

ANDROID HIDDEN TREASURES



FAST BOOT MODE

This mode is used to flash the phone firmware using command line tools

What is Fast Boot?

In Android, Fast Boot is a special diagnostic and engineering protocol that you can boot your Android device into.

While in Fast Boot , you can modify the file system images from a computer over a USB connection.

Step 1. Power off your phone.

Step 2. Press and hold **OK/Home** and **End Call/Power** keys.

Step 3. Or press and hold **Volume Up, Volume Down** and **End Call/Power** keys.

Fast Boot is three different things with the same name:

1. A protocol for communication between your phone hardware and a computer,
2. Software that runs on the phone when in FastBoot mode
3. Executable file on the computer you use to make them talk to each other.

DOWNLOAD MODE

This mode is used to flash the phone firmware using command line tools

What is Download/Odin Mode?

Used to flash the firmware or root your Samsung

This mode is a default feature so far only available on Samsung devices like Samsung Galaxy S5/S6/S7/S8.

Step 1. Power off

Step 2. Press and hold down "Volume Down", "Home" and "Power" keys at the same time until you see the Samsung Logo screen shows up.

Step 3. Immediately let go of the buttons and press "Volume Up" to enter Download Mode.

As the name implies, it aims to **download some packages or firmware** especially when the device is acting up.

Also, it works with Odin tool if you want to flash the firmware or root your Samsung.

RECOVERY MODE

This mode is used for recovery purposes like to reset the phone firmware.

What is Recovery Mode?

Android devices have a feature called [Android Recovery Mode](#)

It allows users to fix some problems in their phones or tablets.

Refers to a special bootable partition, which contains a recovery application installed in it.

Step 1. Power off your phone.

Step 2. Press and hold **Volume Up, OK/Home** and **End Call/Power** keys.

Step 3. Once the alert triangle is shown on screen, press "**Menu**" key to reset the firmware or press "**OK/Home**" and "**End Call/Power**" keys to show recovery menu.

In Android devices, Recovery is an Android-based, lightweight runtime environment which is separate from and parallel to the main Android operating system.

There are mainly two kinds of recoveries:

stock recovery and **custom recovery**. In recovery mode, you will get some advanced options.

SAFE MODE

Safe mode used to start your device with only the original software that came with it.

What is Safe Mode?

Builds a clean and secure environment, where only original apps that came with your device can be seen or run.

You can boot into safe mode and see whether the problem still exists. If not, the problem is likely caused by third-party apps and you can try uninstalling the suspicious apps that may cause the problem in App manager.

Step 1. Press and hold your device's power button.

Step 2. On your screen, touch and hold Power off .

Step 3. If needed, tap OK.

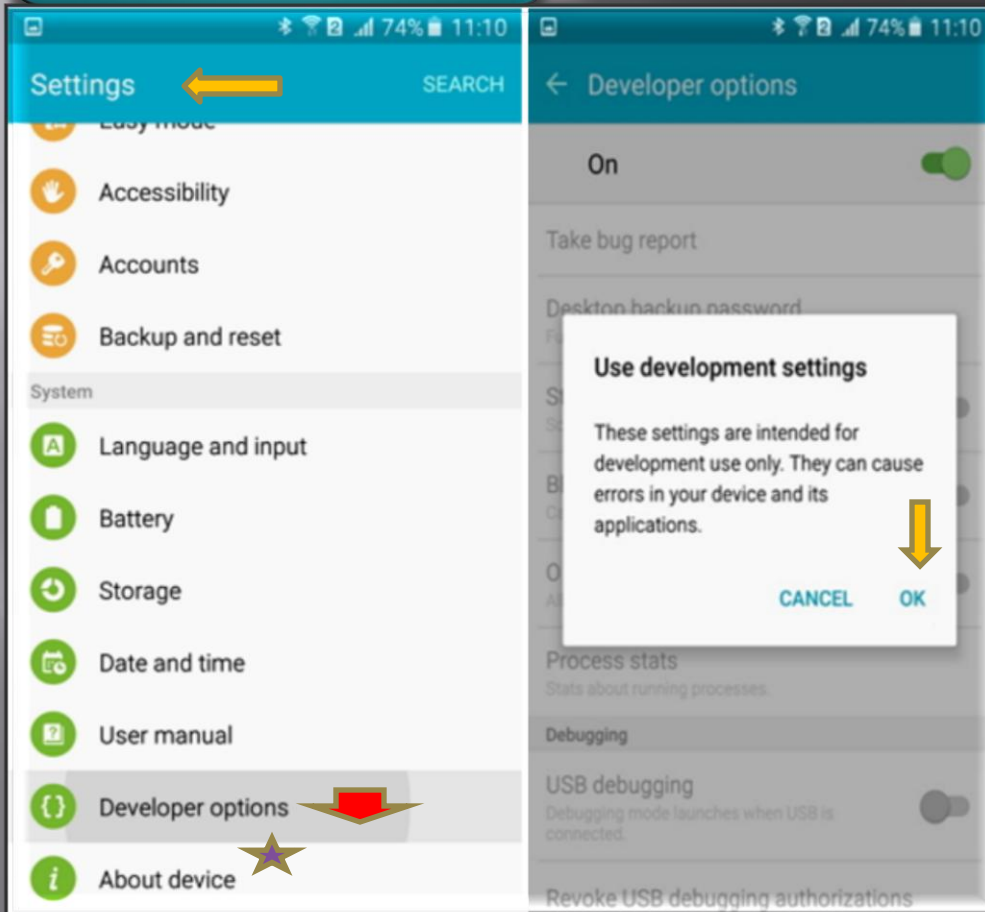
Your device starts in safe mode. You'll see "Safe mode" at the bottom of your screen.

This mode will tell you if your SmartPhone's problems, like restarting itself, lagging, freezing, battery issues, or data disappearing, are caused by third-party applications or not.

DEVELOPER OPTION MENU



Hidden in the settings on your phone, (they are hidden by default) are settings used for debugging and testing Android APPs



How to enable Developer Options Menu ?

- Step 1.** Open **Settings**
- Step 2 :** Select **About Device** or **Device Info**
- Step 3.** Scroll to the bottom and select **About phone**.
- Step 4.** Scroll to the bottom and tap **Build number** 7 times.
- Step 5.** Return to the previous screen to find **Developer options** near the bottom.

DEVELOPER OPTION MENU

TAKE BUG REPORT

- Tapping this option grabs the *current* log files on your device, packages them up and prepares them for sending to, well, whomever you want to have it. It takes a minute or two after you tap it, and you'll see a notification once it's ready. Tap that notification to send it on it's way. Swipe it away to cancel.

DESKTOP BACKUP PASSWORD

- You can use ADB to backup and restore things like apps and their associated data to and from your computer. This option forces a password on those backups, and they can't be restored without that password

STAY AWAKE

- Checking this box will force the screen on your phone to stay on anytime and every time it is plugged in. This works with a wall charger or your computer's USB port, and is a great way to make sure you burn images into your screen. Don't use this one unless you need to!

SELECT RUNTIME

- Here is where (for *now*) you choose to use Dalvik or ART.

DEVELOPER OPTION MENU

Enable Bluetooth HCI snoop log

- Sometimes, a developer (or security specialist) will need to capture and analyze Bluetooth HCI (**H**ost **C**ontroller **I**nterface) packets. Enabling this will place them in a file on the

Process stats

- Everything you ever needed to know about the running processes on your phone. Go ahead and tap it, then tap one of the entries. For the layman, it's just a lot of numbers, but for a developer debugging his or her app, this information might save the day.

USB debugging

- This is what allows your phone to communicate over the USB port on your computer via the **Android Debug Bridge** (ADB). You need to enable this to use things like **DDMS**, or to use ADB commands

Revoke USB debugging authorizations

- When you use a computer to debug over USB for the first time, you have to authorize it and set up a *keypair*. This setting revokes all those and forces you to do it again.

DEVELOPER OPTION MENU

Power menu bug reports

- Puts an option in the menu you see when you press and hold the power key to collect and send a bug report (as seen above). Very handy if you're testing something.

Allow mock locations

- This setting will let you manually write location information, making your phone think it is somewhere it really isn't. Besides cheating at foursquare, this is useful if an app uses location information.

Select debug app

- This setting lets you choose an application to debug. You don't really need to attach it to a debugger, but if you do it prevents error messages when paused on a breakpoint.

Wait for debugger

- This setting is greyed out unless you've set an app to debug. When set up and selected, it simply prevents the *chosen* application from starting until the debugger is attached. This is more application debugging stuff most of us will never need.

DEVELOPER OPTION MENU

Verify apps over USB

- Lets Google scan applications you installed via ADB for malicious behavior. This is a good thing.

Show touches

- Select this to see a visual cue on the screen when and where a touch was registered.

Pointer location

- This setting places an information bar at the top of your screen telling you the screen coordinates of the last place the screen was touched.

Show surface updates

- Makes the edge of a "window" flash when its contents are updated.

Show layout bounds

- Marks the edges of all the elements in a dialog so you know where any touch will activate them. Try this one, then quickly shut it off.

Force RTL layout direction

- Forces screen orientation for right to left language support.

Window animation scale

- Sets the speed for window animation playback. A lower number is faster

DEVELOPER OPTION MENU

Transition animation scale

- Sets the speed for transition animation playback. Again, lower is faster.

Simulate secondary displays

- This setting allows developers to simulate different screen sizes. It's pretty wonky.

Force GPU rendering

- Forces applications to use hardware 2D rendering if they were written to *not* use it by default.

Show GPU view updates

- With this setting, any view that is drawn with the GPU hardware gets a red overlay

Show hardware layer updates

- show the updates to the hardware layers rendered by GPU in a green light for the duration of the frame for the update occurs. Developers can optimize the performance of the app by ensuring the hardware layer updates are not abnormal.

Debug GPU overdraw

- Overdraw happens every time the application asks the system to draw something on top of something else. This setting lets you see when and where this is happening so you know if it is a problem

DEVELOPER OPTION MENU

Force 4x MSA

- This setting forces multi-sample anti-aliasing (MSAA). Like any other computer graphics hardware, more AA makes things look better, but performance takes a hit.

Strict mode enabled

- This setting flashes the screen when an application uses the main thread to perform long, intensive operations

Show CPU usage

- Places a tiny window in the upper right of your screen with information about the CPU and how it is being used.

Profile GPU rendering

- This setting can either draw a graph on the screen, or write it to a file. The graph is a visual rendering of how hard the GPU is working. This is another really neat one to try.

Enable OpenGL traces

- This setting watches for OpenGL errors, and places them in the log file you chose when you started it up.

Don't keep activities

- This setting destroys (as in, forces everything closed) any and every application as soon as you leave the main view. Nothing good can come of this, regardless of what you might have heard on the Internet

DEVELOPER OPTION MENU

Background process limit

- Allows a custom setting of how many process can run in the background at once. Another one most of us shouldn't be fiddling with very often, if at all.

Show all ANRs

- This setting makes every process show an "App Not Responding" dialog if it gets hung – even background processes that the user did not start. Useful if one application is interfering with another.

Secret CODES: INFO

Please Note !

The following presentation slide's Secret Codes might not work on all Android Devices.

Some Android Devices might have their own unique key codes combination.

Please use Google Search to find out information about your own Device. You may use the keywords :

“Model # (your Phone) Secret Key Codes “

Secret CODES: IMEI and MEID

WHAT is IMEI ?

The **IMEI** (International Mobile Equipment Identity) is a unique number to identify GSM, WCDMA, and iDEN mobile phones, as well as some satellite phones.

Mostly phone have **one IMEI** number, but in **dual SIM phones** are **two**.

The **IMEI** is only used for identifying the device and has no permanent or semi-permanent relation to the subscriber.

Number is used by the GSM network to identify valid devices and therefore can be used for stopping a stolen phone from accessing the network in that country.

WHAT is MEID ?

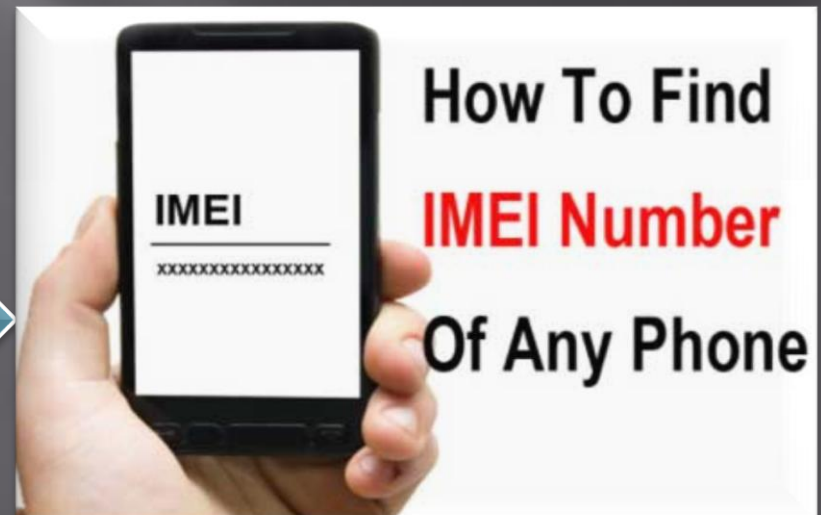
MEID stands for Mobile Equipment Identifier. Similar to an ESN, a phone has a different MEID, just like every human has a different fingerprint.

Phone carriers use your **MEID** to monitor whether your account has any past due bills or has been reported as lost or stolen.

The **MEID** system was introduced to replace the ESN system for CDMA MOBILE phones in the United States.

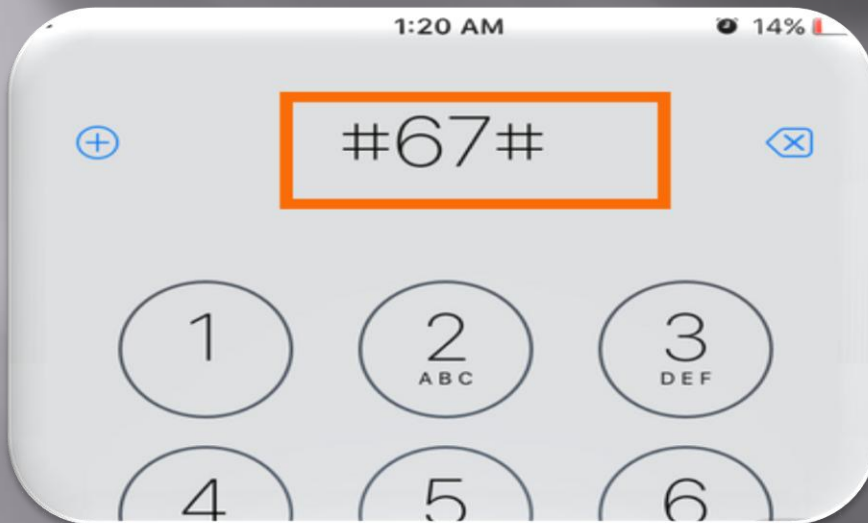
Open Phone APP

Display your IMEI/MEID: ***#06#**



Secret CODES: Call Forwarding

This code allows you to check which number your phone is currently forwarding calls to when you're busy or reject a call.



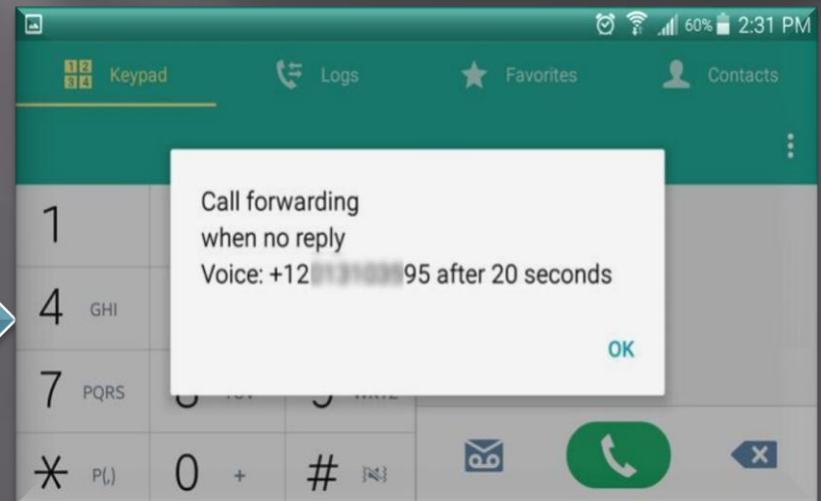
Get Even More Info on Call Forwarding: ***#61#**

This code prompts a pop-up that let you know how long until a call is forwarded to the message center.

On the iPhone, regardless of carrier, this code might show the same info as ***#67#**.

Open Phone APP

Enter : *#67#** or ***#61#****



Secret CODES: Hide/Show Caller ID

In most of the countries, **you can just enter a code at the start of the number which you like to call**, and your number will not be displayed on recipient's phone.

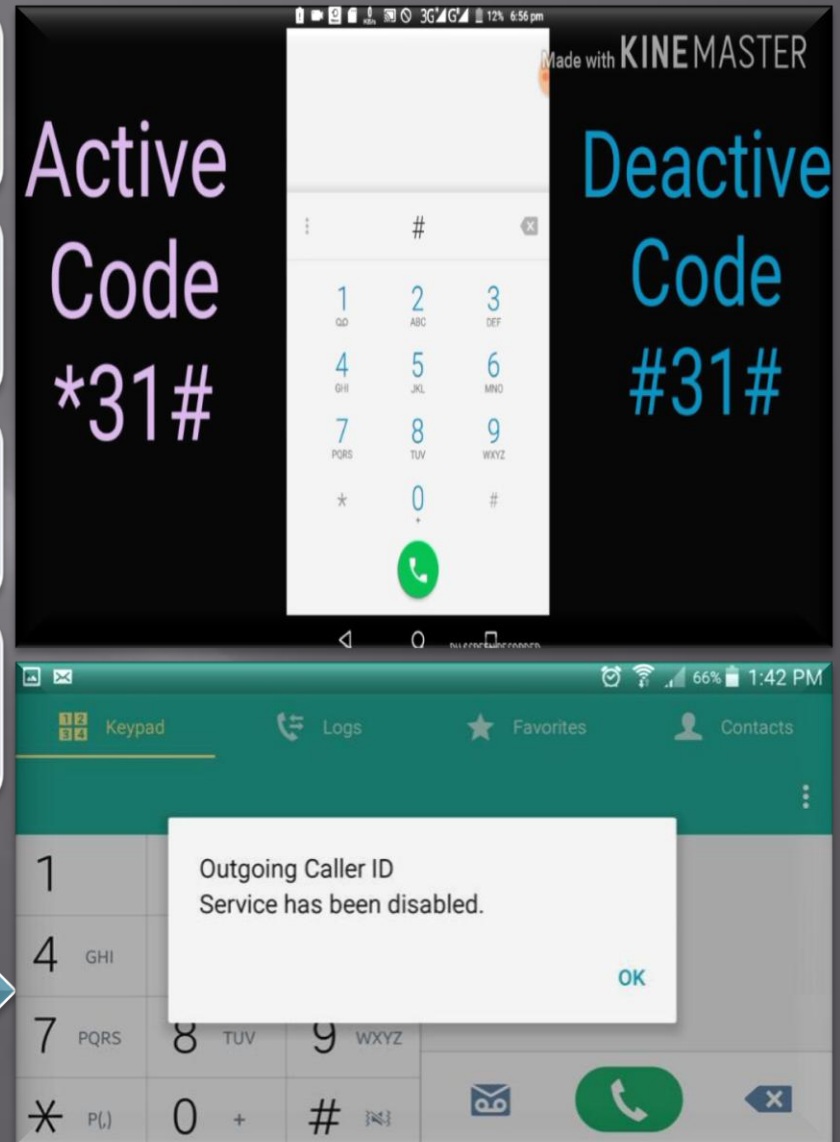
The code will vary from carrier to carrier and country to country.

So, you will have to find the right code to block caller id.

However, in most countries the prefix ***67**, **#37#** and ***37#** work.

Open Phone APP

Enter : #31# or *31# (show again)



Secret CODES: Quick Test Menu

(Samsung Galaxy Only)



This code only works on Samsung Galaxy models This is similar to the General Test mode .

Brings up a menu with a number of one-tap test prompts.

This is another useful code which helps you in testing various things of your mobile phone such as sound, vibration, camera, bluetooth and many sensors.

[Open Phone APP](#)
[Samsung Galaxy only](#)
Enter : ***#7353#**