and/or the **Time** with each record, but these prompts are not displayed on the screen when the program is running.

The next item on the **Configuration Menu** is **2 Set Options**. Using a similar scheme to that described above, this function allows you to:

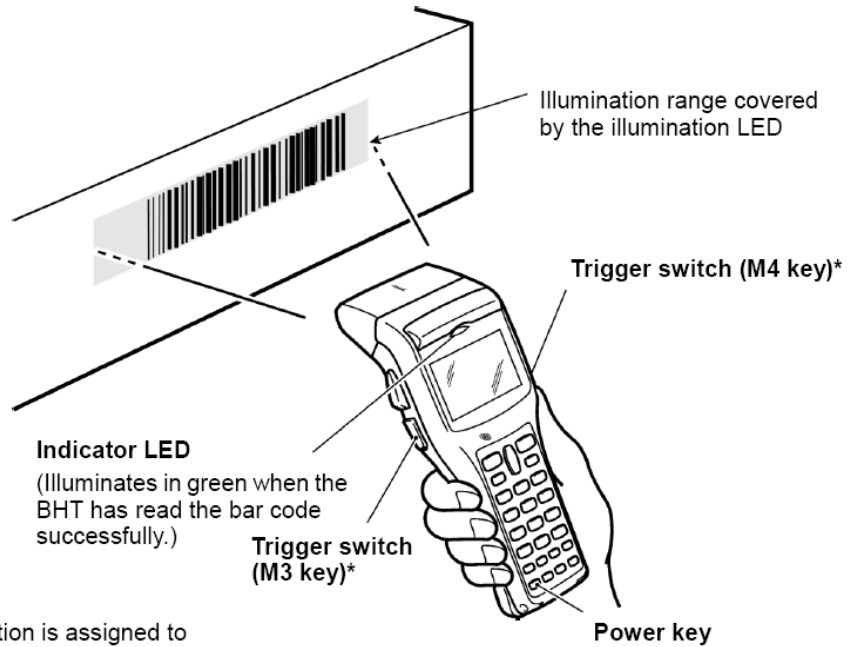
1. If the **Location** field is enabled, to keep the same location for multiple records, or to require the operator to scan or enter a new location for each record.
2. If the **Time** field is enabled, to include or not include seconds with the time.
3. To enable **Alphanumeric Input** at prompts (see *Keypad Input* on page 8 for more details).
4. To turn **Vibrate** mode off or on. When vibrate mode is turned on, the BHT-300 will vibrate whenever the beeper is sounded.

The next option on the **Configuration Menu** is **3 Set Time/Date**, which allows you to set the time and date on the unit, and the final function is **9 Delete data file**, which allows you to irretrievably delete any data you have stored in the unit. Under normal circumstances, you should not have to use this option.

Pressing the **0** or **ENT** keys will take you back to the main menu.

Reading Barcodes

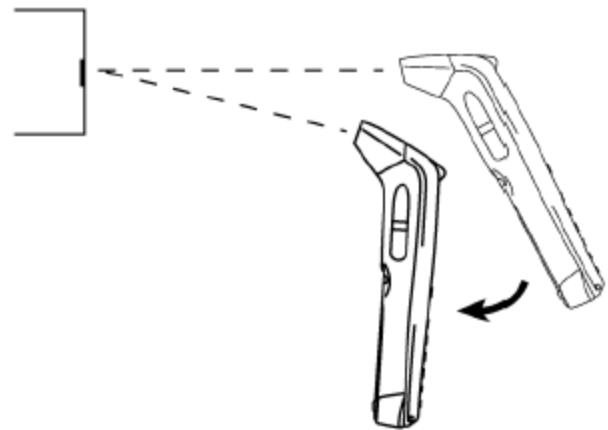
Ensure that the BHT-300 scanner is turned on, and at a place in the program where barcodes can be scanned, then press one of the trigger switches (M1 or M2 at the top of the keyboard, or M3 or M4 at the sides of the scanner).



*The trigger switch function is assigned to both of the M3 and M4 keys by default.

Hold the BHT-300 about 3 to 10cm back from the barcode, and direct the scanning beam over the barcode as shown below. When the barcode has been read successfully, the BHT-300 will beep and the indicator LED will flash briefly.

If the BHT fails to read the barcode, change the scanning angle of the reading window or the distance from the barcode as shown at right, and try it again.



To read bar codes wider than the readable area of the bar-code reading window, pull the bar-code reading window away from bar codes. The BHT-300 can read bar codes at a maximum distance of 45 cm from the bar-code reading window, depending on the characteristics of the barcode label.

Keypad Input

In most applications, the only time you'll need to use the keypad is to enter data such as quantities, and these are usually numeric only. The BHT-300 was designed to make this kind of data entry fast and simple.

If you need to enter letters or other characters, the BHT-300 provides two different ways for you to do so. In the first method, the function keys **F1** through **F8** are programmed with the upper case letters **A** through **H**, and if the **SF** key is held down, with upper case letters **I** through **P**. The remainder of the upper case letters (and + and -) can be accessed by holding down the **SF** key and pressing the numeric keys, and the **BS** and **C** keys. Note that these are **not** the letters displayed in white above each key.

The second method, which we call **Alphanumeric Input**, is enabled by the program running in the BHT-300. With this method, pressing and releasing the **SF** key will display a small **ALP** icon at the bottom right of the screen. When this icon is displayed, the characters shown in white above each numeric key can be entered. The first press of a key displays the first letter above the key, the second press displays the second letter, and so on, first in upper case, then in lower case. When the key you want to enter is displayed, simply press the **ENT** key to accept the character, or any other key to accept the character and start entry of a new character. To turn the **Alphanumeric input** method off, press the **SF** key again, and the **ALP** icon will disappear from the display, returning the input mode to normal.

Auto Off

The standard program automatically turns the BHT-300 off five minutes after the last keypress or barcode scan, to save battery life. You can turn the unit on again with the **PW** button.

Turning on the display backlight

To enable the display backlight, press the **M4** key (the trigger switch on the right side of the unit) while holding down the **SF** key. The backlight will immediately turn on for a few seconds, and then turn off again until any key is pressed, whereupon it will turn on for a few seconds again.

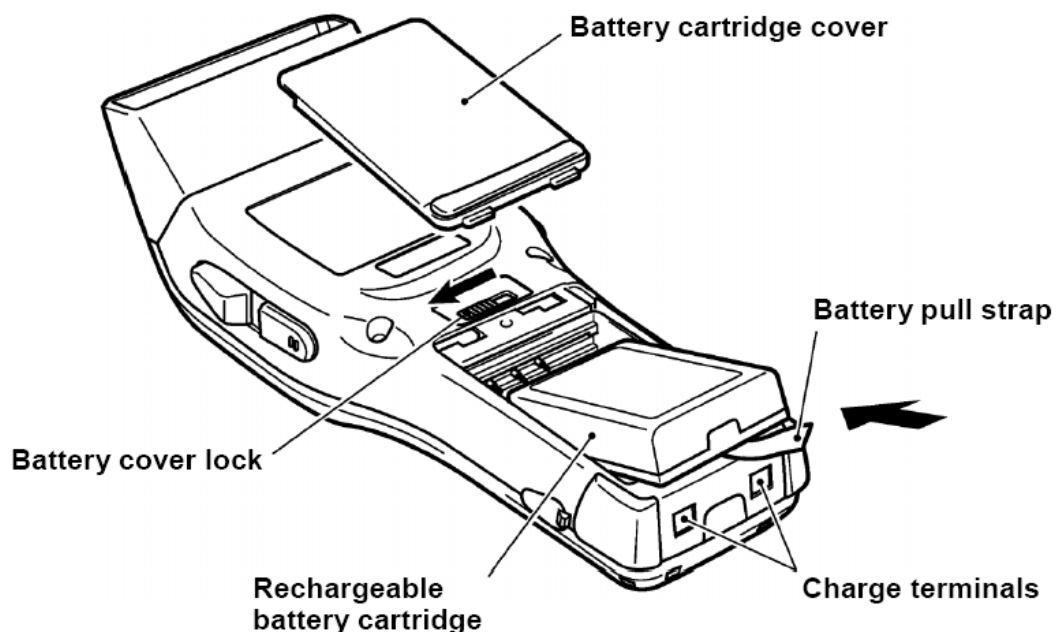
Note that battery life will be reduced with the backlight enabled.

To disable the display backlight off, just press the **M1** key while holding down the **SF** key again.

Loading or Changing the Battery Cartridge

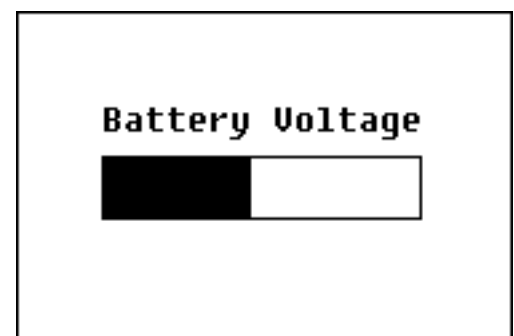
Before the first use of the BHT-300, be sure to load the battery cartridge as shown below.

1. Turn the BHT-300 upside down.
2. As shown below, slide the battery cover lock in the direction of the arrow and remove the battery cartridge cover.
3. Check the polarity (positive and negative) of the battery cartridge. Then, load it so that the end of the battery pull strap appears above the battery cartridge as shown above. This facilitates easy removal of the battery cartridge.
4. Put the battery cartridge cover back into place taking care not to pinch the battery pull strap between its cover and the bottom cover. Then, return the battery cover lock to the original position.
5. Place the BHT-300 on the CU-300 cradle to charge the battery cartridge.



Checking the Battery Voltage

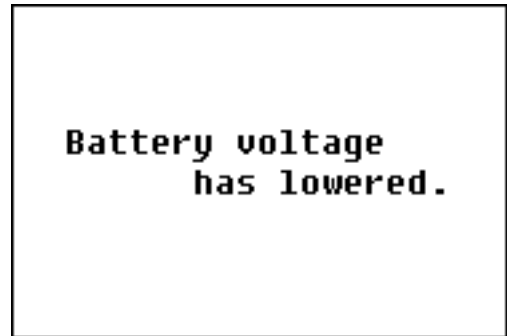
Pressing the **ENT** key while holding down the **SF** key will display the current battery voltage level as a bar indicator, as shown on the right. Releasing the keys will restore the display.



Low Battery Warning

If the battery voltage drops below a specified level while the BHT-300 is in operation, the warning message shown on the right will be displayed for approximately three seconds, and the beeper will be sounded three times. The BHT-300 will then resume normal operation.

This message means that you need to recharge or replace the rechargeable battery cartridge as soon as practical.

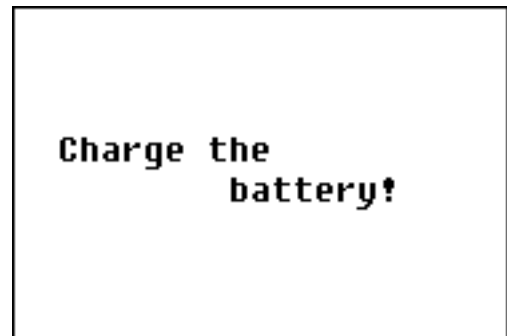


**Battery voltage
has lowered.**

Shutdown due to low battery

If you continue to use your BHT-300 without replacing or recharging the battery cartridge after the low battery warning message appears, then the BHT-300 will display the following message, beep five times, then turn itself off. Depending on the battery level, the beeper may not be able to sound five times.

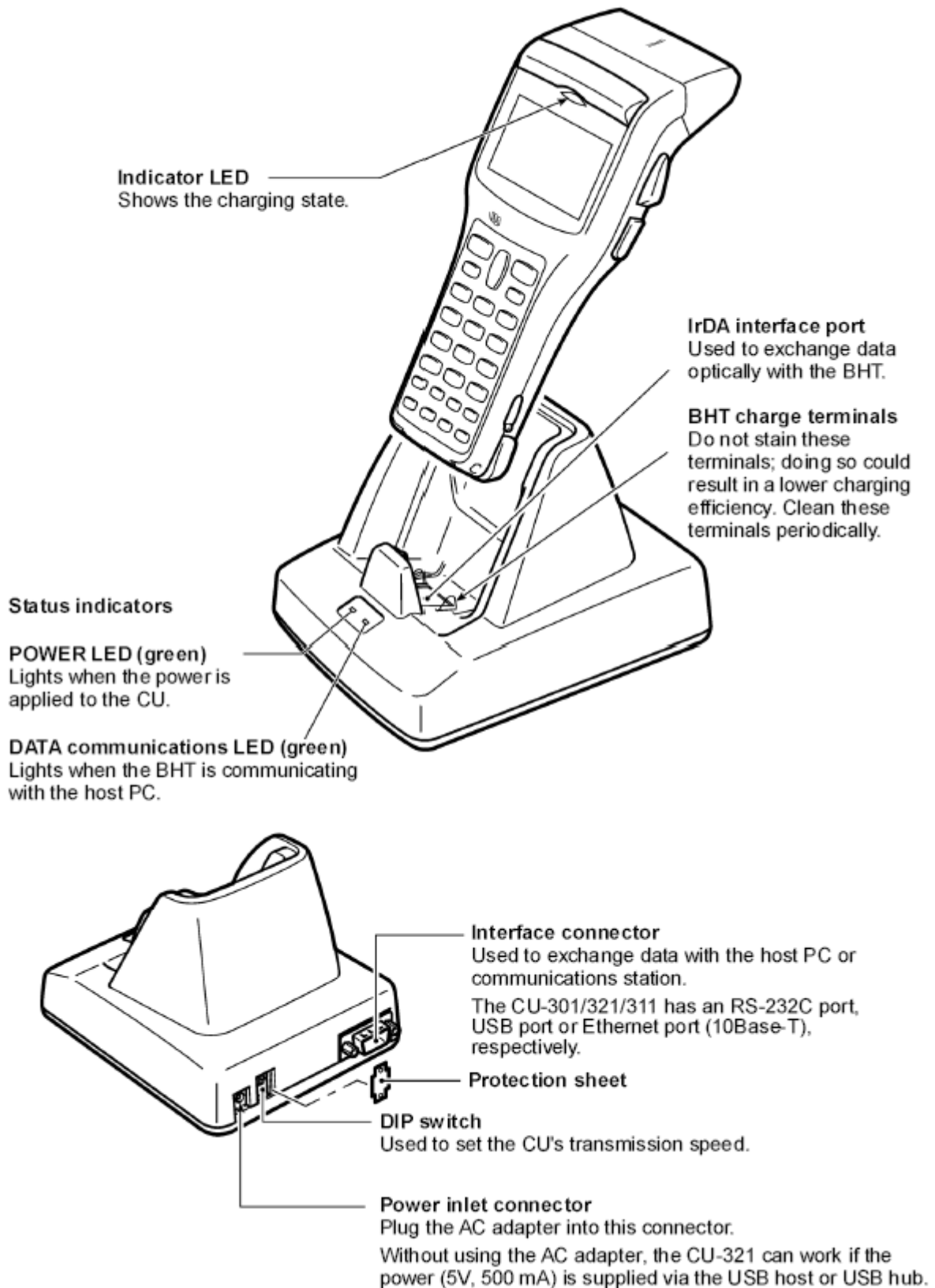
You must recharge or replace the battery cartridge immediately when these messages are displayed.



**Charge the
battery!**

CU-300 Cradle

The main features of the CU-300 cradle are shown below.



ASP's BHT Transfer Utility

ASP's BHT Transfer Utility is used to download data from the Denso range of scanners to your PC. The BHT Transfer Utility can also be used to load a program or data file into your Denso Scanner if required. The main screen of the transfer utility is shown on the right.

Before you can use the BHT Transfer Utility for the first time, you'll need to configure it. The main settings are the **COM port** and the **baud rate**. On the example screen at the right, you can see that the program is set to use **COM1**,

and the baud rate is set to **38400**.

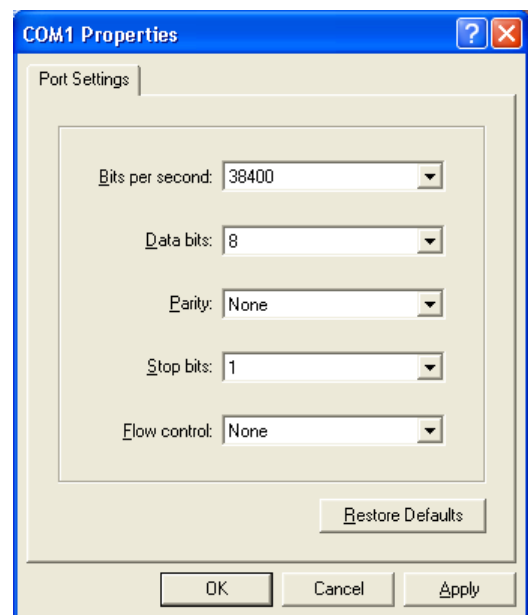
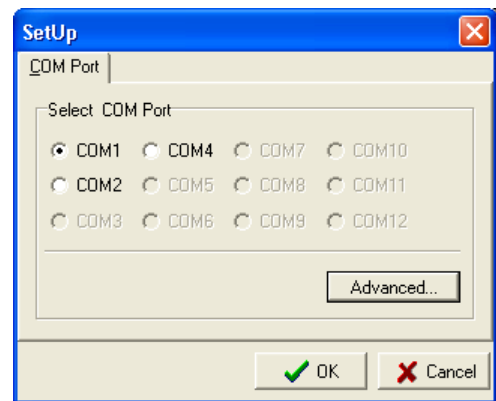
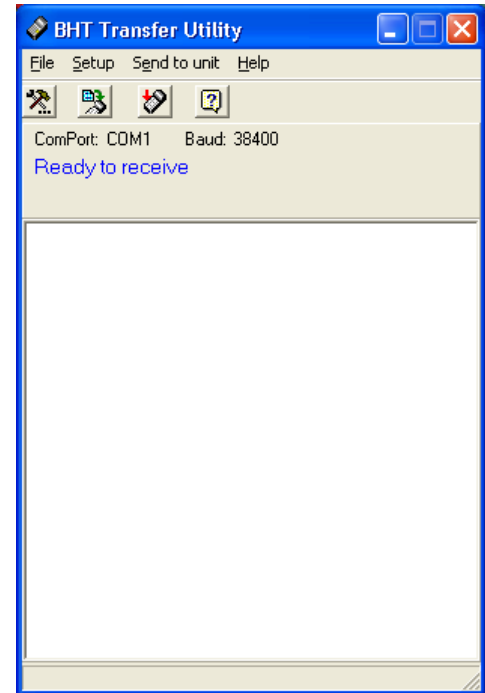
To change the COM port, select **Communication...** from the **Setup** menu, to open the screen shown on the right. Note that only COM ports that are actually installed on your computer, and that are not already in use by other programs, are listed.

If you need to change the baud rate, click on the **Advanced** button to open the screen on the right below. The default baud rate with most ASP programs is **38400**, and this can be changed by clicking the down arrow at the right of the **Bits per second** field and selecting the baud rate from those listed.

No other setting on this screen should be changed. The number of **Data bits** should remain set to **8**, **Parity** should be set to **None**, the number of **Stop bits** should be set to **1**, and **Flow control** should stay set to **None**.

Once you've configured these settings, click on the **OK** buttons until you're returned to the main screen.

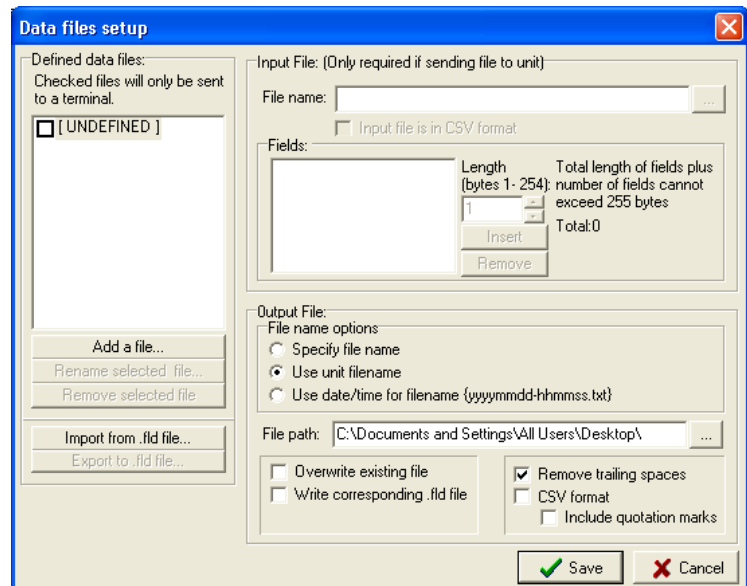
Next, we need to tell the BHT Transfer Utility what to do with the data that it downloads from the scanner.



Select **Data Files...** from the **Setup** menu to open the **Data files setup** screen, as shown on the right below.

This screen has a large number of options and configurable settings, but for applications with simple download-only data file requirements such as ASP's standard program, setup is quite easy, and that's what we'll deal with here.

If your application requires you to upload data or lookup files to the scanner, or has complex downloading or file handling requirements, BHT Transfer Utility configuration information will be supplied with your program.

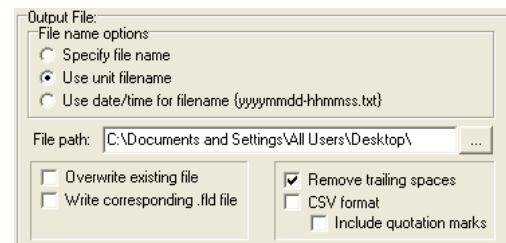


The example screen above has been set to save the data file downloaded from the scanner to the desktop using the same filename used by the scanner. These same settings will also work even if the program in your scanner needs to download several files to the PC.

To configure the **BHT Transfer Utility** in this way, first click on the **[UNDEFINED]** heading in the **Defined Data Files** section of the screen on the left. Make sure that you click on the heading itself, not the checkbox to the left of it. The heading will become highlighted, and any changes you make to the screen will now apply to all files that have not been specifically defined.

Since we're not uploading any files to the scanner, we can ignore the **Fields** and **Input File** sections of the screen, and leave them blank.

In the **Output File** section of the screen, we need to check the **Use Unit Filename** and the **Remove Trailing Blanks** options, and make sure that the **CSV Format** and **Write Corresponding .fld File** options are *not* checked. We also suggest that you do not check the **Overwrite Existing Filename** option, unless you have a specific reason to want to enable it, and you realise that setting this option may allow data to be lost in some circumstances.



The **Filename** field of this section of the screen is where you set the folder that the data file(s) will be stored in. To set this, click on the button to the right of this field, and use the standard Windows file open screen to select your preferred location. In the example on the previous page, the file is being stored on the computer's desktop.

If the **Use Unit Filename** option is not selected, the **Filename** field can also be used to set the output filename, if you have a specific requirement to use a particular filename, rather than using the same filename that used internally by the scanner.

Another option is to select the **Use Date/Time for Filename** option, which names the file with the date and time of the download. This option is useful if you need to keep every downloaded file, and need to know when each file was downloaded.

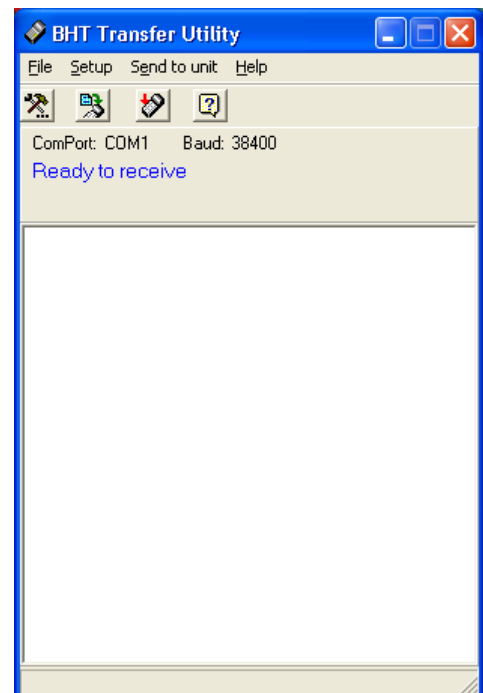
Note that we have not selected the **CSV Format** option in this example because the ASP Standard Program is designed to create its output file in CSV format already, and the file therefore does not need to be converted a second time.

Note that there is no need to select the checkbox next to the **[UNDEFINED]** heading – this selection is always used when there are no other selections.

Finally, click the **Save & Exit** button to return to the main screen, and you're ready to go.

We suggest that you leave the BHT Transfer Utility running all the time, so that it's ready to download data as soon as you connect your scanner to your PC. If you do this, there is no need to touch anything on the PC to download data from your scanner – just connect up the scanner (via a cable or pop it into its cradle), and select the data download or data transfer function on the scanner, and the data will be automatically stored on the PC.

Note that each time you use the BHT Transfer Utility, status and advisory messages are displayed on the screen. You can clear these messages at any time by selecting **Clear Log** from the **File menu**.



Copyright, License, and Limited Warranty

BHT-300 Scanner and Cradle

To the extent permitted by law, ASP's warranty in respect of the **BHT-300 Scanner and Cradle** and its use is limited to correction of defects due to faulty components or workmanship for a period of one year from the date of purchase. This warranty does not extend to consumables such as batteries, and does not cover wear and tear to products.

This warranty is in lieu of other warranties express or implied including but not limited to the implied warranties of merchantability and fitness for purpose. In no event will ASP Microcomputers be liable for damages including loss of profits or other consequential damages arising out of use or inability to use the products.

This limited warranty gives you specific legal rights. Some states give other rights and/or do not allow excluding or limiting implied warranties or limiting liability for consequential damages. Accordingly, the above limitations/exclusions may not apply to you. If any provision of this agreement shall be void unlawful or unenforceable then that provision shall be severable without affecting the validity of remaining provisions. This agreement is governed by the law of Victoria, Australia.

It is your responsibility to carefully pack any unit being returned for service, warranty or otherwise, and pay shipping charges to your dealer location or ASP. Units sent freight collect will not be accepted. Freight back to you will be paid by ASP in the case of warranty repairs.

BHT Transfer Utility and Standard Program

The **BHT Transfer Utility** and **Standard BHT-300 program** are proprietary products of ASP Microcomputers and are protected by copyright laws, which prohibit making additional copies of the software for any other person.

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ASP Microcomputers undertakes that the **BHT Transfer Utility** and **Standard BHT-300 program** will perform substantially as described in this manual, and will correct "bugs" in the software reported to us by licensed users within a reasonable time. Should such "bugs" not be correctable, the only remedy available will be return of the software for refund.

This warranty is in lieu of other warranties express or implied including but not limited to the implied warranties of merchantability and fitness for purpose. In no event will ASP Microcomputers be liable for damages including loss of profits or other consequential damages arising out of use or inability to use the software.

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