



Federal-TVED BUREAU

Basic Electronics Communication and Multimedia Equipment Servicing

Level - II

Learning Guide #26

Unit of Competence: Service and Repair mobile phones

Module Title: Servicing and repairing mobile phones

MO Code: EEL BEC2 M07 1019 L01-L05

TTLM Code: BEC2 LG 26 1019 V1



L05: Install additional/ enhancement features

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Instruction Sheet	Install additional/ enhancement features
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This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

-  Enhancements and applications
-  Advise/orient Customers' on the operation of additional operator services

This guide will also assist you to attain the learning outcome stated in the above. Specifically, upon completion of this Learning Guide, you will be able to –

- Install additional enhancement features and special application.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below
3. Read the information written in the “Information Sheets”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-checks” in each information sheets.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
6. If you earned a satisfactory evaluation, proceed to “Operation sheets and LAP Tests if any”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Learning Activity.
7. After you accomplish Operation sheets and LAP Tests, ensure you have a formative assessment and get a satisfactory result;
8. Then proceed to the next Learning guide.

**1.1 Installing enhancements and applications to the unit based on customers' request and manufacturers' recommendation****1.1.1 Install software from outside the Android Market on your Android phone**

Even though there are thousands of titles in the Android Market, there's still a lot of great software that isn't available in the Market. Here's how to install a non-Market application on your Android device.

If you find must-have software that is not available in the Android Market, you can install it on your Android phone without going through the Market. Here's a walk-through of the simple process. **Note:** The AT&T Samsung line of phones does not allow installation from unknown sources. I think this is an unfortunate mistake on the part of AT&T/Samsung.

Step 1: Configure your smartphone

You have to enable a non-Market application installation on your phone before you will be able to install third-party software. To do this, follow these steps:

1. Tap Menu.
2. Tap Settings.
3. Tap Applications.
4. Check the box labeled Unknown Sources.

Your Android phone is ready to accept the installation of software from outside the Android Market.

Step 2: Locate the software

There are a number of good sites that allow you to download Android apps. One such site is AndAppStore, where you can download a number of apps you won't find in the Android Market. The file will have to be in the format .APK (Android Package).

Step 3: Install a file manager

You will need to be able to locate and install the file from within the file manager. The file manager you install doesn't really matter, as long as you can navigate around both internal and external storage. I highly recommend the Astro File Manager (there is both a free version and a paid version), which you can install from the Android Market.

Step 4: Download the software



Download the software from your Android phone's browser. You could also download the software to your PC and then copy the .APK file to your external storage (as long as your file manager can see the external storage).

Regardless of the method you use, remember to make note of the location where you saved the file; otherwise, you will have to spend some time hunting around the file structure of your phone in order to install the software.

Step 5: Install the software

Open your file manager and navigate to where you saved the .APK file. (This is why it's so important to remember where you saved the file.) Tap that file, and you should have the option to open the AppManager (**Figure**). **Figure**

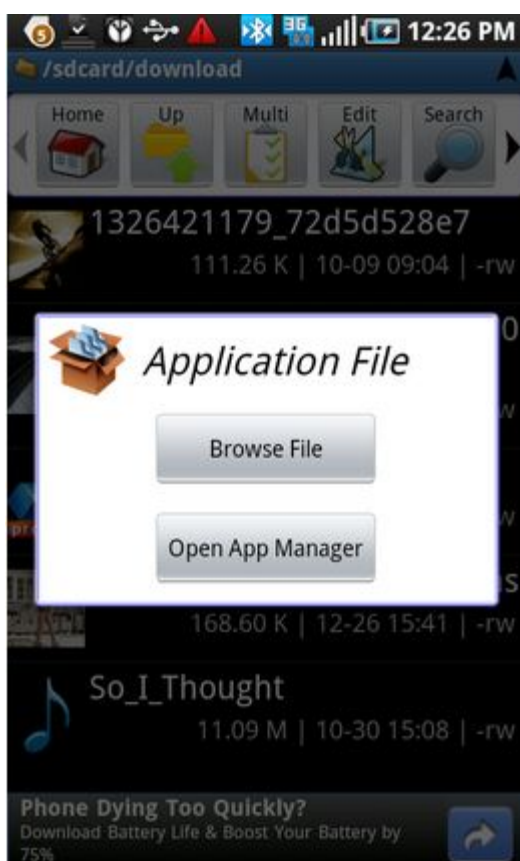


Fig 1.1

When you select Open App Manager, the Application Manager will open (**Figure B**). This tool allows you to see information about the application. From here, click a single button and the application will install. Once the installation is complete, go back to your application drawer, and you should see it listed among the installed applications. **Figure B**

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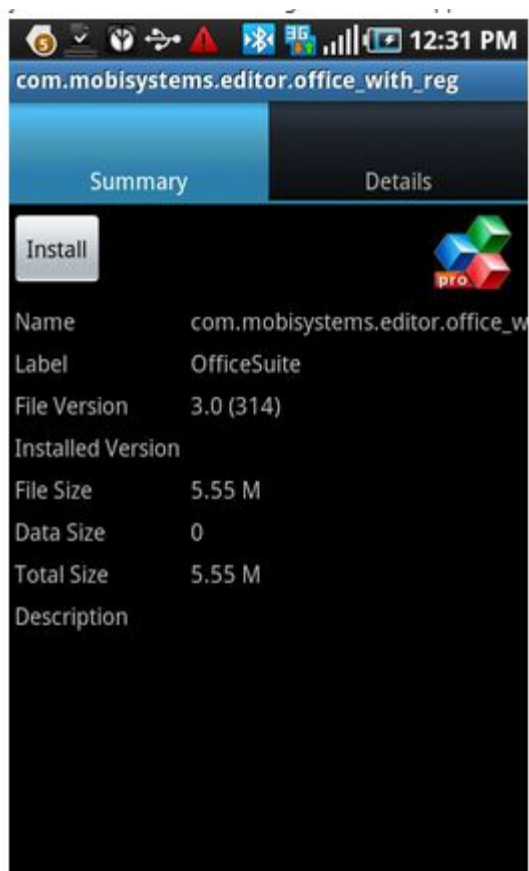


fig 2.2

Step 6: Disable Unknown Sources

1. Tap Menu.
2. Tap Settings.
3. Tap Applications.
4. Uncheck the box labeled Unknown Sources.

If you leave this option enabled, your Android phone could be vulnerable to the installation of malicious software. Although this is a hassle, it's a precaution you should take.

Use caution

You always want to make sure the third party, non-market applications you are installing are safe to install. If you download the software from a known, reliable source, you should be fine, but use caution when doing so to avoid the installation of software that could be malicious.



• How to install the mobile software?






A short generic description of the options available for installing the mobile software on your mobile device.

From the Downloads page, you need to get the **GS-911 Downloader** utility. This is a Windows utility and should be run on any Windows PC/Laptop. See the F.A.Q.: "What does the GS-911 Downloader do?"

When you press the "Download Options" button on the GS-911 Downloader window, a web page will open in your web browser that shows all the download links available for your GS-911 device. Browse down to the Mobile Software section and select the type of software that is appropriate for your device... i.e. the Android app for an Android device and the Blackberry app for a Blackberry device, etc. You should be seeing something similar to the following (versions and dates might change):

Mobile Software Downloads

3 downloads found, displaying all downloads.

Download Link	Description	Release Date
GS-911 1.2 for Android  2 Click here to download the file	GS-911 Software for Android devices. Please read the related FAQ	Oct 7, 2013
 1 E-Mail download link to phone GS-911 1.10 for Java mobile Phones	 GS-911 Software for Java (J2ME JSR-82) phones. To install, browse the following link with your phone: http://upgrades.hexcode.co.za/upgrades/download.do?session=AE98D1389F27A3551660359B3C355F43&id=8&file=GS911Mobile.jad You can E-Mail or text the link to your phone. Alternatively download and install the file using the software provided with your phone. Please see How to set up your GS911Mobile application See the installation How-To's on the Video page	Sep 27, 2010
GS-911 1.40 for Blackberry  E-Mail download link to phone	 GS-911 Software for Blackberry phones. To install, browse the following link with your phone: http://upgrades.hexcode.co.za/upgrades/download.do?session=AE98D1389F27A3551660359B3C355F43&id=9&file=GS911Mobile.jad You can E-Mail or text the link to your phone.	Sep 27, 2010

You basically have 2 options, highlighted as "1" and "2" on the screenshot above. My preference is definitely Option 1. Here is a brief description of the options:

Option 1: Email download link to phone

When you click on this link, it will open the default email client on your PC with the link already populated in the body of the email... you simply add the email address that you

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want to send it to. Make sure this is an email that you can access on your mobile device... If you don't have one (highly unlikely), you can register on gmail.com for free.

Once you open the email on your mobile device, simply click on the link and this will install the software. You might also have to enable 'install from unknown sources' in your phone settings.

Option 2: Download the install package and manually install it on your mobile device

As the heading suggests, you download the install package (typically: right-click, save-as...). This will now be somewhere on your PC... and it is not our responsibility to teach you how to install a package on YOUR mobile device ;-). Manual installation procedures differ from device to device, manufacturer to manufacturer and are even different (or prohibited) for various Operators (AT&T etc.)... if you need help on the manual install... Google is your friend!

1.2 Smartphone Repair

Smartphone repairing business is flourishing in the same speed as the smart phone market. With more and more people now using smart phones like Android, iPhone, Blackberry, China made Smartphone etc, the smart phone repair business is bound to grow since these smart phones are electronic devices and they will never last for ever. There are online tutorial and course available that can provide you some training on how to repair smart phones. But one can master the business only with practice. Practice makes a man perfect. Initially you may make some mistakes or even damage some smart phone but eventually anyone can learn how to repair smart phone.

For someone who want to do simple DIY (Do it yourself) repairing, online videos and tutorials or Guides in PDF format is enough. But for people who are looking for deep knowledge on smart phone repairing from business point of view, it is important to learn few of the basic theory and the do some practical training.

Following are some of the basics that one must learn to master the art of smart phone repairing:

2.1.1 The Basics of Smartphone Repairing

- Assembling & disassembling of different types of smart phones.
- Knowledge of different parts of smart phone and their function.
- How to use Multi meter.

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Understanding Hardware of Smartphone

- Understanding of Circuit Board / Motherboard / Logic Board.
- How to check faulty parts and how to replace them.
- Fault finding & troubleshooting.
- How to repair different hardware problems.

Understanding Software of Smartphone

- Proper understanding of smart phone operating system including Android and iOS.
- Understanding types of software faults.
- Flashing smart phones.
- Upgrading operating system.
- Unlocking of handsets through codes and software.

Tools to Repair Smartphone

Before you start repairing any smart phone, it is important to have the right tools and tool kit. Modern smart phones are very delicate and sensitive to ESD (Electrostatic Discharge). Hence it is important to have the right and ESD-Safe tools.

Following are some the must-have tools that you will need to repair and brand and any model of smart phone:

- A workbench or work table with layer of ESD-Safe mat that is properly grounded. Remember that without proper grounding, ESD-Safe mat is good for nothing.
- T4, T5 and T6 precision screwdriver. These three screwdrivers is sufficient for most repairing jobs.
- Suction Cup – Used to remove glass panel of a smart phone.
- SIM Card Eject Tool – Used to safely remove the SIM card from iPhones.
- Spudger – Used to disconnect connectors, remove thermal paste, pry off components etc.
- Opening Tool – Used to safely pry open smart phones without scratching the case, glass, or internal components.
- ESD-Safe Tweezers – Used for picking up and handling screws and other small components.
- Opening Pick – Can be used for prying, sliding, separating etc.
- Soldering Iron or Soldering Station.
- Hot Air SMD Rework Station.

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1.2.2 There is Complete List of Tools to Repair Mobile Cell Phone

Most Common Smartphone Repairs

While there can be different problems with a smart phone, studies and observations have shown following major problems:

- **Screen cracked or smashed** – 60 to 65%
- **Water damage** – 20 to 30%
- **Charging connector damaged** – 10 to 15%

Other problems include:

- Broken LCD Screen or Touch screen.
- Broken or Faulty PDA or External Touch screen (glass / digitizer).
- Cracked, Broken or Faulty Internal LCD Display.
- Charging connector / USB connector / dock broken or faulty
- Damage due to Water or any other Liquid.
- Unlock a Locked phone.
- No Network Signal.
- No Wi-Fi
- Bluetooth Problem.
- Data retrieval from dead phone.
- Not powering / not charging / no signs of life or Dead.
- Speaker / Microphone / Loudspeaker / Ringer / No Sound problem.
- Keypad buttons not working.
- Home button problem.
- Broken volume / power / camera button problems.
- SIM card / SD card problems.
- Camera problems.
- Phone is freezes / crashing / won't start up
- Replacement of housing.
- Headphone Socket problem.

Self-check 1	choose
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Name: _____ Date: _____

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Time Start: _____ Time Finish: _____

Instruction: Answer all the questions provided correctly, if you have some clarification regarding the test just raise your hand and ask the assistance of the teacher.

1. One of the following is not the step for configuration of smart phones

- A. Tap menu
- B. Tap setting
- C. Speaker setting
- D. Tap application

2. Which one of the following is not basic principle for smart mobile maintenance?

- A. Assembling & disassembling of different types of smart phones
- B. Knowledge of different parts of smart phone and their function
- C. How to use Multi meter
- D. none

Answer

score



- 1. _____
- 2. _____

Operation sheet 1	Configure your smartphone
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PURPOSE: Configure your smartphone

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Required tool/equipment: smart mobile phone

Procedure: first try to check your safety

Step1.Tap Menu.

Step2.Tap Settings.

Step3.Tap Applications.

Operation sheet 2	Install software from outside the Android Market on your Android phone
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PURPOSE: Install software from outside the Android Market on your Android phone

Required tool/equipment:

Procedure: first try to check your safety

Step1: Configure your smartphone/from operation sheet 1

Step2: locate the software from trusted site

Step 3:install the afile manager

Step 4 :donload the software

Step5:install the softwa

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Information sheet 2	Advising or orienting customers' on the operation of additional operator
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2.1 What is Operation strategy?

A plan specifying how an organization will allocate resources in order to support infrastructure and production. An operations strategy is typically driven by the overall business strategy of the organization, and is designed to maximize the effectiveness of production and support elements while minimizing costs.

Customer Relationship Management

In its purest and most literal form CRM stands for Customer Relationship Management. A system or strategy for managing client interactions, dealing with future and current customers, optimising and systematising relationships.

What is the CRM process?

CRM process involves the activities and strategies that companies use to manage their interaction with current and potential customers. ... Harness that relationship even with prospects and they'll be converted into actual customers.

Why is CRM important to your business?

CRM or Customer Relationship Management may be a strategy for managing associate organization's relationships and interactions with customers and potential customers. A CRM system helps many firms to keep connected to customers, contour processes, and improve profits

A CRM system consists of a historical view and analysis of all the acquired or to be acquired customers. This helps in reduced searching and correlating customers and to foresee customer needs effectively and increase business. ... The strongest aspect of Customer Relationship Management is that it is very cost-effective.

Customer relationship management (CRM) is an approach to manage a company's interaction with current and potential customers. It uses data analysis about customers' history with a company to improve business relationships with customers, specifically focusing on customer retention and ultimately driving sales growth.

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Self-Check #2

Choose and T/F

Name: _____ Date: _____

Time Start: _____ Time Finish: _____

Instruction: Answer all the questions provided correctly, if you have some clarification regarding the test just raise your hand and ask the assistance of the teacher.

Part I. Give your Answer for the Following Questions

1. _____ Process involves the activities and strategies that companies use to manage their interaction with current and potential customers.
 - A. ESD
 - B. PPE
 - C. CRM
 - D. SMD

Part I. Say true or false

2. Customer relationship management (CRM) is an approach to manage only a company's interaction
3. A CRM system consists of a historical view and analysis of all the acquired or to be acquired customers.

Note: Satisfactory rating –5 points

Unsatisfactory - below 5 points

You can ask your teacher for the copy of the correct answers.

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Answer

score



1. _____

2. _____

3. _____

reference

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Prepared by:-

Coordinate by:

No	Name	Edu. Background	Experience in TVET	Addresses
1	Alemseged Getachew	MA in vocational management	17Years	getachewalemseged@yahoo.com alemsegedabt@gmail.com
2	Abel Molla	Bsc in Cont.En	9 Years	Molla1@gmail.com
3	Gashaw Mamo	Msc in Cont.En	16 years	gashawshalom2010@gmail.com
4	Engida Tefera	Msc in Com.Technology	7 Years	Tefera.engida@gmail.com
5	Nardos Daniel	Bsc in Cont.En	4 years	Leulmoke45@gmail.com
6	Tamirat	Msc in El.Comm.En	12 Years	
7	Zewdu	Msc in El.Comm.En	12 Years	