The Complete ANDROID Guide

Kevin Purdy

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IT'S A 3ONES

A Note on Android Versions, Hardware, and Rooting

On Versions

The Android Mascot, Next to his Cupcake, Donut, and Eclair Markers. Photo by VDVsx (Flickr)

Google's Android operating system for phones is definitely a moving target. During the production of this book's first version, the latest Android version available on a cutting-edge phone jumped from 1.6 to 2.2. In that time, too, phones made by HTC and Motorola became exceedingly popular, and modified versions of the Android interface, HTC's "Sense" and Motorola's various "Blur" versions, have become the de facto standard for what a new Android buyer sees. Different phones have seen updates at very different paces, with some phone owners still loaded with Android 1.6 and wondering if they'll ever see a ping from out of the sky about a new version ready for downloading.

This guide was written with the newest version of Android in mind, running on Google's own Nexus One phone, though that changed from Android 2.1 to 2.2 somewhere in the middle of the text. It was also conceived, at first, as focusing on a "stock," unmodified Android interface, though the significant differences in the HTC and Motorola home screens, and particular apps, are covered. In short, we tried to look forward and diversify throughout, but especially where a difference might matter.

On Hardware

As noted above, this book was written primarily using a Nexus One, which is fairly representative of today's Android phones, as far as that goes. It features a trackball, which does not appear on all phones, and lacks a physical, QWERTY-style keyboard, unlike the popular Droid models. The camera offers a 5 megapixel capture and has a flash, but can't shoot 720p video or let the shooter alter the focus with a touch.

In other words, your hardware will likely vary from any other Android owner's phone, but Android was meant to incorporate many designs and features without needing an entirely new system.

On Rooting

Android is based on the Linux operating system that powers huge server installations and individual computers alike. Inevitably, that means that computer and programming enthusiasts have sought to get deeper access to Android's internals--to become a "root" user--to both add creative new features, and fix those things that irk them about their phones.

This guide was not written with "rooted" phones at its core--but rooting isn't something to look down on, either. Coders and communities like those behind the CyanogenMOD project have unleashed nifty fixes and upgrades on modern phones, and given the owners of phones left behind by their makers and carriers a new lease on life.

In a few cases, the answer to "Why can't I fix this?" may lie in rooting your Android phone--but be cautious, and do lots of research, if you choose to go that route. Altering your phone's core firmware will almost certainly void your

Meet Your Android

Android is a free phone operating system that aims to get all kinds of phones running like computers and, most importantly, connecting to the web. It's been developed primarily by Google, though others have helped, and it's a project that's constantly updating, growing, and getting a new look. In this chapter, you'll learn what makes Android different from iPhones, BlackBerry phones, and other so-called smartphones. You'll get a sense of why it might be right for your next phone (or other device), what you can do with it now, and where it's going in the future.

Say hello to your newest computer—the one that your mom can call you on.

The computer you carry with you

At its very core, Android is a version of the very free and open Linux operating system, but tailored for a computer that has just a few buttons and a touch-sensitive screen. It's not a single phone or line of phones, like Apple's iPhone, though the Verizon/Motorola Droid model might make you think that. It's not even a single look for a phone, as manufacturers and cellphone companies can totally remake the interface however they'd like. At the moment, learning how to get at the good stuff on one Android device generally trains you to use them all, but that may change in the future. Put simply, Android is a bundle of code, mostly developed by Google, that allow phones with small screens and tiny chips to do great things.

What it can do

What kind of things? If you're showing off your Android phone to your friends, you might show how you can hit a microphone-style button, say "Pizzeria Due, Chicago" into your phone, and, a few seconds later, have links to call, get directions to, or view the web site for one of Chicago's best deep-dish pizzerias. You can have the My Tracks app follow you via GPS and record your progress on a map, or in a spreadsheet. You can listen to your MP3s or streaming podcasts, read and respond to emails, and get turn-by-turn directions as you walk around a city you don't know—all at the same time. If you can't do something, there's a good chance an app in the Android Market can do it, and you can download it at any time.

Sure, you can browse the web, make phone calls, and send text messages (or SMS, for the purposes of this guide), but you can do that on most any phone these days. What makes Android different are a few features baked into its core:

- **Sync with Google:** It's the first thing you do when you turn your phone on for the first time—sign into a Google/Gmail account, or create a new one. From then on, your contacts, Gmail, Google Calendar, browser bookmarks, and even your wallpaper, phone, and search preferences are backed up and constantly streaming between your phone and Google's servers. You never need to plug your phone into, or "sync," with a computer, if you don't want to—your phone is its own computer. Not every Android phone must sync with Google, but the vast majority of them do—it's a prime selling point.
- **True Multi-tasking:** This is the big difference between the Android and the iPhone, and it's an even bigger leap forward from the clamshell/"candybar" phones sold by U.S. cellphone carriers. Android phones can keep multiple applications of any kind loaded at once, so you can switch between Facebook, email, SMS, and other apps without losing your place, and allow them to quietly do small things in the background. Applications written for Android phones can also synchronize with their servers and run little tasks in the background, without having to be actually open. The latest iPhones can let applications keep certain features, like music or message watching, open in the background, but Android allows app developers a lot more flexibility. iPhone applications can work around their limitations with pop-up "push notifications," but that involves their own servers pushing a message to your phone over the wireless internet, and they often charge for it.
- **Get totally customized:** Don't like the way Android's icons, widgets, and interface buttons look by default? You can change them. You can easily change your background wallpaper to any picture you want. Themes that provide total graphical makeovers are available, both free and for a small fee, in the Market app included on your phone. The entire home screen interface, in fact, can be replaced entirely with neat apps like SlideScreen or Launcher Pro, and if you don't like your SMS app, your phonebook app, your dialing app, or anything else for that matter, you can replace it!
- **Use open software:** Android itself is open-source software, meaning that anyone can look at how it works and make it better, or just different. Not everything is free and open—you can't (normally) copy applications between phones—but application makers can do a lot more with your phone than on other platforms.

What it can't do

Run the iPhone's apps: The iPhone was the first major smartphone intended for personal use, and it has built up a catalog of thousands upon thousands of third-party applications since early 2008. Many of the most popular and clever applications have made their way to Android's Market, or someone's made a very close copy. Still, experienced iPhone users coming to Android often have to live without an app or two they really enjoyed, but can often make peace with a work-around or almost-there app.

Work with iTunes (officially): There are applications like Songbird or doubleTwist that can put your iTunes music playlists on your Android phone, but Android phones aren't officially supported by iTunes itself—and, most likely, never will be.

Work with Niche Corporate Servers: The latest versions of Android support Microsoft's ActiveSync, part of Microsoft's Exchange server platform, and if you can get your company email working on any other app or phone, you can likely get it working on Android. The exception is for certain proprietary email models, and certain uses of the BlackBerry platform. In other words, if you work for a corporation that doesn't really trust its employees to get at their email except on the apps and phones they hand out, you might run into problems.

The Android Learning Curve

Android is a very young phone operating system, and it comes with a few new features and concepts that take some getting used to.

Your emails, SMS messages, and other background notifications pile up on the **notification bar** that's almost always at the top of your screen, and you "pull" down on it with your thumb, like a window shade, to see more details and click on a notification to access the app. Applications don't automatically get a shortcut on your home screen, but can be accessed from a **tray** sitting at the bottom of your home screen which you "pull" up on to access (Android 2.1 & below) or by pressing the center icon between your phone and browser icons at the bottom of your screen (Android 2.2) . You can access a **universal search bar** from any screen, and the **four main buttons** have distinct purposes, but they do slightly different things, depending on what you're doing. Most importantly, you don't, at the moment, sync your phone through a primary computer application that handles all your music, pictures, videos, and applications. You drop it all on your phone's **microSD card** from any computer, and your phone picks it all up from there.

Get Started with Android

Break open the box

Depending on what Android phone you purchased, you'll have different accessories inside the shiny-coated box. When you've got time and a clear space to open it, get a good whiff of that New Gadget smell, then extract your phone and its wall charging cord or USB cord. You *should* connect the small plug to your phone and plug the other end into your wall or computer for a good long charge before turning it on. But, knowing you, you'll want to get started, right? Just make sure it's plugged in while you run through the initial setup, so the uncharged battery doesn't give out during your first setup, and that it gets at least one overnight charge before you plan to take it out and about.

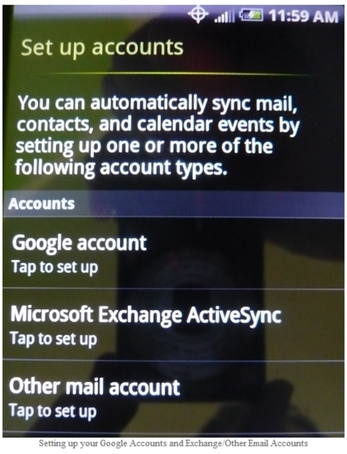
You'll also want to make sure you're somewhere with decent cellular signal, and probably a Wi-Fi signal you can connect to, as backup. The Google login/setup process, for phones running Android versions earlier than 2.0, requires a cellular data connection. On phones running Android 2.0 and later, you can choose to connect with a Wi-Fi signal. Until someone at Google decides to be kind to the folks in North Dakota, you generally can't set up your phone without some kind of data connection.

To readers in Bismarck—I'm sorry. That was a cheap, lazy association. I owe you all a beer the next time my plane breaks down over or near your state.

Once you're plugged in, and pretty sure you'd have a good connection, press and hold your phone's power button for a second. It's in a different place on many phones, but looking for a red button on your phone's main set of buttons, or on the top left edge, is usually a safe bet. Your phone will run through its boot screens, showing off your cellular carrier and the Android logo. When it's done booting up, you'll be greeted by a little green Android friend, whom you'll touch to start the login process.

Logging into a Google Account

The first thing you'll see is a long license agreement, which basically states that you won't hold Google liable if something goes wrong with your phone, or it wants to start a nice game of Global Thermonuclear War (what's Matthew Broderick up to these days, anyways?). After you've hit "Next," you'll be asked to either create a "Google Account" or sign into an existing account.



Setting up your Google Accounts and Exchange/Other Email Accounts

If you've ever signed into Gmail, Google Docs, Picasa Web Albums, or any other of Google's services, you have a Google Account you can sign into. If you have a Gmail account, that's your username and password, and you don't even need to type the "@gmail.com" portion. If you have a Google account, but don't use Gmail, the username is likely your primary email address.

Can't remember your Google Account details? Fire up your desktop or laptop computer, head to google.com/accounts, and click the "Can't access your account?" link under the sign-in boxes. You'll be asked a few security and verification questions, then you'll be allowed to reset your password from an emailed link.

Don't have any kind of Google account? You *could* create one from your phone, but it's easier to create a new Gmail account on your main computer and use that to set up your phone, even if you plan to keep using your existing email address. Why? Once you have a Gmail account, it's the only username and password you'll need to log into all your Google services. As for the email you're not giving up, it can be piped into Gmail and used with your Android phone's very awesome Gmail app. You still get your mail, your contacts and old mail can usually be transferred, and you still send out mail from your existing address. It's win-win for you and your phone.

On some phones, you'll also be offered a chance to set up your other email accounts, or Microsoft Exchange access, so that it's up and running right from the get-go. These steps are optional, though, and you'll still be required to create or sign into a Google account to get up and running.

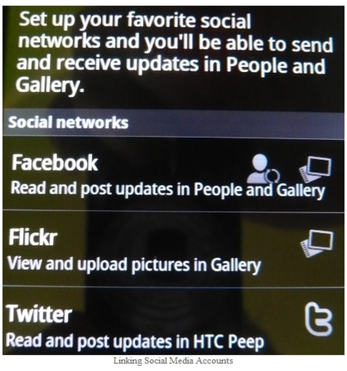
> Setting up Gmail with your own email If you've got a tried-and-true MSN, Yahoo!, or other email address that you don't want to give up, you can keep it and still use Android's very powerful Gmail app to access it, rather than using the quite-less-awesome "Email" app. Bonus feature: Gmail's web interface is probably a lot better than your own email's webmail page, so you get a great way to access your email when you're away from your home or work computer. The step-by-step has already been run down by Gina Trapani (who is, incidentally, the author of *The Complete Guide to Google Wave*). Check out Gina's feature on consolidating multiple email addresses with Gmail at Lifehacker, a blog at which your editor is a contributing editor.

All set? Go ahead and sign in. If you have the password right, you'll see a screen showing that your phone's "Signing In" and that it's "Communicating with Google's Servers." If it takes longer than five minutes, go ahead and hit the "Cancel" button, then get somewhere with better cellular coverage. If you're setting up a newer (Android 2.1 and above) phone, you can connect to your home Wi-Fi network instead and connect through it. If it does go well, you'll see that "Your Google account is now linked to this phone," and get some text providing a really basic introduction to features like the "Status bar," by which Google actually means the Notification bar.

If you're using a newer Android phone, you may also be asked to allow Google to back up your phone settings. That means your wallpaper preference, certain application settings, and other data. You'll probably be getting another phone in a year or two, and if it's an Android phone, it makes sense to keep this checked.

You'll also be asked during this setup process to decide on a few options related to Google's location services. By default, the boxes are checked and your phone will send its location—gathered from your Wi-Fi network, GPS device, and/or cellular tower triangulation—to Google in the background. Google uses that data for determining how fast traffic is flowing on major streets, among other uses. Another check box decides whether Google can collect your location data when you specifically want it to, for localized search results, driving directions, and other map-y things. If you're cool with what Google wants to peek into, leave the boxes checked; if not, you won't suffer all that much for your privacy, but consider keeping at least the second box checked.

Finally, some carriers add a few other options for account integration just before the setup process is done:

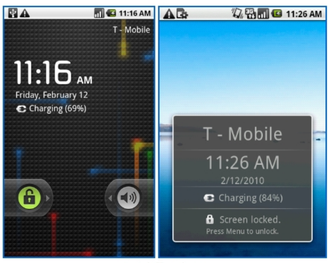


Linking Social Media Accounts

Again, you can easily skip this step and set up these accounts later in your phone's settings, but it's fairly easy to do from this screen, too, while you're in a "Here's my password" mood.

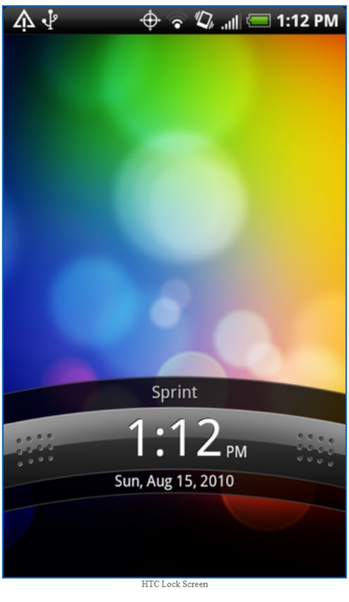
Hit the "Finish Setup" button, and you'll arrive at your phone's "lock" screen—it's what you'd see if you woke up/turned on your phone after a few minutes in your pocket. On a new stock Android phone (pictured below at left) and some Motorola models, you'll see the time, date, and battery amount charged on the screen. In the upper-right corner, you'll see the cellular carrier your phone's detecting, but don't freak out if it's not what you expect—that can change depending on your geographic location. In the lower third of the screen, you'll see lock and speaker icons. Swipe the lock toward the right to head to your phone's home screen. You could also swipe the speaker icon toward the left if you wanted to mute your phone's sounds at the movies or other quiet moments, then swipe it again to turn sound back on.

On phones with an older version of Android, you'll see a menu similar to the one below at right, showing the same kind of basics. Hit the Menu key—which either says "Menu" on it, or looks like a short stack of horizontal bars, to head to the Home screen.



Android Home Screen

On an HTC phone, the lock screen is slightly different, and the action to "unlock" your phone is to pull the gray bar down:



HTC Lock Screen

The Home Screen

Let's start with the Home screen, the main screen that you see when the device is switched on, and which returns when you hit the Home button.

Your Home screen is actually a collection of screens, which can be as many as you need. Swipe left or right to move between them. Some of the screen is taken up by the Notifications bar, which shows you what's going on with your phone, such as new messages, calendar events, and alarms. You can open the Notifications bar to see more information about these, and to quickly change settings such as Wi-Fi and Bluetooth. Some of the screen is also taken up by the Dock, which contains shortcuts to the Phone and Contacts applications, and a button to open the Apps menu. The rest of the screen is taken up by widgets, which are small applications that can be placed on your Home screen to provide information at a glance, such as the weather or your next appointment, and shortcuts to your favorite applications and bookmarks.

Exploring your home screens

Here, you can add widgets, change wallpapers, and manage your Home screen. Tap **Add to home screen** to add a new widget, shortcut, folder, or wallpaper.

Tap **Wallpapers** to see the wallpapers available. You can choose from wallpapers that are installed on your phone, or tap **Gallery** to use a photo you have taken or downloaded. Tap **Live wallpapers** to see animated wallpapers that will run while you are using your phone. Tap **Wallpapers** to see static wallpapers that are installed on your phone, or tap **Gallery** to use a photo you have taken or downloaded.

Tap **Folders** to see the folders available. You can choose from folders that are installed on your phone, or tap **New folder** to create a new folder. Tap **Shortcuts** to see shortcuts to your favorite applications and bookmarks. Tap **Widgets** to see widgets that are installed on your phone. Tap **Widgets** to see widgets that are installed on your phone.

Tap **Gallery** to see the photos and videos that are stored on your phone. Tap **Gallery** to see photos and videos that are stored on your phone.

Tap **Live wallpapers** to see the live wallpapers available. You can choose from live wallpapers that are installed on your phone, or tap **Gallery** to use a photo you have taken or downloaded. Tap **Live wallpapers** to see live wallpapers that are installed on your phone.

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Tap **Widgets** to see widgets that are installed on your phone. Tap **Widgets** to see widgets that are installed on your phone.

Getting around Your Home Screen

Swipe left or right to move between the Home screen, the Apps menu, and the Home screen. Swipe left or right to move between the Home screen, the Apps menu, and the Home screen.

Swipe up or down to move between the Home screen, the Apps menu, and the Home screen. Swipe up or down to move between the Home screen, the Apps menu, and the Home screen.

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What's in Your Home Screen: Widgets, Wallpapers, Apps and Shortcuts

Tap **Add to home screen** to add a new widget, shortcut, folder, or wallpaper. Tap **Add to home screen** to add a new widget, shortcut, folder, or wallpaper.

Tap **Shortcuts** to see shortcuts to your favorite applications and bookmarks. Tap **Shortcuts** to see shortcuts to your favorite applications and bookmarks.

Tap **Widgets** to see widgets that are installed on your phone. Tap **Widgets** to see widgets that are installed on your phone.

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Tap **Gallery** to see the photos and videos that are stored on your phone. Tap **Gallery** to see photos and videos that are stored on your phone.

Add and Remove Shortcuts and Widgets

Tap **Add to home screen** to add a new widget, shortcut, folder, or wallpaper. Tap **Add to home screen** to add a new widget, shortcut, folder, or wallpaper.

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Change your wallpaper

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Adding widgets

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All the other widgets

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Adding shortcuts

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All the shortcuts

- **Applications**: Tap this shortcut to open a list of your applications. Tap this shortcut to open a list of your applications.
- **Bookmark**: Tap this shortcut to open a list of your bookmarks. Tap this shortcut to open a list of your bookmarks.
- **Contact**: Tap this shortcut to open a list of your contacts. Tap this shortcut to open a list of your contacts.
- **Direct dial**: Tap this shortcut to open a list of your contacts, so you can dial one of them. Tap this shortcut to open a list of your contacts, so you can dial one of them.
- **Direct message**: Tap this shortcut to open a list of your contacts, so you can send a message to one of them. Tap this shortcut to open a list of your contacts, so you can send a message to one of them.
- **Directions & Navigation**: Tap this shortcut to open a list of your recent destinations, so you can get directions to one of them. Tap this shortcut to open a list of your recent destinations, so you can get directions to one of them.
- **Email**: Tap this shortcut to open a list of your email accounts, so you can send an email from one of them. Tap this shortcut to open a list of your email accounts, so you can send an email from one of them.
- **Folder**: Tap this shortcut to open a list of your folders, so you can add one to your Home screen. Tap this shortcut to open a list of your folders, so you can add one to your Home screen.
- **Gmail**: Tap this shortcut to open a list of your Gmail accounts, so you can send an email from one of them. Tap this shortcut to open a list of your Gmail accounts, so you can send an email from one of them.
- **Gmail label**: Tap this shortcut to open a list of your Gmail labels, so you can add one to your Home screen. Tap this shortcut to open a list of your Gmail labels, so you can add one to your Home screen.
- **Gmail search**: Tap this shortcut to open a list of your Gmail searches, so you can add one to your Home screen. Tap this shortcut to open a list of your Gmail searches, so you can add one to your Home screen.
- **Music playlist**: Tap this shortcut to open a list of your music playlists, so you can add one to your Home screen. Tap this shortcut to open a list of your music playlists, so you can add one to your Home screen.
- **Phone call**: Tap this shortcut to open a list of your contacts, so you can dial one of them. Tap this shortcut to open a list of your contacts, so you can dial one of them.
- **Text message**: Tap this shortcut to open a list of your contacts, so you can send a message to one of them. Tap this shortcut to open a list of your contacts, so you can send a message to one of them.

Folders

Tap **Add to home screen**, then tap **Folders** to see the folders available. You can choose from folders that are installed on your phone, or tap **New folder** to create a new folder. Tap **Add to home screen**, then tap **Folders** to see the folders available. You can choose from folders that are installed on your phone, or tap **New folder** to create a new folder.

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Get connecting

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Notifications and the Notification Bar

Notifications in the Top Left

Use your phone for just about any length of time, and you'll notice that little icons pop up and sit on the top-most gray bar on your phone. This is known as the **Notification Bar**, though it's sometimes referred to as the "Status Bar" or "System Status Bar" in Android developer documents. For the purposes of this book, we'll call it the Notification Bar, because it's where you get notified of things.

What kind of things? The bar is divided into two basic sections. The left-hand side is where your applications and message services can drop you a note that there's something new to look at. The right-hand section, which is given more space, is where Android gives you the basic status information you'd expect from any cellphone. Let's start there.

Note: The look, and perhaps arrangement, of the notifications and status bar icons described in this chapter may look different on your phone, especially if it's made by HTC. The functionality of the Notification Bar, and the meaning of the icons, stays the same across all phones.

System Status Icons

Starting at the right and heading left, you'll see what time it is, then an alarm-style clock icon if you've got an upcoming alarm set. To the left, you'll always see a battery icon, which fills up from right to left and changes from red to yellow to green as your phone gets juiced, and shows a power symbol if your phone is being charged. Next up on the left is the familiar cellular signal strength indicator. To the left you'll find another icon that appears if you've got your phone set to vibrate, or make no noise at all, for incoming calls. Finally, to the right of that vibrate icon, or on the far left of the right-hand icons (confusingly enough), you'll see possibly the most important indicator for an Android addict: the data connection icon.

When you've set your phone to connect to a wireless (Wi-Fi) signal, you'll see a recognizable circle and waves icon, with more waves lit up to indicate a stronger signal. We'll cover how to connect your phone to Wi-Fi networks in your home, your office, coffee shops, and other spots in just a bit. For now, we should point out that seeing the Wi-Fi icon simply indicates that your phone has been permitted to connect to a Wi-Fi network, and that usually means you've got web access—but not always, depending on the network setup.

Cellular Data Indicator

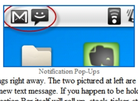
Cellular Data Indicator

If you've turned Wi-Fi off, or there's no valid network in range, you'll see a cellular data connection indicator, assuming you've purchased a data plan from your carrier. If you're a T-Mobile or AT&T wireless customer, or in Europe or on another GSM network, and you're in range of a data connection, you'll see different icons depending on your signal speed and strength. "G" indicates you've got only a very basic GPRS connection, which is a kind of last resort in this day and age. "E" shows that you're connected to an EDGE network—decent enough at browsing text-heavy web pages and managing email, but not so hot at multimedia. "3G" refers, as you might guess, to the heavily advertised 3G, a kind of catch-all term for a connection package that delivers a decent web experience—slightly better than you'd get at home with a DSL connection, speed-wise, but with a bit more latency between requesting something and getting it back. Verizon, Sprint, and other CDMA networks provide a more simple scale. 1x for basic, slower data service, and "3G" to indicate a full-strength connection. Speeds will vary across locations, and technologies like "4G" and WiMax are developing, so expect to see different icons in newer areas.

Your cellular connection icon has two arrows, up and down, that light up when your phone is passing information "up" to the network and making requests for web sites and services, and "down" when it's pulling data. These arrows can tell you a good bit about what's happening with your phone. When it's busy grabbing data and checking what's next, both arrows will be lit up. If you notice that only the "up" arrow is steadily lit up, and your web-connected apps don't seem to be responding, you might need to close that app or restart your phone to get it unstuck, so to speak. If you're wondering why your phone is so warm, see if the arrows are staying lit continuously, which indicates a big download or sync you might want to stop if you're trying to conserve batteries.

Message and App Notifications

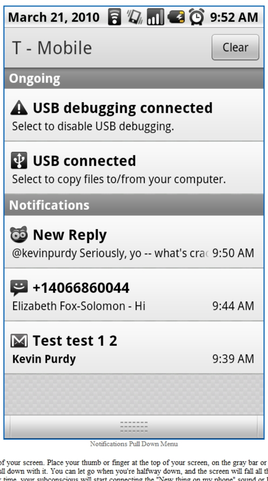
The left-hand side of your Notification Bar is where you see updates, messages, sync announcements, reminders—anything any app on your phone wants to tell you about, and that you probably want to be kept aware of.


Notification Pop-Ups

With only the apps that come pre-installed on your phone, you'll start getting these little pings right away. The two pictured at left are the most common: A Gmail-like icon to indicate you've got, yes, a new Gmail message. The smiley-faced, speech-bubble-looking guy to the right of the Gmail is an indicator of a new text message. If you happen to be holding your phone and the screen is on when they arrive, you'll notice your phone vibrate, beep, or otherwise react, an LED or trackball on your phone might light up, and the Notification Bar itself will tap, stock-ticker-style, to show either a basic message ("New Email") or a quick read on the message ("**Jim Smith** - Hey Steve just wondering where you are..."). If not, these updates will plant themselves in the Notification Bar, and you can act on them whenever you want.

When Notifications Pile Up

Depending on your screen, you'll have a certain maximum number of icons that can stack up on the left-hand side of the Notification Bar. When you reach that limit and more notifications are coming in, the Notification Bar will show a generic left-pointing arrow and the number of notifications beyond what sits to the right of it. If you find this happening too often for your tastes, you can set up certain applications to stop putting up notification badges in the bar, covered just a bit further down.



Notifications Pull Down Menu

How do you act on notifications? By "pulling down" the bar from the top of your screen. Place your thumb or finger at the top of your screen, on the gray bar or slightly above it on the black buffer around your screen. Slide your finger at least halfway down the screen, and you'll see a gray "window shade" pull down with it. You can let go when you're halfway down, and the screen will fall all the way down. If you pull down fast and let go, you can also flick the screen down without having to follow it with your finger. Trust me—over time, your subconscious will start connecting the "New thing on my phone" sound or buzz with the "Flick down the screen" motion, and it will feel pretty natural.

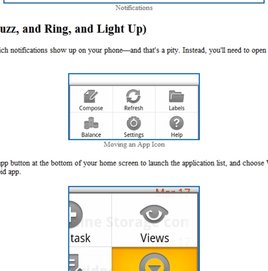
What's on the Notification Bar? That depends on what apps and processes you have running on your phone, but they work mostly the same. In the example above, I have my phone connected to my laptop via a USB cable, and I've enabled USB debugging in the settings in order to take screenshots of my phone. Those are "Ongoing" things that I shouldn't be able to dismiss, but that I can access by clicking on either of those items. When you have music running in the background, or if you run software that tracks your exercise with GPS, for example, those will show up in the same "Ongoing" area. In many situations, this area won't show up at all.

"Notifications" is what you'll usually see when you pull down the window shade. In the example at left, I've got three items that have arrived since I last looked. The little critter icon next to the "New Reply" notice indicates that Seesmic, the Twitter client on my phone, has a new reply for me, and shows a small part of the message. Under that, there's a text message from my wife, and an email to myself at the bottom, with the subject line highlighted. If I tapped any of these rows with my thumb, the application they came from—Seesmic, Messaging, or Gmail—would launch and show that message.

If you're not in the mood to see them, or plan to get to them later, hit the "Clear" button in the upper-right corner. Those messages won't be deleted or marked as read, but will be dismissed from the "Notifications" section.

What Notifications Mean

To a newcomer, the icons that appear in the Notification Bar aren't exactly apparent, even after rolling down the window shade to see what's happening. As you install new applications from the Market, they'll add their own notification icons, but every Android phone has a standard set it uses. Here's a look at those default notifications (which, as noted above, are pulled from an Android 2.2 phone running the stock interface, yours may vary).



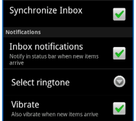
Notifications

Control When Notifications Show Up (and Buzz, and Ring, and Light Up)

There is, at the moment, no one central spot on your phone to control which notifications show up on your phone—and that's a pity. Instead, you'll need to open up each application and tweak how and when it notifies you about new messages or happenings.

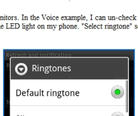
Moving an App Icon

I'll use the Voice (a.k.a. Google Voice) application as an example. Hit the app button at the bottom of your home screen to launch the application list, and choose Voice. Hit the Menu button on your phone when the app launches, and you'll see a Settings icon, which looks the same on just about every Android app.



If you don't see "Settings," try "More"

Sometimes, though, an app's Settings—sometimes dubbed Preferences—are tucked away under the More button. Hit the button and a sub-menu of options will pop up, with Settings often among them.



Google Voice Menu, Refresh and Notification

In most Android app's settings, you'll find a category for "Notification," "Alerts," or something akin. In the Voice app, it's "Refresh and notification," as if to cover all bases. Click it!

From this screen, you can usually change when and how an app notifies you of whatever it monitors. In the Voice example, I can un-check "Inbox notifications" entirely to remove Voice's pinging from the Notification Bar. In less drastic fashion, I can un-check Vibrate and Light to turn off phone vibrations and blinking of the LED light on my phone. "Select ringtone" seems to imply that I can only select a different sound for Voice notifications, but click it and take a look:

Ringtone Menu

You can keep Voice using the same ringtone your phone normally uses, or select "Silent" to have Voice not actually make a sound. You can also choose a different ringtone or sound, so that your brain eventually learns what each sound means when it issues forth from your pocket or purse.

Keyboard and Voice Input

You probably get a basic feel for Android's on-screen, virtual keyboard the first moment you powered up your phone; you had to, really, to set up your Google account. Your phone might have a physical keyboard that's better for longer messages and emails, but for your on-handed texting and for "quick" tasks, the on-screen keyboard is fine, and you can use it anywhere.

NOTE: If your Android phone comes with the TOUCH Home desktop (or other similar, custom, you-keyboard-free video buttons and doesn't look like the keyboards in these screenshots), you'll still get essentially all of this chapter, especially the bits about voice input. But skip down to Alternate Keyboards to see how you might change up your game, including the use of neat gesture-based keyboards that can speed up your text entry.

The Standard Android Keyboard

The keyboard generally comes up whenever it's called for. Whenever you open up an app that needs input, or click somewhere to input text, the keyboard pops up, and your screen shifts to keep the text right under the text box.

Looking for the keyboard. Tap!

The orange-tender indicates which bits have not-being edited. Underneath the business-needed-to-do-after-work, the keyboard's suggestions for the sentence so far which match you're typing-out, changing as you type each word, with the best guess highlighted. First and all of the words with your-language-dictionary-stuff, the keyboard's suggestions, in a blue, the word you're trying to type, you don't need to stop to write your finger, just hit the space bar, and that word gets typed-in for you.

Adding to Your User Dictionary

These word suggestions you see as you type come from a standard dictionary installed on your phone. If you commonly use particular words that aren't included in the dictionary, you can tell your keyboard to add them to the "User dictionary". You can do it from the main Settings, but it's easier just tough it-while-at-a-time-type:

Adding a word to the dictionary.

When you tap a word that you realize you-phone will never consider legitimate, select it's dotted-underline-thing-word with your finger, on, search-tangent-text, choosing "Select text" from the "Edit" menu, if available, and using your keyboard to grab it.

Adding a word to the dictionary.

Then, press and hold on the word (or hold down the keyboard), and you'll down-by the pop-up menu to choose "Add X to dictionary."

Adding a word to the dictionary.

You'll end up inside your User dictionary, with the word you want to add already loaded-in. You can modify it-here-before-submitting-it, or just hit "OK" to submit the word.

Your-time-you-save-typing is the first-few times of your-add-words-to-it. Later, it's also up to the suggested words-list above the keyboard, and you can save yourself the typing-time: Highly recommended for members of Neuromancer/Snow Crash, LBC, Kandinsky-etc. Pls, or Wonjudoo-etcetera, :)

Android Keyboard Layout

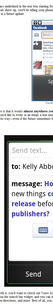
The keyboard-and-keyboard-layouts-and-keyboards-QWERTY-version-Dvorak-or-non-companion-name-"Dvo"-qwerty-version-has-lowercase-left-or-shift-key-for-it-cause-to-pick-just-a-single-capital-letter, or-every-to-type-in-all-caps. The keyboard-layout-is-on-the-right, the-main-text-you-type-below-it. Keyboard-layout-keys-also-have-letters-on-them. Andro's-keyboard-uses-keys, which-for-example-is-the-letter-"Q"-on-the-keyboard-layout-is-the-letter-"Q"-on-the-keyboard-layout-keys.

The Universal-Alt-Sym-Shift-Del-Enter-Space-Bar-Keyboard.

In the very-bottom-and-left-is-the-keyboard-"switch"-for-lack-of-a-better-term: it opens up half of the other-characters-you-need-to-type-on-a-full-keyboard.

The Universal-Alt-Sym-Shift-Del-Enter-Space-Bar-Keyboard.

But let's say you're stuck-of-typing-the-"!!!!!" and-"&!!" between-to-get-at-your-amusement-text-. Starting with-Android 2.1, you can-press-and-"pull"-the-top-edge-of-the-keyboard-up-with-a-finger-or-thumb, then-navigate-to-one-of-20-common-punctuation-marks-or-numbers-thereto-there.



Pulling-up-the-keyboard-to-get-at-the-extra-punctuation-marks.

With-one-or-two-thumbs-in-the-"qwerty"-orientation, you-can-type-out-a-few-words, or-start-a-search-click-the-text-email-at-a-comma-up. If-you-want-to-do-a-bit-more-typing, simply-turn-your-phone-sideways-(into-what's-commonly-called-"landscape"-orientation, as-opposed-to-the-more-typical-"portrait"-and-the-keyboard-will-come-automatically. Until-turn-the-text-of-the-app-over-back, or-turn-your-phone-back-upright-and-the-keyboard-will-change-it-back-automatically, as-if-you-were-adding-down-a-popular-comma.

Turned-sideways-for-more-space-for-typing-and-more-keys-for-typing-with-.

Selecting, Copying, and Pasting Text

It's-worth-noting-that, while-the-keyboard-generally-does-a-good-job-of-knowing-where-to-pop-up-and-where-to-hide-away, there-might-be-occasions-where-you-need-to-pull-up-the-keyboard-manually, or-hide-it-when-it's-obscuring-and-covering-up-the-screen-you're-trying-to-see-and-type-on. Fortunately, there's-a-button-for-that-and-it-lets-you-physically-Dismiss-buttons-on-any-screen, and-the-keyboard-disappears-up-the-screen-to-the-bottom-and-"stays"-a-little-bit-and-stays-up-a-little-bit-longer-than-it-would-if-it-wasn't-a-button-for-it-.

Let's-say-that-I-want-to-write-a-blog-entry-on-my-Droid-Bionic-(that-is-a-fine-device-for-blogging-from-by-the-way-actually). I'm-going-to-ask-my-publisher-to-send-it-to-me-but-I-want-to-specify-which-brand-of-coffee-the-my-Keurig-brewer-has-in-it-open-my-browser-and-head-right-to-the-purchase-page:

With-the-page-pulled-up, I'm-the-bliss-bitten-on-my-phone, select-the-blue-sub-menu, then-get-"-the-offerings-that-come-up-

Back-to-my-Google-page, I've-written-up-what-I-need-before-my-paste, then-I'll-press-and-hold-on-the-text-field, and-select-"Paste"-to-put-my-text-right-where-the-cursor-is-positioned.

Back-to-my-Gmail-page, I've-written-up-what-I-need-before-my-paste, then-I'll-press-and-hold-on-the-text-field, and-select-"Paste"-to-put-my-text-right-where-the-cursor-is-positioned.

Perfect. I can-send-those-deep-notes-of-robust-sumatran-flavor-walking-through-my-office-email.

If-I-were-using-an-HTC-device, the-text-selection-would-be-a-little-bit-different. Actually, it's-not-all-that-different, if-you've-ever-used-a-modern-iPhone:

Selecting-text-on-an-HTC.

After-pulling-"Select-Text"-from-your-menu, you-press-and-drag-your-finger-in-the-approximate-point-you-want-to-start-or-stop-your-selection. Five-markers-will-pop-up, which-you-can-then-hold-down-and-drag-to-better-fit-the-outline-of-text-you-want-selected-then, you-can-press-the-"paste"-icon-to-copy-the-text-for-pasting-elsewhere-or-you-can-hit-the-cut-icon, or-the-share-icon-to-send-the-text-through-one-of-your-other-apps.

Keyboard Settings

Keyboard-settings-in-Gmail.

You-can-change-the-settings-for-the-standard-Android-keyboard-through-any-buttons-on-the-keyboard-itself. Instead, head-back-to-your-home-screen, hit-the-Menu-button, select-Settings, then-choose-the-"Language-&-Keyboard"-section. Select-the-"Android-keyboard"-offering, and-you'll-see-these-options:

- **Vibrate on keypress:** Check-it-to-have-your-phone-make-a-little-micro-vibration-every-time-you-press-a-key. It-can-give-you-a-little-more-reassurance-that-you're-hitting-the-right-keys, and-may-speed-you-up-but-can-also-be-an-annoyance-in-text-speed-sensitive-situations, if-you'll-be-typing-a-lot.
- **Sound on keypress:** Check-it-to-have-your-phone-make-a-little-click-sound-every-time-you-hit-a-letter. There's-not-much-point-to-this-one-.
- **Auto-capitalization:** Un-check-this-if-you-don't-like-how-your-phone-automatically-capitalizes-the-first-word-after-a-punctuation-mark.
- **Voice input:** Check-it-to-have-your-keyboard-show-a-button-for-voice-input-in-addition-to-the-spacebar-and-other-keys. Voice-input-is-Google's-"speech-to-text"-system-.
- **Input languages:** Jump-in-and-set-the-setting-itself, you-can-change-your-keyboard-language-by-hitting-the-world-icon-in-the-keyboard-and-spacebar-available, mainly-for-taking-your-Skype-across-the-spacebar. But-you-can-also-pick-one-or-multiple-languages-here.
- **Dictionary:** Pick-your-dictionary-here.
- **Quick fixes:** Switch-whether-Android-should-automatically-fix-the-typos-and-misspellings-that-it-notices-you-make-because-auto-all-fix-here.
- **Show suggestions:** Un-check-this-box-to-get-rid-of-the-words-over-the-keyboard-you-can-press-for-quick-suggestions.
- **Auto-complete:** When-checked, Android-will-automatically-put-the-space-for-you-when-you-select-a-word-from-a-list-for-the-sentence-in-a-particular-text. It's-good-out-of-"Dictionary-suggestions"-is-on-checked.

The Magic of Voice Recognition

Google-Voice-Typing-Ready-to-Hear-Your-Voice.

Click-the-"microphone"-and-"landscape"-unique, you'll-see-a-microphone-style-icon. What-happens-when-you-press-it? Your-phone-starts-listening, or-say-something-into-the-phone-receiver. You-don't-have-to-hold-the-phone-up-to-your-face-as-if-you're-on-a-call, simply-talk-at-it-or-speakerphone.

Google-Voice-Typing-Working-on-Google-Search.

As-soon-as-your-phone-senses-that-you've-stopped-talking-for-a-full-second, it-pulls-up-what-it-just-recorded, submits-it-to-Google's-servers, and-uses-the-search-company's-database-of-speech-to-text-data-to-take-a-stab-at-what-you-were-saying.

Google-Voice-Typing-Ready-to-Hear-Your-Voice.

When-you-use-speech, on-Google's-best-side-at-what-you-just-spoke, appears-underneath-it-in-the-text-entry-area-the-text-that-it-thinks-you-just-said. It's-worth-making-a-through-check-just-probably-figure-it-out-on-your-own, unfortunately—that-if-you-let-the-backspace-delete-text-right-after-your-voice-input-starts-to-your-text-entry-area-(and-you're-telling-your-phone, "No, that-wasn't-at-all," and-everything-gets-wiped-out. It's-best-to-move-your-cursor-around-just-a-bit-with-the-touchpad-before-fixing-an-error, and-then-to-hope-Google-hears-that-determining-is-a-future-update.

Google-Voice-Typing-Ready-to-Hear-Your-Voice.

One-of-the-most-important-things-to-note-about-this-speech-to-text-feature-is-that-it-works **almost-anywhere-your-type-in-text**. If-you're-walking-around-and-don't-want-to-be-the-person-who-type-while-texting, or-that-yourself-simply-tramping-on-the-crowd-and-not-wanting-to-type, go-ahead-and-use-it-from-your-phone-to-send, a-text-message, a-facebook-update, a-web-search, anywhere-there-you-get-asked-to-speaking-for-something-you-can-type-instead-of-typing-it-out-. Also-note-that-the-feature-is-not-a-type-of-the-future-sometimes-feature-a-Google-user-in-whom-you-cannot-have-a-contact.

Voice Actions in Android 2.2

Voice-Actions-Ready-to-Send-a-Text-Message-to-Someone-Who-Is-Not-Kelly-Abbott.

If-your-phone-received-its-upgrade-to-Android-2.2, or-some-pre-loaded-with-it, you'll-want-to-use-Voice-Actions, an-upgrade-for-Google's-speech-to-text-capabilities-that-goes-far-beyond-text-searching-and-text-filling. Down-and-hold-down-your-phone's-home-button, it-pulls-up-the-microphone-button-on-the-main-Google-page-and-you-can-actually-use-it-SAM-to-do-what-with-your-voice-? Good-question-! In-fact-Google's-launch-text-around-"Play-Glassbreaker"-on-both-Google-Voice-Search-and-Voice-Actions-, and-the-Voice-Actions-app-is-actually-a-little-more-powerful-than-the-Voice-Search-app-, so-let's-start-there-.

Pop-open-your-app-what-you-use-do-with-Voice-Actions-, check-out-Google's-directory-page. If-your-phone-received-its-upgrade-to-2.2-yet-but-not-, you'll-have-to-search-the-Market-for-"Voice-Search"-to-download-the-updated-Voice-Actions-.

Tips for Better Speech to Text

Let-Captain-Scott-of-the-The-Thaw-in-Text-podcast-(and-more-sponsor-). The-Thaw-is-Google's-and-where-the-Google-is-understanding-what-you're-saying, you-should-speak-like-a-radio-host-Shoutcast-, slow-down-, and-maintain-a-consistent-level-of-"-ABC-radio-voice-. If-that-all-seems-like-too-much-, let's-try-an-experiment-and-pick-a-little-bit-of-something-from-your-pocket-lunchbox-, saying-"-mmmm-"-pencil-, "-of-spectrum-and-"-red-and-black-"-then-to-phrase-in-one-step-at-a-time-. Or-maybe-a-long-poem-or-a-single-long-sentence-or-a-single-long-phrase-.

Write-down-your-phone's-home-screen-number-and-your-cell-phone-here-:
Write-down-your-Google-Voice-Search-number-here-:
U.S. or-Canada-this-calls-1-800-GOOGE-411-(1-800-466-4411)-and-enter-the-business-directory-leading-the-, along-with-city-and-state, can-be-connected-for-free, or-have-additional-information-sent-by-text-message-.

As-you-might-have-guessed, Google-has-been-doing-all-that-specific-in-particular, the-phenomena-of-regional-dialects—and-the-search-results-they're-connected-to-in-order-to-build-a-pretty-huge-speech-recognition-database. It's-a-lot-, the-Google-perfect, but-it's-also-surprisingly-good-at-times-.

Alternate Keyboards

Google-Voice-Typing-Ready-to-Hear-Your-Voice.

Look-around-in-Android's-Market, and-poke-around-the-web, and-you'll-find-that-quite-a-few-keyboard-apps-and-alternatives. One-of-the-most-interesting-companies-contains-picture-based-keyboards-like-Swype, DragonDictate, and-Swiftkey. They-all-work-on-the-same-principle-when-typing-and-inputting-your-figure, dragging-or-swiping-over-a-word, you-can-also-even-Swype-on-such-sites-as-your-word. These-keyboard-apps-will-stick-at-the-shape-you've-made-and-try-to-figure-out-what-you-meant-to-type-, and-even-in-some-cases-learning-your-typing-patterns-and-adjusting-to-your-style-. Swiftkey-is-the-only-standing-out-exceptional-, if-you're-looking-for-a-good-alternative-and-Swiftkey-seems-to-be-the-best-of-the-lot-.

Google-Voice-Typing-Ready-to-Hear-Your-Voice.

Look-around-in-Android's-Market, and-poke-around-the-web, and-you'll-find-that-quite-a-few-keyboard-apps-and-alternatives. One-of-the-most-interesting-companies-contains-picture-based-keyboards-like-Swype, DragonDictate, and-Swiftkey. They-all-work-on-the-same-principle-when-typing-and-inputting-your-figure, dragging-or-swiping-over-a-word, you-can-also-even-Swype-on-such-sites-as-your-word. These-keyboard-apps-will-stick-at-the-shape-you've-made-and-try-to-figure-out-what-you-meant-to-type-, and-even-in-some-cases-learning-your-typing-patterns-and-adjusting-to-your-style-. Swiftkey-is-the-only-standing-out-exceptional-, if-you're-looking-for-a-good-alternative-and-Swiftkey-seems-to-be-the-best-of-the-lot-.

Not-every-phone-comes-with-Google's-extra-keyboard-installed-on-the-default, and-not-every-phone-comes-with-the-Google-Market-installed-on-it-either-. Some-phones-manufactured-by-HTC—like-Hero, the-Droid-Incredible, and-the-HTC-G1—feature-a-Swiftkey-derived-keyboard-installed-on-the-default-, and-the-HTC-Sense-Market-, for-example-, is-a-good-place-to-get-it-. Other-phones-manufacturers-like-Motorola-and-Samsung-have-their-own-keyboards-, but-only-offering-predictive-word-suggestions-when-in-landscape-mode-, and-the-inclusion-of-a-"-cover"-physical-keyboard-. There-are-also-a-lot-of-specialty-settings-, available-in-the-same-place-as-your-standard-keyboard

Buttons and Finger Controls

Android Buttons.

Every Android phone comes with at least four buttons on its face, whether they're on actual, physical, press-and-release buttons, or touch-sensitive "soft" buttons. Most Android phones will also come with a trackball or similar tracking device, and some will come with hardware buttons for powering the phone on and off, and perhaps for hanging up calls or powering off.

What do these buttons do? In part, that depends on what application you're using, but the four main buttons that every phone carries do have some nearly universal purposes. We'll examine and explain the buttons on the Nexus One as an example, but these buttons serve much the same purpose on any Android model.

Home

Home Button

This is the most universal of buttons, besides, perhaps, the power switch. Tap it at any time on your phone, and it drops out of whatever application you're using, bringing you right back to your central home screen. The Home button doesn't usually "close" that application, though, so if you're in the middle of writing an email, clicking on Gmail again should return you to that text field, with none of your text lost. That's a nice thing for the sanity of the thick-fingered, no? If you're on a different section of your home screens than the center, hitting Home brings you back to the center.

On HTC phones, pressing the Home button while on the central home screen brings up a Mac-style layout of all your home panels and their contents so you can easily switch to, say, your Twitter and Facebook widgets on the far-right screen. On some of Motorola's Droid models, pressing Home while on the central home screen pops up your app list, just as if you'd pressed the middle icon at the bottom of your phone's screen.

Holding down the Home button has a different effect: launching a pop-up window that shows the six most recent applications you've opened and used from your phone. You can tap any of them with your finger to pop them open, or scroll to an app with your tracking device and press to open. It's kind of a complimentary function to the tapping function—if you accidentally tapped Home while you were reading Facebook updates, holding down Home will let you click back into Facebook, right where you left off.

Back

Back Button

Back does pretty much just what you'd think it does. In most applications, hitting Back brings you to the screen you were on before the one you're currently looking at. Holding it down in some applications flips (very) rapidly back, likely bringing you back to the home screen. In other applications, holding down Back simply counts as if you're pressed it once.

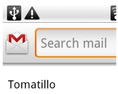
The one default application where Back has a special purpose is the browser. In your standard Browser, and most other browsers you can download, Back works like the back button in a browser, taking you to the previous web page you had visited. Hold down Back, and you'll see your browser history listed, from which you can tap and pick any page you were on in the recent past.

Search

Search Button

From the home screen, or from most applications, tapping the magnifying glass icon of the Search button brings up the Quick Search Box. It loads up a text box at the top of your screen, brings up the keyboard, and searches nearly your entire phone for whatever you're typing. Next to the text box, there's another magnifying glass button that performs the search, and a microphone icon that lets you speak your search rather than type it. Voice commands are a fairly amazing part of using an Android phone, and we're covering that in the next chapter.

You can change what Quick Search covers in your Settings ("Searchable items," under the Search sub-menu), but without changing anything, you'll see contact names and data, browser bookmarks and history, and installed applications show up as you start to type. Type out a web address (lifehacker.com), hit Enter or the search button up top, and you'll head there. Write a search phrase ("best custard Boston"), and you'll get quick Google results (unless your phone is set to use another search engine as its default).



Tomatillo

What You're Searching for is Described in the Search Bar

In *most* applications, hitting the Search button brings up the universal Quick Search bar. In some applications, like Mail, Contacts, and some third-party apps you might install, tapping Search searches the application you're in—digging through email messages, looking up contacts, or displaying something related to the application. To know whether you're pulling off a universal search of your phone data, versus seaching in that application, pay attention to the text that's inside the text box when it pops up. If you're performing a general search, the faded grey text will read "Quick Search Box." If the application you're in has a special use for the Search button, it will read something like "Search mail," "Search contacts," or the like.

What happens when you press and hold down on the Search button? No matter what you're doing on the phone, it launches the Voice Search application. More to the point, it gears up for a second, then starts listening to what you've got to say. In most cases, what you say turns into a search on Google, after the audio is passed to Google and its servers have a chance to transcribe your spoken words into text. You can also call contacts and get turn-by-turn directions to a location by simply stating its name—again, a cool thing we'll cover just a few pages further in.

Menu

Menu Button

Pressing the Menu button does something different on almost every screen of your phone. In almost every case, it pops up a white tiled menu on the bottom of your screen, giving you access to things that are either deeper options, that don't quite fit on the screen, or that are just more explicitly explained.

From the home screen, for instance, the Menu key offers options to add an item to that screen, change the wallpaper, open the Quick Search Box, see what notifications are waiting, or enter the system settings. All but the last of these options can be accessed elsewhere on the screen—pressing and holding on a blank space, tapping the Search button, pulling down the notification "shade," etc. In other applications, tapping the Menu key might offer some crucial functionality that isn't easy to incorporate into a screen—a link for composing a new email or Twitter message, adding a new contact, or changing the settings. If you can't figure out how to do something in an application from looking at it, the answer is, more often than not, tucked in the Menu key's pop-up.

Menu Button on a Droid X

Some phone makers have changed the look and feel of the Menu button from Google's own design. Motorola prefers a somewhat abstract four-square icon, with the upper-left icon filled in.

Tapping and holding on the Menu key brings up the keyboard for typing under any circumstance. It's a helpful fall-back for when applications fail to bring up the keyboard on their own and, if you start typing, it's a shortcut to using the Quick Search Box to pull off Google searches from anywhere on your phone.

The Trackball

Moving an App Icon

There is nothing the trackball does that you can't do with your fingers, and that's why some Android phones have skipped them entirely. For a few things, though, the trackball—or, on some phones, the optical tracking sensor—is more convenient.

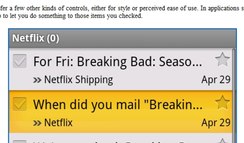
The main thing Android users need the trackball for is fixing up text. While typing with the on-screen keyboard, scrolling the trackball left and right moves the cursor around in a more precise fashion than stabbing around with your finger trying to pinpoint the spot between the "T" and the "H" in "the." When selecting text to copy from a web page or other text, the trackball is how you map out the amount of text you want copied.

The trackball is also a handy tool for apps that let you draw, control a cursor, or otherwise get semi-precise control, and a few games have made clever use of it. It can sometimes be more comfortable to scroll through a long list of items—email, messages, items for sale—with the trackball than having to "push" the screen upwards. Clicking down with the trackball serves the same function as pressing with your finger, and holding down the trackball replicates the behavior of pressing and holding with a finger. When you're navigating web pages with tiny links and controls designed for laptops and desktop computer browsers, the trackball can be very handy indeed.

The trackball on the Nexus One, and likely future Android phones, also serves as an indicator for new messages. When new emails, SMS messages, updates to Market applications, or other notifications from your applications arrive, the trackball will pulse with a white glow. In the settings for each application, you can change or disable the light-up behavior of the trackball (or LED light near the top of the screen, on some phones).

Finger Controls

How to control things on your Android phone with your fingers should be, for the most part, obvious. Swipe up to scroll down, and swipe down to scroll up, as if you had a long scroll of paper in front of you, or were using a microfilm projector. Pressing down briefly on an item is the equivalent of the "clicking" you'd do with a computer mouse. Pressing and holding is the thing as a "right click" on a standard computer—it reveals further actions you can perform on whatever you've selected.



Long Pressing (press and hold) brings up extra actions, like a right click on a PC

Check Boxes to perform one action to multiple items

Some applications you can download, and some in your own phone, prefer a few other kinds of controls, either for style or perceived ease of use. In applications such as Gmail, where you might want to do the same thing to a lot of different things, you'll get check boxes to toggle and buttons that pop up to let you do something to those items you checked.

Pressing an Email

Some applications also have tucked all the additional things you can do to an object into an arrow or some other kind of pointing marker on the sides. In the example of the official Android application from the messaging service Twitter, clicking a tweet doesn't actually do anything, but clicking the downward-facing arrow to the right brings up a dialog-balloon-style menu of options.

Drop Down Action Menu on Twitter App

In certain applications, like the browser, the photo Gallery, and some document viewers, you can use your fingers to zoom in and out of an image—the "pinch-to-zoom" action that iPhone users learn as second nature. It's hard to put a picture, but you'd likely figure it out. Place two fingers on the screen, close to the center, and expand them, as if you had an expandable magnifying glass between your fingers that focused in closer as you spread your fingers apart

Making Calls, Sending Texts, Managing Contacts

At one point in the not so distant past, cell phones were primarily used to make and receive audio phone calls, as old timers on that remark. Time swiped up Android phone can, of course, make phone calls, send SMS ("text") messages, and do many other things that your phone can do. Android's extensible framework allows developers to create new features for your Android phone. Some of these apps will be free, and others will be for a fee, and the overall usage cost for the phone is your concern.

Dialing a Number

Dialing a Number

When you first get your Android phone, there will be a Phone shortcut on the central home screen. This is really just a shortcut to the "Phone" tab inside the Contacts application. Youll probably want to replace Phone with Contacts on the home screen, because you ALL ARE ALL calls initiated from the phone will be initiated from the Contacts application. Tap the Phone shortcut, and you will see the dialer. Simply Phone would like you 12 Android Android phone will be a phone number, so you can dial it. Tap the numbers, and when you have dialed the number you want to call, tap the green button to the right of the numbers. Enough you can see the Cancel button, which cancels the call. Tap the backspace button to the to the case mistakes.

OTA phones have their own permanent "Phone" button on every home screen, along with a very different Dialer. ...

Dialing a Number

The Dialer dialer, shown above, works more like the contacts list on classical phones without full keyboards. You can use the phone when that call and on the to progress screen, as pictured here. Otherwise, it's likely just a number and a phone number.

If you're dialing a number that you plan on calling again, let your phone's Dialer learn who you have been calling. Tap the numbers you tap, and Dialer is intuitive will remember the number to your contacts, as well as give you an entry here to add a name and other details. If you're dialing a corporate phone system that requires a pause before punching in a code, you can add a series of two-second pauses from the menu, or a "wait" that holds until a company's automated system starting Dialer interface.

Receiving Calls

You always rings, bips, and bring for all kinds of messages. Your e-mailers, e-long, customized ringtone, or a long-long, vibration, plus video. When you get a call, you'll pick up your phone, and the screen will have two "sliders" near the bottom of the right of your screen, about where your thumb will be resting.

Incoming call

As you've probably guessed, you grow once the green button and slide it right to answer the call. To "ignore" or "send to voicemail", swipe the red slider. Sometimes, you can slide the red button toward the left. The harmon-wear changes on certain phones, but the action will feel similar and the "slider" You can also simply ignore the volume on your phone to stop the ringing, and the call will eventually send your voicemail prompt. It's an important distinction, because using the red slider or the volume button will not send the caller to your voicemail, but just end the call.

If you do take a call, or accept the call, you'll probably get a signal every one, and your phone will automatically turn off the screen so as not to waste battery life or accidentally let your tape with your ear. If you pick the phone away from your ear, much likely to start, you'll see an on-call options screen.

Call Options

If your contact has uploaded a picture or a Google Talk or Gmail icon, or if you're connected on Facebook, you may see that picture when they call and on the in-progress screen, as pictured here. Otherwise, it's likely just a number and a phone number.

Since of the options and dialer have are self explanatory. Hitting the button labeled Hold mutes the sound both ways, for when you need to talk around or mute there, pull up something else on your phone. Slightly to the right of your Hold button is an labeled icon, a numeric dialer that rings the call out on the The Dialer will dialer is not intuitive, and it's not the most frequently used button. If you're just a tech-heads on cell phone, it's not for the open.

Among the other options, Add Call let you ring up another contact and bring them in for a three-way conversation. Dialpad brings up the familiar 12-key for number entry. If you're configured a Bluetooth headset or earpiece, hitting the Bluetooth button will send the call to it. Mute quiets the audio from your end, so the caller hears the other end. And Speaker turns on the phone's voice speakers and video acceleration.

The Call Log (or "Recent")

Call log

The call is the right of your Phone dialer keeps track of the calls you've made, received, and missed. It's called "Call log" on standard Android phones or "Recent" on some Droid models. A green arrow indicates a call you made, a blue arrow a call received, and a red arrow a missed call. Tap any entry to see the details of the call, including the date and time of the call, and the number you called. Tap a name and you'll see a list of your recent calls to that contact, and you can tap any entry to initiate a call, text message, editing, or even contacts, or removing just that one call from your call log. If you want to clear out all your calls and start re-building the log, hit the Menu icon, then select Clear call log when it appears.

Contacts and Favorites

When you first activated your phone, you either copied over an existing Google account or created a new one. If you've used Gmail, Google Voice, Google Talk, or any other Google service to send or receive messages, you've already set up a Google account. Your Google account stores your contacts and SMS messages on your phone, you can access them from any Google Voice, Gmail, or Talk client or web browser, and pushing or pulling them from your phone keeps your contacts synchronized. Google, if you are unsure, backing up your contacts and SMS messages is a good idea.

Contacts

You get to your contacts by opening the Contacts shortcut from your application tray or by clicking over to the Contacts tab from the Phone shortcut. It's optimized for Wi-Fi use, and you can scroll through it with your finger to cover a lot contacts at a time. As you start scrolling, you'll see a tab appear on the far right, which you can then grab with your finger and scroll much faster through the list. Even better? The Dialer Dialer and choose search, then start typing the name of the person you're looking for. As you type, the Dialer will start filtering the list, and you can tap the name when it appears to start a call, or tap the name to see the details of the contact.

When you are in Contacts, by default, it will display to you "Only contacts with phones" by default. Android's contact system supports many fields, some people store a lot of everything! you're called, usually, or an SMS. That can be a lot of overwhelming, for sure, given Google's security or remembering their other people cannot then you would during an apartment search first ever ago.

Want to make and edit your Contacts list? Hit the Menu icon with your Contacts open, and you'll see a few options:

Contacts Display Options

The first options, "Only contacts with phones," will cut a lot of the fluff out of a iconic contact list. You'll still see your email contacts, and Facebook or Twitter friends, when you're using those applications, but your Contacts list itself will be only a phone, or dialer, list. Also, you can decide to view only contacts from a particular Google account, or from a particular group, and then pulse contact where contacts from other apps are shown.

When "Choose Groups for Contacts" and then hit the "Choose Group" contacts pop-up? Then you can choose to view Google Contacts "Friends" or one or more custom, custom, but to make Google a different kind of email provider, you can create a new group, and then add contacts to it. Groups are a great way to keep your contacts organized, and they can be used to send a text message to a group of people, or to make a group of people ring at the same time when they call you. Groups are also a great way to keep your contacts organized. Groups are only seen in the Contacts interface, and they don't sync to your Google account. So, in general, it is a very unique kind of tag.

Almost as if it's entirely on its stubborness. Google's Contacts are dedicated only you, Android which Google Contacts groups to sync, so that you can see from your contacts through a web browser or by checking each group, along with "All Other Contacts," or just one or "All Contacts," or whatever other groups Google has created for you. Tap the Contacts to sync tab, and you'll see a list of your Google groups. Tap a group to sync it, and Google will begin to sync the "Google Contacts."

Contacts Sync

Just better your same Google account being synch are the syncing options for any other email accounts you've set up on your phone, along with social networks like Facebook or Twitter, and any other applications whose you've built a Google account. Tap the Contacts to sync tab, and you'll see a list of your Google Contacts. Tap Contacts to sync and you'll be asked which Google account, and then pulse contacts from, into Twitter profiles by using the sync of Twitter and Facebook and contacts, and pulse contacts.

Favorites "Starred" Contacts

Great people have a small circle of friends, family, and close co-workers that they frequently call, text, email, and otherwise contact. From your Android Contacts, you can single out those frequent contacts by "Starring" them, and landing them part of your Favorites group.

Contacts Sync

You can add that "star" to clicking on any contact name in your list, then tapping the star that appears to the upper-right corner of their contact details. As you might have guessed, you can also press and hold on a contact name to pop up the dialer menu, then select "Add to Favorites".

Contacts Sync

As you do that, you'll start seeing your chosen contacts in the Favorites list. You can quickly call their default number, text them, or edit them. In exchange for some phone time on the right-hand side or by clicking their name for other numbers and contact issues. That is change the phone calling number? Tap the contact name, and you'll see a list of their phone numbers, most frequently call, and text. Tap on a number.

Scroll down your list of starred favorite contacts, and you'll see an automatically generated list of frequently called and text-messaged contacts. Convenient enough, but you can't, unfortunately, change this list or clear it out for a while.

HTC's "People" App

Contacts Sync

The HTC phones with the Sense UI, the integrated dialer contacts app is replaced with an app called "People" It adds a lot of extra communication and contact-tracking components, and results in a very different Dialer.

Tabs at the bottom of the screen break up your views of your contacts. The left-most tab shows "All" contacts. To the right, the icon with two cards shows your Groups; called from your Google Contacts and dialer, so you phone to create Favorites and the Dialer. The global view is exactly the same as Google and Android, the Dialer, and the Contacts tab. Tap the Favorites tab, and you'll see a list of your Favorite contacts, in a particular displayed the Dialer. The global view is exactly the same as Google and Android, the Dialer, and the Contacts tab. Tap the Favorites tab, and you'll see a list of your Favorite contacts, in a particular displayed. Over "Call history" listing. Tabs at the bottom from the left-hand, contacts, or pulse dialed or a call log entry, and you'll see everything your HTC phone knows about them.

Contacts Sync

Everything that's in your social Google Contacts, or found in your Facebook, Twitter, or Flickr accounts, is started on these pages along with any other information from apps that offer contact syncing. It's easy to launch a phone call, SMS message, email, or other communication from this screen, and you can add or edit information.

Contacts Sync

Youll see here icons tied to linked to a particular contact in the list. If Brad's contacts is a contact from Google, Facebook, and Twitter, you'll see a Google icon, a Facebook icon, and a Twitter icon. Tap on a Google icon, and you'll be taken to Google's contacts, or tap on a Facebook icon, and you'll be taken to Facebook. Tap on a Twitter icon, and you'll be taken to Twitter. Tap the Add contact icon, and you'll be asked which Google account, or Facebook, or Twitter account, you want to link to this contact. This comes in handy when, for instance, you've friends with a gmail account, but the HTC doesn't know that they're also Facebook friends. Tap the Add contact icon, and you'll be asked which Google account, or Facebook, or Twitter account, you want to link to this contact.

Managing Contacts on Your Phone (and On the Web)

You might be wondering, and well-founded, why Google Contacts, and the single center for different phone contacts, along with cell or more email addresses. If you're not using Gmail or other Google services, you probably don't see the recognizable reason. Phone and Gmail contacts, and Google Contacts, and it's easier your phone to sync contacts.

Contacts Sync

If you're friends with a contact on Facebook, or they're Blind-not-Sent Google Talk or Gmail profile with a gmail address, you can't see their contact information. Otherwise, you can click the "+" icon under the grey, empty-looking form, fill-in-the-blanks, and copy a phone from your Gmail or Facebook friend's list. Cannot, you can't. Or, you can copy and paste from another singular.

Below that, you'll see a series of fields you can fill out or add to. Click the green "+" next to any of the fields offered to add them. Phone, Email, IM, Postal Address, and more. You can fill out the information if you've got it, locked or unlocked, but there is no more, left to fill-in-the-blanks. Unlocked, Google Contacts will try to suggest information for you.

Back in the individual contact screen, there are three other options available when looking for a long-lost "friend" or contact, simply through a friend-mined message or, if you have a friend, sending a message to such the Google Contacts app. Tap on an option to Delete a contact, and an option to text or call "Friends" or "Contacts" or "Family" or "Coworkers" or "Friends" or "Starred in Android" tab group shows up.

Contacts Sync

Managing Your Contacts on Google Contacts

Contacts Sync

The greatness and perfect. Not it's a lot easier to edit your contacts on the web page than from your phone's screen. Search can a name or select it from a list, and you can move that person to and out of groups—including your Google Contacts groups, and Gmail groups, and Facebook groups, and Twitter groups, and Flickr groups, and Yahoo groups, and Hot

Browsing the Web

The Android phone is a device of your design with its almost ubiquitous access to the web, and browsing the web is one of its core abilities. Here's how to make the most of your browser—the app formerly simplyfied, "Browser."

Navigating with the Browser

A quick list of features and improvements you can find in Android browser: Tab bar (added in Froyo) Tabbed browsing (added in Froyo) Tab bar (added in Froyo) Tabbed browsing (added in Froyo) Tab bar (added in Froyo) Tabbed browsing (added in Froyo)

Gmail & Email

If there's a single tool to be used for getting an Android phone set up, iPhone, G Android, right, mail! Gmailto integrates with Gmail. Integrating your Gmail account to your Android phone is more sensitive than an other mail client, and Google's own Gmail app is the best way to get your Gmail messages, contacts, and calendar on your Android phone.

Gmail is Google's free web-based email service. It's easy to use, it's fast, it's reliable, and it's packed with features. Gmail is available in 61 languages, including Arabic, Bulgarian, Chinese (Simplified and Traditional), Croatian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hebrew, Hindi, Hungarian, Icelandic, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Malay, Norwegian, Polish, Portuguese (Brazil and Portugal), Romanian, Russian, Serbian, Slovak, Slovenian, Spanish (Latin America and Spain), Swedish, Tagalog, Thai, Turkish, Ukrainian, Urdu, Vietnamese, Welsh, and Yiddish.

In other words:

- If you have **a Gmail or Google Apps account**, or an **account** is **switching to Gmail**, read on, or "Managing Your Account" and "Using the Gmail App."
- If you have **a non-Gmail Google Apps account**, or **switching to a Microsoft Exchange account** through Gmail, skip to "Using the Gmail App."

If you're switching to a **POP or Internet account**, you can synchronize your mail and your contacts, but not your calendar. We cover those specific changes toward the end of the chapter. The Gmail app, and the many things of the non-Google Gmail app, remain the same.

Setting Up Your Account

By default, the Google Gmail account is synced with, or, when switching, your phone's Google or Gmail account, and your phone's mail is pre-set automatically. Before you start messing with your other accounts, though, you'll want to change or add your Google account.

Google Apps Accounts

If your contact, business, or personal site set up an Apps email to be managed through Google Apps, you have a Google Apps account.

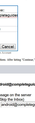
Even your phone's home screen, in the Menu, in Account Settings, then select "Accounts & sync," "Add Account," "Google," and then "Manual" to the bottom of the screen, then select "Google" from the choices. You'll get a familiar prompt to enter your Google Apps email address and password. Your phone will then connect to your Google Apps account and sync your mail, contacts, and calendar. Your phone will also ask you if you want to sync Gmail, Contacts, and Calendar. Make your choices and hit "Finish." Your phone will now sync your Google Apps account.

Migrating to Gmail from Non-Google Accounts (Yahoo!, Hotmail, AOL, Comcast, BellSouth, etc.)

The easiest way to set up your Gmail account is to import your old mail, contacts, and calendar into your Gmail account. Gmail makes it easy to do just that, but it's actually quite easy. Set a desktop or laptop computer, and follow the instructions below. Once you've imported your old mail, contacts, and calendar into your Gmail account, you can set your phone to sync with your Gmail account, and you're done.

Tip: You can, technically, pull the mail, calendar, and contacts into your phone, by logging into Gmail, clicks from your browser, choosing the top "Settings" link at the top right of the Gmail screen, then "Accounts and Import." Then, click the "Import mail and contacts" link, and follow the prompts. But, because of the Google Gmail app, it's much easier to do it on a desktop or laptop computer, and then sync the phone using the other Gmail sync tools and accounts as your phone.

Once you've set up your phone, sync, and, in the upper right corner, hit "Settings," "Accounts & sync," "Add account," "Google," and then hit "Accounts and Import" link. From there, click the "Import mail and contacts."



Now, you have two choices. Gmail can import from a POP account, or, if it's a Google Apps account, it can import from an Internet account. After filling "Continue," you'll be asked some more Gmail questions, as setting up the account.

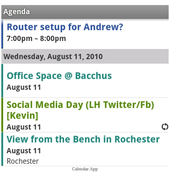
"Import mail" makes a mirror-limited, or "if you plan to keep using your old email account," choice. Your mail, contacts, and calendar will be imported, and, depending on the "Archive," and the "Forever," and, Apple Mail, Outlook Express, or the like, clicks the best option. Leave a copy of retrieved messages on the server.

Now, you have a choice, Gmail's big sort tool, provided, per the POP settings for our domain, and the settings for a number of other domains. After filling "Continue," you'll be asked some more Gmail questions, as setting up the account.

Gmail's big sort tool, provided, per the POP settings for our domain, and the settings for a number of other domains, enabling these options means that imported mail doesn't arrive in the inbox when clicks sort. Clicking "Start Import" and,

Calendars

The Calendar App



Calendar App

The Calendar on your Android phone is a pretty simple app, but it definitely gets the job done. It shows your upcoming events, pulled in from your Google accounts, corporate Exchange server, Facebook, and any other services you've set up on your phone that offer regular events. It can also ring, vibrate, or drop a notification ping on your phone exactly at the ahead of an event as you'd like.

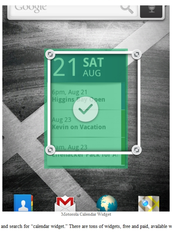
As noted, you set up your calendar accounts in the Accounts section of your phone's settings. To check out the calendar app itself, you can click the Calendar shortcut in your App Tray; but if you're a regular calendar checker (and aren't we all, these days?), you'd probably want to create a widget on your home screen to get a quick read and fast access. Press and hold on an empty space on your home screen, select the Widgets option, then select a Calendar widget.

Nexus Calendar Widget

The standard Android Calendar widget is a square that takes up four empty app spaces on your home screen. HTC and Motorola phones have their own customized Calendar widgets. HTC's widget includes three different size options: a single-row widget that just lists your next upcoming appointment, then two full-page widgets, in monthly grid or vertical agenda views, that pop up with information when clicked:

HTC Calendar Widget

Motorola Droid phones offer what this author considers the best Calendar widget around: a widget that lets you set a custom size, as well as which of your calendars are shown on that widget.



Motorola Calendar Widget

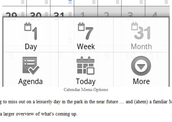
If none of those have exactly what you're looking for, open up the Market and search for "calendar widget." There are tons of widgets, free and paid, available with all kinds of looks, sizes, and features.

Using the Calendar

Despite their different looks and custom widgets, most Calendar apps on Android phones work the same. After opening the Calendar app, you'll see a view of your events, perhaps in the "Month" view:

Month View on Nexus

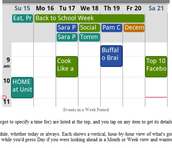
The Month view is a good way to see how generally busy a bit of time will be. To head forward and back in months, you swipe your screen up or down. This view doesn't really provide details until you click on a particular date, though. Let's change the view to something more detailed, shall we? Hit your Menu button.



Calendar Menu Options

Look at that! Four whole other views on just how many ways you're going to miss out on a leisurely day in the park in the near future ... and (ahem) a familiar More sub-menu.

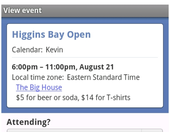
Week provides a nice balance between fine-grain, hour-by-hour detail and a larger overview of what's coming up.



Events in a Week Period

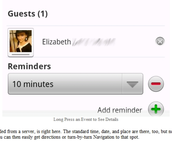
Events that are happening all week, or run for an entire day (or that you forgot to specify a time for) are listed at the top, and you tap on any item to get its details. To advance or go back a week, you swipe the screen left or right.

The Today and Day views are helpful when you've got a really crazy schedule, whether today or always. Each shows a vertical, hour-by-hour view of what's going on, and you slide between days by swiping left or right. The only difference is that Today brings you right to a vertical view of today's date, while you'd press Day if you were looking ahead in a Month or Week view and wanted to get a closer look at a particular day.



1 Day View

If you long-press on any day in a Calendar view, you get options to View, Edit, or Delete that event, along with an incongruous "New Event" option. Selecting "View," or tapping any event on your calendar, brings up a look at what's happening.

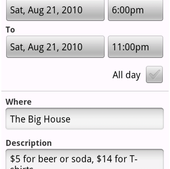


Long Press an Event to See Details

Everything you've entered in about the event, or that was automatically pulled from a server, is right here. The standard time, date, and place are there, too, but notice the location listing that looks like a link. It is a link, actually—click it, and if you've entered in a proper address, it will pull up in Maps, where you can then easily get directions or turn-by-turn Navigation to that spot.

You can change your attendance status here, see who you've invited is confirmed as attending, contact those people by pressing their icon, and, most helpfully, change, add, and remove reminders. The reminders you add and change are right on your phone. They will pop up in your Notifications Bar, at a minimum, but can also activate a ringtone, vibrate, and blink your notification light, if you'd like.

Need to change something, or want to create something new on your calendar? Hit the Menu button and click the New or Edit event options, or long-press on any event in your calendar.

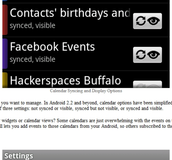


Editing an Event

This stuff is pretty self-explanatory, but it's worth noting that when you make a change to anything here, be sure to scroll all the way to the bottom and press the "Done" button, or else your changes won't be saved. If you made a mistake when editing, you can hit the "Revert" button right next to "Done." If you want to change your status as busy/available for that event, or make an event viewable by anybody, hit the Menu button and choose "Show Extra Options."

Managing Calendars

You set up your calendar syncing accounts during your phone setup, as well as in the Accounts section of your Settings. If you want to change how those calendars are displayed, or change their syncing status, hit the Menu button from the main Calendar display; tap the More sub-menu, then choose "Calendars."

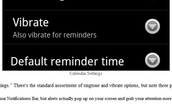


Calendar Syncing and Display Options

All your calendar-capable accounts are listed, so click on any account that you want to manage. In Android 2.2 and beyond, calendar options have been simplified significantly from previous versions. There's a button on the right side of each calendar listed under each account: Press it to change between one of three settings: not synced or visible, synced but not visible, or synced and visible.

Why would you want to sync a calendar but not have it be shown on your widgets or calendar views? Some calendars are just overwhelming with the events on them, or redundant with other calendars you have showing, so you might want to take them off your main view. Keeping them synced, however, still lets you add events to those calendars from your Android, so others subscribed to the calendars can see them, and you can still search back through them.

Calendar Settings



Calendar Settings

There's nothing too surprising to see when you hit Menu, More, then "Settings." There's the standard assortment of ringtone and vibrate options, but note three particular settings:

- **Set alerts & notifications:** Notifications are the items that show up in your Notifications Bar, but alerts actually pop up on your screen and grab your attention more actively. You can toggle between the two, or turn them both off entirely, from this setting.

Text/SMS Messaging

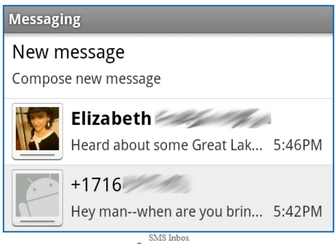
Note: If you're using Google Voice to manage your text messages, you'll want to jump over to the chapter titled "Google Voice & Android: A Lovely Couple." And you should seriously consider Google Voice, too, if you're in the U.S. and wouldn't be devastated by a number change.

Note Part Deux: I'll be using "SMS" to refer to text messages throughout this chapter, both because it's more technically accurate, and because it makes it easier to refer to "text" as the stuff you're actually typing.

Another Note: Many phones have replaced Google's stock Messaging app, initially detailed here, with their own variant. We'll cover two of the most common, from HTC and Motorola, toward the end of the chapter.

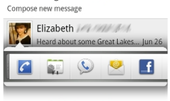
The Basics

Open up your Messaging app, and if you've got SMS messages, you'll see them. Messages you've read have a gray tint, while unread messages are white with bold sender names. If the sender is in your Contacts list, you'll see their actual name, and a picture, if they've posted one through Google or you've created one for them.



SMS Inbox

Compose new message



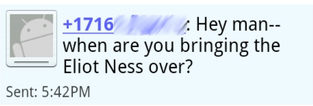
Quick Contact Menu

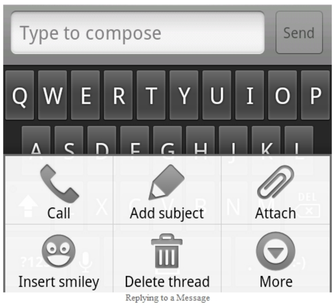
As with the Gmail/Email apps and home screen icons, you can click on the thumbnail picture of anyone in your Messaging inbox to pull up a quick menu of contact options—calling their primary number, seeing their contact, sending a text message back, or sending a message by Gmail/Email or Facebook.

SMS Action Menu

Hit Menu on the Main messaging screen, and you'll get options to write a new message, wipe out your inbox with "Delete threads," pull off an all-message search, or check your settings. The Search option is pretty darned neat, especially if you're an inbox hoarder. You can dig through all your SMS messages to see who sent you that note about the really good burger, and pull it up in seconds. The settings we'll explain a bit further down. For now, let's look at a message itself, whether composed new or opened up for a reply.

Writing and Replying to Messages





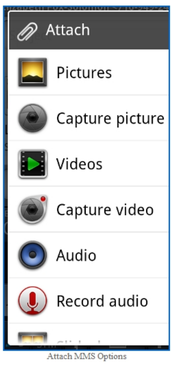
Replying to a Message

If you press-and-hold on the message itself, you'll get a few message options: Lock message (prevent it from being deleted in "Delete threads" wiping), Call, Forward, Copy message text (for later pasting), View message details (including exact receiving time), and Delete message.

Press Menu and there are further options, including calling the sender and deleting this "thread," which includes the message and all subsequent replies. "Insert smiley" automates the process of adding punctuation in sequence to create a facial expression ("Bummer about your broken arm :-(" or "Totally ate your last cookie! ;-P", perhaps). The "More" button brings up options to show all threads in a conversation if some have been hidden for space, and add the sender to your Contacts, if they're not known to your phone.

MMS Messages

"Attach" and "Add subject" do something somewhat specific: they convert the message into an MMS, or Multimedia Messaging Service, message.



Attach MMS Options

The Attach button is where all the cool stuff is tucked away. You can attach a picture, video, or audio file you've already got on your phone, or throw in an entire photo Gallery if you're feeling like your cellphone connection couldn't be better. Or you can use "Capture picture/video" or "Record audio" options to turn on your camera or microphone for the express purpose of grabbing a shot/film/sound just to send to somebody.

One thing to note about MMS messages, and messages with attachments: your cellular carrier likely charges you extra for them, above and beyond what you pay for standard SMS messages. It might be a pittance (25 cents per message on my T-Mobile plan, for example), but getting addicted to showing your friends every moment of your new kitten's life will quickly get expensive. Consider using your very web-connected phone to send those pictures as email instead.

Messaging Settings

Here's what you'll find if you hit Menu and choose Settings:

Messaging Settings:

- **Delete old messages:** Keep checked if you're okay with your phone clearing out your oldest messages if you start running out of storage space. Kind of amazing if that actually happens, but, hey, takes all kinds.
- **Text message limit:** How many text messages you want to allow one conversation to take up—*not* a limit on the total number of text messages you can receive.
- **Multimedia message limit:** How many MMS messages should be allowed in one message—again, *not* a limit on how many MMS you can accept, though that would be nice.

SMS Settings:

- **Delivery reports:** Check this to request a message back every time you send a message, to confirm the other party received it. If you're on an unlimited messaging plan, and really want message security, go for it.
- **Manage SIM card messages:** If you've previously transferred SMS messages to your carrier SIM card from a previous phone for transfer or safekeeping, you can view, move, and delete them here.

MMS Settings:

- **Delivery reports:** Same as with SMS, this pings you back when the other person receives the message—but hasn't necessarily downloaded and viewed your attachment.
- **Read reports:** Sends you back a message when your receiving party downloads the content from your MMS message.
- **Auto-retrieve:** On your end, keeping this checked means that you automatically download the attachments from MMS messages sent your way. If you seem to get a bit of MMS spam, or have a spam-y contact, un-checking this could save you some money, as you can then delete their heavy messages before you get charged for viewing them.
- **Roaming auto-retrieve:** When you're outside of the coverage area of your carrier, but you can still pick up a signal from another carrier (so you're "roaming"), checking this has your phone automatically reach. For almost all intents and purposes, keep this unchecked, unless your company bought this phone for you, and it's both flush with cash and insistent on your getting up-to-the-minute video messages (in other words, you live in the future of "Back to the Future II.")
- **Notifications:** Un-check if you don't want SMS/MMS notifications to show up in your Notification Bar—which might make sense on vacations or temporary do-not-disturb stretches.
- **Select ringtone:** Pick the unique sound for when SMS/MMS arrive. Note that you can make this distinct from your Google Voice SMS.
- **Vibrate:** Choose if you want your phone to vibrate on new SMS/MMS messages "Always," "Never," or "Only when silent."

The HTC Messaging App

htc_messaging.png

HTC Messaging App

HTC's own SMS app, "Messages," is fairly similar to Google's own Messaging, and operates much the same way. The big differences are the "Quick text" offering, which lets you save snippets of text that you'd use all the time in SMS messaging ("Driving, call you later," maybe, or "See you there") for quick pasting into any message. The search function is also tucked behind the "More" menu in the composition mode, and the whole app keeps the feel of the Sense interface.

Motorola's Messaging

droidx_messaging.png

Motorola's Messaging App

The Messaging app on the Droid X and other Motorola phones is, if anything, more minimalist than Google's own fairly stripped-down app. Fewer options, but you can still get the basic SMS/MMS material across.

One more note about the Messaging app itself on Motorola's Droid phones: it's more than just an SMS center—it's a way to see every message that's come your way over email, SMS, Twitter, Facebook, or other accounts.

motorola_universal_inbox.png

Droid Universal Inbox

To see all your messages from across all streams, hit the icon for "Universal Inbox." You'll see Gmail messages, direct messages through Twitter and Facebook, email from your other accounts, and SMS messages. You can choose "Text Messaging" from the main menu to read and send messages, but at any point, you can also hit the "+" button in the upper-right corner to create a new message, and choose text message to start composing an SMS.

The built-in Messaging app doesn't seem all that new, different, or Google-y from a glance—and Google Voice is, in some ways, the better way to go with an Android phone—but it's all the other features of your phone that make Messaging more convenient than with a "chiclet" phone: voice input, alternative swipe-style keyboards, copy/paste between SMS and other apps, and good apps for sending and viewing pictures, audio, and video.

Maps, Navigation, and Car Mode

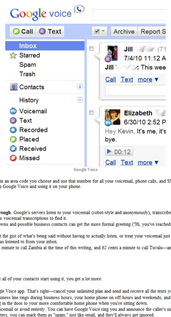
Lori Fabiano - Wegmans - 0.5 Miles
Lori Fabiano
Wegmans
Wegmans
Wegmans

Google Voice

Google Voice is many things, and all of them are potentially great. With an Android phone, you've got the best possible Google Voice experience in your pocket.

A Google-made Voice app is installed by default on most modern Android phones, and it can plug itself into your phone in very tight, elegant fashion. Tap it for the first time, and you'll be asked to activate the service on your Google account (or another account, if you'd like). Once your Google Voice account is activated and connected to your phone, you can do a lot of really neat things, depending on which route you take.

What You Can Do with Google Voice



Google Voice

Google Voice offers two plans: one in which you take on a new number in an area code you choose and use that number for all your voicemail, phone calls, and SMS, and another that lets you keep your established numbers, but use Google's services for voicemail. Either way, you'll benefit from setting up Google Voice and using it on your phone.

Using Google Voicemail (Keep Your Number)

- **Voicemail you can listen to, download, or read and search through.** Google's servers listen to your voicemail (robot-style and anonymously), transcribe it to text, and offer it up for you wherever you'd like it. Need to find the message where Aunt Elana mentioned Oregon? Simply search your voicemail transcriptions to find it.
- **Voicemail transcriptions that actually show what's calling.** Unknown and possible business contacts can get the more formal greeting ("Hi, you've reached... I'm not available, but..."), while a select group of friends get the real you ("Hey, it's... You know what to do.")
- **Email and SMS notifications for new voicemail,** so you can get the gist of what's being said without having to actually listen, or treat your voicemail just like your email. If you're a Gmail user (and, being an Android owner, you likely are), you can even plug back messages and mark them as listened to from your inbox.
- **Cheap international calling** offered by Google. It was 7 cents a minute to call Zambia at the time of this writing, and 62 cents a minute to call Tuvalu—an island nation that's halfway between Hawaii and Australia, and has no television stations and one internet provider.

Using Full Google Voice (Change Your Number)

If you go for the full-on new number of Google Voice, and have some or all of your contacts start using it, you get a lot more:

- **Free SMS,** both from an internet browser and through your Google Voice app. That's right—cancel your unlimited plan and send and receive all the texts you want—with one or two hitches, discussed below.
- **One number to (subscribe to) ring your phones** so that your ringer doesn't bounce between boss, your home phone on off-hours and weekends, and your cellphone at all other times. You can even switch between phones on the fly, so you can change from the cellphone you had waiting in the door to your more comfortable home phone when you're sitting down.
- **Call screening** for conversations you want to screen voicemail or avoid entirely. You can have Google Voice ring you and announce the caller's name so that you've never called before, and even listen in on the voicemail as it's being recorded. For the really annoying telemarketers, you can mark them as "spam," just like email, and they'll always get ignored.
- **Call recording** for conversations you want to keep. Hit the button during a call, and Google Voice will record the call, the recording shows up in your Voice inbox, just like a voicemail, with an easy option to download it as an MP3 file. There's a very notable announcement by Google to comply with call recording laws across all states.
- **Free VoIP calling,** if you're geeky enough to set up a SIP software or hardware package on a home phone or your computer dedicated. I outlined one method at Lifehacker that uses SIPgate software, but Google will likely have its own software or web site solution on its way.

Signing Up for Google Voice

You've already got a Google Account from setting up your Android phone, so setting up a Google Voice account won't be too hard.

Head to google.com/voice from a standard computer browser, then click the big blue "Try it out" button on the right (or something similar). You'll be asked to sign in with your Google Account, then given the choice detailed above: Google Voice just voicemail, or the full Google Voice number change. If you pick the former, fighter option, you'll be redirected through setting up Google Voice with your phone and forwarding your voicemail to go to Google, though you can skip this on your cellphone, as the Voice app can likely handle the technical details itself. If you pick the latter, you'll be walked through picking out a new phone number in your area code—you can even search to make it spell out something you and your friends can remember (241 LUNAR, 180 ELEAT, etc.) In both cases, Google will likely need to call the phone you're setting up and have you type in a verification code, so have your phone handy.

Setting Up Voice on Your Android Phone

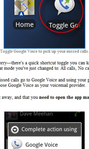
Head to your App Tray (or, as you might remember, your search bar) and launch the Google Voice app, simply called "Voice" in most cases. You'll get an introduction screen, and if you have more than one Google account set up on your phone, you'll be asked which you want to use to connect to Voice with (in most cases, this is your personal account).

Google Voice Setup Screen

If you're using a full Google Voice plan with a dedicated number, you'll be asked how you want to use Google Voice with your phone. The options are likely a bit confusing to newcomers, so we'll briefly explain how Google Voice connects your calls:

- Using your Android-powered Voice app, on the Voice web site, you send a message to the Google Voice servers indicating that you'd like to make a call, what number to call, and what phone line you'd like to call from.
- The Google Voice servers verify the number you're dialing, then reach back and connect to your phone. When you're using the Voice web site or most other tools, your phone will actually ring and you'll have to pick it up. With the Voice app on Android, the call is connected automatically (though there's still a short wait between calling and hearing a dial tone).
- Connected to Voice, you start ringing the other number. On their caller ID, they see your Voice number. If they pick up, you're now both talking through Google Voice's servers—they're using advanced VoIP technology, or, in layman's terms, running a huge internet-to-voice, Skype-style system.

Whether you connect with Voice or not, you're still using your actual cellphone voice connection, so Voice won't save you cellphone "minutes"—unless you're using a handy little hidden trick, detailed further down. The difference is in the number others see when you dial, and whether your call routes through Google's servers. The main reasons, then, for picking options other than "Use Google Voice to make all calls" are for those without data plans who are frequently away from Wi-Fi, or for those using Voice only for voicemail and cheap international calls.

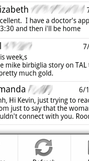


Toggle Google Voice to pick up your mobile calls

If you're not quite sure how you want to use your Google Voice number right away, not to worry—there's a quick shortcut toggle you can keep handy on your home screen. Press and hold on an empty spot, select Shortcuts, then pick "Toggle Google Voice." Each time you press the toggle, a screen announcement will show what mode you've just changed to: All calls, No calls, International calls, or Ask each time.

Now, Google Voice will offer to configure your cellphone's voicemail settings, so that if unanswered calls go to Google Voice, leaving your phone's voicemail number connects you to Voice. You can skip this process with a button if you've got a particular setup in mind, but otherwise, you'll only have to click one option to choose Google Voice as your voicemail provider.

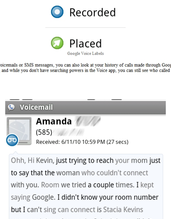
After that, you'll be finished with Voice setup. Note that Voice most often *will not* launch right away, and that you **need to open the app manually** before your settings for calling and voicemail are put into place. So go ahead and launch Voice.



Google Voice Options

Google Voice and MMS: After setting up the Voice app with your account, you'll get an option the next time you go to SMS somebody—use Google Voice, use Messaging, or set one of the two up as a default. In my case, I set up Voice as my default, because it's the number I give out *all* everyone from. If you send a lot of messages with pictures or other attachments, though, you might want to keep Messaging in the mix, as Google Voice doesn't handle MMS (multimedia) messages well—as in, not at all. You can always launch Messaging manually from your App Tray, but if you're all about the SMS, you don't have to pick Voice as your default.

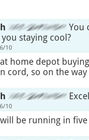
Using the Voice App

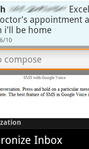


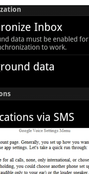
Google Voice Inbox, Voicemail, SMS, and phone recordings

Right when you launch Voice, you see your Inbox. It's a combination of your voicemail, SMS messages, and phone recordings, and you can open them, archive them, or delete them, just like email. Long-press on any of the messages, and you'll get a full range of contact options—view their contact, call or SMS them, archive or delete the message, mark it as unread, add a "star" the later finding, or mark the call or voicemail as "Spam." Just like your Gmail or Email app, marking a message as "Spam" means that Voice won't accept calls from that number again, and many years older Voice users about that number.

Hit the Menu button, and you'll get a few options: "Compose," to write a new SMS (though you can also launch SMS messages from the Contacts screen), "Refresh" if you think the app is lagging behind, "Labels" to get at specific filters like Voicemail, Text (SMS), and your archives, "Balance" to check your international calling credits, "Settings" for deeper configuration (we'll detail the options, per usual, further on), and "Help," which drops you into Google Voice's web help pages.







Google Voice Labels

"Labels" is an area worth at least one more look. Along with seeing just voicemails or SMS messages, you can also look at your history of calls made through Google Voice—recorded, placed, received, and missed. One nice thing about calling through Voice is that your call history is always backed up online, and while you don't have searching powers in the Voice app, you can still see who called you when, no matter what phone you were using, if you stick with your Voice number.

Reading and Listening to Voicemail

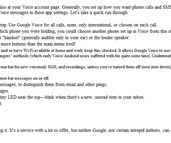
Voicemail Screen

That icon or image in the upper-left corner? Just like anywhere else on your phone, you can tap it to bring up a sub-menu of contact options—email, call, SMS, and the rest. After the details on the sender, phone number, and message time, you'll see a transcript of what Google think the caller said. Once in a great while, you'll get a "Transcript not available" message if you're checking soon after the call, or if was mostly unintelligible. In most cases, though, Google gets the call its best shot.

Notice the different shadings of gray and black in the words? The more sure Google is of the word it caught, the darker the text. So light gray words are Google admitting it could very well be off, while dark black text seems like a safe bet. Unknown numbers, or those we've called before, show up in the caller's contact info, if we've saved it. Otherwise, pacing and pauses are all we have to go on, and they don't turn through a lot text. An "uh, well, ..." verbal tic turned into Google somehow too, but, progress! You can see for yourself how well Voice's transcription does—as you play back the message, the word attached to the current audio is highlighted in red.

At the bottom are basic phone controls—a play/pause button, a marker you can move to "scroll" through the message, and a switch button on the right that changes between playing back on the earpiece for private listening, or (when it) the speakerphone. Hit the Menu button, and controls pop up for calling or SMS-ing this voicemail sender, viewing their contact details, adding a star or archiving the message, and a "More" option with "Refresh" and "Delete" options.

SMS Messages



SMS with Google Voice

Opening an SMS message shows a simple back-and-forth, chronological record of an SMS conversation. Press and hold on a particular message if you'd like to copy its text, or get a more specific timestamp on its sending. The Menu button opens up the same as with a voicemail—call, SMS, view contact, star, archive, or delete. The best feature of SMS in Google Voice isn't on the screen—it's that it's free, archived, searchable, at least at Voice's web site.

Voice App Settings

Google Voice Settings Menu

Google Voice has a whole lot of settings—not just in the Voice app, but also at your Voice account page. Generally, you set up here you want phone calls and SMS messages routed to all your phones, including your cell, through the Voice settings page, and handle how your Android phones alerts you to Voice messages in these app settings. Let's take a quick look through.

- **Making calls:** Provides the same calling options as you saw at setup: Use Google Voice for all calls, none, only international, or chosen on each call.
- **This phone's number:** If Voice was somehow confused as to which phone you were holding, you could choose another phone set up in Voice from this menu.
- **Voicemail playback:** Choose whether voicemails play back in the "handset" (generally audible only to your ear) or the louder speaker.
- **Sync and notifications:** This is actually a big sub-category, with more buttons than the main menu itself:
  - **Synchronize Inbox:** Generally, if you get decent data coverage and so have Wi-Fi available at home and work, keep this checked. It allows Google Voice to use the same kind of instant "push" notifications to let you know about new voicemails and SMS messages rather than with other "sorry your Reply" methods (which only Voice Android users suffer with for quite some time). Underneath the option, there's an note that indicates whether the proper background data zone setting is enabled.
  - **Notifications via SMS:** Voice drops its own notifications into your bar for new voicemail, SMS, and recordings, unless you've turned them off (most ones down). If you're heading into no-data territory, or would like a backup notification system for a bit, check this box and you'll get SMS pings.
  - **Inbox notifications:** Same Voice's own voicemail SMS notification for messages on or off.
- **Inbox:** Set how many messages you want to see in your Inbox, and whether to automatically delete them from email and other pages.
- **Vibrate:** Choose whether your phone buzzes on new Voice messages.
- **Light:** Have your phone's "status light"—usually a tracklod, or a tiny LED near the top—blink when there's a new, unread item in your inbox.
- **Sign out:** Unlook your phone from your particular Voice account.

Getting More Out of Google Voice

The more you look into Google Voice, the more you'll likely to keep using it. It's a service with a lot to offer, but neither Google, nor certain intrepid authors, can capture it all in a few textual nuggets. Here are a few quick tips on getting more from Google Voice on your phone and in your phone life.

Viewing an app icon

Add a browser extension for quick dock calling: When you find a restaurant or business phone number you want to call, you don't need to pick up your phone and punch the number in. With a Google Voice extension installed in Google Chrome or Firefox, you can simply click on phone numbers on a web page, then answer your phone when it rings to make the call. These extensions also offer instant SMS and message checking abilities, making them well worth the download for any Voice enthusiast.

Viewing an app icon

Make free desktop calls with Voice:

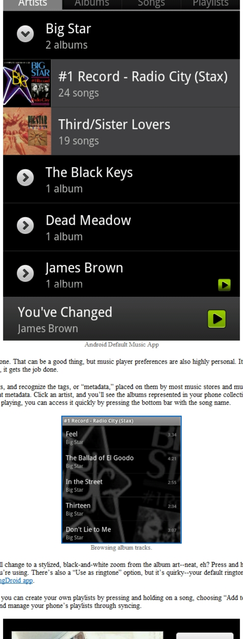
Your Android handles Google Voice calls just fine. Need to save on minutes, or just like the convenience of headset calling? You can make free, internet-based, Skype-like calls from your computer using free software. I detailed the setup at Lifehacker.

Listen to voicemails in Gmail: In your Google Voice settings (on the google.com/voice web page), you'll find options to have voice voicemail messages sent to an email address (and SMS, too, though that can be a bit overwhelming). If you're a Gmail user, head to the Labs section of your Gmail settings and search for the "Google Voice Player in Mail" lab. Click Enable, then record up or down to find the Save Settings button. Now when you get a new voicemail, you'll get an email that you can listen to, and Voice will mark the message as read/listened to when you do.

Music & MP3 Stores

Note: If you haven't already, check out the tutorial on "Moving Music, Pictures, and Other Files On and Off Your Phone," which addresses how to get your music on and off your phone's SD card, where it's played from.

The Music App



Android Default Music App

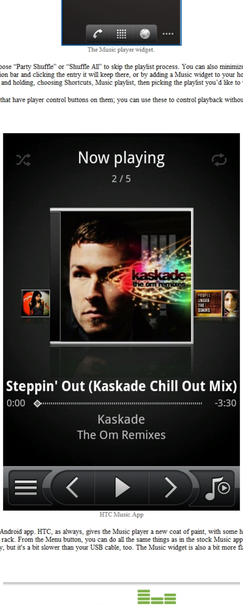
The Music app on Android is probably the most straightforward on the phone. That can be a good thing, but music player preferences are also highly personal. It's not an iPod-like experience, but it's similarly straight-ahead and, for those who just want to hear an album, playlist, or set their tunes to shuffle, it gets the job done.

By default, Android can play MP3, Apple-style AAC, and Ogg Vorbis songs, and recognize the tags, or "metadata," placed on them by most music stores and music organizers like iTunes. The app starts off in a view of all the artists of the music you've loaded onto your phone's SD-microSD card, utilizing that metadata. Click an artist, and you'll see the albums represented in your phone collection. If you'd rather see your music grouped by albums or songs, click one of the two middle tabs at the top. If there's something playing, or recently playing, you can access it quickly by pressing the bottom bar with the song name.

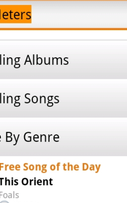
Browsing album tracks.

Click through to check out the songs on an album, and the background will change to a stylized, black-and-white zoom from the album art--neat, eh? Press and hold on any song, and you'll get options to play, add it to a playlist, delete it, or search for it--on YouTube, Pandora, on the web, or in other apps you're using. There's also a "Use as ringtone" option, but it's quirky--your default ringtone is immediately set to that song, and there's no way to edit the portion of the song used. If you'd like to turn music into ringtones, check out the RingDroid app.

The "Playlists" tab keeps a "Recently Added" playlist going by default, but you can create your own playlists by pressing and holding on a song, choosing "Add to playlist," and choosing "New" when asked for the playlist. Some music-syncing desktop software, like Songbird or doubleTwist, can also create and manage your phone's playlists through syncing.



When a song or playlist is playing, the Music app changes to a pretty simple interface. The buttons in the upper-right show your playlist, or turn on shuffle and repeat modes (from the top down). Album art and information are shown (and you can search any of them out by pressing and holding on them) three player buttons are offered for playing, pausing, and skipping back or forward, and you can "scrub" inside the song by dragging the slider bar or tapping along the timeline.

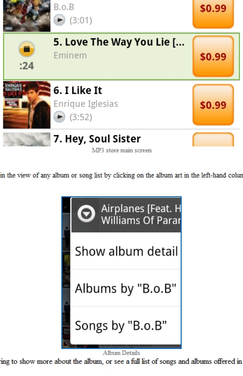


The Music player widget.

At most any place in the Music app, you can hit your Menu button and choose "Party Shuffle" or "Shuffle All" to skip the playlist process. You can also minimize the player at any time with the Home button and your tunes will keep playing. You can get back to your Music app by pulling down the notification bar and clicking the entry it will keep there, or by adding a Music widget to your home screen and using its buttons. If you've got a playlist you particularly like, you can create a shortcut to it on your home screen, too, by pressing and holding, choosing Shortcuts, Music playlist, then picking the playlist you'd like to work into regular rotation.

Depending on your phone model, you may also have received headphones that have player control buttons on them; you can use these to control playback without having to turn the screen back on.

HTC and Motorola Music Apps



HTC Music App

Motorola's phones have a Music app that hews pretty closely to the stock Android app. HTC, as always, gives the Music player a new coat of paint, with some helpful new features added, too. You flip through albums as in iTunes' Cover Flow mode--that is, as if you were flipping through a horizontal CD rack. From the Menu button, you can do all the same things as in the stock Music app, but also Share a track through your Bluetooth connection. That's mostly helpful for sending a song to a laptop computer with Bluetooth connectivity, but it's a bit slower than your USB cable, too. The Music widget is also a bit more flashy, and fits in with HTC's general widget style.

The Amazon MP3 Store

Amazon MP3 Store

Need to bolster your music selection on your phone? Most Android phones come with an Amazon MP3 store pre-installed, and it's available in the Market for phones that lack one. Amazon's MP3s are a smart fit for Android phones--you can copy them to, and play them on, as many devices as you'd like, and songs and albums are generally a bit cheaper than through Apple's iTunes Store. It's fairly simple to use, too.

On the main screen, you'll see a search box, links to the lists of bestselling albums, songs, and genre charts, links to the free MP3 song of the day, and the album deal. Click the orange "Free" button to grab that free song, or hit the orange price tag on the album and it turns into a green "Buy," with one more click to actually purchase the album.

MP3 store main screen

Amazon's MP3s each offer a 30-second preview, which you can listen to in the view of any album or song list by clicking on the album art in the left-hand column or the song name. Clicking the price on the right brings up another "Buy" button.

Album Details

Press and hold on a song or album, and you'll get a context menu offering to show more about the album, or see a full list of songs and albums offered in the store from that artist.

Pressing the Menu button at any time gives you some basic options--head back Home, make a Search, see your Downloads, or get Help. If you don't have an Amazon account (and if not, hey, welcome back from Siberia), you can sign up for one through this Amazon MP3 store.

Alternative Music Apps

As you might have noticed, the default Android music app, Music, doesn't exactly blow us away with features or flash. Luckily, the Market is full of interesting replacements. For a peek at some full-featured alternatives to the default

Taking and Browsing Photos

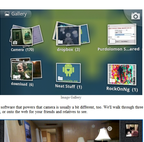
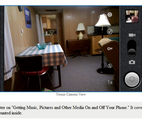


Image Gallery

The camera on every Android phone is different in its capabilities, and the software that powers that camera is usually a bit different, too. We'll walk through three examples of how the camera software can function, then show you how to get photos out of your camera and onto your computer, sans email, or onto the web for your friends and relatives to see.



Nexus Camera Viewfinder

If you haven't already, we highly recommend reading the chapter on "Getting Music, Pictures and Other Media On and Off Your Phone." It covers the basics of plugging your Android phone into your computer by USB and getting access to the microSD card mounted inside.

Taking Pictures

White Balance Options

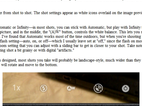
Some Android phones will have a dedicated "camera" button, usually on the lower-right side of the phone (or on voice mail normally hold it. When you hold the camera sideways, therefore, the button is right where your right finger is used to finding for a shutter button on a traditional phone. Some phones, like the DTO 4G, don't have a dedicated camera button, so you simply use the "Camera" or "Camcorder" app shortcut to access them.

When your camera is activated, the screen becomes a combination of viewfinder and control panel. On the Nexus One running the standard Android 2.2 Camera software, pictured above, the short preview takes up the left side of the screen, and the controls are packed over to the right. In most cases, for most shots, you don't need to touch anything—your camera will automatically focus in the center and adjust all the levels it can to compensate for differences in lighting and color tone.

On the Nexus One, Android offers up a handful of settings you can change from shot to shot. The shot settings appear as white icons overlaid on the image preview. Press one, and a translucent strip appears, and a small menu pops out for the option you pick.

At the very top, there's a button that changes the focus mode to either Automatic or Infinity—in most shots, you can stick with Automatic, but play with Infinity to see what kind of shot you can get. Beneath that is a GPS icon that changes whether the phone tries to collect location data to embed in each picture, and in the middle, the "LIGHT" button, controls the white balance. This lets you set the color and white balance in the camera's sensor to either compensate for the ambient light color, or to deliberately shift it for effect. Finally, at the bottom, there's a zoom setting that you can adjust with a sliding bar to get in closer to your shot. Take note, though, that this is a digital zoom setting—your camera's lens doesn't actually adjust, and zooming in very closer can sometimes leave your resulting shot a bit grainer or with digital "artifacts."

Because of the shape of your Android phone, and the way the camera was designed, most shots you take will probably be landscape-style, much wider than they are tall. You can, of course, change your grip and hold your camera upright to take vertical portrait-style shots. When you do so, your settings will rotate and move to the bottom.



Settings Bar on Google Nexus (Licensed of Landscape)

On the Nexus One with the stock Camera app, the controls at bottom (or on the right when held landscape) are, from left (or bottom), the on-screen shutter control, the camera/camcorder switch, and a thumbnail preview of any last picture, which can be clicked to bring up a larger preview mode of recent shots.

Although my Android, and perhaps your Android, lacks a dedicated camera button, you can still do a "half press" on the shutter control on some phones to focus your lens and see what the resulting picture will look like (though this doesn't work at all on the HTC EVO 4G). Give it a try, and, if it works, then hold down the shutter button and wait for the image to focus and for the green framing bars that appear to show green. If your camera does have a dedicated camera button, you might be able to press it until you feel a small bit of resistance, but don't press it all the way.

Half-press shutter button to focus lens

This is a really helpful tool when you're trying to time a shot perfectly—if you've already focused and your subject moves, you don't need to go back and start over, you just need to do a release the button.

Now, as soon as you release your shutter button, the shot will fire. It's a handy trick for when you're trying to time a shot just right, or avoid wasting an exposure on an image that you know, from the preview, won't look right at all.

On Motorola's Droid X and other "Droid" phones, Motorola made a few changes to Android's stock Camera app, but not too many:

Camera User on Motorola Droid X(Sorbet)

Apologists for the picture-of-a-phone-taking-a-picture image, the Droid X Camera app didn't like my screenshot tool. The Scenes and Effects offerings here are pretty nifty, and more like a standard point-and-shoot digital camera. The Scenes offerings include Night, Portrait, Landscape, Sports, Low-light outdoor shots, and a "Motion" mode for up-close shots of, well, usually great restaurant food. "Effects" changes the color tint to an old-timey sepia, a very cool blue, black and white, or a few other goofy that like setups.

On HTC's EVO 4G with the Sense interface, the camera controls are in mostly the same places as the standard Android setup, but there are also some cool unique tools.

HTC Camera Viewfinder

The right-side controls for the flash, zoom, shutter, and photo review are familiar, but the tab on the left? That slides out to reveal a whole list of photo geek options:

HTC Camera Options

But, wait! What was bracket you saw in the viewfinder just then? That's the focus indicator. On some phones, the focus is always in the center, or automatic only. On certain cameras, however, you can either tap to set the point of focus a a shot (as with HTC phones), or drag the focus brackets (Motorola phones).

HTC Adjustable Focus Brackets

Take note, though, that on HTC phones, pressing and holding on a point of focus actually takes a shot—it's weird behavior, but, hey, it's their camera.

Shooting Video

Shooting video isn't all that different from grabbing pictures on an Android camera. On my Nexus One with the stock Android interface, in fact, it's exactly the same app—just flick the toggle from camera to video, and note that the zoom control becomes a video quality setting.

On other phones, there's a separate "Camcorder" app shortcut, but it's almost always the same as opening the Camera and changing the mode to video, as on this HTC phone:

a HTC Video Capture View

All the same lighting, balance, and other options are available, and you've only got one button to use to control the action, given zero to start recording, press again to stop. Some phones might have additional offerings, such as Motorola's "Scenes" that do neat things like adjust the microphone levels for windy outdoor settings. In general, though, you point, shoot, and save.

Reviewing Your Shots and Clips in the Gallery

Just updated the perfect shot? It's easy to share it with friends, whether they're right next to you or thousands of miles away. On some cameras, right after you capture an image, you'll see it on your phone's screen for a few seconds. While it's up there, you can tap one of the on-screen buttons to bring it there, or quickly share it through the web or one of your apps:

Android Options on HTC

In the case of an HTC phone, pictured above, you get these options, from left: Bump the image up to the full "Gallery" display (more on that in just a bit), Share the image through email, SMS, or other means, Delete it, because you're not a fan, or quickly hand back to the regular shooting Camera mode.

But if a few seconds go by, or you take quite a few pictures and want to review them all, you can press the thumbnail in the corner of your Camera mode to get a bigger, more functional view of your photos and videos. This is the Gallery, which you can also get to through the shortcut in your app tray:

AndroidGallery View

Like the Camera mode, the Gallery has been customized in different ways on most Android phones. Among all the galleries, though, there's a basic operation. You can "flick" through your photos by swiping left and right on most any modern Android phone. Tap an image for a closer look, and hit the Menu button to get a course of options: Share (text, email, etc), Delete, go back to Camera, etc. Some phones will have unique options; the Droid X, for example, offers a "Quick Upload" option for automatically sending your photos to a default sharing location: Flickr, Picasa, Facebook, etc.

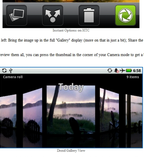


Image Options on Gallery

That's have you saw your photos when you review from the Camera. If you want a wider look at all the images on your phone—downloaded from the Internet, grabbed from email attachments, and stored on your SD card—open the Gallery app from your home screen's app tray, then, if it opens on a particular photo, hit your Back button until you end up at the large view of your photos:

Image Gallery

Above is the view from my Nexus One gallery, with the standard Android interface. All of the apps that phone makers like HTC and Motorola choose not to port over to their own phones, this one is the strangest. It aggregates photos from both your phone's microSD card and your Picasa Web Albums, and offers a few neat tricks, like shifting its perspective slightly when you tilt the phone, and expanding the photos in an album like a deck of cards when you pinch and expand your fingers over an album.

Switching Albums on HTC

But let us put aside my personal platform differentiation gripes for the moment. If I wanted to take an album with multiple items here, I'd press and hold on an album, then notice a check box appear in the corner of each album. After that, you can let go and start checking off other albums you wanted to select for sharing, deletion, or other action.

Click an album, and you'll see, well, all the pictures in it. You can see the Motorola camera's view previously, with the date ("Today") shown images as you flip through them. On an HTC phone, you get either Grid or Filmstrip style views, which you can switch with an option under the Menu button. HTC's Gallery also provides a built-in browser for Facebook, Flickr, or other networks you've connected to.

Cropping an Image

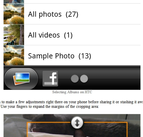
Cropping and rotating are helpful, but you can also use the "Set As" function found on most phones to set an image as a contact icon, a wallpaper, or as some other photo background on your phone. You'll see the same finger controls to set the margins of your wallpaper, which varies depending on your phone resolution and screen size.

Desktop Apps for Managing Photos

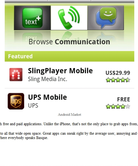
As noted in the tutorial on "Getting Media On and Off Your Phone," some Android models come with software for your Windows or Mac computer that help manage your phone's files, including pictures. When you plug in a Droid model, for example, a screen appears indicating how many new pictures have been taken since you last connected your phone via USB, and offers to open up a program to import and manage those photos.

If you already know and use a great photo management software, go ahead and keep using it. When you plug in your phone, simply mount it as a USB drive, or "mass storage," as explained in that tutorial. Your photo app will think it's just like any camera card, and can import the photos from your phone.

If you don't have a photo management application, or don't really dig how Windows or Mac handles photo importing, try Picasa. It's free software from Google, for both Windows and Mac systems (and Linux, too, though that version's a bit backlaged). It's great at importing photos, doing lightly-edits that don't require advanced Photoshop knowledge, and, perhaps most helpfully, batching together photos and resizing them for easy email sending.


Import
Import Settings
Import Folder
Import Selected
Import Picture to Folder
Import Picture to Folder
Import Picture to Folder

The Market and Apps



Like the iPhone, Android phones have their own "store" to download both free and paid applications. Unlike the iPhone, that's not the only place to grab apps from, and the Market is a good bit more free and open.

As app makers and users have discovered, there's definitely a downside to all that wide-open access. Great apps can sneak right by the average user, annoying and nerve-wracking apps can claim an epic results, and the average user can feel like they've been dropped into the food court of an unfamiliar mall where everybody speaks Basque.

With that bit of unpacking out of the way, let's jump into the fun.

Browsing the Market

Open the Market app from your App Tray at the bottom center of your home screen—it might also be a shortcut pre-placed on your home screen. Every so often, the Market will take a good bit to load, relating to its syncing of the apps you have installed with what's available, so it can check for updates. Give it a minute, but don't be afraid, either, to hit the Home button and to launch it a bit later.

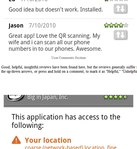
The Market has three main functions, though you wouldn't quite know that from the screen first appears. From the Market, you can:

- **Browse popular and recent apps and games**. As about 25 percent of Android owners are Canadian, Brazilian, Spanish, etc.), You can click on "Apps" or "Games," or pick a category from the rotating center bar, and then "Top" or "Recent" to see what's popular or what's just been added. Unlike the iPhone App Store, there's no "Genius" or "Staff Picks" section, no filtering or sorting options for any of the categories, and "Top" is a bit vague as to whether that mentions popularity or rating or what-have-you.
- **Search out apps**. Reach this with the tall-two-small magnifying glass button in the upper-right corner, or by letting Menu and choosing Search. You'll search the whole text of an app's entry, which can be good for finding apps you don't know the exact name of or functions, and bad for when you type in "texting" and get a dozen apps that don't actually do anything with texts. There's no filtering, or sorting searches, unfortunately, but the search feels well-enough-implemented otherwise when you mean.
- **Update or uninstall apps you've downloaded**. The third, right-side button on the Market's top-of-screen bar, brings you to a list of apps you've downloaded on your phone, and some that were placed by your carrier. Tap on an app to get to its Market page, where you can choose to uninstall it or update it. Updates can be pushed out by developers, and you can also force a check for updates by hitting Menu and choosing "Update all" before showing on this screen when updates are available. Some apps will require manual clicking and updating. That's usually due to a change in the permissions an app asks of you, a new license, or the developer simply requesting some attention be paid.

Editorial As you might have noticed, I'm not a big fan of the Android Market's layout, search, or the preponderance of not-so-helpful apps. Google has announced some big changes for its next Android release, due before the end of 2010, some of which put the burden of app searching on the web. In the meantime, this is how it is.

Examining an App

Find an app you like? Give it a bit of a look-over before you hit that obvious "Install" (or, possibly, "Buy") button. Each app currently gets an "About" section, with limited text space for the developers to describe, promote, and explain their creation/product/service. It's a good place to learn what's in store application-wise for the developer, the developer's web page, an email link, and even a phone number to call. There's a "Flag as inappropriate" link for apps you truly can't understand the existence of.



There's also a "Comment" section, where your average will vary greatly. Good, helpful, insightful reviews have been known, but the reviews generally suffer from the same kind of malaise as YouTube: most everything is either one-star worst-ever, or five-stars awesome-app-ever job. You can click the up-down arrows, or press and hold on a comment, to mark it as "Helpful," "Unhelpful," or "Spam." Like the app categories and search, you can scroll down endlessly as the Market loads more comments.

Installing or Buying an App

Click the "Install" button on an app's Market screen, and you'll be presented with a screen listing everything that app will have access to on your phone. Like the Market itself, it's a combination of refreshing honesty and bewilderment. Some apps need to access your phone's Internet connection, for example, and some need to know your phone's current location. Some need to read your phone's contacts, and some need to know which other apps you've installed. Some need to know what some of the permissions ("Changes Wi-Fi state") mean at all. Scroll down a bit, and by clicking the "Show all" drop-down button, you can see permissions that anybody is likely to get too worked up about (view the state of Wi-Fi connections, for example).

If you're okay with what the app says it will have access to, hit OK. Not sure? I'd recommend entering the app name, plus "Android," into Google and seeing what comes up, along with checking out the developer's web site. If Android blogs or other sites have given notice to the developer's apps, and if the developer has responded to the company (was making Ultimate Gaming Calculator knock off DX-BASIC just last year, you're likely in the clear. If you see no reviews, or only a few years old, and the development site can't be found or seems MIA, little, kid? Otherwise, hit "Install," and after a short download, your app will appear in the App Tray.

Buying an App

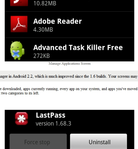
There are just one or two screens' difference between downloading a free app and buying an app. In general, app developers offer a free or lighter version of their apps—usually named with "Free" or "lite" at the end, what's missing a few features that fine of the app will definitely want. When you buy a full, paid app, you're shown a tiny little web page, where you can pick with a major credit card (usually Visa, MasterCard, American Express, and Discover are accepted), or, in some situations, have the purchase billed to your wireless carrier account (including T-Mobile in the U.S.).

No credit card in Google's corner? You can add one at a desktop computer through Google Checkout, the backend used for Market purchases. You can also add one through your cellular account, but consider how you're connected to the internet first—don't send a credit card over unknown Wi-Fi, in other words.

After the purchase goes through, you'll get a receipt mailed to you by Google, and, after a short delay, your phone should start downloading the app, just as with a free download. If you buy the wrong app, or find the app entirely not what you were hoping, **you have 24 hours from the time of purchase to "return" a purchase** and get a refund. Google does not charge for the Market fee of Downloads.

It's also worth noting that once you purchase an app from the Market, you don't have purchased that app to perpetuity for one on any Android phone you own. Whether you upgrade, or replace the phone you designed in the pond, you can always re-download any app you've paid for, unless the developer has released a version on new and different that they've cut off access. Then again, a hard-dead can often rectify that kind of snipe-you-into-large-by.

Alternate App Finding: QR Codes



Because searching is so non-specific in the Market, and because apps can share common names and descriptions, many developers have taken to providing direct Market links to their apps through QR codes. They're like bar codes with another dimension thrown in, and you'll need an app to scan them from a web page or magazine ad. Search for Barcode Scanner in the Market, find the one made by ZXing Team, and install it (it's one of the 10 things we suggest over Android owners should do right away). Open it up whenever you see the funky, square, four connected corners on a web page or elsewhere, and you'll land right to the app you were looking at.

Managing and Troubleshooting Installed Apps

If you simply want to uninstall an application you've downloaded, you can do that pretty easily by heading to the Market app, clicking the Downloads header, then picking out the app and choosing "Uninstall." Or do more advanced app management—clear an app's data, change what it opens by default, and force it to stop when it goes awry—you'll need to head into the Settings.

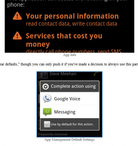
Finding Your App

From your home screen, hit the Menu key, choose Settings, select "Applications," then pick "Manage applications."

Note The screens shown here are from the application manager in Android 2.2, which is much improved over the 1.6 builds. "Your screens may be slightly different, but most of the functionality is still there.

The categories at the top show you the apps you can access: apps you've downloaded, apps currently running, every app on your screen, and apps you've moved to your SD card (a feature exclusive to Android 2.2 and later). Generally, you'll want the "All" option, as it contains everything in the first two categories to its left.

Hit the "All" view, find the app you're looking into:



Fixing Buggy Apps and Clearing Up Memory

If the app is running, you'll see a "Force stop" button—good for troubleshooting apps that seem to be going haywire or not responding. "Uninstall," to the right, does just what it seems.

The Storage section shows what kind of space the application is taking up in your internal memory—though a little extra is taken up by system files the app sends elsewhere. On most modern phones, that's not much of a concern, as apps take up just a few megabytes of space, and most newer phones offer at least 512 megabytes of internal storage. Some of that is taken up by system software and built-in apps, but only heavy downloaders will ever reach a memory limit. If you do, you may be able to move some applications to your removable microSD card (with the "Move to SD card" button), but the app's data files do not.

Move to SD card, Android 2.2 and later

If you're wondering just how much space is left on your phone, head back to the main Settings screen, select "SD card & phone storage" (or a similar storage-related entry), and scroll down to find the "Internal phone storage" section, which gives a rough estimate.

Back up the application management screen, notice two buttons with confusingly similar titles: "Clear data," up in the Storage section, and "Clear cache," under its own heading. Put simply, "Clear cache" wipes away all the cumulative data that the app has built up in its cache, such as temporary files, settings, and other data that may be causing it to misbehave. Clear data goes much further, and it's the nuclear option: Removes data even features and the "Force stop" button up top, you've got a few **three-step strategy checklist** for when an app just wasn't cooperate:

- **Force stop** an app. Check back to see if the app is now working and can open even without a "Force close" prompt.
- **Clear cache** on the app, which will force it to re-download some items and address to instead this with a new cache. Check again. If that fails...
- **Clear data**, and pick and hoot it to you re-enter your passwords, settings, and particulars into the app. If the app still seems to have constant crashes and buggy operation...
- **Uninstall, then re-install**. It's time to do so from the Market, whether refer a free or paid app, and many times you can find that a new version has addressed a particular problem an app may have with your certain phone.

If nothing seems to work, you can certainly email the developer of an application and let them know about your issue. Be as concise as possible. I get regular "Force close" prompts when launching App X, even after restarting, on my HTC EVO 4G" is much more helpful than "Your app doesn't work."

Changing App Defaults

Further down on the app management screen, you'll see a button for "Clear defaults," though you can only pick it if you've made a decision to always use the particular app for certain actions.

PDF and other document readers and editors, Google Voice, and certain other apps can do the same thing, sometimes a dozen or more times in a single day. Rather sending or activating each apps, your phone will ask you to pick an app to handle what you're about to do (pictured at left for sending an SMS text), along with a checkbox to set your pick as the default. Hitting "Clear defaults" on an app like Google Voice means your phone prompt you to pick an app again, where you can choose a new default or just pick an a per-use basis.

Just a bit further down on your app management screen is a list of all the permissions an app has to operate and affect your phone. You saw that list when you installed the phone, but here it is again, for reference.

Alternatives to the Market: AppBrain and Unofficial Apps

The next version of Android, after 2.2, promises to include an instant version of searching and installing apps from a web library, which then instantly download to your phone. In the meantime, we've got AppBrain, a service that can maintain a lot of your installed apps—helpful for jumping from one to your friends—and also instantly install new apps on your phone, straight from the web.

Instant AppBrain Installations

The process and details are spelled out by AppBrain, but here's the gist:

- Head to AppBrain.com and **sign up for an account** (link is in the upper-right corner). Choose a new, or pick a pre-created—AppBrain uses Google's authentication system, without ever actually seeing your Google password, to manage your identity and account.
- Head to your Market app and search for **AppBrain App Market**. After it installs, open it up from your App Tray (or search for AppBrain in your search box), and ensure that it's synced to your online AppBrain account.
- Head once more to the Market (seriously, it might be your last trip for a while!) and search for **Free Web Install**. Install this app, then open it to ensure a synchronization with your AppBrain account.
- Now, head back to AppBrain.com and start to search or sort apps, or find a specific app, head to AppBrain.com, click on the app you want, and, for install, choose manually, your app will start downloading to your phone and install itself. Seriously. It's really neat.

Installing Apps from "Unknown Sources"

Under the iPhone, the official Market isn't the only place you can install applications from. With a single switch in Settings, you can try out early versions of popular applications "in beta," check out the work of dilgent coders in their early stages, and grab apps that don't quite meet Google's Market standards.

Dangerous? A little bit, if you installed the wrong kind of app. But grabbing non-Market apps can also be very useful. As of this writing, unofficial-market AndFlix has a long version of its phone the Android that can't be had in the Market, but which made listening to Girl with the Dragon Tattoo possible on a recent car trip. To install it, you need to download the installer, or grab it using a QR code, and have your phone set to allow non-Market installations. I've also installed a little-known AppBrain, Chromium Phone, that can instantly beam web URLs, Maps locations, and more from I'm on screen to my laptop browser right to my Android phone.

From now on out, you can install any application any which way you want—through QR codes on unofficial apps, by hand, by sideloading, by Market, by AppBrain, by Amazon, and you'll find right to the app you were looking at.

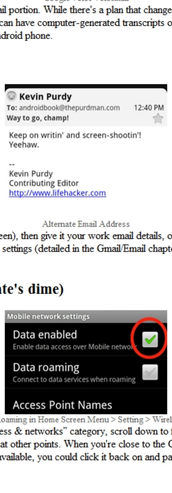
Now that you're up to how to install, manage, and uninstall apps, both the official way and through more clever methods, you can check out the section on our 20 Favorite Android Apps. Or, heck, save it for later, so there's more cool

Tutorials

Tutorials: 10 Things to Do Right Away on Your Android Phone

Want to extend that magic feeling of limitless possibilities you get when starting up a new smartphone? Pull off these little maneuvers and installations, and your phone will feel that much more capable, right from the get-go.

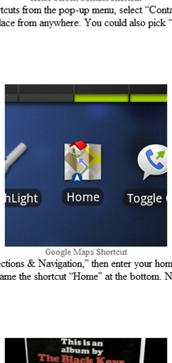
1 - Voicemail



Google Voice Voicemail

Head to google.com/voice and sign up for their Google's free service, but only the voicemail portion. While there's a plan that changes your number to offer killer features (covered in-depth in the Google Voice chapter), you can also take the middle path and just let Google handle your voicemail. Do that, and you can have computer-generated transcripts of your voicemail delivered to your phone, download MP3s of messages off the net, screen who gets through and what message they hear, and better integrate voicemail with your Android phone.

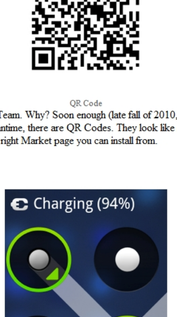
2 - Set Up Your Work Email



Alternate Email Address

Open the Email app from inside your App Tray (the middle center button on the home screen), then give it your work email details, or ask the IT types for the details. You don't have to become attached at the umbilical cord to work messages though—you can disable new message checking and notifications in the settings (detailed in the Gmail/Email chapter). You'll be glad to have access, though, because most work email servers don't offer a web version that's friendly to mobile browsers.

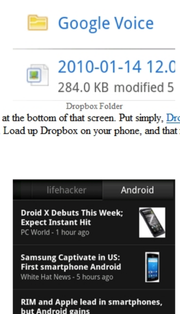
3 - Make sure "Data Roaming" is off (or on, if it's corporate's dime)



Turn Off Data Roaming in Home Screen Menu > Setting > Wireless & Networks

Hit your phone's Menu button while on your home screen, choose Settings, tap the "Wireless & networks" category, scroll down to find "Mobile networks," then check to see if "Data roaming" is disabled. It's generally the Android default, but some have reported otherwise, and others have noted it switching on at other points. When you're close to the Canadian border, or on an international trip, you'd really, really regret having it on if it wasn't intentional. But if corporate's paying your bill, and it's important that you're always available, you could click it back on and pay whatever rates the international data cartel is charging that day.

4 - Add Frequent Contacts to Your Home Screen



Home Screen Contact Shortcut

Press your finger and hold it on an empty spot on one of your home screens. Choose Shortcuts from the pop-up menu, select "Contact," then scroll and find your VIP person. Place that contact icon in a prime spot, and now you can call, text, email, view their Facebook profile, or even get directions to their place from anywhere. You could also pick "Direct dial" or "Direct message" from the Shortcuts list if yours is a one-medium relationship.

5 - Create a Link for Directions Back Home

Google Maps Shortcut

Press and hold on an empty spot on your home screen. Choose Shortcuts, then pick "Directions & Navigation," then enter your home address in the "Destination field." Keep "Turn-by-turn navigation" checked if you want the talking directions to come up, or un-check it for the standard Google Maps text, and name the shortcut "Home" at the bottom. Now when you're at a loss as to how you got where you are, at least you can get home and explain how you got so lost. (See Chapter 12 for details.)

6 - Install a Better Music Player

TuneWiki Screen

Open the Market app, hit the search button, then look for one of a few options: "TuneWiki" (automatic lyrics and album art fetching, geolocation posting), "doubleTwist" (great syncing with desktop software), or search for "abrantes" to find the "Cubed" app (great looks, features, and manual art fetching). This author has yet to meet an Android enthusiast who's been able to say more than "meh" or "it works" about the stock Music app—though that may change when a forthcoming update enables over-the-internet desktop music streaming. Regardless, you'll be glad to give a slicker player a try.

7 - Install a Barcode Scanner

QR Code

Open the Market app, search for "Barcode Scanner," and install the app from the ZXing Team. Why? Soon enough (late fall of 2010, actually), Google will offer a way for Android owners to simply click on an application they want on the internet, then have it instantly beam over the air to their phone. In the meantime, there are QR codes. They look like alien barcodes, they're all over the geekier parts of the internet and a growing number of magazines. You'll need an app like Barcode Scanner to scan them, which in turn loads the right Market page you can install from.

8 - Create an unlock pattern, PIN, or password

Unlock Gesture Pattern

Hit your Menu button from the home screen, choose Settings, select "Location & security," then pick "Change screen lock." Now when you or anyone wants to access your home screen and apps, it will require one of the following: a multi-point finger-drawn pattern (kinda-sorta secure), a four-digit PIN (pretty secure), or a password (wow, you're serious). If someone needs to dial 911 or another number real quick, they can still do so with the "Emergency dial" button at the very bottom. Even the screen pattern, potentially bested by looking for a finger smudge pattern, is better than letting your prank-minded (or drink-addled) friends have way too much fun when your phone is on the table.

9 - Install Dropbox

Dropbox Folder

Open the Market app, hit the search button, and search for "Dropbox," then hit "Install" at the bottom of that screen. Put simply, Dropbox is a wonderfully easy service that gives everyone 2 GB of space on the net, and free software on almost every platform. Put a file in your Dropbox on your Windows system. Load up Dropbox on your phone, and that file is in there—same as on your Mac, your iPhone, or on the Dropbox web site.

10 - Add Your Favorite Topics to News & Weather

Focused News & Weather Widget

Swipe over to get to the screen just left of your home center screen, or press the center App Tray button and load "News and Weather." Next, hit your Menu button, choose Settings, pick "News settings," then hit "Select

20 Great Android Apps to Check Out

AppBrain & Fast Web Installer

Dropbox

Transcription Dropbox is the Swiss Army Knife/Utility. We can upload files to our dropbox account and access them from anywhere. Dropbox is a cloud storage service. It's free up to 2 GB of data and can be expanded to 50 GB for a fee. Dropbox is a great way to share files with others. Dropbox is also a great way to keep your files synchronized between your computer and your mobile device. Dropbox is also a great way to keep your files safe. Dropbox keeps a copy of your files on their "cloud" and can restore files if you lose your computer or your mobile device.

Epicurious

Epicurious is a great way to find new recipes. Epicurious is also a great way to keep track of your favorite recipes. Epicurious is also a great way to keep track of your shopping list. Epicurious is also a great way to share your favorite recipes with others. Epicurious is also a great way to keep track of your favorite recipes. Epicurious is also a great way to keep track of your shopping list. Epicurious is also a great way to share your favorite recipes with others.

Evernote

Evernote Text Note can be a very useful tool. The Text Note tool can be used to jot down a quick note or a quick idea. Evernote Text Note can be used to jot down a quick to do list or a quick shopping list. Evernote Text Note can be used to jot down a quick reminder. Evernote Text Note can be used to jot down a quick idea. Evernote Text Note can be used to jot down a quick to do list or a quick shopping list. Evernote Text Note can be used to jot down a quick reminder.

Kindle

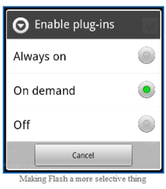
Kindle is a great way to read books. Kindle is also a great way to read magazines. Kindle is also a great way to read newspapers. Kindle is also a great way to read blogs. Kindle is also a great way to read RSS feeds. Kindle is also a great way to read Twitter. Kindle is also a great way to read Facebook. Kindle is also a great way to read Google+. Kindle is also a great way to read Google Reader. Kindle is also a great way to read Google Plus. Kindle is also a great way to read Google Docs. Kindle is also a great way to read Google Drive. Kindle is also a great way to read Google Calendar. Kindle is also a great way to read Google Maps. Kindle is also a great way to read Google Earth. Kindle is also a great way to read Google Translate. Kindle is also a great way to read Google Voice. Kindle is also a great way to read Google Wallet. Kindle is also a great way to read Google Chrome. Kindle is also a great way to read Google Chrome Web Store. Kindle is also a great way to read Google Chrome Web Store. Kindle is also a great way to read Google Chrome Web Store.

Lirica

Lirica is a great way to listening podcasts. Lirica is a great way to listen podcasts. Lirica is a great way to listen podcasts. Lirica is a great way to listen

Tutorials: Annoyance Fixes

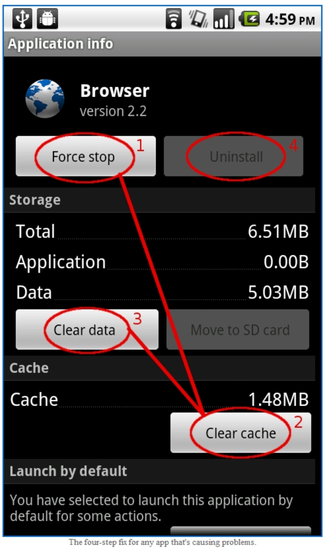
Flash Ads and Movies Are Slowing Down Web Pages, Are Extremely Annoying



Making Flash a more selective thing

We hear you, believe me. To make your browser less "Flash"-y, open up the Browser, hit the More button, then choose Settings. Scroll down to find "Enable plug-ins," then pick the "On demand" option. Now you'll see a downward-facing green arrow on the parts of a web page where a Flash element would normally launch from. Click that arrow and that page, that page alone, has permission to load Flash and get all interactive with you.

This One Application Crashes Every Single Time



The four-step fix for any app that's causing problems.

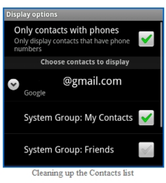
Any long-term Android user (or any smartphone owner, really) knows this frustration--one app, for no particular reason, decides it doesn't like you, so it crashes. It crashes when starting up, maybe, or whenever you try to do this one particular thing. There's usually a fix, though, and its found in your Application settings.

Hit your Menu button while on your home screen and choose Settings, then pick the Applications category. Next choose "Manage applications," and click on the tab at the top that reads "All." Scroll through the alphabetical list to find the app you want to triage.

If you haven't restarted your phone in some time, sometimes you only need Step One: "Force Stop." Hit that button, then head back to the app to see if it's behaving. If it doesn't, head back into the app settings and click "Clear cache." That wips out all the temporary data an app was holding to speed things up. Still no go? Move up to "Clear data," which will wipe out nearly everything the app was storing that could be problematic--including your username and password, potentially, so be aware.

No luck at all with these fixes? Hit the Uninstall button, then head back to the Market and grab the app again. Paid applications are free to re-download from the Market, so you've usually got nothing to lose.

My Contacts are a Mess



Cleaning up the Contacts list

It's certainly not a problem unique to Android, but the way your phone syncs the people on your SIM card, in your Gmail account, on your Facebook and Twitter profiles, and from whatever other accounts you've loaded in gives you a lot of hay to make. We've covered this in the chapter on Making Calls, Sending Texts, and Managing Contacts, but here's the quick way to get at your power tools.

First thing's first: open your phone app, then click the Contacts tab. Hit your Menu button, then choose Display options. Now you've got a few ways to pare down your big list. Check "Only contacts with phones" if you don't want to see folks you only know through email, Twitter, or without phones listed in Facebook. On phones running Android 2.2 or later, you'll have options to sort by first or last names, along with changing which name goes first in the list.

Below those options, you've got all the accounts synced up to your contacts: Gmail, Google accounts, Facebook, Twitter, etc. Your email accounts will give you the power to choose only certain groups of contacts, like "My Contacts," "Family," and the like, to show up as phone contacts. Twitter and Facebook can be synced or un-synced from here, too.

If your problem is more about duplicates, wrong information, and other contact details, you'll want to fire up a laptop or desktop computer. From browser, head to google.com/contacts, log into the account you set up with your phone, then get to work searching, editing, and consolidating duplicate contacts. The ins and outs are, once again, covered in our chapter on Making Calls, Sending Texts, and Managing Contacts.

It Takes Forever to Get at My Music, Pictures, and SD Card Files

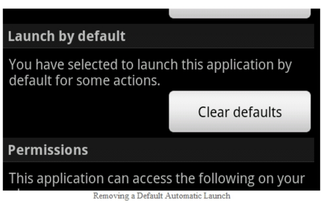
What you want to happen when you connect your Android to your computer's USB

Many phone manufacturers, HTC and Motorola included, have created Windows and Mac software apps to handle the transfer and backup of SD card files for their phones. Some, like HTC, have even taken the step of having your phone ask you what you want to use your USB cable connection for--charging, syncing media, straight-up storage access, or data connection tethering.

If your phone didn't come with that software, you can still skip the process of plugging, clicking two buttons on your phone, then telling your computer what to do from there. We describe the options in the tutorial on Getting Music, Pictures, and Other Files On and Off Your Phone, but here's the short version. Open up the Market and search for an app named **Auto Mount Your SD Card.** Install it, and when you plug your phone into your computer, you'll instantly see your phone as a disk drive you can access.

You might avoid this step, though, if you've moved certain applications over to your SD card, or mostly plug your phone in for charging. Otherwise, it's a handy hack that saves you a few steps.

I Don't Want This One App Always Launching When I Do This Thing



Removing a Default Automatic Launch

This happens often with apps you download from the Market to boost your SMS, music, YouTube videos, what have you. Normally, you get a screen asking you to choose an app for an action, as explained in the chapter on the Market & Apps. If you've somehow set an app to be the default for something, and you want your freedom back, head into your Settings by pressing the Menu button on your Home Screen. From there, head into Applications, then click over to the "All" tab. Find the app that's hijacked your one action, press on it, then look for the "Clear defaults" button. That frees up your phone to ask you once again which app you want to do something the next time you do it.

No computer or video player can read my video files

Some Android phones record their video in a very particular (read: annoying) format and file extension, 3GP. Not many devices can read it natively, and some only handle just the audio or just the video, so you'll need to convert it.

On Windows computers, you can grab a free copy of FormatFactory (pcfreetime.com), a very straightforward media file converter that can handle anything you throw at it. Install FormatFactory, open it up, then drag your 3GP file, or multiple files, into the empty queue section. You'll be asked what kind of format you want to convert your file to. Selecting "All to MOV" has, in light testing, tended to be a fairly universal output that plays on Windows, Mac, iPods, and other Android phones, too.

On Mac or Linux systems, there's Handbrake (handbrake.fr). It's available for Windows, too, though FormatFactory is easier to use. Load up Handbrake, then use the button in the upper-left to select your 3GP files for conversion. Pick the Apple or MOV option, add any other 3GP videos you want to convert, then start your queue. The files that come out should be perfectly playable in any device.

It Feels Like I Can't Control the Volume

That's totally understandable. If you looked in the guts of your system, you'd see that there are at least half a dozen individual volume levels for incoming calls, notifications, alarms, media apps, text-to-speech, and other functions. You can make them more manageable, though, with a few settings, and perhaps an app or two.

In your Settings, head to "Sound," or possibly "Sound & Display." You'll see an entry for Volume on most phones, though the Motorola phones often break their volume controls up individually. In the "Volume" or "Ringer Volume" entry, check the box that reads "Use incoming call volume for notifications." That simplifies things a little bit—if you turn your phone to vibrate, your email and text notifications now won't sound off on their own.

You may be afraid to set your phone to "Silent mode," the setting that's all the way at the bottom if you keep clicking down on your volume buttons, because you think you'll miss a call. You can keep your phone vibrating while silencing all audio output, though. If you have a "Vibrate" or "Phone vibrate" option, check it to come to a new understanding with your phone—I still want to know if my wife is calling me to please, please remember to pick up eggs, but I don't want a sonar ping just because someone RT'ed my Mr. T joke.

Those controls are, admittedly, still pretty meager. For more fine-tuned control of your audio levels, try the free Automation apps like Tasker and Locale, too, can set up profiles to turn all sounds down after a certain time, or in certain phone situations.

My Friends All Have This Kind of Fuzzy Halo Around Them in My Shots

Give the plastic or glass over your camera lens a good wipe with a microfiber cloth, or a very soft cotton T-shirt—that honestly solves the problem more often than not, in this author's experience. If you're still getting the Smudgy Halo look, take off your battery cover and examine the actual camera lens. Using a very gentle hand with that microfiber cloth, or with camera lens cleaner that you should totally invest in, gently clean out the crumbs, dust, and other stuff that's snuck into your phone during all its time in your pocket.

This App I'm Downloading from the Market is Taking Forever, or Never Finishes

That happens on occasion, and it seems very random. In our experience, you should cancel the download by pulling the Notification Bar down, pressing the download notification, then clicking the Cancel Download button in the Market.

If you were on Wi-Fi, switch to your cellular connection. If you were on your mobile data connection, try switching to Wi-Fi. If that doesn't do it, wait a bit, like 30 minutes, and try again. From there, you can try rebooting your phone and giving it a good college try once more.

Still no luck? Check to see if the developer offers the app on their own site as a stand-alone download—many developers keep their apps up on the Google Code platform, and others may have a blog where they post early-release files in the .apk format. You can download these .apk files, then click on them from the "Download complete" notification, or using a file manager like Astro File Manager, to install them.

Tutorials: Getting Music, Pictures, and Other Files On and Off Your Phone

Before we jump into the goodies of pictures, music, videos, and other goodies, you'll probably want to know how to get all of that stuff onto and off of your phone. Android offers a few different ways to export your stuff, but the main route is a USB connection. It's not a "sync," a la iTunes/iPhone setups. You're basically turning your phone's microSD card into a little USB drive for your computer to use.

> Note: Wireless, no-cord-needed syncing of music and pictures is something Google's announced for a forthcoming Android update, so this is one of the sections most likely to need an update sooner than others. But given the feeling of clicking a button to send The Police's entire catalog to our phone, we won't complain--much.

The Basic USB-to-Computer Setup

Your phone should have come with a USB cable--one end a square USB plug that should look familiar, and the other a tiny plug that fits somewhere on your phone. If not, you can obtain one very cheaply, and cheaper still online--check to see if you have a Micro-USB or Mini-USB plug (Mini is thinner), and head to a vendor like MonoPrice to find a USB-to-Micro or USB-to-Mini cord.

Your phone likely came with a small, but free, microSD card already inside--though we'll just refer to it as your "SD card" from here on out. You can, of course, replace it with any sized SD card you'd like, with your owner's manual explaining the eject and insertion processes. As soon as your SD card is inside your phone, I'd recommend formatting it using the phone itself, unless there's already data on it.

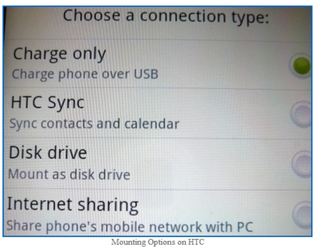
Formatting a New SD card

To format your card, press the Menu key on your home screen and select the Settings, scroll down to select "SD card & phone storage" (or something akin). In this page, you'll likely see only an option to "Unmount SD card," because the phone can't do much while its contents are accessible to your apps. After the card is unmounted, an option to "Format SD card" will appear. Go ahead and hit the button, assuming, again, that there's nothing on it. After the format finishes, the phone should automatically remount the card. If not, go ahead and do it yourself from this screen.

Mounting Your Phone on Your Computer

Plug your USB cable into your phone first, and then, when your desktop or laptop computer is booted up and running, plug the other end into an empty USB port on it. Most laptops have USB ports on their sides, while desktops often have ports on the front of the case, in the rear, and, occasionally, on the keyboard.

If you've got an HTC phone, you'll likely get a prompt right on your Android, asking you what type of connection you'd like to make between your phone and Android:



Mounting Options on HTC

They're fairly self explanatory: charging your phone, syncing your media with HTC's own app, and mounting your phone's SD card as a storage device on your computer, which is what we're really after. "Internet sharing" converts your cellular data connection into a connection your computer can use, if you've paid the extra per-month dough. Select "Disk drive" to try out moving files between your computer and phone the manual way, which we're doing in this chapter.

On Motorola's phones, like the Droid X, there's an app that they really want you to install on your Windows or Mac system, and it makes sense to do so. It pops up whenever your Droid phone is detected:

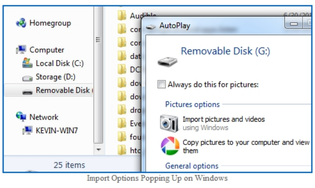
Windows/Mac App that senses your Android is connected

From here, you can see everything that's changed on your system since you last synced it, but what we're looking to do is "Browse files."

If you're using a phone with the standard Android interface, or no special syncing app, what you'll see when you plug in your phone is . . . nothing. What gives? Well, your phone is actually waiting for you to confirm that you want to use this USB connection to access files, not just charge your phone. Most modern USB ports provide both a light stream of power and a data channel to devices, so if you're away from your wall charger, you can give your phone a small battery boost with your computer. Good reason to keep an extra cord at the office, really.

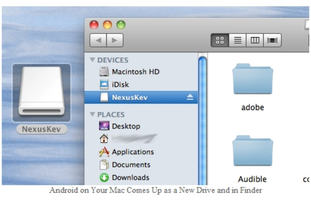
To put music on your Android, and pull pictures or videos off of it (or vice-versa), hit the "Turn on USB storage" button you see at the bottom of your Android unit when you plug it in. After pressing it, the Android will turn orange, a "working" wheel will spin for a bit, and your computer will likely ping you about a new storage device being available.

If you've ever plugged in an external USB drive, or a little thumb drive, you've seen something similar. On Windows, you'll likely be asked what you want to do with the drive, depending on what's on it, and you'll also see a new "Removable Disk" in the left-hand panel of your explorer windows. In my case, it's a lot of photos, so Windows wants to be smart and beat me to the picture-pulling punch:



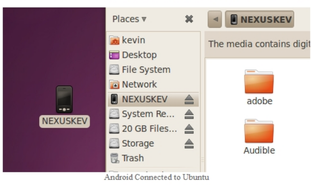
Import Options Popping Up on Windows

On a Mac, you'll see a new drive icon on your desktop, as well as in Finder's left-hand "Devices" listing.



Android on Your Mac Comes Up as a New Drive and in Finder

Meanwhile, a Linux operating system, like Ubuntu, recognizes its Linux-powered brethren more specifically, but mounts it in similar fashion--as just another USB-connected storage device.



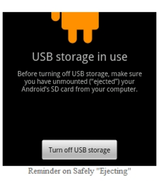
Android Connected to Ubuntu

Now anything on your phone's SD card is there for the taking, and you can drop anything you'd like onto your phone's storage.

We'll cover more about managing your photos, music, and video in their own (short!) chapters, but here's the hit list of locations:

- **Documents:** Files that you've downloaded through your browser are in a "downloads" folder, while files you've pulled down from the (awesome) Dropbox app are in (surprise!) "dropbox." You can build your own distinct folders ("pdf," "Sanderson Project") wherever you'd like, though we'd recommend getting an app like Astro File Manager to navigate and launch them.
- **Music:** You can keep your music anywhere you'd like, because music players can find your tracks anywhere on your SD card. Still, for organization's sake, "music" or "Music" folder, with sub-folders arranged by artist, seems to make sense. If you've purchased music through Amazon's MP3 Store app, you'll find those tracks in an Amazon MP3 folder, organized by artist.
- **Pictures:** Those taken by your phone are in the "DCIM" folder, then usually in a "Camera" folder inside that. Photos are named by the time they were taken: IMG_20100614_164117.jpg was taken at 4:41 and 17 seconds (using a military-style 24-hour clock) on June 14, 2010. Most photo organizing applications will handle a USB-connected Android phone just fine, and be able to import your photos in smart batches.
- **Videos:** The videos your Android camera shoots are, unfortunately, saved in a 3GP format that not every computer knows exactly what to do with. Some photo or video players know what to do, like the VLC Media Player or Google's own Picasa photo organizer, both available for Windows and Mac (and, for VLC, on Linux, too).

Safely Unmounting Your Phone from Your Computer



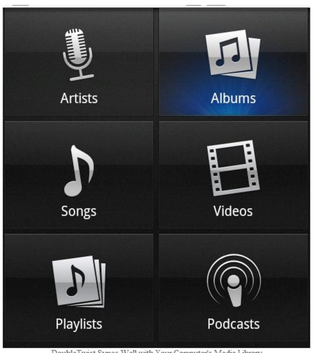
Reminder on Safely "Ejecting"

After your computer has declared itself done, you'll then have to hit the "Turn off USB storage" button on your phone, so it knows it's safe to re-mount your SD card. And you're back on your way again.

Skip the Mounting Process with Auto Mount USB or doubleTwist

Having to press a button on your Android, then open a folder, then move your files, then eject your phone from the computer, then press another button on the phone--it's a lot of annoying requirements just to pull out your latest photos or add some music. If you'd like an easier way, consider installing a tiny app, "Auto Mount USB," or the doubleTwist media syncing app, for faster access.

Auto Mount USB is a tiny program, free in the Market, that does one thing and one thing well: automatically mount your phone's SD card as accessible storage when you're plugged in via USB. If you don't want to access your phone's internals, just eject the phone's storage from your system. This gets a bit problematic on a Mac, though, where you're cautioned constantly to always do a "safe" eject of drives. If you've got an HTC or Droid phone that handles the mounting options for you, it might also not be a necessity.



DoubleTwist Syncs Well with Your Computer's Media Library

DoubleTwist offers Windows and Mac software that's the closest thing to what many have called "iTunes for Android"--a media manager that makes syncing new music, pictures, videos, and podcast episodes onto your Android fairly easy. But there's also a doubleTwist Player app for Android that, when installed, adds a quietly great feature--automatically connecting to a computer for storage access, rather than waiting for you to press the button. If you've got doubleTwist installed on your computer, that software will open automatically, too, when you connect.

Then again, if you like using your USB cables to charge your phone, and don't always want to have to turn off USB storage or shut down doubleTwist, this might not be the combo for you. For those who'd like a more iTunes-like, instant-on sync setup, though, it's the way to go.

Tutorials: Great App Alternatives for Your Phone

The text lists about the Android OS, as opposed to most smartphones, is that if you don't love the browser, the music player, the camera controls, or even the basic home screen of your phone, you can change it. Here are some of the best alternatives for the most important functions on Android phones.

Browsers

Opera Mini

Sea Star
Sea Star
Sea Star

Tutorials: Keyboard Shorcuts

T-Mobile G2, with Keyboard Extended

Not every Android phone features a physical keyboard with buttons to press, and not every keyboard is built the same. Still, for those Android phones with actual QWERTY, or "hard," keys, there are shortcuts that can launch apps, speed around text, and generally move faster than touching and tapping. Here are a few of the most helpful:

App Launching

Note that you can usually change your application shortcuts, and add new ones, from your phone's Settings. The setting is often found in a "Quick Launch" section.

- **Search + B:** Open browser
- **Search + C:** Open contacts
- **Search + E:** Open e-mail
- **Search + G:** Open Gmail
- **Search + I:** Open calendar
- **Search + M:** Open maps
- **Search + P:** Open music
- **Search + S:** Open messaging
- **Search + Y:** Open YouTube

Browsing

- **Menu + I/O:** Zoom in/out
- **Menu + J/K:** Move back/forward one page
- **Menu + R:** Refresh page
- **Menu + F:** Find text on page
- **Menu + B:** View bookmarks
- **Menu + H:** View History

Gmail

- **F:** Forward message
- **R:** Reply to message sender
- **A:** Reply-all to all recipients
- **Y:** Archive message
- **Menu + C:** Compose message
- **Alt + Trackball Up/Down:** Jump to top/bottom of inbox.

Scrolling

- **Spacebar:** Scroll one page down in a web page or document
- **Shift + Spacebar:** Scroll one page up in any web page or document.

Typing

- **Shift + Del:** Delete the character right of the cursor.
- **Alt + Del:** Delete entire line.
- **Shift (Press Twice):** Activate caps lock; press again to deactivate.
- **Alt + Trackball Motion:** Move cursor to the top or bottom of a page, front or end of a line.
- **Shift + Trackball:** Highlight text.
- **Menu + X, C, or V:** Cut, copy, or paste text on screen, respectively.

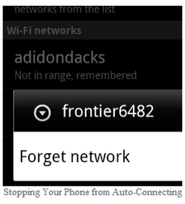
Tutorials: Save Your Android Battery

Use Wi-Fi When at Home or Office

Wi-Fi Security Setup

In releasing its custom-designed Nexus One Android phone, Google gave the particulars on its hardware capabilities, including peak battery life. They suggested that the Nexus One could last a full hour and a half longer on a wireless internet, or Wi-Fi, connection, as compared to cellular 3G reception. The exact reasoning escapes this non-engineer, but it makes a general kind of sense—a phone negotiating with a wireless router 40 feet away, as opposed to negotiating data packet exchange with a tower clear across town. So when you're at home, or somewhere you know the connection is steady, turn on Wi-Fi from the Power Control widget (or one of your phone maker's custom Wi-Fi toggle widgets; both Motorola and HTC offer them).

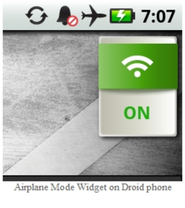
Turn Off Wi-Fi and Bluetooth When Wandering



Stopping Your Phone from Auto-Connecting

While having your phone use a Wi-Fi connection you know about can save battery, having it regularly look around for a Wi-Fi connection, or a Bluetooth device to pair with, can draw on your battery. Keep those capabilities off when you're away from your home or car for a while. And in your "Wireless & Networks" settings, head into "Wi-Fi Settings" occasionally, click the "Manage Networks" option, and clean out any old Wi-Fi networks you might have connected to once or twice—coffee shops, in-store Wi-Fi, and so on, so your phone doesn't bother to look for them and try to connect when nearby.

Use Airplane Mode, with Wi-Fi, When Cell Service is Weak or Gone

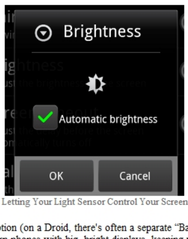


Airplane Mode Widget on Droid phone

Once in a while, you may find yourself somewhere with very sparse or non-existent cellular service, such that your signal indicator shows an "X." When that happens, your phone will keep looking to reconnect with your cellular provider, and that will decidedly drain your battery—it always has, since the very earliest cellphones. Turning on "Airplane Mode," by holding your power button a few seconds and pressing the on-screen option, will keep your phone from trying to connect, and it's easy to turn back off.

The great thing about Airplane Mode, at least in newer (2.1 and up) Android phones, is that it still allows Wi-Fi connections, even if it disables them temporarily. Go ahead and start your Wi-Fi back up, and keep your data in sync.

Set Automatic Screen Brightness and Lower Display Time-Outs

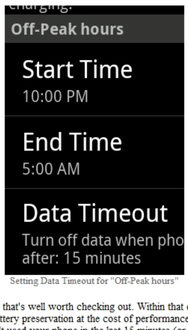


Letting Your Light Sensor Control Your Screen

Head into your phone's Settings, scroll down to "About phone," then press the "Battery Use" option (on a Droid, there's often a separate "Battery Manager" entry in Settings). Look at what's been using your battery most since you last powered down, and Display is likely right up there, if not the very top item. Especially on modern phones with big, bright displays, keeping your screen on full power for minutes at a time is like owning a very, very elaborate flashlight with a tiny battery.

To scale back on your battery use, get to the "Display options" (or sometimes "Sound & Display") section of your Settings. Under Screen Timeout, roll the number back to something like one or two minutes, so your phone isn't burning life for the rare cases when you want to stare at it and do nothing. The screen won't time out when playing video, slideshows, or games, so you've usually got very little to lose. In the same settings, if you're running at least Android 2.2, click the "Brightness" control and check the box for automatic brightness, or click on the brightness setting on your Power Control widget until the small light icon has an "A" in the middle.

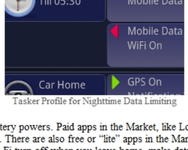
Take Advantage of Motorola's Battery Profiles



Setting Data Timeout for "Off-Peak hours"

On Motorola's latest Droid model phones, there's a "Battery Manager" option inside the Settings that's well worth checking out. Within that option, you can set your "Battery Profile" to Performance, Smart, or Battery Saver mode. The first and last options are just what they sound like—speed with no battery consideration, and battery preservation at the cost of performance and convenience. "Smart Mode" is where it's at. You can set an "Off-Peak hours" time span—10 p.m. to 5 a.m., by default—in which cellular data connections are turned off if haven't used your phone in the last 15 minutes (or longer, if you'd like). You can also set the same kind of data timeout during "Peak hours," for intervals ranging 15 minutes to one hour, so that your data turns off if you haven't touched your phone in some time.

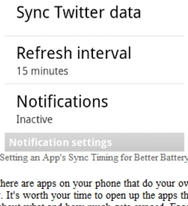
Set Your Own Battery Profiles with Advanced Apps



Tasker Profile for Nighttime Data Limiting

If you're not rocking a Motorola Droid phone, you can still get in on some handy automated battery powers. Paid apps in the Market, like Locale and Tasker, allow you to set up exceedingly personal profiles that turn your cellular data, Wi-Fi, background syncing, and other tasks on or off under nearly any circumstance you'd like. There are also free or "lite" apps in the Market, like JuiceDefender and APNdroid, that can turn your cellular data off, even if your carrier doesn't give you a standard means to do so. You can use your phone's location sensors turn Wi-Fi turn off when you leave home, make data only switch on every often at night, or have Bluetooth only turn on when you've got your phone docked in your car. Each app will require a little exploration on your part, but most have very detailed instructions at their web sites.

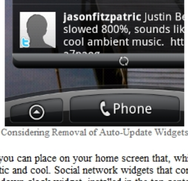
Change Your Apps' Sync Settings



Setting an App's Sync Timing for Better Battery

Beyond Google's own applications, which do a quiet kind of server-pushing background sync, there are apps on your phone that do your own reaching out to check for new stuff. Facebook, Twitter, podcast grabbers, to-do managers—they're all very intent on being up-to-the-minute, even if that's not strictly necessary. It's worth your time to open up the apps that push you notifications about new things, hit the Menu key, and find their Settings. Inside, you'll likely see at least a "Refresh Interval" you can modify, along with possibly some options about what and how much gets synced. Facebook, for instance, I'm very happy to let sit for at least one hour between checks.

Pare Down Your Updating Widgets



Considering Removal of Auto-Update Widgets

Just like many apps will constantly try and keep you notified with new stuff, there are widgets you can place on your home screen that, while potentially convenient, can also be a big power draw. Consider which widgets you actually check every day for information you need, and which just kind of make your phone feel futuristic and cool. Social network widgets that connect to Facebook, Twitter, Flickr, and other apps are the biggest culprits, but if you're going to go all the way, consider your weather widget—or even the weather contained in HTC's big flip-down clock widget, installed in the top center of most HTC phones. Do you really need a constant check on the weather right where you're standing, especially if you could free up six app shortcut spaces without it? Press, hold, and drag the app to the trash, then create a shortcut to a Google search for the weather in your area ("Weather 14201" where I live). The shortcut

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