



DENSO BHT-M80 Series Handheld Android Terminal Instruction Manual

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DENSO

SAFETY PRECAUTIONS BHT-M80 Series

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.



496996 – 0861

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SAFETY PRECAUTIONS

Be sure to observe all these safety precautions. Meaning of Symbols

 DANGER	Alerts you to those conditions that could imminently lead to serious bodily injury or death if the instructions are not followed correctly.
 WARNING	Alerts you to those conditions which could cause minor bodily injury or substantial property damage 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.



Handling battery

Failure to follow all instructions listed below may cause electrical shock, overheating, smoking, fire, or an explosion.

- Never disassemble or modify the battery.
- Do not stick a needle into the battery, hammer at it, or tread on it.
- Avoid dropping or throwing the battery or letting it undergo any shock or impact.
- Do not use significantly damaged or deformed batteries. Do not use batteries when they are subject to the impact, for example, a drop impact.
- Never connect the positive and negative terminals of the battery with a wire or other metallic materials.
- Do not carry or store the battery together with ballpoint pens, necklaces, coins, hairpins, or anything else metallic.
- Never place the battery into or soak it in water or seawater.
- Never burn or heat up the battery.
- Do not use or leave the battery in places where there is excessively high temperature (60 °C or higher) such as near fire or heater.

- Do not use or store the battery in places exceeding the service or storage temperature.
- Never charge the battery near a fire or in strong sunlight. Raised battery temperature may result in leakage of battery fluid, blowout, or combustion.
- Never charge or use the battery where any inflammable gases may be emitted. Never apply solder directly to the battery.
- Do not use batteries other than the specified ones.
- If the battery fluid leaked from the battery gets into the eyes, wash thoroughly with clean water such as tap water without rubbing and obtain medical treatment immediately. Failure to do so will result in eye injuries.
- During use, charging, or storage of the battery, if odors come from the battery, the battery is overheated, discolored, deformed, or anything unusual is found, unload the battery from the BHT or charger. Do not use the battery.
- If the battery does not finish recharging within the specified time, stop recharging.



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 disassemble or modify the BHT.
- When the BHT is subject to the strong impact, for example, a drop impact, check the case for any damage and the battery for damage and leakage. Never use a damaged case. Never use a damaged or leaked battery.
- Do not insert any foreign materials into the battery cartridge.
- Do not get the BHT wet or put it in water or seawater.
- Never put the BHT in a microwave oven or high-pressure container. Never put it on the induction cooktop.
- Never put the BHT in places where there are excessively high temperatures, such as inside closedup automobiles, or in places exposed to direct sunlight.
- Avoid using the BHT in extremely humid or dusty areas, or where there are drastic temperature changes.
- If smoke, abnormal odor or noise comes from the BHT, immediately turn off the power and remove the battery cartridge from the scanner case.
- If the LCD screen is broken by mistake, care must be taken not to get the liquid crystal into your eyes or mouth or drop it on your skin.
- Be careful of broken glass if the LCD screen is accidentally cracked or broken. It may cause bodily injury.
- If the LCD screen is accidentally broken and liquid crystal gets into your eyes or mouth, wash it off immediately with clean water and then seek medical care.
- Never stare into the reading window.

Handling battery

Failure to follow all instructions listed below may cause electrical shock, overheating, smoking, fire, or an explosion.

- The battery is exclusively for the BHT. Do not use the battery for purposes other than charging the BHT.
- To charge the battery, be sure to use the specified charger, the charging cable, or the recommended wireless charger.
- If abnormal odor, heat, discoloration, deformation or any other abnormal conditions are noticed when the

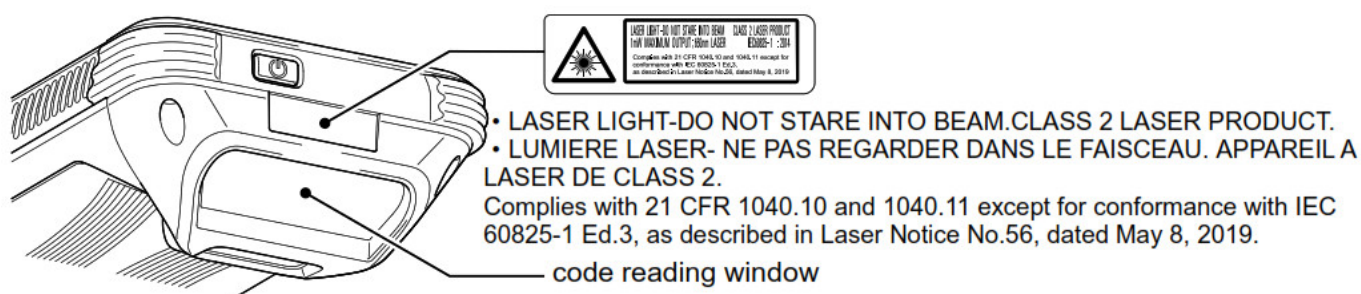
battery is in use, being charged, or is in storage, remove it from the BHT or charger and avoid further use.

Handling the scanner using a laser light

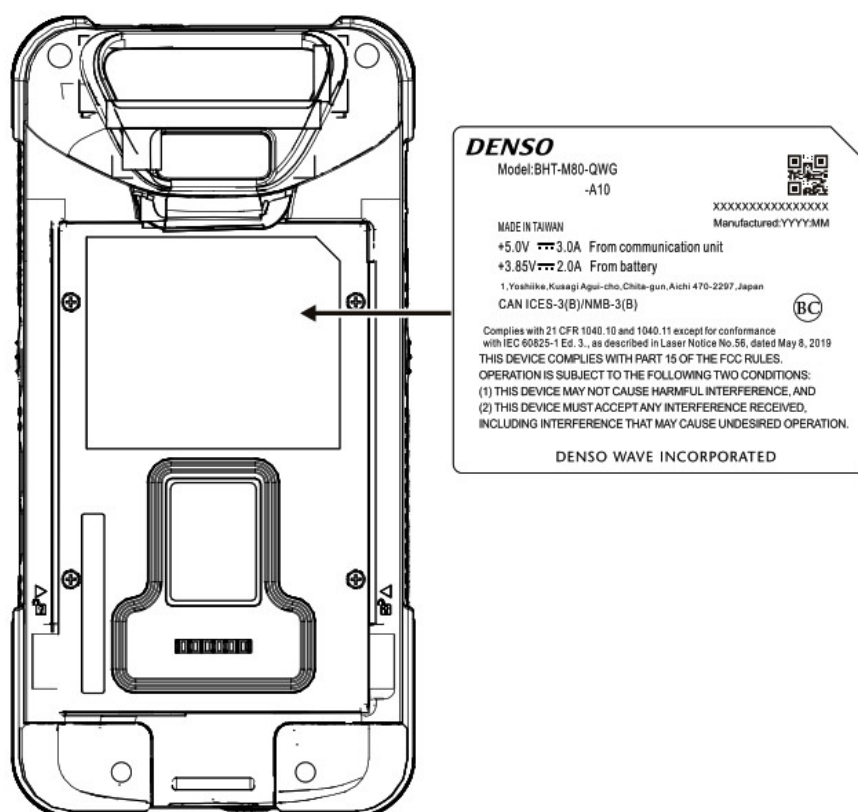
- The 2D Code Handy Terminal uses a laser light for indicating the scanning range. The intensity of the laser light is too low to inflict bodily injury. However, do not stare into beam. You must observe the following precautions when handling the BHT equipped with laser light. 1) Never stare into the reading window. 2) Never point the reading window at someone's eye.

Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

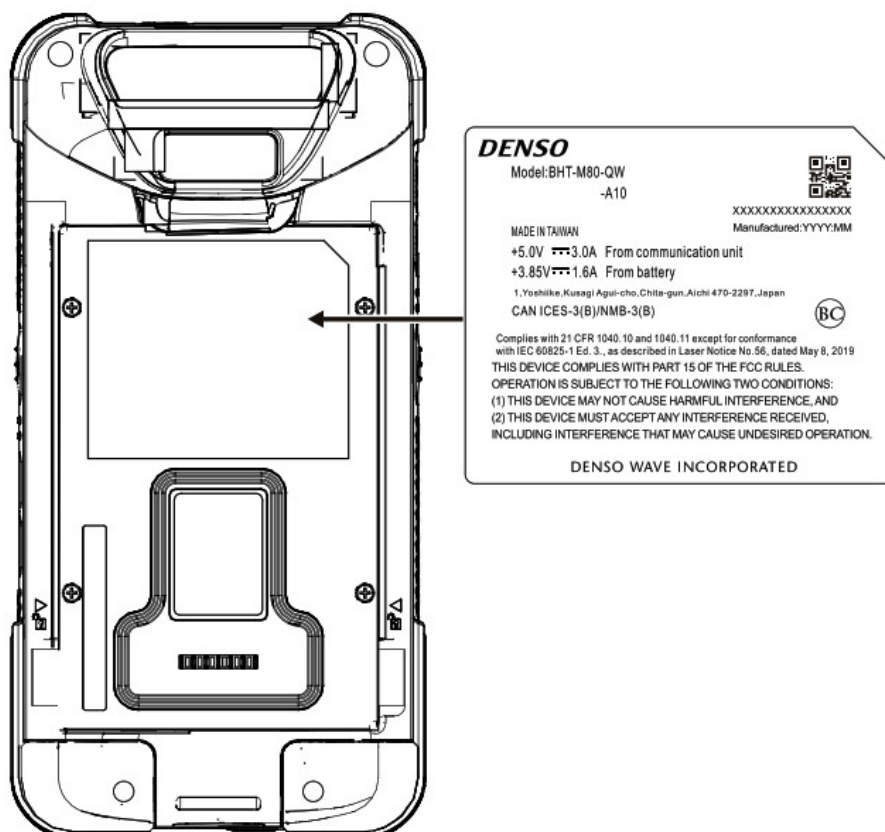
[BHT-M80 series]



[BHT-M80-QWG]



[BHT-M80-QW]



To System Designers

- When introducing BHTs in those systems that could affect human lives, develop applications carefully through redundancy and safety design which avoids the feasibility of affecting human lives even if a data error occurs.



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 strap 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.
- Keep your ears away from the speaker when a loud sound comes out of it. Failure to do so could lead to hearing difficulty.
- Do not operate the BHT in environments where static electricity can build into significant charges. Doing so could result in malfunction or mechanical failure.
- Avoid dropping the battery cartridge or letting it undergo any strong shock or impact. Doing so could result in malfunction or mechanical failure.
- Do not use the BHT near a wireless transmitter such as a ham radio. Doing so could result in malfunction or mechanical failure.
- Do not touch BHT with oily hands or gloves containing oil such as machine oil and grease. Doing so may cause the deformation and discoloration of a device.
- This product incorporates connectors for microSD card and SIM cards. Do not insert anything other than these cards. Do not insert a card inversely, diagonally and with twisted. If a card is inserted forcibly, this could damage a card or a connector.
- Do not attach a wet BHT or rechargeable battery cartridge to CU.

- Do not use excessive force when inserting or removing the battery cartridge. Doing so could result in malfunction or mechanical failure.
- Keep magnetic cards such as a cash card or a credit card away from the BHT. Failure to do so could cause loss of magnetic data.
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- L'utilisation de commandes ou de réglages ou l'exécution de procédures autres que celles spécifiées ici peuvent entraîner une exposition à des radiations dangereuses.

Chapter 1 Please read me first

Please contact your nearest distributor, if using in other countries.

The latest precision manufacturing technology yields LCD panels with an effective resolution of 99.99 % or higher. The downside, however, is that up to 0.01 % of the pixels can remain permanently dark or lit on today's state-of-the-art panels.

Furthermore, please be aware that individual differences may occur in the screen color and brightness due to the characteristics of the white LEDs used in the LCD display backlight. The Customer shall not modify, reverse compile, reverse engineer, reverse assemble, and or otherwise tamper with our BHT's firmware.

About This Manual

Due to changes and improvements, the content of this manual may be subject to change without prior notice. The reproduction or duplication of the whole or part of this manual is strictly prohibited without prior consent. Please contact DENSO WAVE if this 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 descriptions, mistakes or omissions, if any, to DENSO WAVE.

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DENSO WAVE INCORPORATED ("DENSO WAVE") 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.

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3. The modification of DENSO WAVE's products by parties other than DENSO WAVE.

If it is judged by DENSO WAVE 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.

- DENSO WAVE will not bear any responsibility for data which customers have recorded and are received by DENSO WAVE for repair and analysis.

Free/Open source software (FOSS)

This product contains Free / Open Source Software (FOSS.) DENSO WAVE is ready to provide compliant source codes. For details, please contact our dealer or contact the site below. <https://www.denso-wave.com>

Chapter 2 States Regulations

Declaration of Conformity (for EU)

Hereby, DENSO WAVE INCORPORATED declares that the radio equipment type BHT- M890 is in compliance with Directive 2014/53/EU.

<https://www.denso-wave.com/eniadcd/download/category/document/>

Application	Frequency Range	Power
HF RFID	13.553-13.567 MHz	60 dBpA/m at 10 m
Bluetooth	2402-480 MHz	2.5 mW
Wireless LAN (11b/g/n)	2400-2485 MHz	100 mW e.i.r.p.
Wireless LAN (11a/n/ac)	5150-5250 MHz (W52: 5.2 GHz Range) 5250-5350 MHz (W53: 5.3 GHz Range) 5470-5725 MHz (W56: 5.6 GHz Range)	W52:200 mW e.i.r.p. W53:200 mW e.i.r.p. W56: 1000 mW e.i.r.p.
Mobile Phones (GSM)	873-915 MHz (ER-GSM 900) 876-915 MHz (R-GSM 900) 880-915 MHz (E-GSM 900) 890-915 MHz (P-GSM 900) 1710-1785 MHz (DCS 1800)	2 W 2 W 2 W 2 W 1 W
Mobile Phones (W-CDMA)	1920-1980 MHz (Band 1) 880-915 MHz (Band 8)	250 mW
Mobile Phones (FDD-LTE)	1920-1980 MHz (Band 1) 1710-1785 MHz (Band 3) 2500-2570 MHz (Band 7) 880-915 MHz (Band 8) 832-862 MHz (Band 20) 703-748 MHz (Band 28)	200 mW



DK	FR	NL
SI	SK	

<Contact information in EU>

Company Name: DENSO WAVE EUROPE GmbH

Address: Parsevalstrasse 9 A 40468 Dusseldorf Germany

Telephone: +49 211 540 138 40

Others information about this products are available from our QBdirect online information service at:

<https://www.denso-wave.com/>

For Australia

The BHT- M80 contains Wireless LAN and Bluetooth.



FCC Regulation (for United States America)

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.

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, and
2. this device must accept any interference received, including interference that may cause undesired operation.

<Representative in U.S.A>

Company Name: DENSO PRODUCTS AND SERVICES AMERICAS, INC.

Address: 3900 Via Oro Avenue, Long Beach, California 90810, U.S.A.

Telephone: +1-310-834-6352

FCC CAUTION

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. This Handy Terminal has been tested and found to comply with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

FOR PORTABLE DEVICE USAGE (<20 cm from body/SAR needed) The product complies with the FCC portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in

this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

For body-worn operating conditions please use belt-clips, holsters, and/or accessories that have no metallic component in the assembly and must provide at least 1.0 cm separation between the device and the user's body. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided

FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

User Steps to Access Information

Starting from Menu or Home:

Step 1 BHTShell

Step 2 5 SystemInfo

Step 3 2 Regulatory Info

HEARING AID COMPATIBILITY HAC FOR WIRELESS TELECOMMUNICATIONS DEVICES

WHAT IS HEARING AID COMPATIBILITY?

The Federal Communications Commission has implemented rules and a rating system designed to enable people who wear hearing aids to more effectively use these wireless telecommunications devices. The standard for compatibility of digital wireless phones with hearing aids is set forth in American National Standard Institute (ANSI) standard C63.19. There are two sets of ANSI standards with ratings from one to four (four being the best rating): an "M" rating for reduced interference making it easier to hear conversations on the phone when using the hearing aid microphone, and a "T" rating that enables the phone to be used with hearing aids operating in the telecoil mode thus reducing unwanted background noise.

HOW WILL I KNOW WHICH WIRELESS PHONES ARE HEARING AID COMPATIBLE? The Hearing Aid Compatibility rating is displayed on the wireless phone box. A phone is considered Hearing Aid Compatible for acoustic coupling (microphone mode) if it has an "M3" or "M4" rating. A digital wireless phone is considered Hearing Aid Compatible for inductive coupling (telecoil mode) if it has a "T3" or "T4" rating.

The tested M-Rating and T-Rating are M3 and T3.

HOW WILL I KNOW IF MY HEARING AID WILL WORK WITH A PARTICULAR DIGITAL WIRELESS PHONE?

You'll want to try a number of wireless phones so that you can decide which works the best with your hearing aids. You may also want to talk with your hearing aid professional about the extent to which your hearing aids are immune to interference if they have wireless phone shielding, and whether your hearing aid has a HAC rating.

To determine the compatibility of a WD and a particular hearing aid, simply add the numerical part of the hearing aid category (e.g. M2/T2=2) with the numerical part of the WD emission rating (e.g., M3=3) to arrive at the system classification for this particular combination of WD and hearing aid. A sum of 5 would indicate that the WD and hearing aid would provide normal use, and a sum of 6 or greater would indicate that the WD and hearing aid would provide excellent performance. A category sum of less than 4 would likely result in a performance that is judged unacceptable by the hearing aid user.

This phone has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service

THIS PHONE HAS A HAC RATING OF M4/T4.

IC Regulation (for Canada)

Industry Canada statement:

This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Caution :

1. the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems:
2. where applicable, antenna type(s), antenna models(s), and worst-case tilt angle(s) necessary to remain compliant with the e.i.p. elevation mask requirement set forth in section 6.2.2.3 shall be clearly indicated.

Radiation Exposure Statement:

The product comply with the Canada portable RF exposure limit set forth for an uncontrolled environment and are safe for intended operation as described in this manual. The further RF exposure reduction can be achieved if the product can be kept as far as possible from the user body or set the device to lower output power if such function is available.

User Steps to Access Information

Starting from Menu or Home:

Step 1- BHTShell

Step 2 – “5 Systeminfo”

Step 3 – “2 Regulatory Info”

Battery Request

CATUION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Rechargeable batteries contain scarce, valuable recyclable resources. We kindly ask for your cooperation in recycling to promote reuse of these resources.



The crossed-out wheeled bin is applicable for EU member status only.

Used rechargeable battery must not be disposed of as combustibles. Contact your nearest battery recycling centre or local sales office for information on disposal procedures. Never disassemble or break down rechargeable batteries.



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<https://www.denso-wave.com/>
 This manual uses recycled paper.

Documents / Resources

	<p>DENSO BHT-M80 Series Handheld Android Terminal [pdf] Instruction Manual BHTM80QWG, PZWBHTM80QWG, BHT-M80 Series, BHT-M80-QWG, BHT-M80 Series Handheld Android Terminal, Handheld Android Terminal</p>
	<p>DENSO BHT-M80 Series Handheld Android Terminal [pdf] Instructions BHTM80QW, PZWBHTM80QW, BHT-M80 Series, Handheld Android Terminal, BHT-M80 Series Handheld Android Terminal, BHT-M60 Series</p>

References

- [D QR RFID](#)
- [D QR RFID](#)
- [D documents and others download automatic data capture DENSO WAVE](#)
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