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Chapter 1. Getting started with Zenith Z5

1.1. Specification

Z5 Base Unit specification

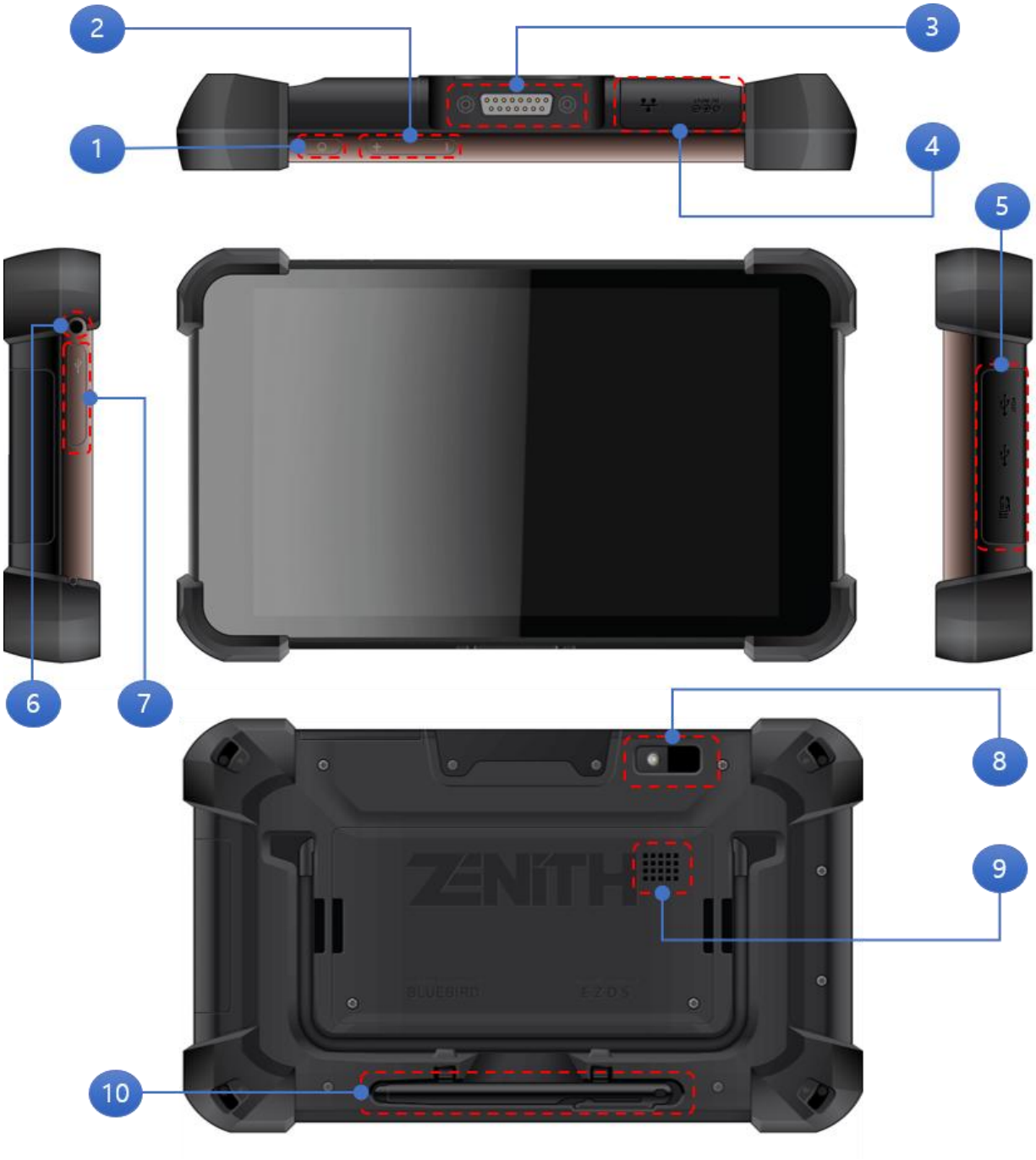
General Specification	
Category	Specifications
CPU	Octa Core Processor 2.0 GHz
Operating System	Andoroid 9
System Memory	3G / Internal 32G
External Memory	Micro SD Card
LCD	8.0 inch FHD (1920 x 1200)
Input Devices	Capacitive Touch Screen, 3 Hard Keys (Power, Volume +, Volume -)
Camera	8 megapixel auto-focus with LED flash
Sound	Loud Speackerl 1 mircrophone; 3.5 pi standard audio jack
Rechargeable Battery	Li-ion 3.8V 3200 mAh
Operating voltage	DC 9 ~ 30V
Sensors	Ambient Light, Proximity, Gyroscope, Accelerometer
Dimension	225 x 136 x 33 mm
Weight	800g

Connectivity	
External port	USB 2.0 1ea, USB 3.0 2 ea
Network	RJ45 Ethernet, Wifi 802.11 a/b/g/n, Bluetooth 4.2

Supported Vehicle Communication Protocols
CAN (High speed, Low speed, Single), ISO-9141, ISO-9141-CARB, KWP-2000, SAE-J1708, SAE-J1587, J1850(PWM/VPW), Melco Pull-Down

1.3. Details of Base Unit

Z5 Base Unit



No.		Description
1	Power button	Long press on the button : Z5 Power On/Off Short press on the button : Z5 Sleep/Wake
2	Volume control button	Control volume for Media or Alarm
3	DLC connection terminal	Terminal for connection of the DLC cable for communications with a vehicle
4	External device connection terminal 1	RJ45 Ethernet port for network connection
		Power connection with a car battery or an AC/DC adapter
5	External device connection terminal 2	(1) Micro-SD card slot
		(2) USB standard port
		(3) USB Type-C
6	Headphone connection jack	
7	Left side External Ports	USB Type-C
8	Rear camera	
9	Speaker	
10	Stylus Pen	

1.4. Battery Installation

A rechargeable battery is detached from Z5 base unit out of the box. Z5 will not be powered on unless the battery is installed. User must install the battery first and connect AC/DC power adapter to charge the Z5.
Follow the installation procedure as described below:

⚠ Caution

Dangerous consequences may arise, with the possibility of fire, death or serious injury to the user, if the product is not handled properly as instructed below.

The user shall be fully liable for any direct or consequential damage or loss caused by not following the instructions provided in this G-scan 3 user's manual.

<Preparation>

- Z5 Base Unit
- A battery that is provided with Z5
- Mini Phillips screw driver

A. Remove the cover and the 2 number 1 (+ screws) located on the back of the Z5 and remove the battery cover.

B. Make sure the battery barcode is facing up. Insert the battery from the right side down from the right side with the battery + and − terminals

positioned at the top right.

C. Insert the battery, close the battery cover by aligning it with the hole on the top of the body, and fasten the 2 screws

- **Basic Buttons for Android system**

A set of basic operating buttons appears fixed on the left of the screen all the time while operating Z5.

A. Power Button

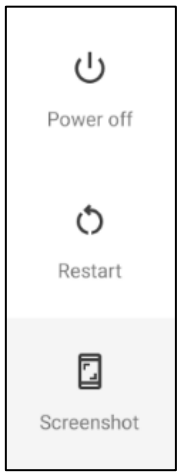
You can turn on/off the power of Z5 by using the power button placed at the top of the main module.

B. Power on

When the device is off, press and hold the power button to power on the Z5.

C. Power saving mode (Sleep mode)

If you press the power button briefly while the power is on, the screen turns off and enters sleep mode. Press the power button briefly again to wake up from sleep mode.



D. Restart/Screenshot

If you press and hold the power button while the power is on, menus such as Power off, Restart, and Screenshot are displayed on the right side of the screen. Click the Restart button to close all running programs and reboot again. And you can capture the current screen by pressing the Screenshot button.

E. Volume Control Button

You can change the volume level with the volume control buttons.
The volume level is displayed on the window as follows.
If you push the setting button, you can control volume for Media, Alarm, and Notification.

9:02
ZENITH
Maker Selection
11.2
DACIA
MAN COMMERCIAL
RENAULT
MERCEDES BENZ
LAND ROVER
SCANIA
FORD EUROPE
OPEL VAUXHALL
EUROPEAN TRUCKS
SEAT
SKODA
VOLKSWAGEN
AUDI
FIAT
LANCIA
JAGUAR
VOLVO
SMART
PEUGEOT
Search
Category
My Menu
A B C D E F G H I J K
L M N O P R S T U V Z
Recent

1.5. Android Operating System

⚠ Zenith Z5 is NOT a multimedia tablet or a smart phone

Unlike many other devices operating on Android system, Zenith hardware is designed and developed specifically for conducting diagnostic functions on the automobile, and it runs on Android operating system that is exclusively customized for itself.

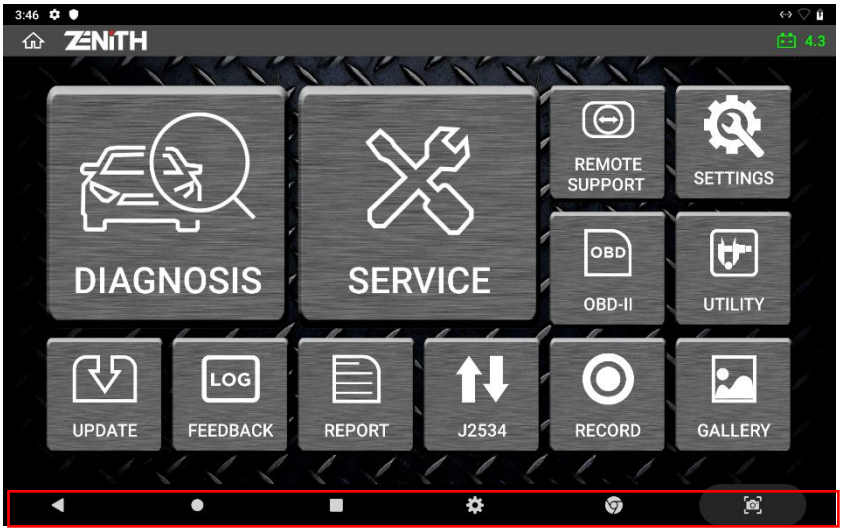
Never try to use Zenith Z5 for playing 3rd party contents or attempt to alter or modify the operating system's settings and security features, which may cause serious consequences including system failure or malfunction of the device

⚠ Caution

For Z5, each print manufacturer's driver can be downloaded from the Google Store. All other unauthorized applications cannot be installed.
In any event, any records of attempts to install unauthorized or third-party applications onto the Z5 will void the warranty.

- **Basic Buttons for Android system**

Android function buttons are displayed at the bottom of the screen as shown in the picture below.

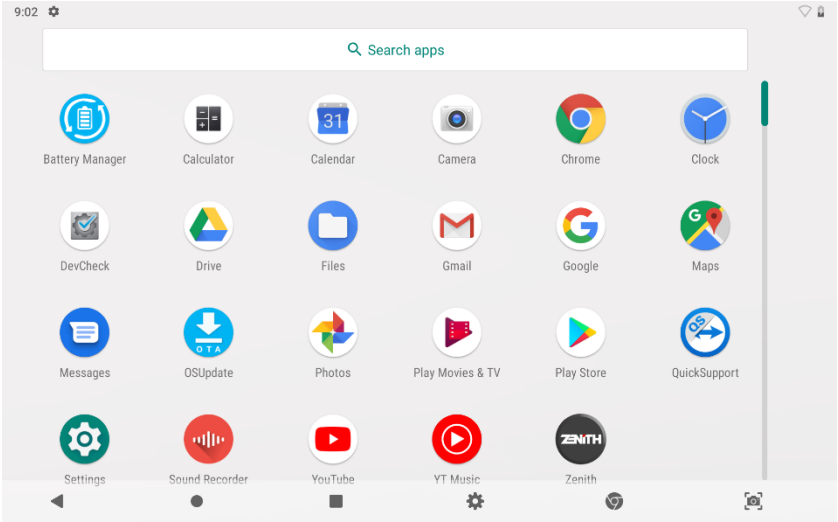


A. Back Button

Closes the current screen and returns to the previous level.

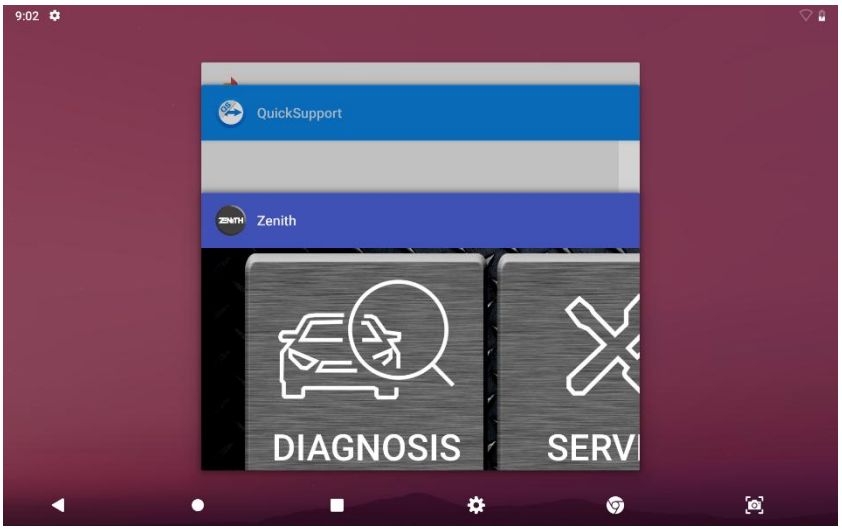
B. Home Button

Returns to Home screen. If the Z5 program is shut down, Zenith software can be selected and executed again by selecting the Zenith icon.



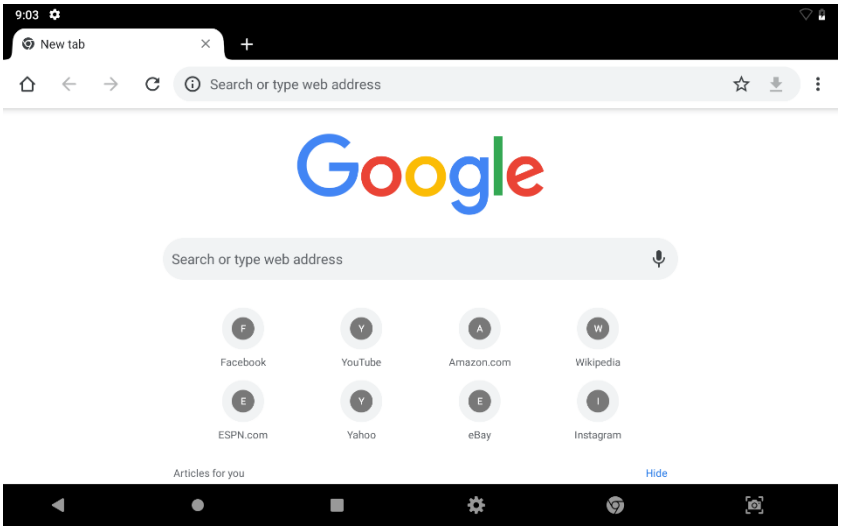
C. **App Running" button**

Displays the applications that are running in the background or recently have executed. Z5 can be selected and executed again by selecting Zenith application while scrolling up and down.



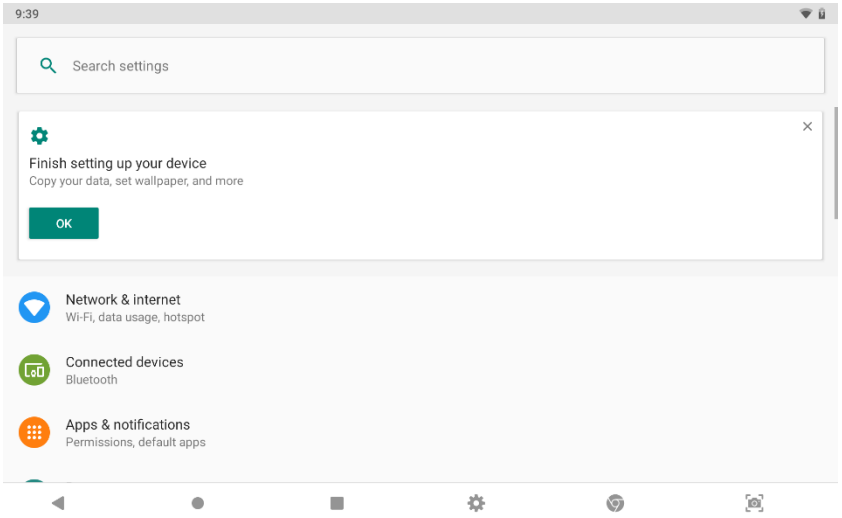
D. Web Browser Button

Runs the default Internet browser.



E. Setting Button

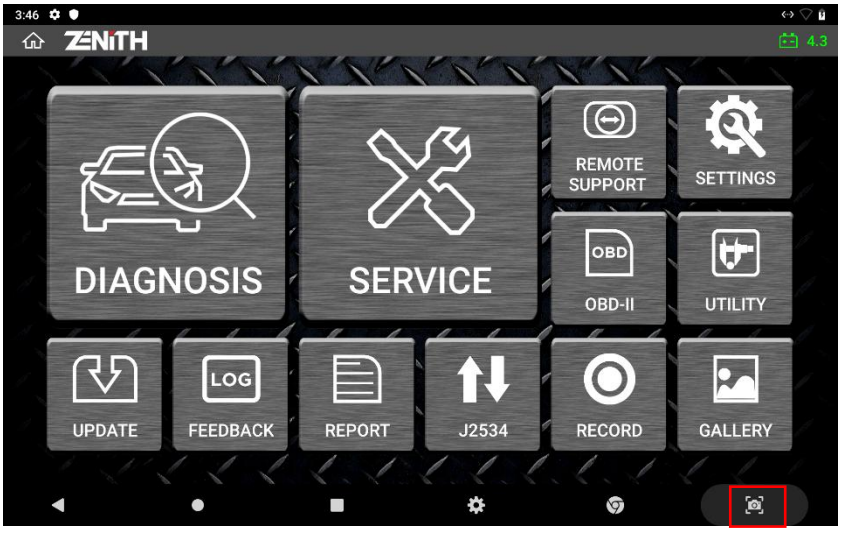
Enables hardware configuration and preference setting for operating Z5.



F. Screen Capture Button

This enables screen capture and image editing.

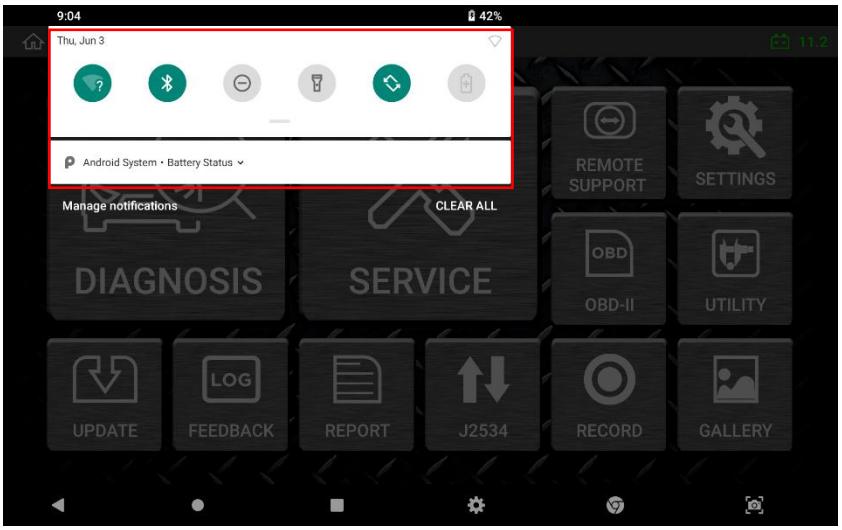
This enables an instant screen capture while operating Z5.



If you capture the screen, you can edit or print it before saving.

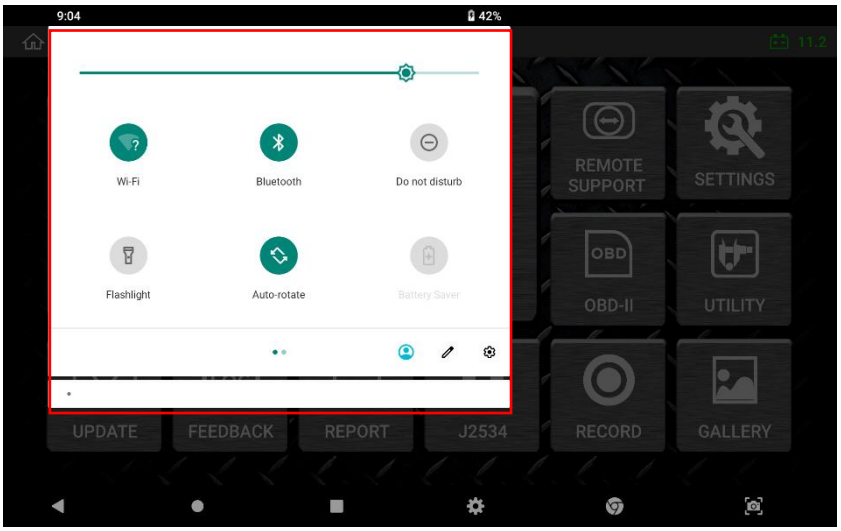
● Quick Setting menu

A quick setting menu appears when you touch the top of the screen.



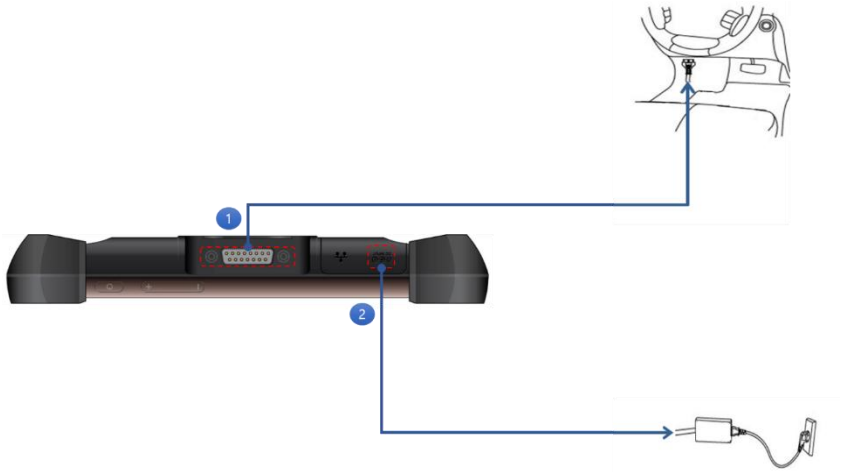
Touch the area then drop-down menu extends and a quick setting menu appears like below.

You can quickly change the basic Android configuration setting such as WiFi, Bluetooth, Do Not Disturb, Flashlight, Auto-rotation, Battery Saver, Airplane Mode, Cast without having to select the “Setting” menu.



2.6. Power Supply to Z5

Power supply to Z5 is available from 2 different sources.



1 Diagnostic connector

1. Extend the Z5 main cable to the vehicle side diagnostic socket. Attach the paring OBD non-standard connector if necessary.
2. Turn the ignition key to ACC or ON position, and power is supplied to Z5. The power is supplied through the diagnostic socket even when the IG key is turned OFF. However, please note that the IG key must be turned ON for diagnostic communication.
3. By the industrial standard, all OBD-2 / EOMB compliant vehicles are designed to supply power through the diagnostic adapter.
4. The vehicle side DLC socket is recommended to be placed within 1 meter from the driver's seat.
   It is generally found under the dashboard. However, be reminded that there are exceptions.

Cautions

Never connect the battery cable clips to the reversed polarity terminals. It may cause serious damage to Z5.

2 AC outlet (through AC/DC adapter)

1. Connect the DC jack of the AC/DC converter to Z5's DC input jack.
2. Extend the AC plug of the AC/DC converter to the AC outlet.

Cautions

Make sure to use the AC/DC adapter that is supplied with Z5.
Damage caused from use of unapproved AC/DC adapter is not subject to warranty.

2.7. Rechargeable Battery

Z5 is fitted with the Li-polymer rechargeable battery pack as the basic supply, and it enables the device to run normally when the external power supply is lost.

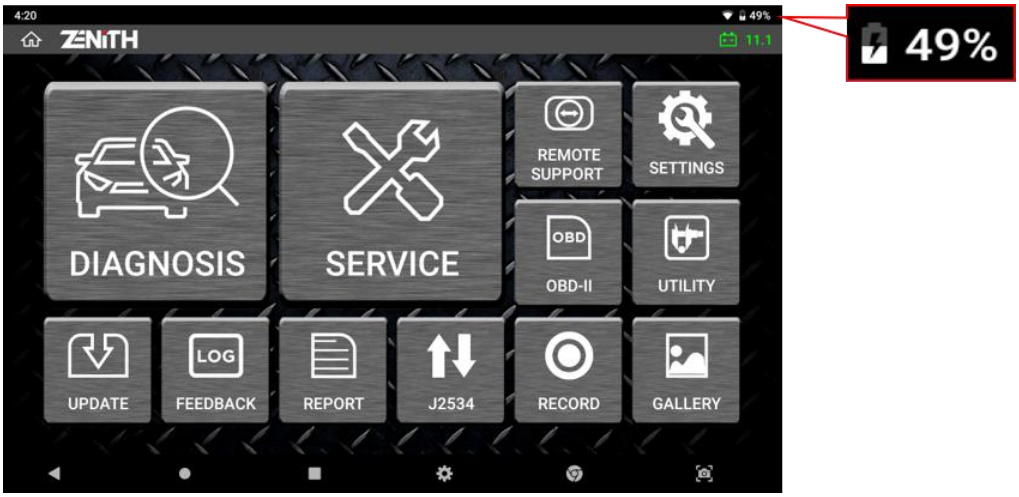
- **Vehicle Battery Voltage Indication**

However, the device is not designed to be run on battery without external power supply for an extended time, and drawing power from the car through the diagnostic adapter or from the vehicle battery is always recommended for diagnostic communication stability.

- **Rechargeable Battery Level Indication**

Please make sure that the rechargeable battery is charged enough and the battery level does not drop below 20% level when operating the device without external power supply. The battery level is indicated in the top right corner of the screen.

- When the battery is low, the device will emit a sound and display a low power message.
- When the battery is charging, the charging LED will be red.
- When the battery is fully charged, the charging LED will be green



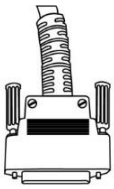
- **Rechargeable Battery Replacement**

A rechargeable battery is an expendable supply of which performance deteriorates over the repeated recharging cycles, and the replacement of the battery is recommended when the lowered charging performance is experienced. Unfasten the 2 screws to open the rear battery cover and lift the battery to remove. Insert the new battery in place, close the cover and fasten the screws.

2.8. Connecting to Vehicle

- **Connecting the main DLC cable to the base unit**

Connect the DLC main cable to the Z5 D-sub connector, and secure the connection by fastening the 2 main screws. Do not apply excessive force when fastening the screws.



- **Connecting to the Vehicle**

  Extend the DLC main cable connected to the Z5 to the vehicle side DLC socket.
  Different types of non-standard diagnostic adapter may be used for the old models or the commercial vehicles. If the vehicle is not OBD2 / EOBD compliant, identify and attach the matching adapter, then connect it to the vehicle side socket.

  The diagnostic adapters are designed to fit in the vehicle side diagnostic ports, therefore the diagnostic adapters supplied with the different scan tools may look alike or similar. However, internal wiring and circuits can be different, therefore not compatible each other. Please do not use the diagnostic adapters that are not supplied by EZDS specifically for use with Z5 and never attempt to connect the adapters supplied by a third party.

⚠ Use of wrong adapters may result in communication failure, damage to the device as well as the vehicle control system, and EZDS are not liable for any damage and loss caused.

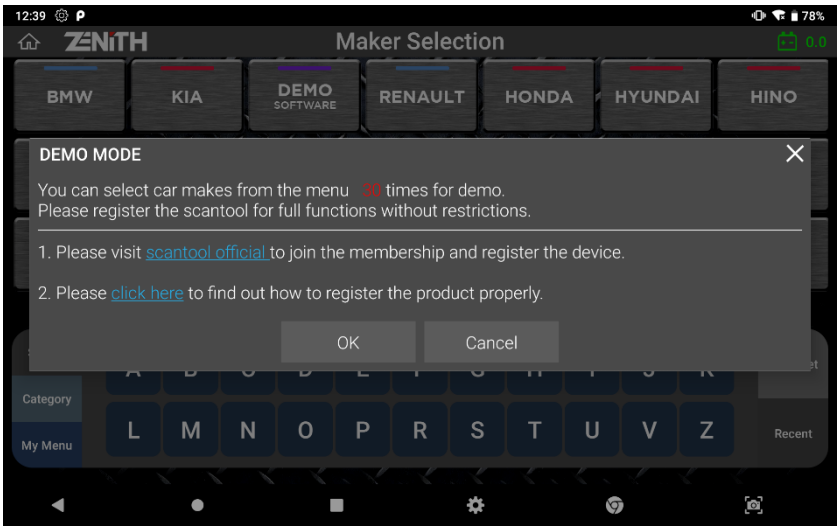
Chapter 2. How to activate Zenith Z5

2-1. Inactivated when delivered

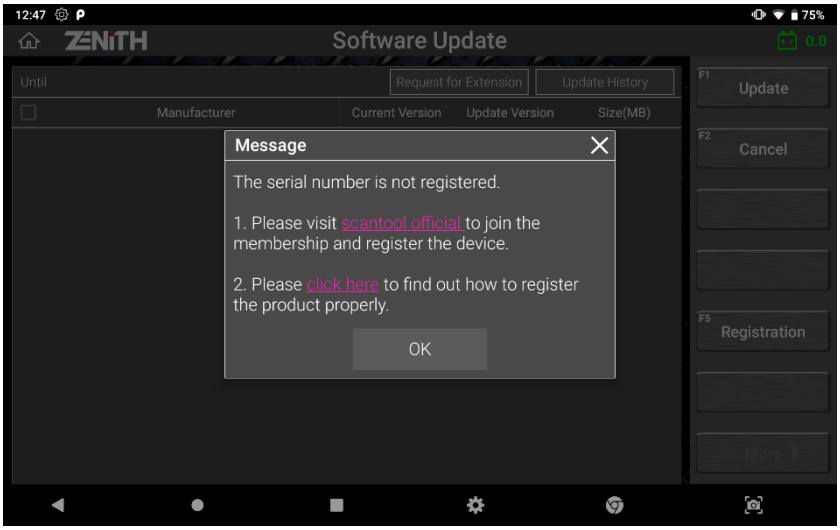
- **Needs to be registered as soon as delivered**

Zenith Z5 comes with all software installed at the factory.
However, in order to use the software of the product normally, you need to visit the EZDS website and register the product.
Unregistered products can be used up to 30 times in Demo Mode.

A. Diagnsotic Software
Press the Diagnosis menu on the main screen to display the menus of each manufacturer.
If you select a manufacturer in the state where the product is not registered for the first time, the number of uses 30 times is displayed as a message.



A. Software Update
Before entering the Software Update menu, connect Wi-Fi or LAN to activate the Internet.
If you select the Software Update item while connected to the Internet, the device is unregistered and displays the phrase “The serial number is not registered” and download is not possible.



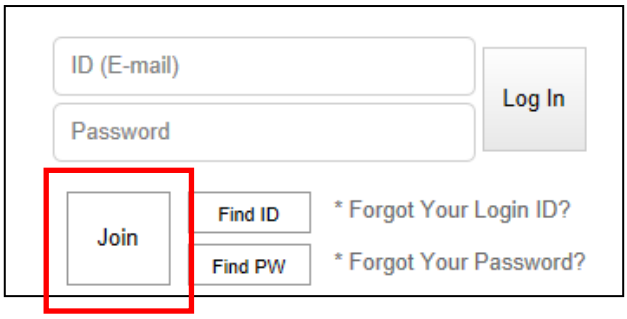
2-2. Device Registration

Step 1. Membership Enrollment at EZDS.com

To register unregistered equipment, first access the EZDS website and set up an account.

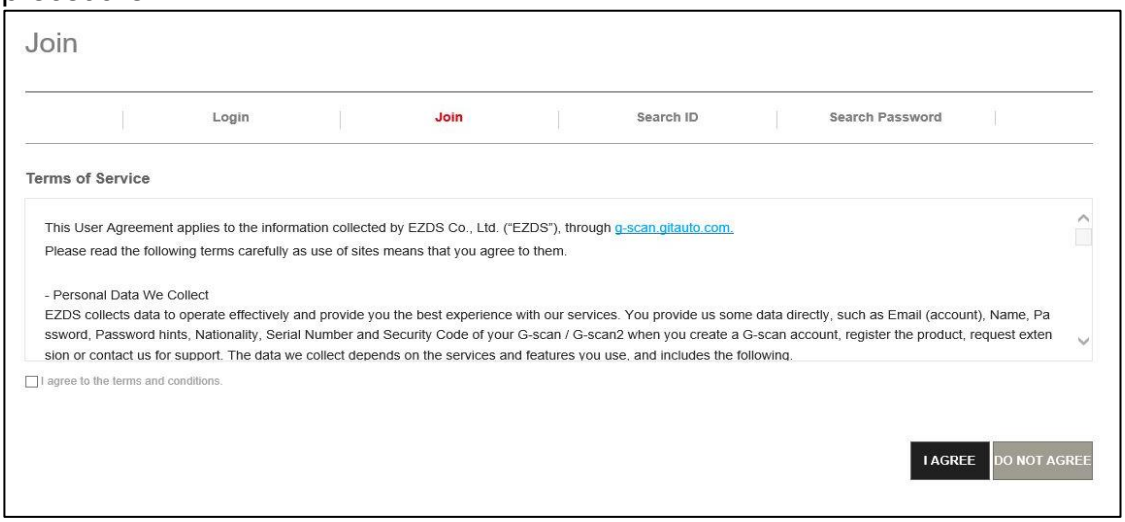
A. Enter www.zenithdiag.com in your Internet browser and click the Join button on the homepage to register as a member.

B. To sign up for membership, check the Terms of service, select “I Agree to the Terms and Conditions”, and then click the [I Agree] button to move to the next procedure.

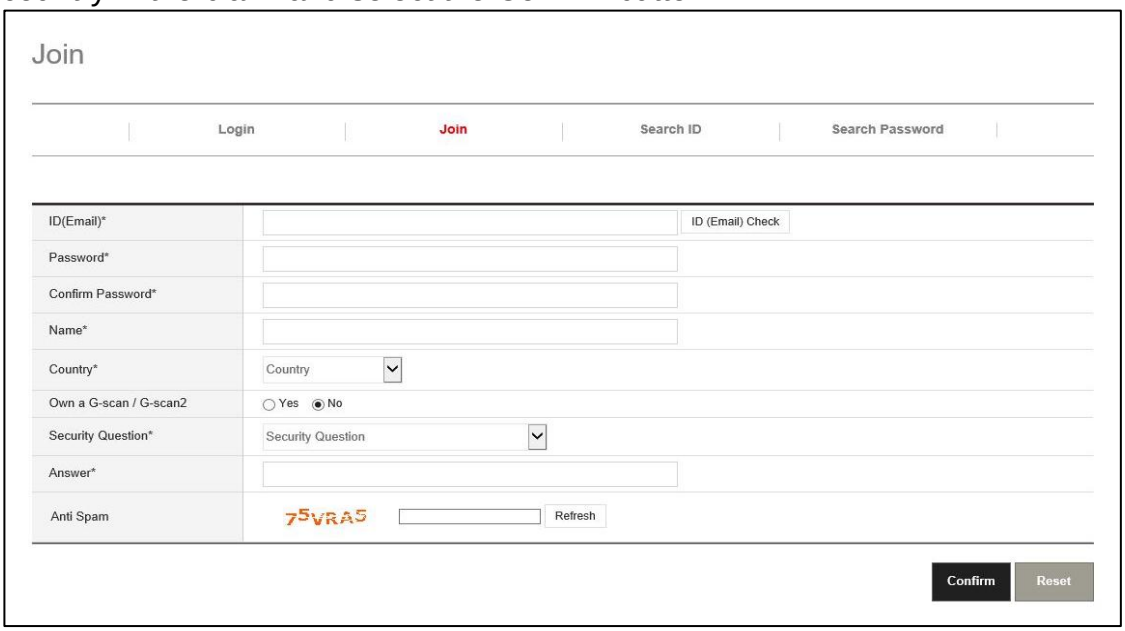


C. To sign up for membership, check the Terms of service, select “I Agree to the Terms and Conditions”, and then click the [I Agree] button to move to the next

procedure.



D. Then, enter the information such as ID and password to be used, name and country in the blank and select the Confirm button.



Step 2. E-Mail Verification

A. The email address that you enter when joining the membership is very important because it is the only channel for bi-directional communication between the customer and the supplier, therefore it needs to be verified to make sure that it is valid and working email.
A verification email will be sent to the address that you entered when you select [Confirm] button on the left right corner of the screen, and you will receive it in the mail box in a few minutes.

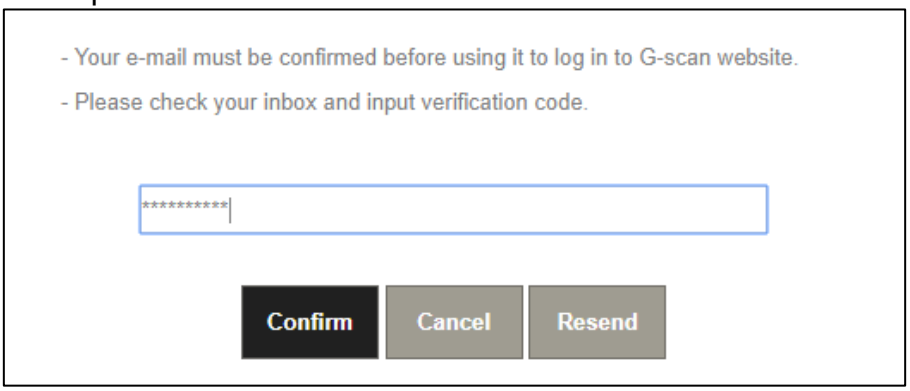
- Please note that the delivery can be delayed due to technical reasons, server overload or traffic.

- In case you do not receive the verification email in your inbox, please check the spam or junk mail box as well because there is a possibility that your email server or email program may put the verification email there according to the security settings.
- Please use an alternative email address preferrably on a public domain if the verification email is not found even in the spam or junk mail box. An email can be filtered or blocked by the server and not delivered to the recipient at all in case of using corporate email account due to email security policy that are stricter than public or personal email services.

B. Check the Verification code in the email inbox of the Email (ID) registered on the Zenith homepage and copy or make a note. Go back to the homepage.

C. Access the Zenith homepage and log in. After logging in, the Email Verification button appears as shown below.

Enter the copied or memorized Verificatin code and select the Confirm button.

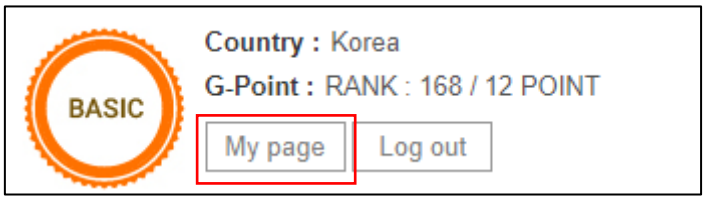


Step 3. Z5 Device Registration

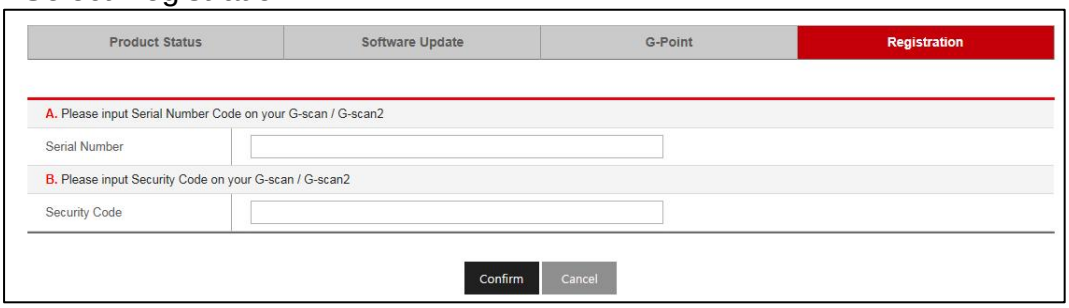
Device Registration is a process of assigning a Z5 serial number with individual website member. When registration is completed, the Z5 will be matched with a specific website member ID on EZDS's database and the device will be finally activated for using full functionality of the device.

After verification is complete, you will be taken to My Page to start registering your Zenith device.

When the email verification is completed, the badge that represents your membership level appears in the log-in area. The membership begins with BASIC level, and your website membership level is decided by whether or not you have a Z5 registered to the website, and the device holds the valid update subscription.
Select [My Page] button to start registering your Z5



A. Select Registration.

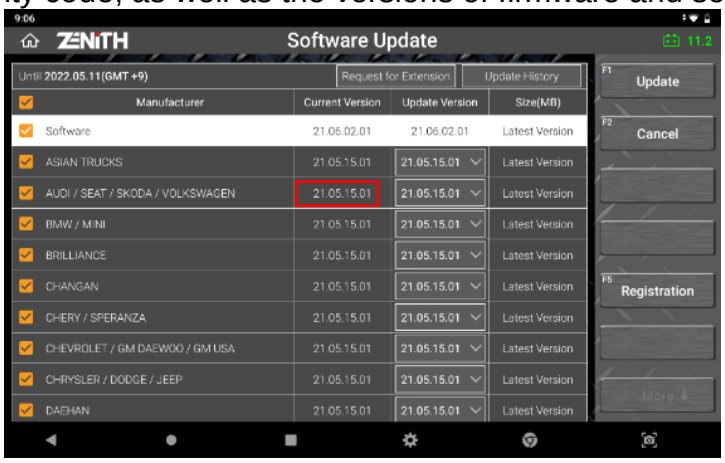


B. You can check the serial number and security code required in the process of product registration in two ways.

C.

D.

- Settings menu – In Version, you can check the serial number and security code, as well as the versions of firmware and software.



- Software Update – You can check the serial number and security code in Registration.

A. Enter the serial number and security code (case sensitive) in Registration on the website and press the Confirm button to complete the product registration.

On My Page, information such as product serial number, warranty period validity, software update subscription expiry date and distributor contact information are displayed on the screen.

B. Server Update

When registration at the website is completed, the result is conveyed to the download server, and you can download the latest updates from the server. The the entire diagnostic software loaded to the Zenith Z5 is activated when you select and download any application from the Software Download screen.

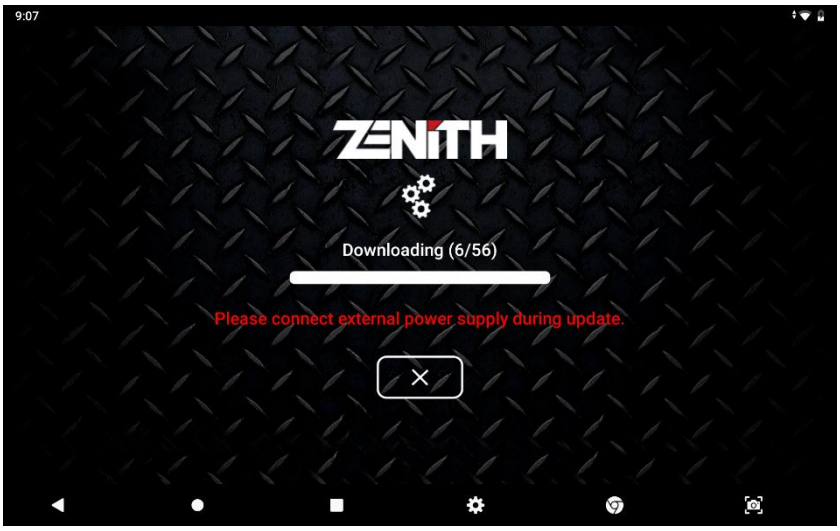
It takes time for the device's serial to be delivered to the download server after it is registered on the homepage. After about 10-20 minutes, the software download should proceed.
If the demo software usage restriction message appears on the screen even after downloading, download the software of the smallest size again.

C. Log-in for Update Software

To download the selected software item, click the Update button and enter your ID and password in the login window.
You can log in by entering the same ID and password as the homepage.

If you tick “Remember ID/Password” at the bottom of the login window, it is automatically saved and you can log in easily without entering your ID and password.

*If you lose your account, you can retrieve and reset your password through Register/Forgot ID/Password.



Chapter 3. Z5 Basic Operation

3.1. Main Menu and System Tools

Please be advised that the user interface including graphical output and menu structure can be changed and updated without notice for the improvement of product performance and usability.

The main menu as shown below appears when Z5 is turned on or when Zenith Application is selected among the applications list.

- **Main menu**

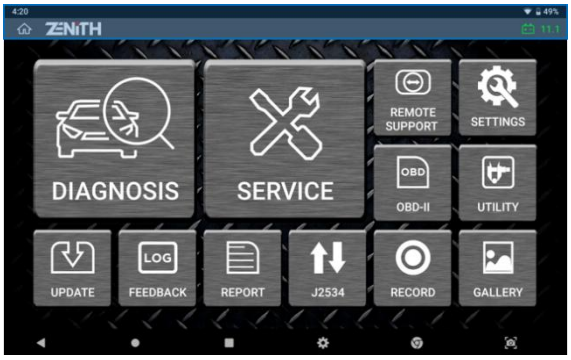
The main menu of Zenith Z5 is consisted of 4 sections (header, major functions ,convenient functions, bottom menu).

● Header

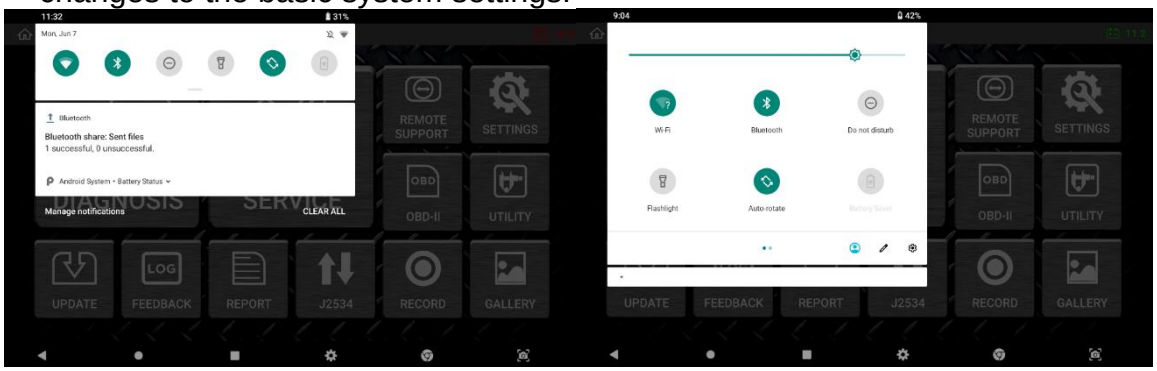
The header shows different Z5 system status indicators.

11:25	System Notifications	In the left corner of the header, indicator symbols appear when Z5 system detects any changes or new development in the system status that need to be notified to the user.
10.2	Vehicle Battery Status	In the right of the header, vehicle battery voltage is indicated when the power is supplied from the vehicle.
27%	System Status	In the right corner of the header, Z5 system status including Wifi or Bluetooth connection, battery charging status.

Double tab on the [Header] area in the top of the screen with a finger or tab on the area and swipe down, then the details of the system notifications are displayed.



Tab on the top of the pop-up notifications with a finger, then a system configuration menu appears where you can check and make quick and simple changes to the basic system settings.



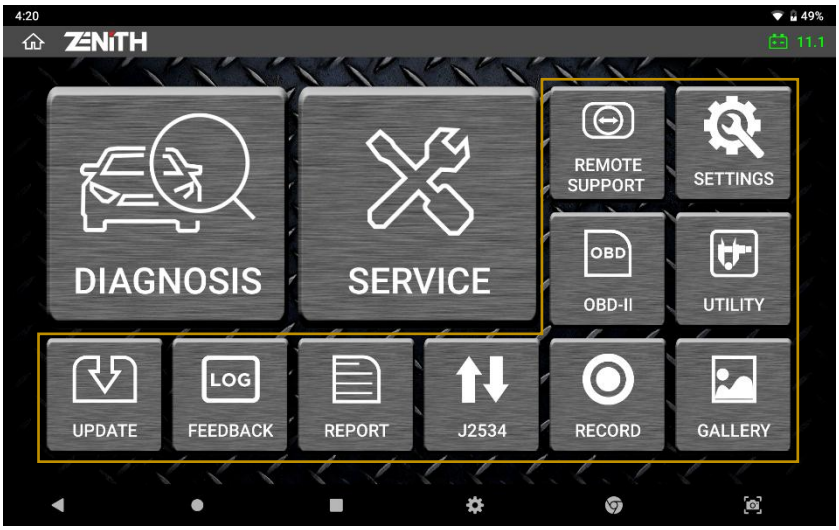
● Major

At the time of publishing this user manual, Z5 main function menu includes following 2 selections: Diagnosis, Service function.

Each of these main functions are explained more in detail in the separate chapters in this manual hereinafter.

Title	Description
	Runs manufacturer specific diagnostic functions including DTC Analysis, Data Analysis, Actuation Test, ECU Info and various Special Functions for each car manufacturer.
	It supports functions such as ADAS, Brake Pad Replacement, Engine Oil Reset, Brake Air Bleeding, Battery Reset, Steering Angle Sensor Calibration and allows you to perform desired items with faster entry.

● Convenient Function



Convenient functions 은

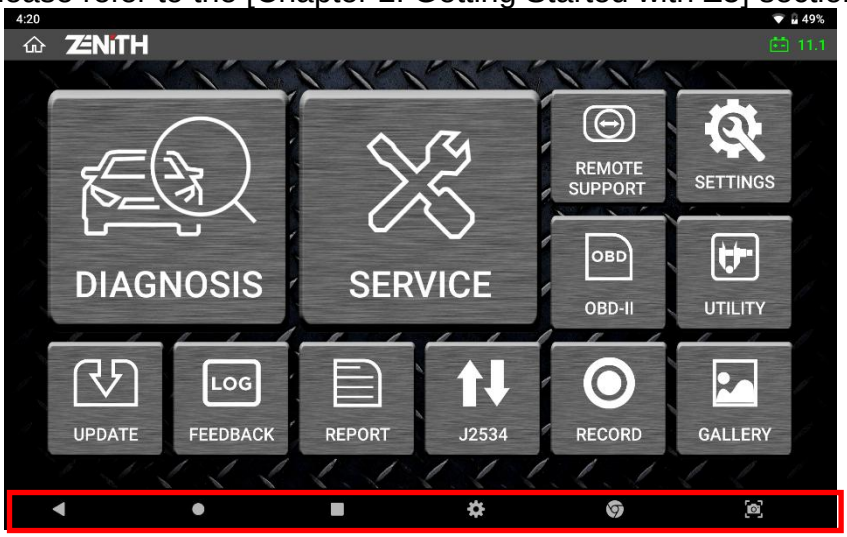
Convenient functions are listed in left side and bottom of the screen that can be directly selected from the main menu: Update, Feedback, Report, J2534, Record, Remote Support, Settings, Utility, Gallery. The details of these convenience functions are explained in the following chapters.

Title	Description
	Calls the Z5's various utility programs such as "Vehicle Communication Line Check", "Unit Converter", "Calculator", "Special Function Calculator", etc.
	Opens the Settings menu where software version information check, language selection, Self-test and various user settings can be reviewed and changed.
	You can check the photos taken with the camera or the photos downloaded and screen-captured in the gallery menu.
	If you select Remote support, TeamViewer is activated and you can remotely diagnose the Z5 with other devices.
	Performs Generic OBD2/EOBD diagnostic functions for the ISO9141-2, ISO14230 (KWP2000) and ISO15765-4 (CAN-Bus) compliant vehicles

RECORD	Retrieves data files recorded in the Z5 internal memory, including flight record data.
J2534	Z5 장비와 PC 를 연결하여 각 제조사들의 J2534 Passthru 를 사용할 수 있습니다.
REPORT	Retrieves the previously saved Pre and Post Repair Diagnostic Report that can be added to Z5 memory while performing Diagnosis function.
LOG FEEDBACK	Log files captured by problems during diagnosis are saved and can be deleted and transmitted
UPDATE	Connects to the G-scan download server to check the availability of new diagnostic software and downloads the latest version software to Z5

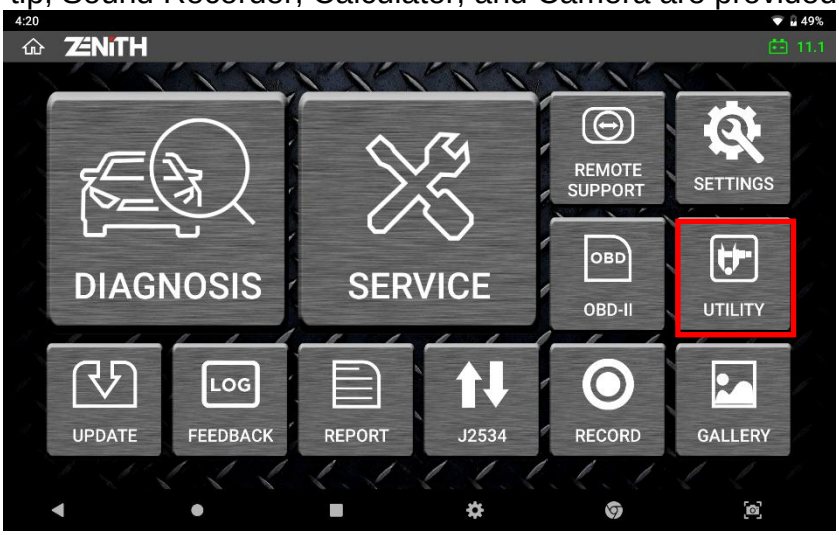
- **Bottom Menu**

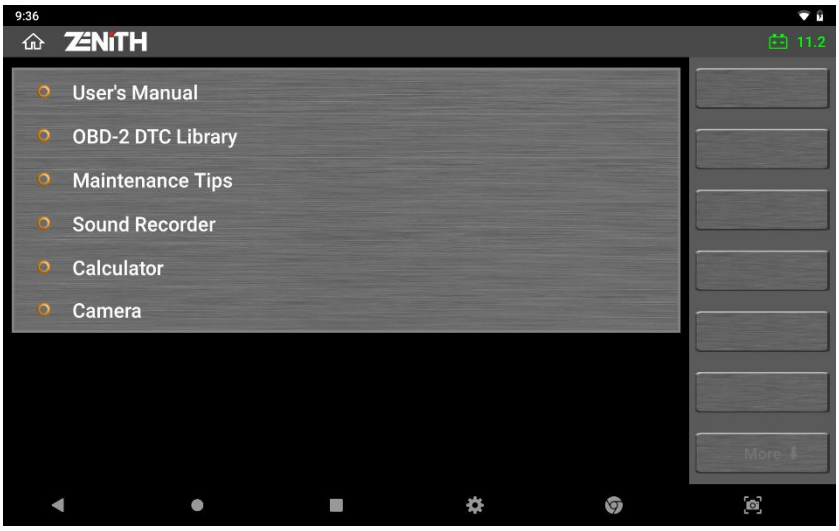
The menu on the left of the screen is a set of standard Android system functions, and the details are explained in the [Chapter 2.4. Android Operating System]. Please refer to the [Chapter 2. Getting Started with Z5] section.



3.2 Utility

In the utility menu, functions such as User's manual, OBD-2 DTC Library, Maintenance tip, Sound Recorder, Calculator, and Camera are provided.





- **User's Manual**

  - **Quick Manual**

    Select [User's Guide BASIC] to view the Quick Manual or this Z5 User Manual on the screen.

  - **User's Manual**

    [User's Guide MAKER] is a function that provides detailed instruction for the specific repair/service function to help the Z5 user provide proper repair service to the customers. Please note that the [User's Guide MAKER] instructions are

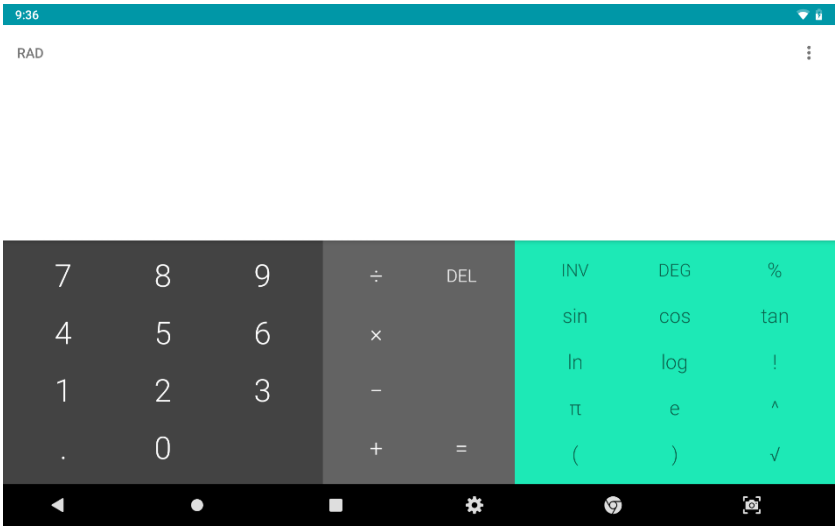
available just for the selected automakers as listed in the menu, and the more instructions can be added without notice as needed.

- **OBD-II DTC library**

  Enables search of OBD-II generic fault codes for code definition.

- **Calculator**

  A utility function that works like a technical calculator.



- **Sound Recorder**

  Enables voice recording through the Z5 embedded microphone.

Button shape	Description

	Starts voice recording from standby mode.
	Stops voice recording while voice recording is in progress.
	The recorded file is saved and the recorded file can be played back.

- **Camera**

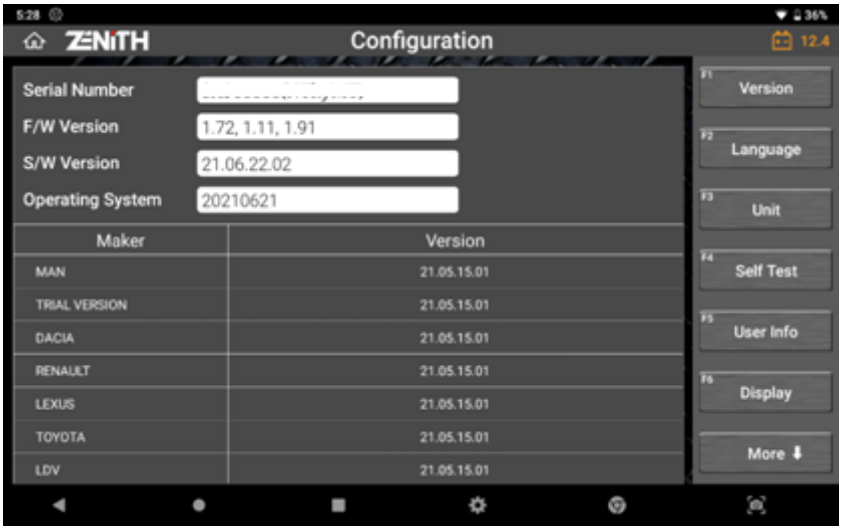
This enables taking the photographs using the embedded camera of Z5

3.3 Settings

If you select the setting menu, you can check the software version, set the language, change the measurement unit, check the self test function, register user info, change the display, and check the open source license.

Software version

You can check the serial number of Z5, main software, and software version information for each manufacturer, and you can proceed with the update history and update extension application.

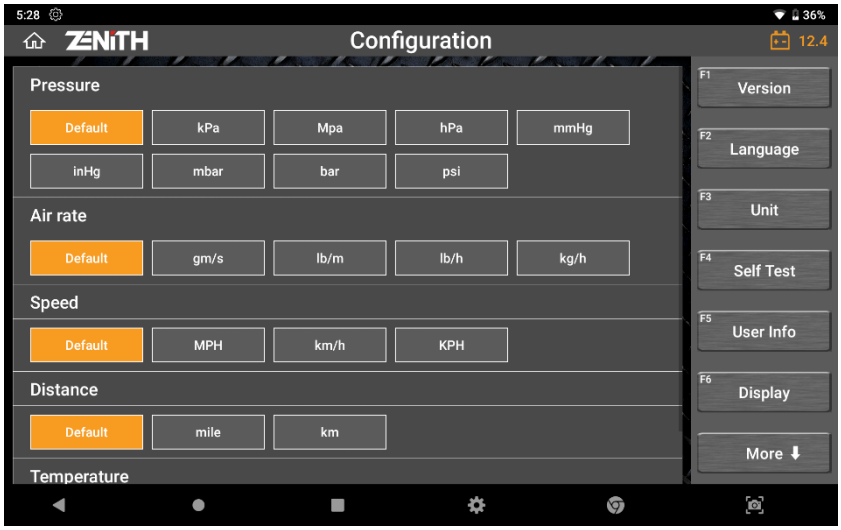


Language

Select the preferred language among the supported languages (if available). The languages are supported in different set by the regions. Generally English is the primary language with the different local languages supported as the secondary.

Unit

Z5 shows the parameter values and the measuring units just as the vehicle's Electronic Control Unit is programmed. However, if the different measuring units are preferred, the units can be selected among the given variations as preferred.

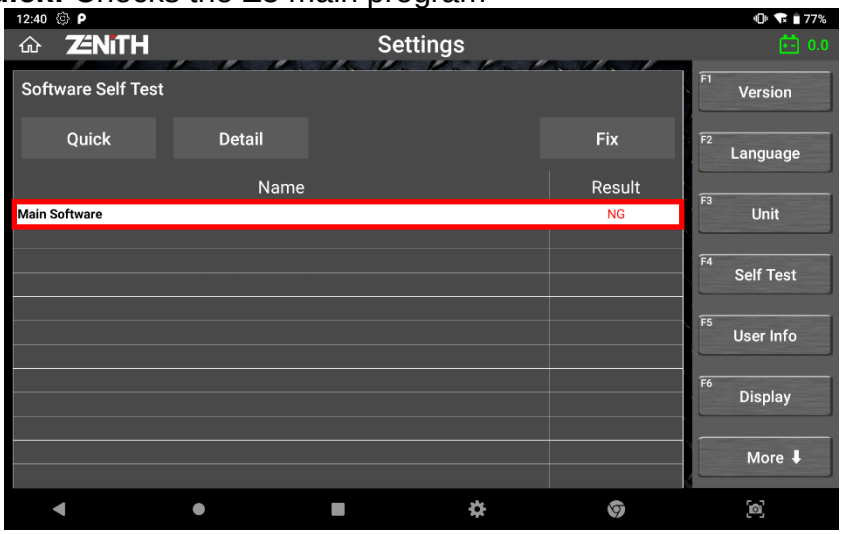


Self test

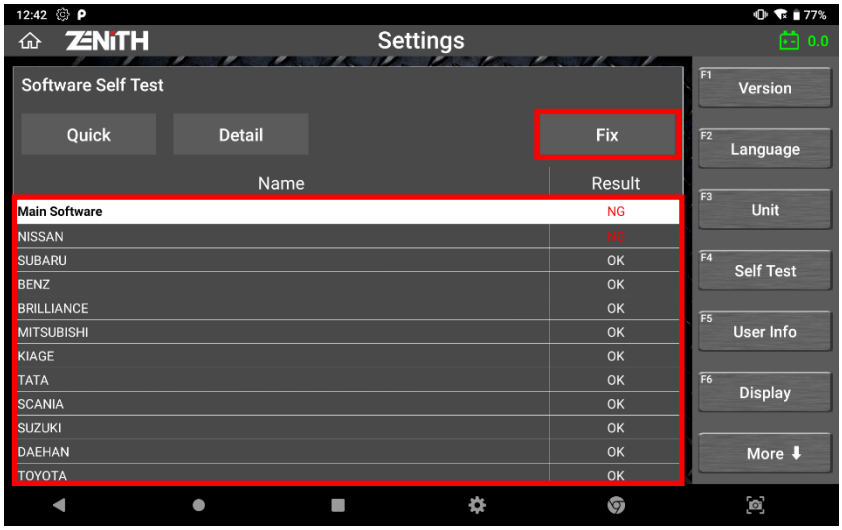
In case the Z5 fails in performing the diagnostic functions properly, Self Test function helps the user identify whether the problem is caused by the abnormalities of hardware or software. If the test result is normal, OK is displayed, and if there is a problem, it is displayed as NG.

Software self-test verifies software integrity to make sure that there are no corrupted data in Z5 diagnostic applications.

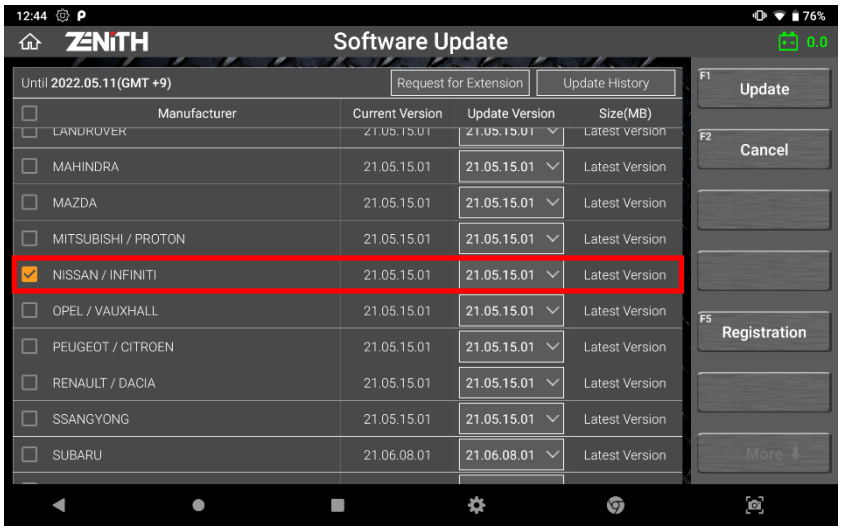
Quick: Checks the Z5 main program



Detailed: Checks software and database of Z5 for the individual automakers.



If NG is detected as a result of the test, the Fix button appears on the screen. If you select the Fix button, you can go to the update menu and download the damaged file.

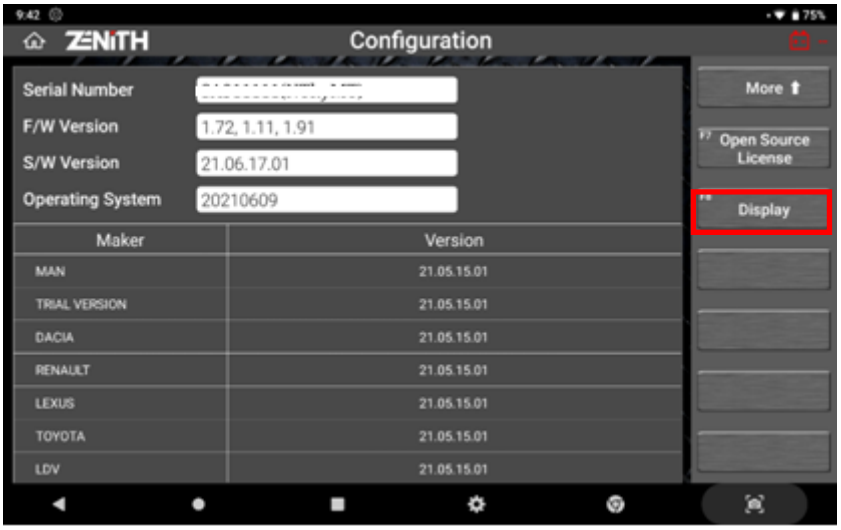


User Info

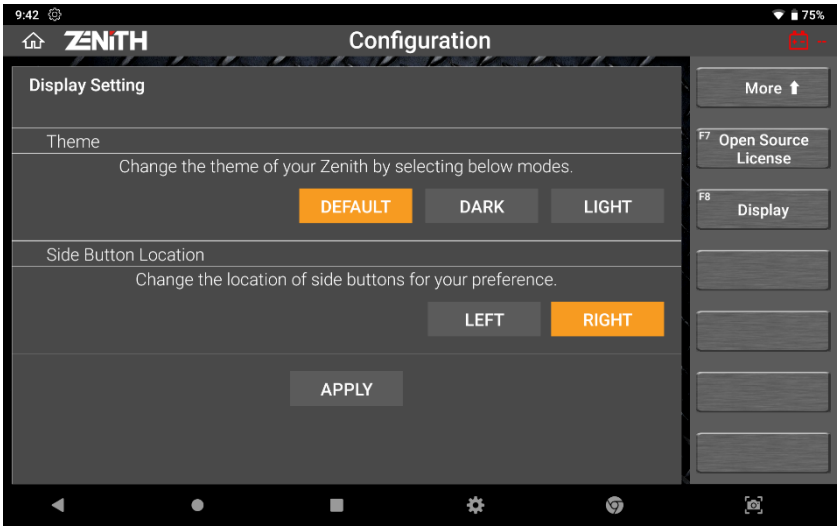
Type in your personal and workshop information and it will be used when printing the Pre-Post diagnostic report and other forms. Be advised that User Info is stored and used within the Z5 device only, and no personal information is transferred to the server.

User Info

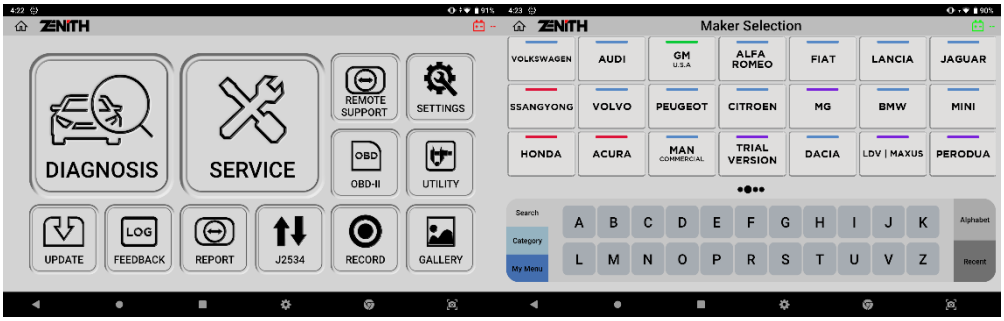
With the Display menu, you can change the theme of the screen and the position of the side button according to the user.

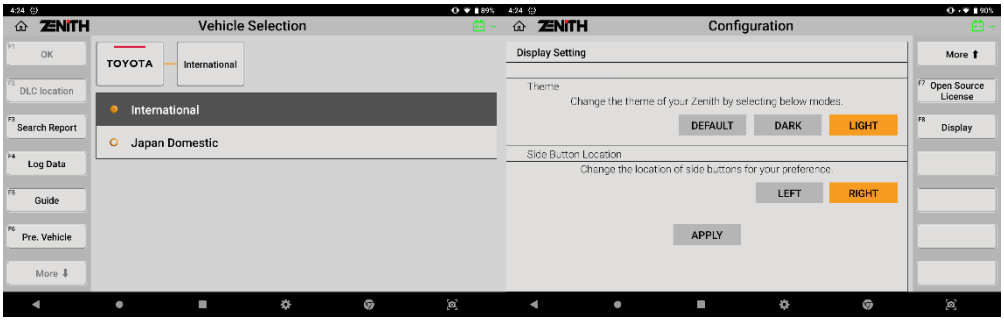


Select the Display button at the bottom by pressing an item in the Settings menu button



Theme items that can be changed include Default, Dark, and Light mode, and the position of the Side menu Button can be changed to Left or Right to suit the user's convenience.





FCC compliance information

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. Note: 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 notoccur 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. Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

Before a new model ZENITH Z5 is a available for sale to the public, it must be tested and certified to the FCC

that it does not exceed the exposure limit established by the FCC, Tests for each ZENITH Z5 are performed in positions and locations (e.g. at the hand and worn on the body) as required by the FCC.

For body worn operation, this model ZENITH Z5 has been tested and meets the FCC RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that Contains no metal and that positions the handset a minimum of 0 cm from the body.
Non-compliance with the above restrictions may result in violation of RF exposure guidelines.