

**BHT-1100 Series**

**Operator's Guide**

**操作 가이드**  
操作手册

**Barcode Handy Terminal**

- BHT-1170WBV
- BHT-1171WBV
- BHT-1172WBV

Thank you for using the DENSO WAIVE Barcode Handy Terminal. Please read this manual thoroughly prior to operation to ensure full use of the product's functionality, and store safely in a convenient location for quick reference even after reading. This manual contains only the basic details required for operation. Please refer to the User's Manual for further details on general operation. The User's Manual can be downloaded free of charge from the DENSO WAIVE Web site (OBDirect). <http://www.obdirect.net>

DENSO WAIVE의 Barcode Handy Terminal을 사용에 주위에 관심이 있습니다. 본 매뉴얼 기능을 충분히 이해하기 위하여 조작 전 본서 읽어서 주시기 바랍니다. 본 매뉴얼은 기본 조작에 필요한 내용만 담고 있으며, 자세한 내용은 사용자 매뉴얼을 참조하십시오. 본서는 조작에 필요한 기본적인 내용만을 기재하고 있습니다. 조작에 관한 자세한 내용은 사용자 매뉴얼을 참조하십시오. 취급요령은 성실하게 숙독하시고 OBDirect에서 매뉴얼 이용 무료다운로드 가능합니다.

感谢您使用 DENSO WAIVE 的 Barcode Handy Terminal。请认真阅读本手册，以便充分使用本产品的功能，并妥善保管，以便日后查阅。本手册只包含操作所需的基本内容，如需了解更多信息，请参考用户手册。用户手册可从 DENSO WAIVE 网站（OBDirect）免费下载。请访问 <http://www.obdirect.net>

49847-6550

**Handling the BHT**

- Incorrect handling of the BHT could cause electric shock, impaired vision, skin problems, injury, burns and generation of heat and smoke from the BHT. Be sure to observe the following to use the device correctly.
  - Never put the BHT in a microwave oven or high-pressure container. Doing so could cause the BHT to break, generate heat, rupture or burn.
  - Never put the BHT in places where there are excessively high temperatures, such as inside closed automobiles, or in places exposed to direct sunlight. Doing so could affect the housing or parts, resulting in a fire.
  - Avoid using the BHT in extremely humid or dusty areas, or where there are drastic temperature changes. Moisture or dust will get into the BHT, resulting in malfunction, fire or electrical shock.
  - Excessive abnormal odors or noises come from the BHT, immediately turn off the power, pull out the battery, and contact your nearest dealer.
  - Failure to do so could cause smoke or fire.
  - If you touch the BHT so as to damage its housing, immediately turn off the power, pull the battery. Failure to do so could cause smoke or fire.
  - Do not use the BHT in the vicinity of the BHT. Doing so could result in an accident such as break or fire.
  - Do not need energy materials in the BHT.
  - Do not use generators or other power sources other than the specified ones.
  - Doing so could generate heat or cause malfunction.
  - Never disassemble or modify the BHT. Doing so could result in an accident such as break or fire.
  - Do not need energy materials in the BHT.
  - Foreign material or water gets into the BHT, immediately turn off the power, pull out the battery, and contact your nearest dealer.
  - Failure to do so could cause smoke or fire.
  - If the LCD breaks and the liquid leaks from the LCD by mistake, do not swallow, inhale or touch it.

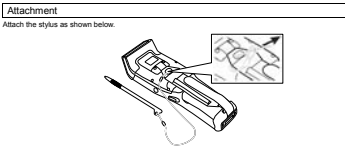
**CAUTION**

- Handling the BHT**  
Incorrect handling of the BHT could cause generation of heat and smoke from the BHT, and malfunction. Be sure to observe the following to use the device correctly.
  - When using the hand straps or neck strap, exercise due care to avoid getting them caught in other objects or entangled in rotating machinery.
  - Failure to do so could result in accident or injury.
  - Do not use the BHT in the vicinity of wireless devices such as personal radios and ham radios. This could cause electromagnetic interference.
  - Do not use the BHT in the vicinity of magnetic cards or the like that may be affected by magnetic fields.
  - Doing so may result in the loss of magnetic data from cash cards, credit cards, etc.
  - Do not insert your card into the BHT while the BHT is emitting.
  - Doing so may result in hearing loss.
  - Do not use the BHT in places where static electricity can build into significant charges (e.g., if you wipe off the plastic plate with a dry cloth), do not operate the BHT.
  - Doing so will result in malfunction or other problems.
  - Do not drop the BHT on the floor or apply strong shock to it.
  - Doing so could cause malfunction of the BHT.
  - Do not use batteries other than the specified ones.

| No. | Key | Name                  | Function and Description  |
|-----|-----|-----------------------|---|
| 1   |     | M1                    | The SF and ENT key functions can be assigned to these magic keys by making settings at the SYSTEM MENU.     |
| 2   |     | M2                    | Character strings can be assigned to other programs.  |
| 3   |     | SCAN                  | Scan key<br>Press to scan barcodes.<br>(This key performs the same function as a Trigger key.)              |
| 4   |     | Trigger keys          | Press to scan barcodes.<br>(This key performs the same function as the SCAN key.)                           |
| 5   |     | Cursor keys           | Used to move the cursor and select menu.  |
| 6   |     | ESC                   | Cancel the operation.   |
| 7   |     | BKSP                  | Moves back one character.   |
| 8   |     | Numerical keys        | Used to enter data.   |
| 9   |     | Enter key             | Press to finalize entered data or execute operations.   |
| 10  |     | Control key           | Used to modify the function of the next key pressed.  |
| 11  |     | Space key             | Used to enter a space.  |
| 12  |     | Tab key               | Used to enter a tab character.  |
| 13  |     | Function keys         | Used to select functions.   |
| 14  |     | Alphabetical mode key | Switches to alphabetical entry mode.  |
| 15  |     | Function mode key     | Switches to Function mode.  |
| 16  |     | Shift key             | Used in combination with other keys such as the numerical keys or power key for special "shift" operations. |
| 17  |     | Power key             | Turns the BHT power ON and OFF.   |

**Step 2 Attaching stylus**

Attach the stylus to the hand belt to prevent from being lost. Attach the hand strap to prevent from dropping the BHT accidentally.



Hold the BHT  
insert your hand into the hand belt and hold the BHT as shown below.



**About This Manual**

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- The reproduction or duplication of the whole or part of this manual is strictly prohibited without prior consent.
- Please contact DENSO WAIVE if the manual is lost.
- Every attempt has been made to ensure that the content of this manual is thorough and up to date. However, we kindly ask you to report any questionable discrepancies, mistakes or omissions, if any. DENSO WAIVE.

**Liability Limitations**

- DENSO WAIVE INCORPORATED ("DENSO WAIVE") does not assume any product liability (including damages for lost profits, interruption of operations, or the loss of business-related information) arising out of, or in connection with, the use of, or inability to use the BHT system software or related manuals.
- DENSO WAIVE takes reasonable precautions to ensure its products do not infringe upon any patents or other intellectual property rights of others; however, DENSO WAIVE cannot be responsible for any patent or other intellectual property right infringement(s) or violation(s) arising from any of the following:
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- If it is judged by DENSO WAIVE that malfunction of the product is due to the product having been dropped or subjected to impact, repairs will be made at a reasonable charge even within the warranty period.

**Customer Registration**

To allow us to provide our customers with comprehensive service and support, we request that all customers complete a Member Registration Form. Registered members will be offered the following privileges:
 

- The latest upgrade information.
- Free exhibition and event information for new products.
- Free e-mail information service "OBDirect".

The latest OS systems for the BHT Series, repair software, and sample programs can be downloaded.  
E-mail inquiries Product related queries can be sent by e-mail.  
Please note that these privileges may be subject to change without prior notice.  
**How to Register:**  
Access the URL below and follow the instructions provided.  
<http://www.obdirect.net>

**Wireless Equipment**

- Precautions relating to the frequency used by this device**
  - In addition to industrial, scientific, and medical equipment such as microwave ovens, static wireless transmitters (permit required) used for mobile identification in places such as plant manufacturing lines and specified low-power wireless stations (no permit required) operate on the same frequency band as this device.
  - 1. Before using this device, ensure that no static wireless stations or specified low-power wireless stations for mobile identification are being used in the vicinity.
  - 2. In the event of instances of electromagnetic interference from this device to a static wireless station being used for mobile identification, either promptly alter the usage frequency, or halt the electromagnetic discharge.
  - 3. If for other reasons arise due to reasons such as electromagnetic interference from this device to a specified low-power wireless station being used for mobile identification, please contact DENSO WAIVE through OBDirect.
- Requests to system designers**
  - Communication may not be possible depending on the environment in which the device is being used. Ensure that problem-free communication is possible prior to use.
  - Use a program capable of retransmitting data if communication fails.
  - If the BHT is introduced into an environment in which a device using 2.4GHz waveband electromagnetic waves is operating, or if another device using 2.4GHz waveband electromagnetic waves is introduced following introduction of the system, run all devices and ensure that communication with the BHT is possible prior to use.
  - Check communication once again prior to use if any changes are made to the usage environment (addition of household appliances, movement or addition of shelves, equipment and so on) following introduction of the system.

**Input Method**

**Using the Stylus**

The BHT liquid crystal display (LCD) is a touch screen. Buttons, menus and so displayed on the screen can be selected using the stylus provided.

**Touch Screen Operation**

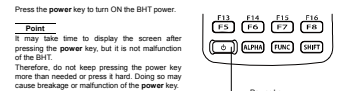
Select the LCD touch screen buttons and menus and so on using the stylus provided.

| Action     | Description   |
|------------|---|
| Tap        | This involves tapping the touch screen once. This function is the equivalent of a "click" with a mouse on a computer.                                     |
| Double-tap | This involves tapping the touch screen twice in quick succession. This function is the equivalent of a "double-click" with a mouse on a computer.         |
| Drag       | This involves moving the stylus to an object while pressing the touch screen. This function is the equivalent of "dragging" with the mouse on a computer. |
| Long-tap   | This involves tapping the touch screen for several seconds. This function is the equivalent of a "right-click" with the mouse on a computer.              |

- Always use the stylus provided to operate the touch screen. Never use fingernails or any pointed or thin object, or apply strong pressure or impact to the touch screen. This may result in damage or malfunction.
- If dirty, clean the touch screen and stylus tip prior to operation. Failure to observe this may result in scratches to the LCD screen or hinder smooth movement of the stylus.

**Step 3 Turning ON the Power**

It is necessary to perform touch screen calibration and set the date and time when turning ON the BHT power for the first time. Press the power key to turn ON the BHT power. The calibration screen should then display.



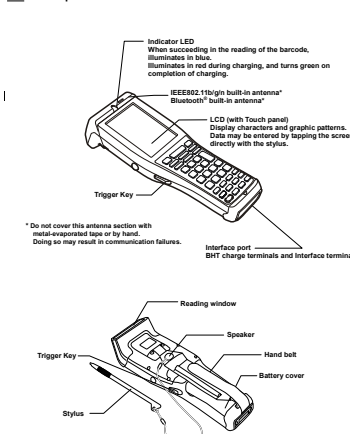
Press the power key to turn ON the BHT power.  
Point  
It may take time to display the screen after pressing the power key, but it is not malfunction of the BHT.  
Therefore, do not keep pressing the power key more than needed or press it hard. Doing so may cause breakage or malfunction of the power key.

**Usage Precautions**

- Usage environment restrictions**
  - Do not use the BHT where it may be exposed to fire, high temperatures, or direct sunlight. (Failure to observe this may result in damage, overheating, explosion, or fire.)
  - When the BHT is stored in a high temperature, high humidity environment of 50 to 60°C, leave to sit in a location at room temperature and normal humidity for at least 1 day prior to use. Failure to observe this may cause a reading failure or damage the BHT.
  - Do not use the BHT in places with extreme temperature variations. (Failure to observe this may lead to BHT malfunction due to condensation.)
  - Leave the BHT for a short while prior to use when moved from a cold to a warm environment.
- Do not use the BHT in places where it may be exposed to strong impact or significant static electricity.

- Keep the BHT away from electromagnetic waves and metallic objects.**  
Wireless communication may not be possible in the following locations.
  - In the vicinity of the following devices operating on a 2.4GHz waveband (Communication may not be possible due to electromagnetic interference.)
    - Industrial, scientific, or medical equipment such as microwave ovens
    - Wireless LAN devices
    - Logistics systems in places such as plants or warehouses
    - Wireless devices such as personal or amateur radio stations
  - In the vicinity of household appliances emitting electromagnetic waves such as computers or televisions (Communication may not be possible due to electromagnetic noise.)
  - In the vicinity of metallic objects, in places with high levels of metallic dust, or in places surrounded by metal walls (Communication may not be possible due to the presence of metallic objects.)

**Components and Functions**



**Proper Care of the BHT**

- Make sure to turn OFF the BHT before cleaning.
- Terminal dirt on the BHT and battery**  
Periodically wipe any dirt from the terminals of the BHT and battery with a cotton swab or similar soft object. The terminal should be treated with the utmost care so as not to be scratched or bent during a cleaning. Never use organic solvents such as benzene or alcohol, as this may cause the coated surface to come off.
- Housing dirt**  
Wipe any dirt from the housing with a dry soft cloth. If excessively dirty, wipe with a soft cloth that has been soaked in soapy water (always use neutral detergent) and wring out thoroughly. Never use organic solvents such as benzene or alcohol, as this may cause the housing to be marred or paint to peel off.
- LCD screen dirt**  
Never rub or stroke the LCD screen with anything hard, as this may result in scratches on the screen or breakage.
- Keypad dirt**  
When cleaning the keypad, do not scrub the surface too hard or pull on the keys, as this may break the keys.
- Code reading window dirt**  
Any dirt or dust adhering to the clear plate of the code reading window will adversely affect reading performance. When using in dusty areas, perform periodic inspections to check whether any dust has accumulated on the clear plate of the code reading window, and if so, first blow the dust away with an airbrush, and then gently wipe the plate with a cotton swab or similar soft object. If sand or hard particles have accumulated, rubbing the plate will result in scratches. Blow the particles away with an airbrush or wipe with a soft brush.

**Preparation**

- Follow the steps below to prepare the BHT for use.
  - Step 1 Charging the Battery**  
Charge the battery.
  - Step 2 Attaching the Stylus**  
Attach the stylus to prevent from being lost.
  - Step 3 Turning ON the Power**  
Preparation is now complete.

**Turning the Power OFF**

Use one of the following three methods to turn OFF the BHT power:

- (1) Normal Power OFF**  
Press the power key.  
The BHT power turns OFF after the message right displays.  
Shutdown in progress. Do not remove the battery.  
Point  
Do not remove the battery while the message on the right is displayed. Failure to observe this may result in data stored in the BHT being lost.
- (2) Turning the power OFF after registry back-up**  
Hold down the CTRL key, and press the power key.  
The message right displays and registry back-up is commenced. The power turns OFF automatically when the back-up is complete.  
Point  
Do not remove the battery while the message on the right is displayed. Failure to observe this may result in data stored in the BHT being lost.
- (3) Auto power OFF**  
The power turns OFF automatically when the BHT is not used for the length of time set at the user program. The default time is set to 3 minutes when the BHT is shipped from the factory.  
\* Refer to the User's Manual for further details of auto power OFF.  
Point  
Do not remove the battery while Auto power OFF is processing. Failure to observe this may result in data stored in the BHT being lost.

**SAFETY PRECAUTIONS**

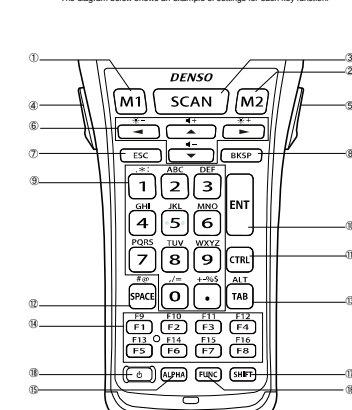
Be sure to observe all these safety precautions.

- WARNING**  
Alerts you to those conditions which could cause serious bodily injury or death if the instructions are not followed correctly.
- CAUTION**  
Alerts you to those conditions which could cause minor bodily injury or substantial property damage if the instructions are not followed correctly.
- WARNING**  
Meaning of Symbols

- Handling the battery**  
Incorrect handling of the battery could cause the batteries to generate heat or smoke, or to rupture or burn. This is DANGEROUS. Be sure to observe the following.
  - Never disassemble or modify the battery.
  - Never connect the positive and negative terminals of the battery with a wire or other metallic material.
  - Do not carry or store the battery together with ballpoint pens, needles, coins, hairpins, or anything else metallic.
  - Never burn or heat the battery.
  - Do not use or leave the battery anywhere there is excessively high temperature (80°C or higher), such as near fire or stoves.
  - Do not put the battery into water of any kind or moisten it.
  - Never charge the battery near a fire or anywhere exposed to direct sunlight.
  - Failure to do so could activate the protector, due to high temperature and thus prevent the battery from being fully charged. Or it may break the protector, resulting in the battery to overheat, blow-out, or combustion.
  - Never connect the positive and negative terminals of rechargeable batteries to each other without connecting to a resistor. Doing so could cause fire.
  - Do not stick a needle into the battery, hammer it, or tread on it.
  - Do not let the battery undergo any shock or impact or throw it at something hard.
  - Do not use batteries that are deformed, scratched or cracked remarkably.
  - Sober handling to the battery directly.
  - The battery is exclusively for the BHT. Do not use the battery for purposes other than charging the BHT.
  - Fatally fluid leaks from the battery and it gets into your eyes, rinse them with clean water thoroughly without rubbing and consult a doctor as soon as possible. Otherwise, you may damage your eyes.
  - If the battery does not finish recharging within the specified time, stop recharging.
  - Never place the battery on a microwave oven or high-pressure container.
  - If abnormal odor, heat, discoloration, deformation or any other abnormal conditions are noticed when the battery is in use, being charged or in storage, remove it from the BHT or Cradle and avoid further use.
  - Only use the Cradle for charging the battery.
  - The battery may swell or warm immediately after charging or use.
- To System Designers:**
  - When introducing BHTs in those systems that could affect human lives (e.g., medicines management system), develop applications carefully through redundancy and safety design which avoids the feasibility of affecting human lives even if a data error occurs.

**Key pad**

The BHT key functions can be set or user programs.  
The diagram below shows an example of settings for each key function.

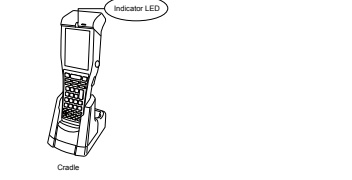


**Step 1 Charging**

The battery is not charged when purchased and must therefore be charged prior to use. The following Cradle can be used with the BHT.  
Cradle CU-1111, CU-1133

The charge time is approximately 3 hours (standard rechargeable battery) or 4.5 hours (large-capacity rechargeable battery).  
\* An almost completely discharged battery should be charged prior to use to become fully charged.

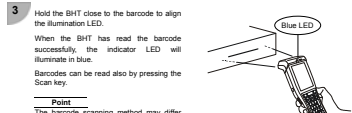
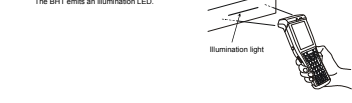
- Charging with the BHT Place the BHT in the Cradle.\*  
The LED illuminates in red and charging begins. The BHT indicator LED will change to green when charging is complete.



\* Refer to "How to Replace the Battery" for how to insert the battery into the BHT main body.

- Remove the battery from the BHT main body or the Cradle and store it cool and dry place, when you don't use your BHT for an extended period of time.
- Check the condition of battery on the following parts before you store it for a long time:
  - If the battery is full charged in a fully charge (complete), and
  - If the remaining battery level is very low (there is not enough power level to activate the BHT).
 Long-term storage under these conditions may deteriorate the performance and life of the battery. You are recommended to ensure that the battery is at least at the [ ] charge level required for long-term storage. In addition, even you don't use the battery for a long time, keep this power level by recharging once a year in order to maintain the battery performance.
- The battery may swell over the years. This is a natural characteristic of a lithium-ion battery and is not safety hazard.

**1 Turn the BHT power ON.**



Point  
The barcode-scanning method may differ depending on the application. Perform scanning in accordance with the instructions provided in the application User's Manual.

**Scanning Barcodes**

Follow the procedure below to scan barcodes.

