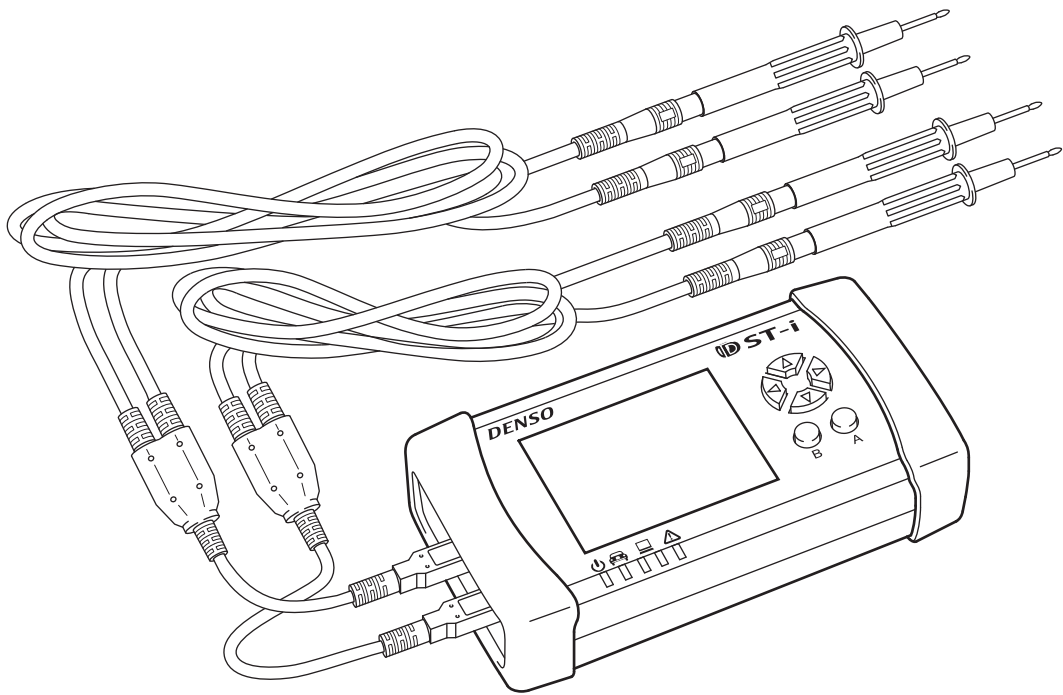


# **D ST-i**

## **Instruction Manual**



**DENSO CORPORATION**





# Preface

Thank you for purchasing this product.


Before using this product, read this document carefully so that you can use this product correctly and safely.





# For safe usage


This document uses symbols for warnings, cautions, and prohibitions. These symbols and their meanings are as follows. Please make sure you fully understand the meanings of these symbols before reading the rest of this document.

 <b>WARNING</b>	Indicates an item for which incorrect handling can result in a major accident involving death or serious injury.
 <b>CAUTION</b>	Indicates an item for which incorrect handling can lead to injury or damage to property. Under certain conditions, more serious consequences may result.
 <b>PROHIBITED</b>	Indicates a prohibited method of handling.
 <b>MANDATORY</b>	Indicates a mandatory method of handling and a forcible item.



## WARNING and CAUTION for handling this product

 **WARNING**





- Do not perform any work while the vehicle is running.  
Doing so could result in an accident. 
- Always observe the following rules. Failure to do so can result in heat generation, fire, blowout, or electrical shock.
  - Do not disassemble or alter this product. 
  - Do not connect this product to anything with a voltage exceeding the ratings of this product. 
  - Do not connect the probe to any parts applied by a voltage exceeding the ratings of this product. 

 **CAUTION**




<Work environment>

- Do not work anywhere that water could come in contact with the product and equipment. 
- Block the wheels of the vehicle with chocks before carrying out work.  
Failure to do so could result in an accident. 






## CAUTION

- When working anywhere hardly visible, for example under the vehicle, always make the vehicle starter switch (ignition switch) OFF to ensure that the vehicle cannot be moved.  
Failure to do so could result in an accident. 
- When working near the engine compartment, be careful of the engine and other high-temperature parts.  
High-temperature parts can cause burns. 
- Do not route the cable of this product over the engine compartment, especially if the engine is running.  
Failure to follow this instruction could result in an accident by catching up the cable and clothes with the belt and pulley. 
- Do not use this product in an extremely dusty environment. 
- The response of the LCD may be slow at the low temperature place. (Caution for the models with LCD)  
This phenomenon is attributed to the characteristics of the LCD and not a failure.







### <Checking before use>

- Inspect for adhesion of foreign materials to or pin breakage of each connector of this product before use. 
- Before connecting the datalink cable to this product and the vehicle side diagnosis connector, inspect to see if each connector is contaminated with foreign materials or the connector pins are damaged. 
- Before using the SD memory card, inspect to see if any foreign materials are stuck in the SD memory card slot or the contact surface of the SD memory card is contaminated with foreign materials. (Caution for the models with LCD) 




### <Handling of the product and equipment>

- Do not drop this product or subject it to a strong impact. 
- When connecting the datalink cable to this product and the vehicle side diagnosis connector or disconnecting it from them, ensure correct orientation of the connector and gently put it straight in.  
If the connector is connected in the wrong orientation, or put in or pulled out at the wrong angle, there is a risk of damaging the connector terminal and this may cause malfunctioning of the vehicle and/or this product. 
- When connecting the USB cable to this product and a PC or disconnecting it from them, ensure correct orientation of the connector and gently put it straight in.  
If the connector is connected in the wrong orientation, or put in or pulled out at the wrong angle, there is a risk of damaging the connector terminal and this may cause malfunctioning of the PC and/or this product. 
- When connecting the oscilloscope probe or ground cable to this product or when disconnecting it, ensure correct orientation of the connector and gently put it straight in.  
If the connector is connected in the wrong orientation, or put in or pulled out at the wrong angle, there is a risk of damaging the connector terminal and this may cause malfunctioning of this product. 
- When pulling out the connector of cable, hold the connector section not the cord.  
Pulling on the cord section can break the lines in the cable. 



## CAUTION

- Do not lift or drag this product by holding the cable connected to this product. When moving or installing, move this product by holding with hands. 
- Do not apply the load causing stress to the connector connected to this product.  
Applying too much force could result in breaking the connector terminal and this may cause malfunctioning of the vehicle, the PC and/or this product. 
- Do not insert anything other than an SD memory card in the SD memory card slot on this product. (Caution for the models with LCD) 
- Do not turn the power of this product OFF or remove the SD memory card while the SD memory card indicator is flashing. (Caution for the models with LCD)  
Failure to do so results in failure of the SD memory card or loss of the data in it. 
- Do not pull out an SD memory card when power is on. (Caution for the models with LCD) 
- The tip of the probe is sharp, so handle it carefully. 


### <Usage restrictions>

- Do not use a datalink cable other than the dedicated datalink cable supplied with this product. 
- When you start this product only by USB power (BUS power), be careful not to set the PC to "low power consumption mode" / "suspend mode". 
- The USB port to be connected to this product requires a power supply capability of 500 mA current source.
- As for connecting this product to the PC, directly connect it to the USB port on the PC or via a USB hub that has the capability of supplying sufficient current.   
Some types of USB hubs may have insufficient power supply capability for normal operation. (For example, a hub on PC keyboard is not suitable for this connection.)

### <Storage and maintenance of the product>

- Do not expose this product to direct sunlight for long periods of time. 
- The backlight of the LCD may be deteriorated and its luminance could be reduced consequently in a high humid environment. (Caution for the models with LCD)  
Use and store this product in a dry environment.
- Do not use solvents or thinners such as benzine when cleaning.   
To do so could cause deformation, discoloration, cracking, etc., and also result in loss of functions. To clean, wipe gently with a soft damp cloth with diluted neutral detergent.

### <Disposal of the product>





- When discarding the product or its accessories, contact authorized industrial waste-disposal service.   
Those who discard waste without authorization will be punished by law.

## **Disposal Requirements**

The product shall be disposed in accordance with all applicable legislation for disposal of Electrical and Electronic Equipment in each country and region. (e.g. WEEE Directive in EU)  
Please contact our authorized distributor or our sales agent when disposing it.

## WARNING and CAUTION for Bluetooth (models with Bluetooth)

### **WARNING**

- Do not use this product near medical devices or inside medical facilities as it may affect electronic devices with medical applications. 
- Make sure to keep this product at least 22 cm away from persons wearing a pacemaker. Radio wave could affect the performance of pacemaker. 
- Do not use this product near an automatic control device such as an automatic door or a fire alarm. Radio wave could effect its operation and result in an accident caused by malfunction. 
- Do not use this product in electric trains, airplanes, or places where flammable gasses are present. Failure to do so may result in accidents. 

### **CAUTION**

- The communication range depends on any obstacles (i.e., human bodies, metal, walls) between this product and the Bluetooth device, and the condition of the radio wave.
- An antenna is built into this product. The sensitivity of the Bluetooth communication is maximized when no obstacles exist between the connected Bluetooth device and the antenna of this product. The communication distance becomes shorter should there be obstacles between the antenna of the connected Bluetooth device and the built-in antenna of this product.
- The following circumstances could affect the sensitivity of the Bluetooth communication.
  - Obstacles such as human body, metal, wall, etc.
  - In close proximity to established wireless networks, microwave ovens, and other devices that emit radio waves.
- Since Bluetooth devices and the wireless LAN (IEEE802.11 b/g) use the same frequency band (2.4 GHz), radio wave interference could occur and cause degradation of communication speed, noise and disconnection if a Bluetooth device is used near a wireless LAN equipped device. To resolve poor communications, perform the following steps.
  - Place this product as close to a Bluetooth device as possible.
  - Keep a wireless LAN equipped device away from this product as much as possible.
  - If communications do not improve, turn off any wireless LAN equipped devices nearby.
- Use the USB cable for more data critical situation over the Bluetooth communication (wireless) due to the greater possibility of loss of connection during data upload or download of the data transmission.
- Please note that we shall have no liability for any information leakage from the Bluetooth communication.

## **The countries where you can use the models with Bluetooth**

Japan, USA, Canada, Australia, New Zealand, EU (European Union), Malaysia, Indonesia, UK

\* In the countries other than those above, you cannot use the models with Bluetooth.

## **Trademarks**

- Microsoft, Windows<sup>®</sup>, Internet Explorer, Windows 10, Windows 8.1, Windows 7 are the trademarks or registered trademarks of the Microsoft Corporation of the United States in the United States and other countries.
- Bluetooth<sup>®</sup> is the trademark or registered trademark of Bluetooth SIG, Inc. in the United State and other countries.
- SD Memory Card<sup>™</sup> and SDHC Memory Card<sup>™</sup> are the registered trademarks of Panasonic Corporation, SanDisk Corporation in the United State and Toshiba Corporation.
- Names of products and companies in this document are registered trademarks or trademarks of their owners.
- TRON, iTRON and  $\mu$ iTRON are not the names for specific products and series of products.
- TRON is an abbreviation of "The Real-time Operating System Nucleus".
- $\mu$ iTRON is an abbreviation of "Micro Industrial TRON".



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# 1 Before Use

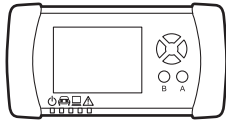
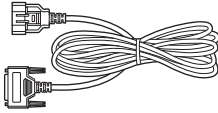
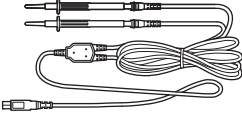
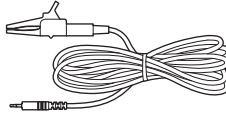
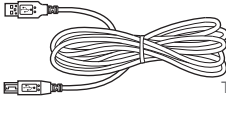


## 1-1 Product Configuration

Check that you have all of the following standard components before using this product.

### Components

Set Part Number: 95171-0111\* (with LCD, without Bluetooth)

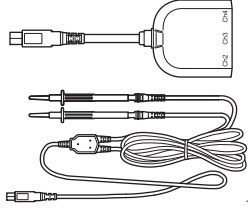
95171-0112\* (with LCD, with Bluetooth)

No.	Part Name	Illustration	Part No.	Q'ty
1	Main unit	 T01856Z with LCD	—	1
2	Datalink Cable	 T01857Z	95171-1284*	1
3	Oscilloscope probe	 T03045Z	95171-1264*	2
4	Ground cable	 T02052Z	95171-1271*	1
5	USB Cable	 T01871Z	95171-1011*	1
6	USB Spacer	 T02747Z	95171-1302*	1
7	SD memory card	 T02715Z	Please ask.	1
8	Instruction Manual (this document)		—	1

### NOTE

- The last figure of a part No. is indicated with \*. When you ask for information, make inquiries with the 9-digit part No. and part name.

**Optional products**

Part Name	Illustration	Part No.	Q'ty
4-channel adapter set	 <p style="text-align: right; margin-right: 20px;">T03046Z</p>	95171-1274*	Adapter (1) Probe (2)

**NOTE**

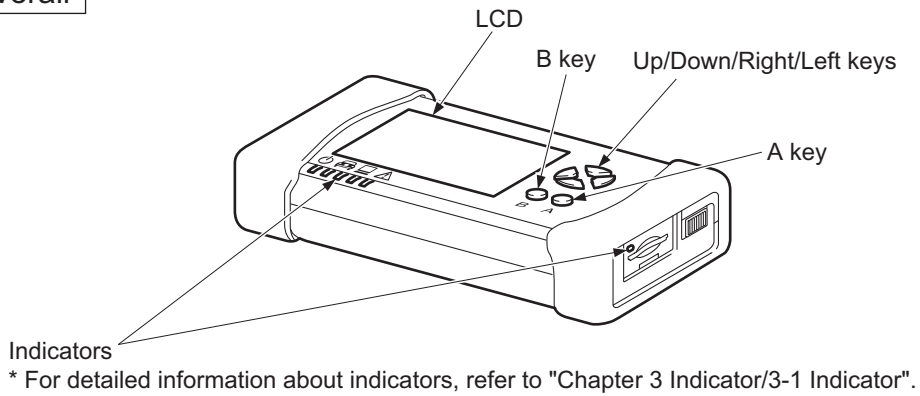
- The last figure of a part No. is indicated with \*. When you ask for information, make inquiries with the 9-digit part No. and part name.

## 1-2 Names of the Parts

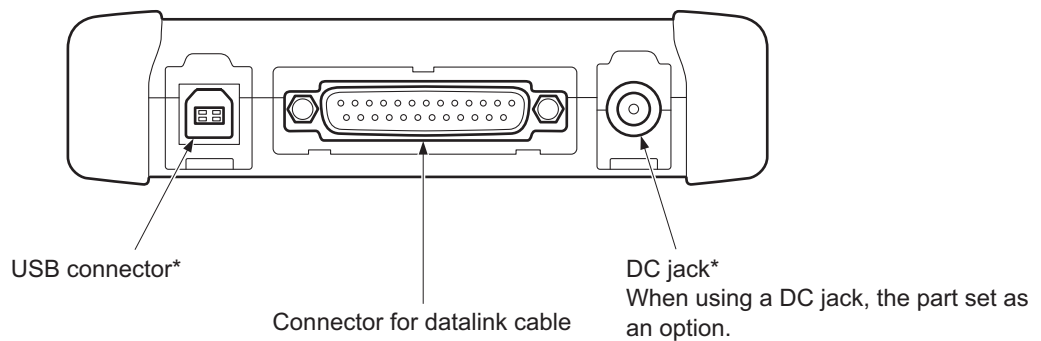
The names of the product parts are as follows:

### models with LCD

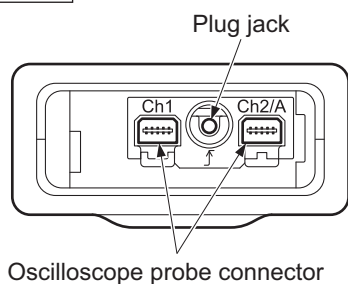
#### Overall



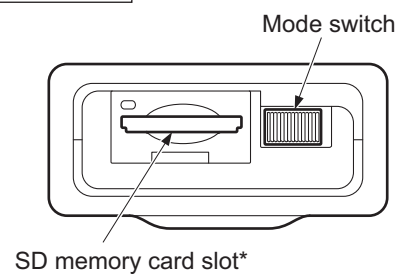
#### Upper side



#### Left side



#### Right side



\* Rubber caps are provided for "USB connector", "DC jack", "SD memory card slot" and "oscilloscope probe connector and plug jack".

## 1-3 Setup

You must carry out the setup necessary for use of this product.

### Required operating environment of the PC

For using this product, a PC with following operating environments is required.

- OS:
  - Microsoft Windows 7 (SP1) (32bit, 64bit) English version
  - Microsoft Windows 8.1 (32bit, 64bit) English version
  - Microsoft Windows 10 (32bit, 64bit) English version
- With USB 2.0 interface as standard
- Internet Explorer 11.0 or later version should be installed.
- Access to Internet is allowed. (Broadband internet connection is recommended)

#### NOTE

- If this product is used as the interface, the operating environment of the software on a PC side is needed in addition to the above operating environment.

## Necessary Setup

For using this product, following setup is needed.

- Installing DST-i setup software to a PC (all models)

A dedicated USB driver, the setup utility (DST-i configuration tool), etc. which is required for connecting this product and a PC using a USB cable or Bluetooth shall be installed to the PC.

- Installing the DST-i main unit software to this product (all models)

Install the DST-i main unit software to this product.

- Installing Bluetooth driver software and Paring to a PC (models with Bluetooth)

For the models with Bluetooth, to connect this product with a PC through the Bluetooth communication function, you must install the Bluetooth driver software to the PC beforehand.

In addition, you must execute pairing between the PC and this product.

- Installing the oscilloscope software

Install the oscilloscope software to this product and the PC.

When installing the oscilloscope software to this product, an SD card is required.

### CAUTION

- Do not connect this product with a PC using the USB cable before the DST-i setup software installation to your PC is completed.
- To install the DST-i setup software to a PC, log on with administrator privileges and close all running applications before installation.
- In installing the DST-i main unit software, execute the install by using the USB cable in the state that this product and the PC are connected.  
Do not execute the install in using Bluetooth communication.
- Use of a Bluetooth driver software equipped as standard to the PC with Microsoft® Windows® operating system is recommended for use of a Bluetooth communication.
- This information does not guarantee the connection between all of commercially available Bluetooth modules and information terminals equipped with Bluetooth (e.g., PC and cellular phone).
- Use a Bluetooth module that is labeled with the Bluetooth logo mark and conforms to the Bluetooth standard 2.0.
- Total eight Bluetooth modules and information terminals having Bluetooth can execute paring with this product. If ninth Bluetooth module or information terminal executes paring, first Bluetooth module or information terminal will be cancelled.

## 1-4 Connection

### Connecting to the vehicle

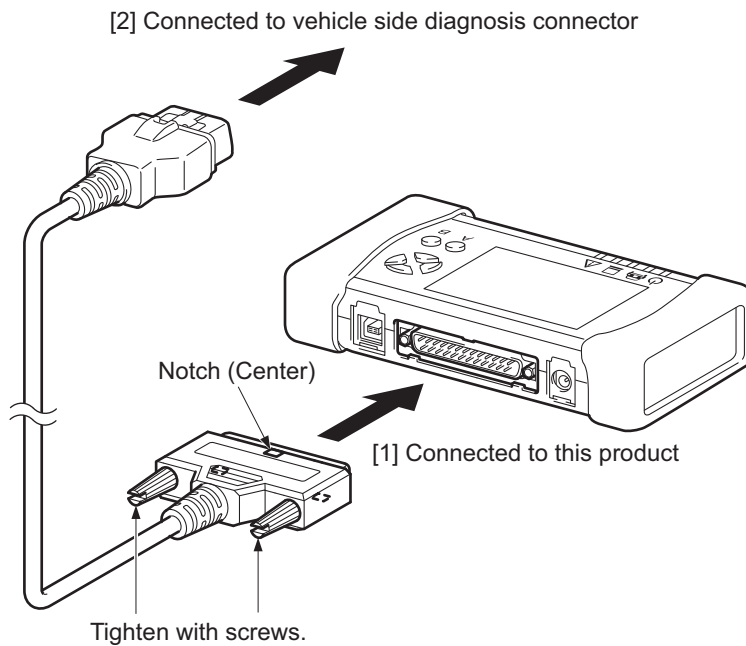
Use the datalink cable to connect this product with the vehicle.

Check the position of the diagnosis connector of the vehicle side in the repair manual of the vehicle.

#### CAUTION

- Perform the connection of step 1 and step 2 according to the order.

1. First, connect this product and the datalink cable.
2. Next, connect the datalink cable to the vehicle side diagnosis connector.



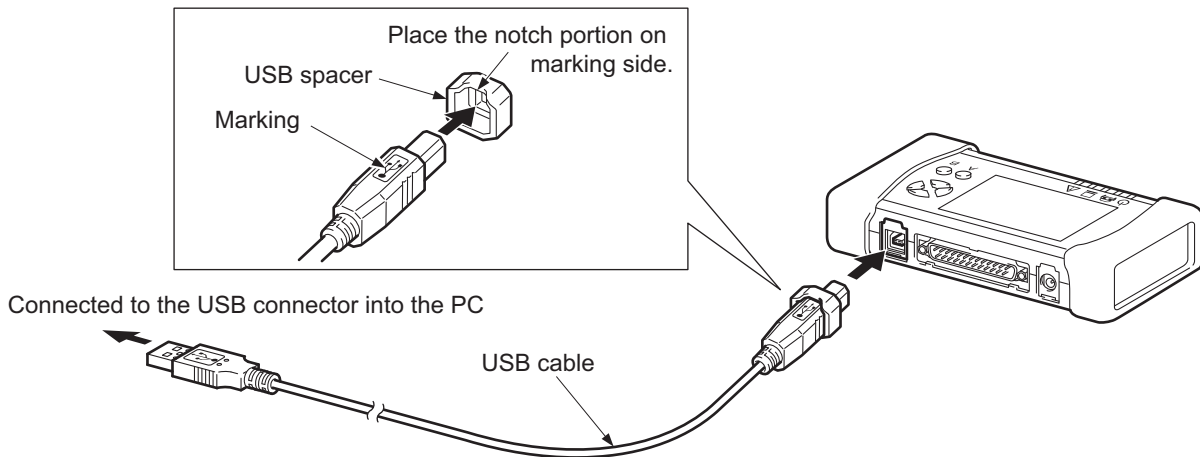
T02929E

#### NOTE

- The power supply of this product is turned ON by turning the mode switch ON after connected with the vehicle.

## Connecting to a PC

Use a USB cable to connect this product to a PC.



### NOTE

- The power supply of this product is turned ON by turning the mode switch ON after connected with a PC.
- When the USB communication with the PC is established, the PC communication (USB) indicator on this product lights or flashes in green.
- When establishing the connection with the Bluetooth communication function on the models with Bluetooth, USB cable connection is not needed.
- If connecting with a PC with the Bluetooth communication, communication setup must be performed with the DST-i configuration tool.
- When the Bluetooth communication with the PC is established, the PC communication (Bluetooth) indicator on this product lights or flashes in blue.
- When connecting the model with Bluetooth to a PC with the USB cable, the USB communication has the top priority in the communication between a PC.
- When communication way is changed from USB to Bluetooth while communicating, remove the USB cable with the PC application software finished.

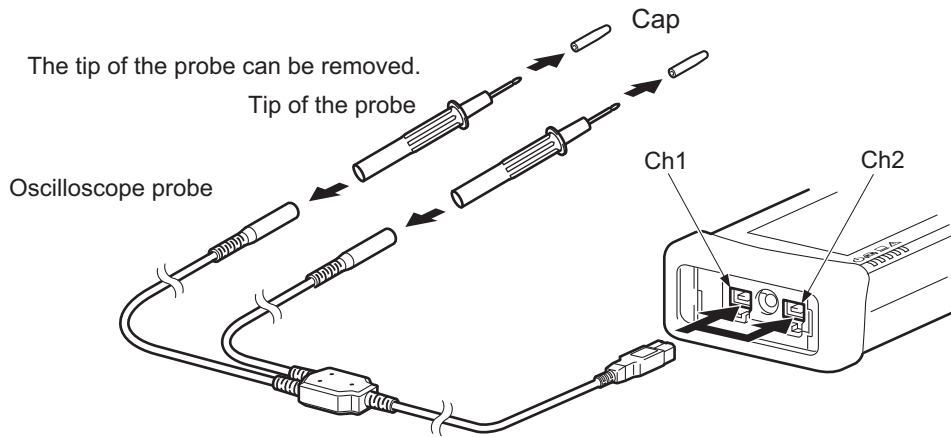
### CAUTION

- You must install the DST-i setup software on your PC before you connect the USB cable to your PC.  
*Reference: Page 5 Installing DST-i setup software to a PC (all models) (Chapter 1 Before Use/Setup/Necessary Setup)*
- When the PC does not supply adequate power, please contact your distributor.



## Connecting the oscilloscope probe

When using the oscilloscope function, connect the oscilloscope probe to this product.



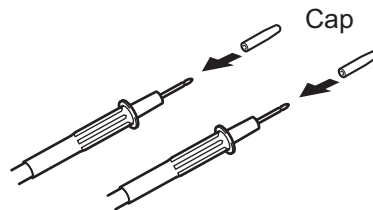
Connect the oscilloscope probe to Ch1 or Ch2.  
The probe can be connected to both Ch1 and Ch2.

T03047E

### NOTE

- The tip of the oscilloscope probe can be removed.

<After using the oscilloscope probe>

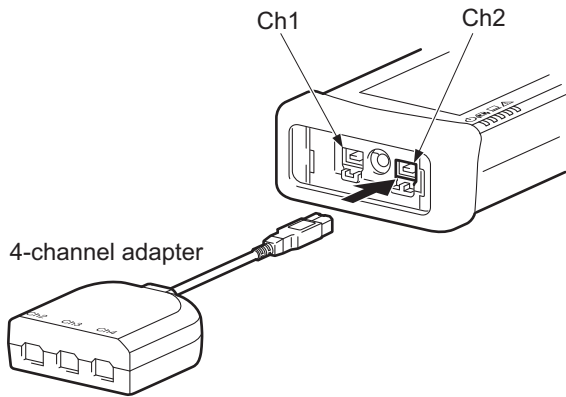


T03048E

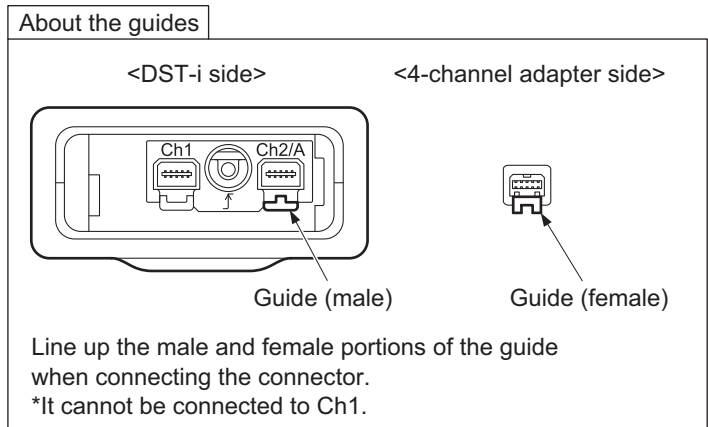
### NOTE

- After using the oscilloscope, always put the cap back on it.

To increase the number of oscilloscope channels, use the optional 4-channel adapter.



Connect the 4-channel adapter to Ch2.  
The connector may only be connected to Ch2.



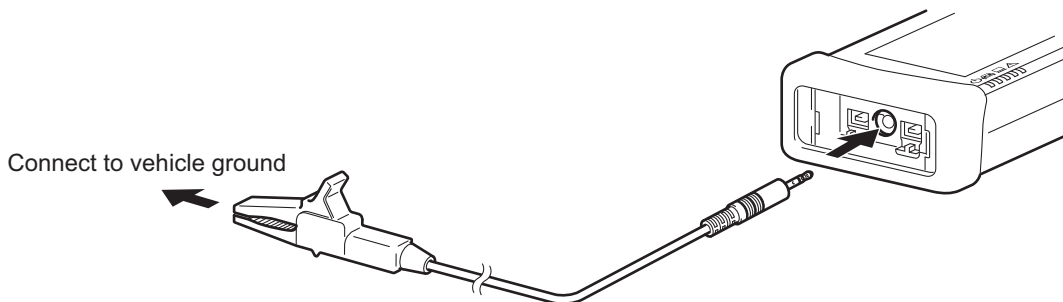
T02059E

**NOTE**

- By using the 4-channel adapter, the number of channels can be increased to four.

**Connecting the ground cable**

When a stable waveform display cannot be obtained while using the oscilloscope function because of noise, connect the ground cable to this product.



T02058E

**NOTE**

- Attach the clip of the ground cable to a stable location where it can be grounded on the vehicle.

**CAUTION**

- Do not remove ground with anything but the vehicle ground. It may cause malfunctioning of the vehicle and/or this product.

## 1-5 SD Memory Card

### Inserting/removing an SD memory card

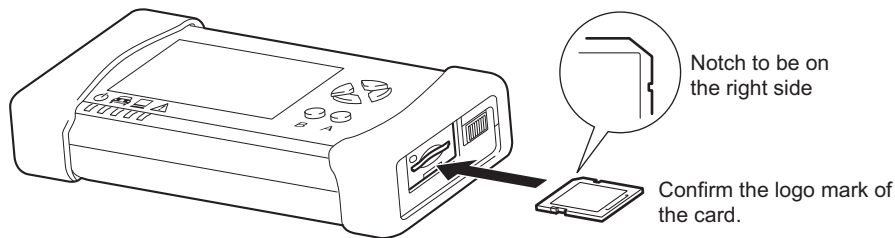
This product can use an SD memory card inserting it into the SD memory card slot. The SD memory card may be used to install software or store vehicle data.

#### ⚠ CAUTION

- Depending on software, some functions with SD memory cards are not available. Refer to the instruction manual of the software to know whether your software supports the functions or not and the handling method.
- Use an SD memory card or an SDHC memory card.
- This product does not support an SDXC memory card.
- Use an SD memory card labeled with the SD logo mark and conforming to the SD standard. The following brand SD memory cards are recommended: Panasonic, SanDisk and Toshiba
- Not all the SD memory cards are supported on this product.

### ■ Inserting an SD memory card

1. Turn the mode switch of this product OFF.
2. Turn the notch of SD memory card to the right and insert gently to the slot end until a clicking noise is heard.



Available card	
SD	SDHC

T02085E

#### NOTE

- If the notch on the SD memory card side face is set to the "Lock" position, data storage and deletion are disabled by the write protect function (write inhibit). Make sure to unlock the write protect function before use.

### ■ Removing an SD memory card

1. Turn the mode switch of this product OFF.
2. Push the SD memory card lightly.
3. The SD memory card is ejected a little. Pull out it gently.

# 2 Basic Operations

## 2-1 Starting

### ⚠ CAUTION

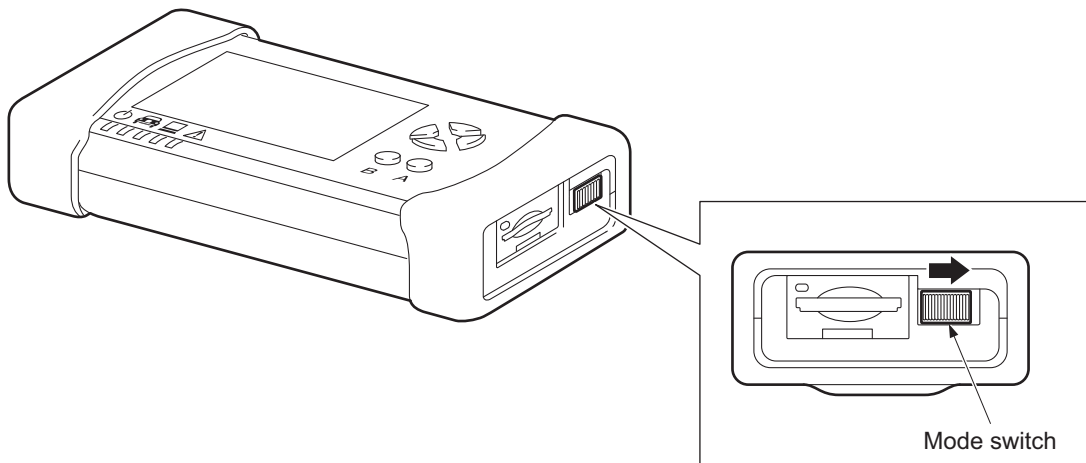
- Perform the connection of step 1 and step 2 according to the order.

1. Connect the datalink cable to this product.  
*Reference: Page 6 Connecting to the vehicle (Chapter 1 Before Use/Connection)*
2. Connect the datalink cable to the vehicle side diagnosis connector.  
*Reference: Page 6 Connecting to the vehicle (Chapter 1 Before Use/Connection)*
3. Connect this product and a PC with the USB cable.  
*Reference: Page 7 Connecting to a PC (Chapter 1 Before Use/Connection)*

### NOTE

- If you do not use a PC, you do not need to connect with the USB cable.
- If you use a model with Bluetooth and connect with a PC through the Bluetooth communication function, you do not need to connect with the USB cable.

4. Turn the mode switch of this product ON.



T01897E

### NOTE

- When turning the mode switch ON, the power indicator of this product turns green.

5. Turn the vehicle starter switch (ignition switch) ON.

### NOTE

- When the vehicle starter switch (ignition switch) position is OFF or ACC, communication with the vehicle cannot be established. Turn the vehicle starter switch (ignition switch) ON or start the engine when using this product.

## 2-2 Ending

1. Finish communications with the vehicle by PC application software or LCD software.

### CAUTION

- Do not turn the mode switch of this product OFF or disconnect the datalink cable from this product during the active test. The diagnosed actuators could be stopped still in the drive status. Make sure to execute the ending procedure after finishing the active test.

2. Turn the mode switch of this product OFF.
3. Turn the vehicle starter switch (ignition switch) OFF.
4. Disconnect the USB cable from this product and the PC.

### CAUTION

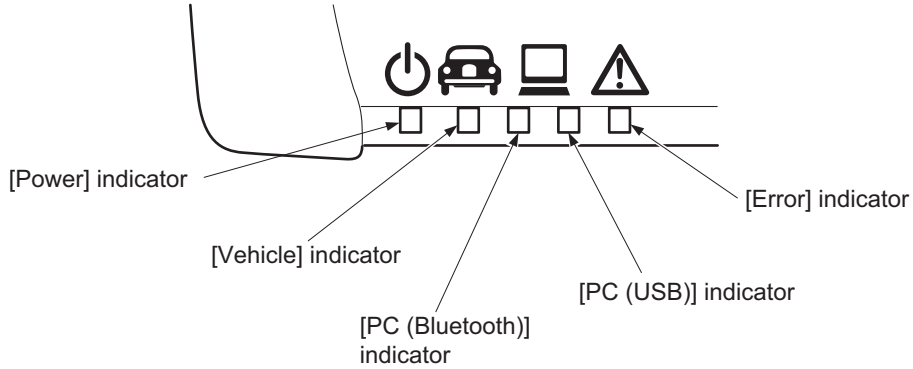
- When disconnecting the datalink cable from the vehicle side diagnosis connector, go after turn the vehicle starter switch (ignition switch) OFF.
- Perform the disconnection of step 5 and step 6 according to the order.

5. Disconnect the datalink cable from the vehicle side diagnosis connector.
6. Disconnect the datalink cable from this product.

# 3 Indicator

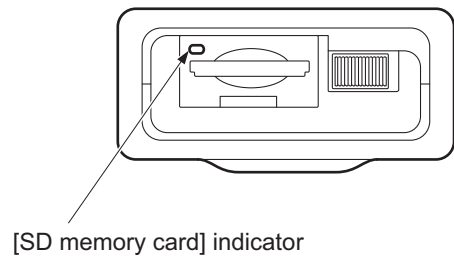
## 3-1 Indicator

The indicators of this product provide the following information by their illumination.



T01900E

- **[Power] indicator**  
Shows the status of power.  
Lights in green during power ON.
- **[Vehicle] indicator**  
Shows the status of communications with the vehicle.  
Flashes in green during active communications.
- **[PC (Bluetooth)] indicator**  
Shows the status of Bluetooth communications with the PC.  
Flashes in blue during active communications.
- **[PC (USB)] indicator**  
Shows the status of USB communications with the PC.  
Flashes in green during active communications.
- **[Error] indicator**  
Lights or flashes in red when an error occurs.
- **[SD Memory Card] indicator**  
Shows the access status of the SD memory card.  
Flashes in green during active access.



T01917E

# 4 Product Specifications

## 4-1 Specifications of This Product

Item		Specifications
OS		µiTRON
CPU		32-bit RISC microcomputer
Memory	Built-in Flash ROM	16 MB
	SDRAM	16 MB
	EEPROM	32 KB
LCD	Size	2.7 inch TFT color LCD
	Resolution	QVGA (320 x 240 dots)
	Display color	Max. 260000 colors
Input device	Operation keys	6 keys
External interface *2	USB	USB 2.0 x 1
	Bluetooth *1	Bluetooth 2.0 class 1
	SD memory card	Slot x 1 (supporting SD and SDHC memory cards)
	DC jack	JEITA4 standard type
	Connector for Oscilloscope probe	2ch
	Vehicle communication	Dedicated connector (D-sub 25 pin) x 1 ISO9141, CAN
	Compatible communication standards	ISO9141, ISO14229, ISO14230, ISO15765, ISO15031-5, SAEJ1979
Main unit power supply voltage	Vehicle power supply	DC 6.5 to 32 V (Datalink cable)
	USB power (BUS power)	DC 4.75 to 5.25 V *3
Power consumption		Normally 1.5 W (12 VDC), Max. 2.5 W (12 VDC)
Operating environment	Operating temperature [Storage temperature]	0 to 50°C [-10 to 60°C]
	Operating humidity	35 to 85% (No condensation)
Dimensions		135 mm (W) x 70 mm (H) x 35 mm (D)
PC required operating environment		OS : Windows 10 / 11, CPU : 1 GHz or more, Memory : 2 GB or more, Available disk space : 1 GB or more
Weight	Model without Bluetooth	Approx. 230 g
	Model with Bluetooth	Approx. 235 g

\*1 For models with Bluetooth only

\*2 Some functions require the support software.

\*3 This product can be turned on by the power supplied from the USB power (BUS power). However, vehicle communication cannot be established when the power is not supplied from the vehicle.

**4-2 Oscilloscope Function Specifications**

Item	Specifications
Number of channels	4 channels (2 channels standard + 2 channels optional)
Maximum sampling rate	64 MS/sec
Voltage axis range	20 mV/div, 50 mV/div, 100 mV/div to 15 V/div
Time axis range	500 ns/div, 1 $\mu$ s/div, 2 $\mu$ s/div to 10 s/div
Trigger mode	Auto, Normal, Single
Rated input voltage	70 V



# 5 Warranty

## 5-1 Warranty

1. The warranty period of this set is two years after the purchase day. However accessories are not covered, main body only.
2. Free repair warranty is applied only for the failure under proper operation conditions within the warranty period.
3. Non-free repair is applied to the following cases even if the valid warranty period remains.
  - Failure or damage from fire and natural disaster.
  - Failure or damage as a result of a falling during transportation and movement after purchase or from the improper handling.
  - Failure or damage caused from handling in a way contrary to proper operating methods and cautions described in this document.
  - Failure or damage from modification or liability for operations.
  - Replacement of external parts such as the resin case.
4. We shall have no liability for any direct or indirect damage resulting from failure or use of this product.
5. For request of repair, please contact your distributor.

### Data preservation

Recorded data in this product could be lost in repair. Please note that we shall have no liability for any damage and data preservation derived in conjunction with data loss.

<b>DENSO Overseas Subsidiary Company &amp; TAS CORPORATION name/Address</b>	<b>Tel/Fax</b>
<b>DENSO AUTOMOTIVE SYSTEMS AUSTRALIA PTY. LTD.</b> Address: 2-46 Merrindale Drive, Croydon, Victoria 3136, Australia	Sales & Service Tel: +61-3-8761-1100 Fax: +61-3-8761-1505
<b>DENSO INTERNATIONAL ASIA PTE. LTD.</b> Address: 51 Science Park Road, #01-19 The Aries, Science Park II, Singapore 117586	Sales & Service Tel: +65-6776-8268 Fax: +65-6776-8698
<b>PT.DENSO SALES INDONESIA</b> Address: Jl.Gaya Motor I No.6, Sunter II, Kel.Sungai Bambu, Kec.Tanjung Priok, Jakarta 14330, Indonesia	Sales & Service Tel: +62-21-6512279 Fax: +65-21-6512284
<b>DENSO (MALAYSIA) SDN. BHD.</b> Address: Lot 2, Jalan P/1, Section 13, 43650 Bandar Baru Bangi, Selangor Darul Ehsan, Malaysia	Sales & Service Tel: +60-3-87328888 Fax: +60-3-87328822/33
<b>DENSO PHILIPPINES CORPORATION</b> Address: 109 Unity Avenue, Carmelray Industrial Park 1, 4037 Canlubang, Calamba City, Laguna, Philippines	Sales & Service Tel: +63-49-549-3030 Fax: +63-49-549-3089
<b>DENSO TAIWAN CORP.</b> Address: 525, Sec. 2 Mei Su Road Yang Mei Town Taoyuan Hsien, Taiwan, R.O.C.	Sales & Service Tel: +886-3-482-8001 Fax: +886-3-482-8003
<b>DENSO SALES (THAILAND) CO.,LTD.</b> Address: 888 Moo1, Bangna-Trad Rd. Km. 27.5, Tambol Bangbo, Amphur Bangbo, Samutprakarn 10560 Thailand	Sales & Service Tel: +66-2315-9500 Fax: +66-2315-9515
<b>DENSO EUROPE B.V.</b> Address: Hogeweyselaan 165, 1382 JL Weesp, The Netherlands	Sales & Service Tel: +31-294-493493 Fax: +31-294-417122
<b>DENSO SALES MIDDLE EAST &amp; NORTH AFRICA FZE</b> Address: P.O.Box 261986, Jebel Ali Free Zone South, Dubai, United Arab Emirates	Sales & Service Tel: +971 4 880 7789 Fax: +971 4 880 7790
<b>DENSO (CHINA) INVESTMENT CO.,LTD.</b> Address: Room No.518, The Beijing Fortune Building, No.5 Dong San Huan Bei Lu, Chaoyang District, Beijing, China	Sales & Service Tel: +86-10-6590-8337 Fax: +86-10-6590-9044
<b>DENSO INTERNATIONAL INDIA PVT. LTD.</b> Address: Plot No.3, Sector-3, IMT Manesar, Gurgaon, Haryana-122 050, India	Sales & Service Tel: +91-124-4803200 Fax: +91-124-4803201
<b>DENSO PRODUCTS AND SERVICES AMERICAS, INC.</b> Address: 3900 Via Oro Avenue, Long Beach, California 90810, U.S.A.	Sales & Service Tel: +1-310-834-6352 Fax: +1-310-513-7319
<b>DENSO SALES CANADA, INC.</b> Address: 195 Brunel Road, Mississauga, Ontario, Canada, L4Z 1X3	Sales & Service Tel: +1-905-890-0890 Fax: +1-905-890-8474
<b>DENSO INTERNATIONAL KOREA CORPORATION</b> Address: 131, Seonggogae-ro, Uiwang-si, Gyeonggi-do, Korea 〒437-120	Sales & Service Tel: +82-31-340-1700 Fax: +82-31-8033-7210
<b>TAS CORPORATION</b> Address: 248-2 Shimoshiota Narumi-cho, Midori-ku, Nagoya, Aichi, 458-0801, JAPAN	Sales & Service Tel: +81-52-629-5311 Fax: +81-52-621-3288

# Regulatory Information to user

## MODEL : DN-VIM-003

### 1. 日本電波法

#### <Bluetooth 付きモデル>

Bluetooth モジュールは、電波法の認証に適合しています。必ず以下のことをお守りください。  
製品に貼り付けてあるシールをはがさないでください。  
不用意に分解しないでください。分解、改造したものを使用することは法律で禁止されています。

### 2. EMC and Radio Regulation in U.S.A.

#### <Model with Bluetooth, Model without Bluetooth>

##### FCC WARNING

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

NOTICE: This device has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the device is operated in a commercial environment.

This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this device in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

##### NOTE

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.

#### <Model with Bluetooth>

##### CAUTION: Radio Frequency Radiation Exposure

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This device has very low levels of RF energy that it deemed to comply without maximum permissive exposure evaluation (MPE). But it is desirable that it should be installed and operated keeping the radiator at least 20 cm or more away from person's body (excluding extremities: hands, wrists, feet and ankles).

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

### 3. EMC and Radio Regulation in CANADA

<Model with Bluetooth>

#### NOTE

Operation is subject to the following two conditions:

(1) this device may not cause interference; and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules.

This device has very low levels of RF energy that it deemed to comply without maximum permissive exposure evaluation (MPE). But it is desirable that it should be installed and operated keeping the radiator at least 20 cm or more away from person's body (excluding extremities: hands, wrists, feet and ankles).

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

L'opération est soumise aux deux conditions suivantes:

(1) Ce périphérique ne peut être la cause d'interférence, et

(2) Ce périphérique se doit d'accepter toute(s) interférence(s), y compris celle(s) susceptible(s) de provoquer des opérations indésirables dans le cadre de son fonctionnement.

Cet équipement est en conformité avec les limites d'exposition aux rayonnements ISED précédemment énoncées dans un environnement non contrôlé et répond aux règles d'exposition aux radiofréquences (RF) ISED définies par RSS-102. Parce qu'il bénéficie de très faibles niveaux d'énergie RF, cet équipement a été jugé conforme sans qu'il soit nécessaire de procéder à une évaluation de l'exposition permissive maximale (MPE).

Toutefois, il est recommandé que cet équipement soit installé et opéré en prenant soin que le radiateur soit à une distance minimum de 20 cm de toute personne se trouvant dans sa périphérie (à l'exclusion des extrémités corporelles suivantes: mains et poignets et, pieds et chevilles).

Co-implantation: Cet émetteur ne doit pas être co-implanté ou exploité conjointement avec une autre antenne ou émetteur.

### 4. EMC and Radio Directive in EU, EFTA, UK

<Model without Bluetooth only>

#### 2014/30/EU, Electromagnetic Compatibility Regulations 2016

Harmonized Standards applied : EN 55011 (This product falls under group 1 and class A)

: EN 61000-6-2

<Model with Bluetooth only>

#### 2014/53/EU, Radio Equipment Regulations 2017

Harmonized Standards applied : EN 300 328 V2.2.2



Model Name	: DN-VIM-003
Radio Frequency	: 2402-2480 MHz
Radio Output Power	: 20 dBm max.
Manufacturer	
Name	: DENSO CORPORATION
Address	: 1-1, Showa-cho, Kariya-shi, Aichi-ken, 448-8661 Japan
Authorized Representative in EU	
Name	: DENSO EUROPE B.V.
Address	: Hogeweyselaan 165, 1382 JL Weesp, The Netherlands
Authorized Representative in UK	
Name	: DENSO AUTOMOTIVE UK, LTD.
Address	: Break spear Place, Breakspear Park Hemel Hempstead, Hertfordshire HP2 4TZ, The United Kingdom

[EN] English	Hereby, DENSO CORPORATION declares that the radio equipment type DN-VIM-003 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[BG] Bulgarian	С настоящото DENSO CORPORATION декларира, че този тип радиосъоръжение DN-VIM-003 е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[CS] Czech	Tímto DENSO CORPORATION prohlašuje, že typ rádiového zařízení DN-VIM-003 je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[DA] Danish	Hermed erklærer DENSO CORPORATION, at radioudstyrstypen DN-VIM-003 er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[DE] German	Hiermit erkläre DENSO CORPORATION, dass der Funkanlagentyp DN-VIM-003 der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[ET] Estonian	Käesolevaga deklareerib DENSO CORPORATION, et käesolev raadioseadme tüüp DN-VIM-003 vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[EL] Greek	Με την παρούσα ο/η DENSO CORPORATION, δηλώνει ότι ο ραδιοεξοπλισμός DN-VIM-003 πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[ES] Spanish	Por la presente, DENSO CORPORATION declara que el tipo de equipo radioeléctrico DN-VIM-003 es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[FR] French	Le soussigné, DENSO CORPORATION, déclare que l'équipement radioélectrique du type DN-VIM-003 est conforme à la directive 2014/53/UE. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[IT] Italian	Il fabbricante, DENSO CORPORATION, dichiara che il tipo di apparecchiatura radio DN-VIM-003 è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[LV] Latvian	Ar šo DENSO CORPORATION deklarē, ka radioiekārta DN-VIM-003 atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[LT] Lithuanian	Aš, DENSO CORPORATION, patvirtinu, kad radijo įrenginių tipas DN-VIM-003 atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[HR] Croatian	DENSO CORPORATION ovime izjavljuje da je radijska oprema tipa DN-VIM-003 u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o skladnosti dostupan je na sljedećoj internetskoj adresi: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[HU] Hungarian	DENSO CORPORATION igazolja, hogy a DN-VIM-003 típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[MT] Maltese	B 'dan, DENSO CORPORATION, niddikjara li dan it-tip ta' tagħmir tar-radjju DN-VIM-003 huwa konformi mad-Direttiva 2014/53/UE. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[NL] Dutch	Hierbij verklaar ik, DENSO CORPORATION, dat het type radioapparatuur DN-VIM-003 conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[PL] Polish	DENSO CORPORATION niniejszym oświadcza, że typ urządzenia radiowego DN-VIM-003 jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[PT] Portuguese	O(a) abaixo assinado(a) DENSO CORPORATION declara que o presente tipo de equipamento de rádio DN-VIM-003 está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[RO] Romanian	Prin prezenta, DENSO CORPORATION declară că tipul de echipamente radio DN-VIM-003 este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[SK] Slovak	DENSO CORPORATION týmto vyhlasuje, že rádiové zariadenie typu DN-VIM-003 je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[SL] Slovenian	DENSO CORPORATION potrjuje, da je tip radijske opreme DN-VIM-003 skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[FI] Finish	DENSO CORPORATION vakuuttaa, että radiolaitetyypin DN-VIM-003 on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[SV] Swedish	Härmed försäkrar DENSO CORPORATION att denna typ av radioutrustning DN-VIM-003 överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>
[UK] English	Hereby, DENSO CORPORATION declares that the radio equipment type DN-VIM-003 is in compliance with the relevant statutory requirements. The full text of the UK declaration of conformity is available at the following internet address: <a href="https://www.denso.com/nl/en/">https://www.denso.com/nl/en/</a>

## 5. Radio Regulation in MALAYSIA

<Model with Bluetooth>

Model name : DN-VIM-003

Manufacturer : DENSO CORPORATION

## 6. Radio Regulation in INDONESIA

<Model with Bluetooth>

33991/SDPPI/2014

3886

## 7. Environmental Regulation in CHINA

Table of toxic or hazardous substances contained in this product for "Management Methods for Controlling Pollution by Electronic Information Products (China RoHS)".

### 产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr <sup>6+</sup> )	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电子元器件	×	○	○	○	○	○
焊锡	○	○	○	○	○	○
电缆	○	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 标准规定的限量要求以下。  
×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 标准规定的限量要求。

环境保护使用期限要以满足以下的条件为前提。

保存温度	- 10℃~60℃
使用温度	0℃~50℃

** ST-i**  
Instruction Manual

1st Ed. September, 2011  
18th Ed. April, 2021

First setup date	
Store purchased	
S/N	