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iPhone

the missing manual®

The book that should have been in the box®

3rd Edition

Covers All Models with 3.0 Software—including the iPhone 3GS

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David Pogue

APPLE/MOBILE DEVICES

Answers found here!

iPhone: The Missing Manual. With the iPhone 3.0 software and the new iPhone 3GS, Apple has a world-class hit on its hands. This sleek, highly refined pocket computer comes with everything—cellphone, iPod, Internet, camcorder—except a printed manual. Fortunately, David Pogue is back with this expanded edition of his witty, full-color guide: the world's most popular iPhone book.

the missing manual®

The important stuff you need to know

- **The phone.** Thanks to voice dialing, Visual Voicemail, and MMS (picture/video messages), the iPhone is a top-notch cellphone.
- **The iPhone 3GS.** This book covers all iPhones, but the 3GS offers a camcorder, compass—and blazing speed.
- **The 3.0 software.** Older iPhone models gain MMS, Copy and Paste, voice recording, global Search, and 100 other features.

The iPhone may be the world's coolest computer, but it's still a computer, with all a computer's complexities. *iPhone: The Missing Manual* is an entertaining, lavishly illustrated guide to the tips, shortcuts, and workarounds that will turn you, too, into an iPhone addict.

Why I started the Missing Manual series.

People learn best when information is engaging, clearly written, and funny. Unfortunately, most computer books read like dry catalogs. That's why I created the Missing Manuals. They're entertaining, unafraid to state when a feature is useless or doesn't work right, and—oh, by the way—written by actual *writers*. And on every page, we answer the simple question: "What's this feature *for*?"

David Pogue is a *New York Times* technology columnist, bestselling author, and creator of the Missing Manual series.

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7 Maps and Apps

Your Home screen comes already loaded with the icons of about 20 programs. These are the essentials, the starting points; eventually, of course, you'll fill that Home screen, and many overflow screens, with additional programs you install yourself (Chapter 12).

The starter programs include major gateways to the Internet (Safari), critical communications tools (Phone, Messages, Mail, Contacts), visual records of your life (Photos, Camera), Apple shopping centers (iTunes, App Store), and a well-stocked entertainment center (iPod).

Most of those programs get chapters of their own. This chapter covers the smaller programs: Calendar, YouTube, Stocks, Maps, Weather, Voice Memos, Notes, Clock, Calculator, and (on the iPhone 3GS) Compass.

Calendar

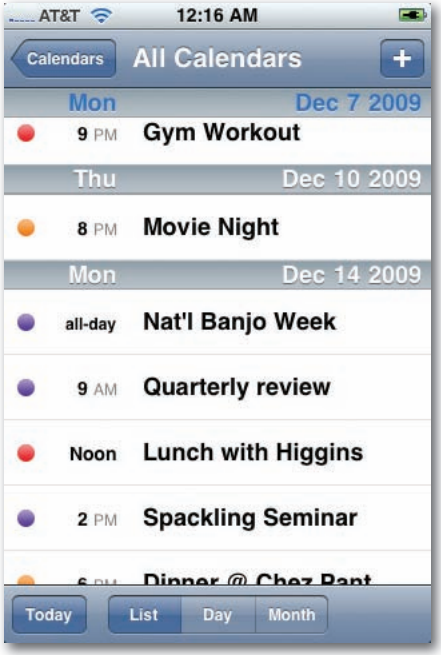
What kind of digital companion would the iPhone be if it didn't have a calendar program? In fact, not only does it have a calendar—but it even has one that syncs with your computer.

If you maintain your life's schedule on a Mac (in iCal or Entourage) or a PC (in Outlook), then you already have your calendar on your iPhone. Make a change in one place, and it changes in the other, every time you sync over the USB cable.

Better yet, if you have a MobileMe account or work for a company with an Exchange server (Chapters 15 and 16), then your calendar can be synchronized with your computer ***automatically,*** wirelessly, over the air.

Or you can use Calendar all by itself.

Tip The Calendar icon on the Home screen shows what looks like one of those paper Page-a-Day calendar pads. But if you look closely, you'll see a sweet touch: It actually shows *today's* day and date!



Working with Views

By clicking one of the View buttons at the bottom of the screen, you can switch among these views:

- **List view** offers you a tidy chronological list of everything you've got going on, from today forward. Flick or drag your finger to scroll through it.

Tip List view also houses the Spotlight box, which can search your whole calendar. Type a few letters of the appointment's name, then tap the result in the list to open it; tap Show in Calendar to jump to that event in Day view.

- **Day** shows a single day's events, broken down by time slot. Tap the ◀ and ▶ buttons to move backward or forward a day at a time.

Tip *Hold down* one of the ◀ and ▶ buttons to zoom through the dates quickly. You can skip into a date next month in just a few seconds.

- **Month** shows the entire month. Dots on the date squares show you when you're busy. Tap a date square to read, in the bottom part of the

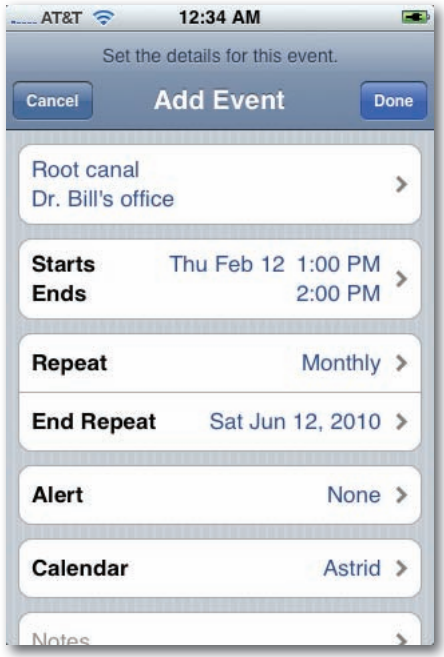
screen, what you've got going on that day. (You can flick or drag that list to scroll it.)

In all three views, you can tap Today (bottom left) to return to today's date.

Making an Appointment

The basic calendar is easy to figure out. After all, with the exception of one unfortunate Gregorian incident, we've been using calendars successfully for centuries.

Even so, recording an event on this calendar is quite a bit more flexible than entering one on, say, one of those "Hunks of the Midwest Police Stations" paper calendars.



Start by tapping the + button (top-right corner of the screen). The Add Event screen pops up, filled with tappable lines of information. Tap one (like Title/Location, Starts/Ends, or Repeat) to open a configuration screen for that element.

For example:

- **Title/Location.** Name your appointment here. For example, you might type *Fly to Phoenix.*

The second line, called Location, makes a lot of sense. If you think about it, almost everyone needs to record *where* a meeting is to take place. You might type a reminder for yourself like *My place,* a specific address like *212 East 23*, a contact phone number, or a flight number.

Use the keyboard as usual. When you're finished, tap Save.

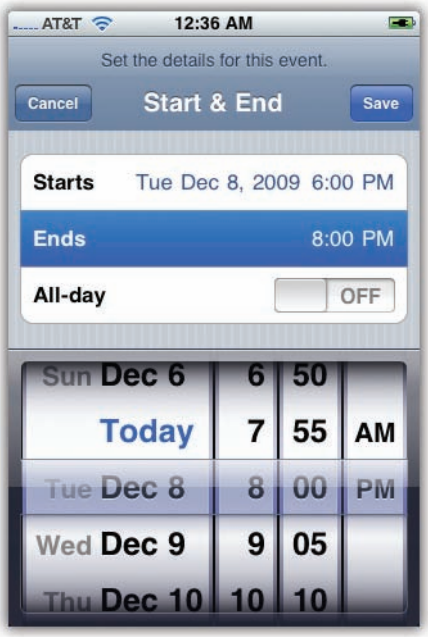
- **Starts/Ends.** On this screen, tap Starts, and then indicate the starting time for this appointment, using the four spinning dials at the bottom of the screen. The first sets the date; the second, the hour; the third, the minute; the fourth, AM or PM. If only real alarm clocks were so much fun!

  Then tap Ends, and repeat the process to schedule the ending time. (The iPhone helpfully pre-sets the Ends time to one hour later.)

  An All-day event, of course, has no specific time of day: a holiday, a birthday, a book deadline. When you turn this option on, the Starts and Ends times disappear. The event appears at the top of the list for that day.

Tip Calendar can handle multiday appointments, too, like trips away. Turn on All-day—and then use the Starts and Ends controls to specify beginning and ending *dates*. On the iPhone, you'll see it as a list item that repeats on every day's square. Back on your computer, you'll see it as a banner stretching across the Month view.

Appointment, with times



All-day event

Tap Save when you're done.

- **Repeat.** The screen here contains common options for recurring events: every day, every week, and so on. It starts out saying None.

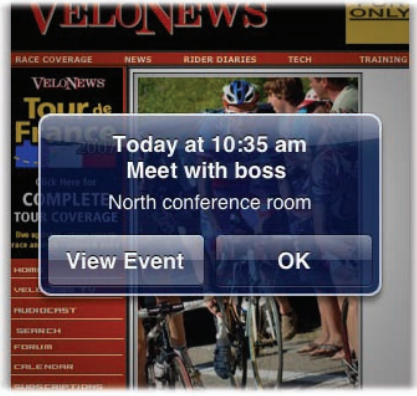
  Once you've tapped a selection, you return to the Edit screen. Now you can tap the End Repeat button to specify when this event should ***stop*** repeating. If you leave the setting at Repeat Forever, you're stuck seeing this event repeating on your calendar until the end of time (a good choice for recording, say, your anniversary, especially if your spouse might be consulting the same calendar).

  In other situations, you may prefer to spin the three dials (month, day, year) to specify an ending date, which is useful for car and mortgage payments.

- **Alert.** This screen tells Calendar how to notify you when a certain appointment is about to begin. Calendar can send any of four kinds of flags to get your attention. Tap how much notice you want: 5, 15, or 30 minutes before the big moment; an hour or two before; a day or two before; or on the day of the event.

  When you tap Save and return to the main Add Event screen, you see that a new line, called Second Alert, has sprouted up beneath the first Alert line. This line lets you schedule a ***second*** warning for your appointment, which can occur either before or after the first one. Think of it as a backup alarm for events of extra urgency. Tap Save.

  Once you've scheduled these alerts, you'll see a message appear on the screen at the appointed time(s). (Even if the phone was asleep, it appears briefly.) You'll also hear a chirpy alarm sound.



Note The iPhone doesn't play the sound if you turned off Calendar Alerts in Settings→Sounds. It also doesn't play if you silenced the phone with the silencer switch on the side.

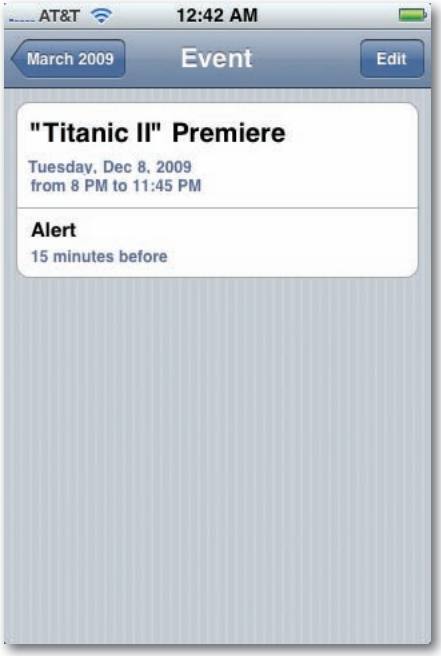
- **Calendar.** Tap here to specify which color-coded *calendar* (category, like Home, Kids, or Work) this appointment belongs to. See page 287 for details on the calendar concept.
- **Notes.** Here's your chance to customize your calendar event. You can type any text you want in the notes area—driving directions, contact phone numbers, a call history, or whatever. Tap Save when you're finished.

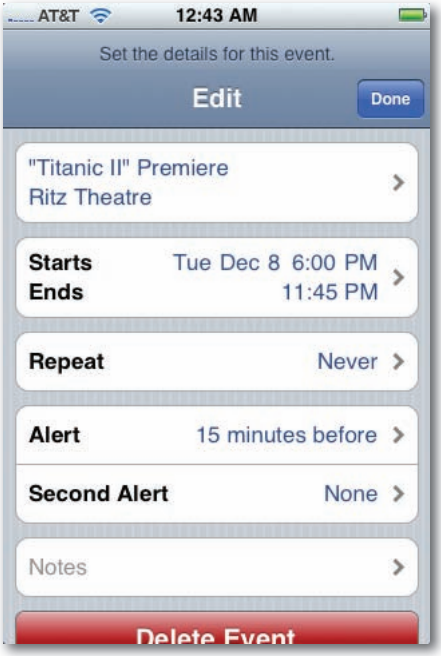
When you've completed filling in all these blanks, tap Done. Your newly scheduled event now shows up on the calendar.

Editing, Rescheduling, and Deleting Events

To examine the details of an appointment in the calendar, tap it once. The Event screen appears, filled with the details you previously established.

To edit any of these characteristics, tap Edit. You return to what looks like a clone of the New Event screen shown on page 144.





Here, you can change the name, time, alarm, repeat schedule, or any other detail of the event, just the way you set them up to begin with. (Except the calendar category. For some reason, you can't change that once you've set it.)

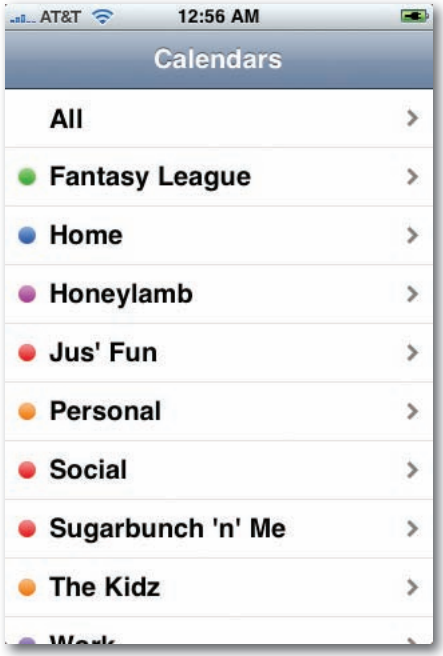
This time, there's a big red Delete Event button at the bottom. That's the only way to erase an appointment from your calendar.

Tip The Calendar program doesn't have a to-do list, as you may have noticed. It may someday, as Apple adds new software features via free updates.

In the meantime, you can always fire up Safari and head over to *www.tadalist.com*, a free, iPhone-friendly, online To Do-list program.

The Calendar (Category) Concept

A ***calendar,*** in Apple's somewhat confusing terminology, is a color-coded subset—a ***category***—into which you can place various appointments. They can be anything you like. One person might have calendars called Home, Work, and TV Reminders. Another might have Me, Spouse 'n' Me, and The Kidz. A small business could have categories called Deductible Travel, R&D, and R&R.



You can't create calendar categories, or change their colors, on the iPhone—only in your desktop calendar program. Or, if you're a MobileMe member, you can also set up your categories at *www.me.com*; all your categories and color codings show up on the iPhone automatically.

What you ***can*** do is choose whether you want to view just one category—or all the categories at once. Just tap Calendars at the top of any Calendar view. You arrive at the big color-coded list of your categories.

This screen exists partly as a reference, a cheat sheet to help you remember what color goes with which category, and partly as a tappable subset-chooser. That is, if you tap the Work category, you return to the calendar view you were just viewing, but now all categories are hidden except the one you tapped.

Tip One big iPhone 3.0 improvement: You can now set up real-time, wireless connections to calendars published by on the Web in the CalDAV format—notably your Yahoo or Google calendar. Just tap your way to Settings→Mail, Contacts, Calendars→Add Account→Other→Add CalDAV Account. For Server, type *www.google.com*; fill in your account info.

Now you have a two-way synced calendar between your iPhone and (for example) your Google calendar. To read about other ways of syncing the iPhone with online calendars, including read-only .ics files (like sports-team schedules), download the PDF appendix from this book's "Missing CD" page at *www.missingmanuals.com*.

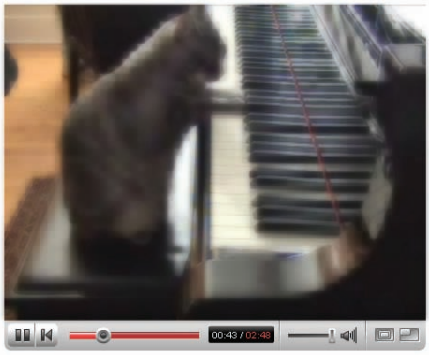
YouTube

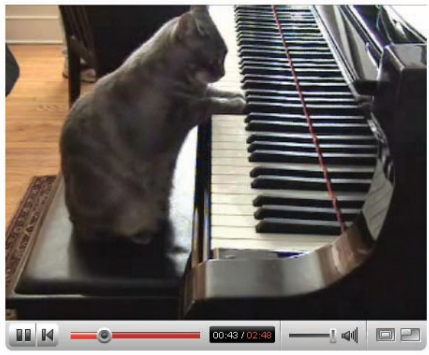
YouTube, of course, is the stratospherically popular video-sharing Web site where people post short videos of every description: funny clips from TV, homemade blooper reels, goofy short films, musical performances, bite-sized serial dramas, and so on. YouTube's fans watch 100 million little videos a day.

Of course, you already have a Web browser on your iPhone—Safari. Why does the iPhone need a special YouTube ***program?***

Long story: Most YouTube movies are in a format called Flash, which iPhone 3.0 still doesn't recognize. Flash video, at least in YouTube's version, doesn't look so great, anyway. YouTube videos are famous for their blurry, mushy look.

So Apple approached YouTube and made a radical suggestion: Why not re-encode all of its millions of videos into H.264, a ***much*** higher-quality format that, coincidentally, is playable on the iPhone and the Apple TV? Amazingly enough, YouTube agreed—and you are the lucky benefactor.

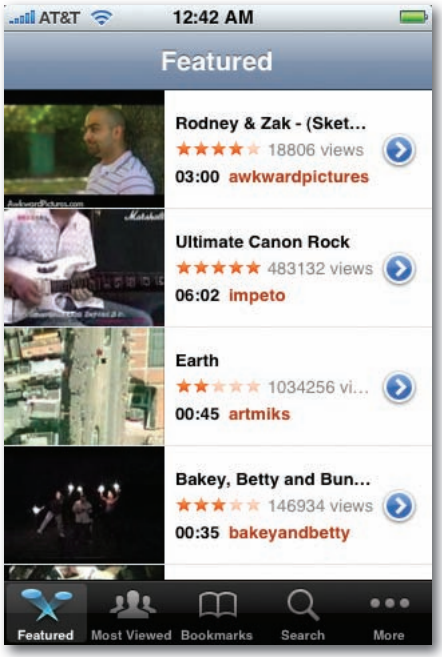




Finding a Video to Play

The YouTube program works much like the iPod program in that it's basically a collection of lists. Tap one of the icons at the bottom of the screen, for example, to find videos in any of these ways:

- **Featured.** A scrolling, flickable list of videos handpicked by YouTube's editors. You get to see the name, length, star rating, and popularity (viewership) of each one.

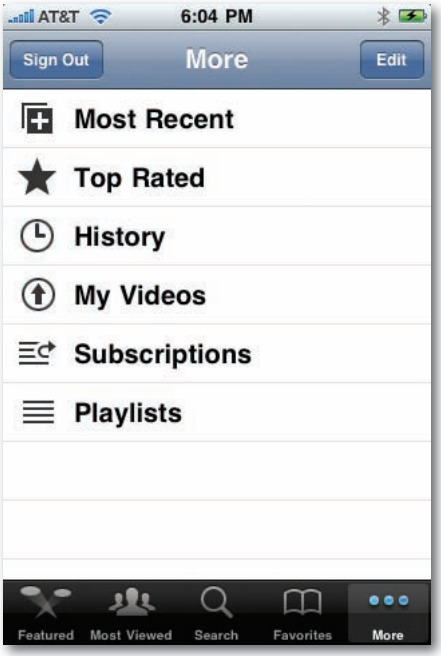


- **Most Viewed.** A popularity contest. Tap the buttons at the top to look over the most-viewed videos Today, This Week, or All (meaning "of all

time"). Scroll to the bottom of the list and tap Load 25 More to see the next chunk of the list.

- **Favorites.** A list of videos you've flagged as your own personal faves, as described in a moment.
- **Search.** Makes the iPhone keyboard appear so you can type a search phrase. YouTube produces a list of videos whose titles, descriptions, keywords, or creator names match what you typed.

If you tap More, then you get some additional options:



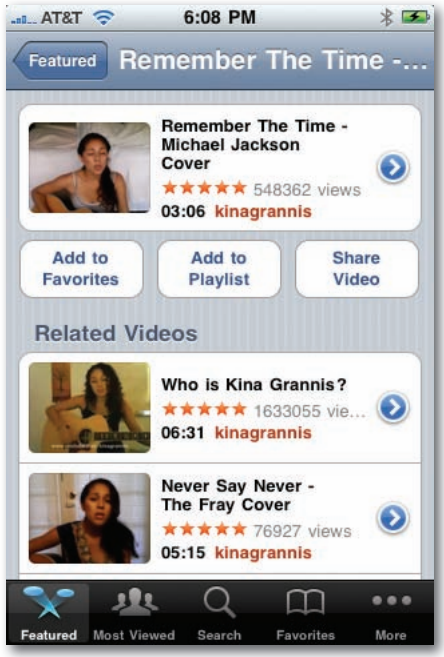
- **Most Recent.** These are the very latest videos posted on YouTube.
- **Top Rated.** Whenever people watch a video on YouTube, they have the option of giving it a star rating. (You can rate videos right from the iPhone, too.) This list rounds up the highest-rated videos. Beware—you may be disappointed in the taste of the masses.
- **History.** This is a list of videos you've viewed recently on the iPhone—and a Clear button that nukes the list, so people won't know what you've been watching.

- **My Videos, Subscriptions, Playlists.** These options appear only if you have a YouTube account (which is free at *youtube.com*) and have logged into it on your iPhone. My Videos are, of course, the videos you've posted on YouTube. Subscriptions are videos you've signed up to receive in installments (many YouTubers produce a new video every week, for example). And Playlists are handpicked sets of videos you've grouped together yourself. Details follow.

Tip Once you've tapped More to see the additional options, you also get an Edit button. It opens a Configure screen that works exactly like the one described on page 98. That is, you can now rearrange the four icons at the bottom of the YouTube app's screen, or you can replace those icons with the ones that are usually hidden (like Most Recent or Top Rated) just by dragging them into place.

Each list offers a ⓘ button at the right side. Tap it to open the Details screen for that video, featuring a description, date, category, tags (keywords), uploader name, play length, number of views, links to related videos, and so on.

Also on this screen are Add to Favorites, which adds this video to your own personal list of favorites (tap Favorites at the bottom of the screen to see it); Add to Playlist, which opens a Playlist screen where you can add, edit, and delete these self-playing sequences of videos; and Share Video, which creates an outgoing message containing a link to that video.



Address it and send it along to anyone you think would be interested, thus fulfilling your duty as a cog in the great viral YouTube machine.

Playing YouTube Videos

To play a video, tap its row in any of the lists. Turn the iPhone 90 degrees counterclockwise—all videos play in horizontal orientation. The video begins playing automatically; you don't have to tap the ▶ button.

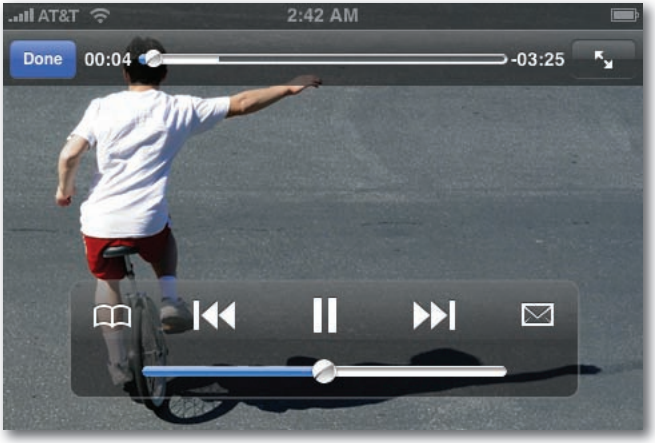
Here, you'll discover a basic truth about the YouTube app on the iPhone: Videos look *great* if you're connected to the Internet through a Wi-Fi hot spot or the 3G network. They look *not* so great if you're connected over AT&T's cellular EDGE network. When you're on EDGE, you get a completely different version of the video—smaller, coarser, and grainier. In fact, you may not be able to get videos to play at all over EDGE.

When you first start playing a video, you get the usual iPhone playback controls, like ⏭ ⏮ ⏸, the volume slider, and the progress scrubber at the top. Here again, you can double-tap the screen to magnify the video slightly, just enough to eliminate the black bars on the sides of the screen (or tap the ⤡ button at the top-right corner to do the same).

The controls fade away after a moment so they don't block your view. You can make them appear and disappear with a single tap on the video.

There are two icons on these controls, however, that *don't* also appear when you're playing iPod videos. First is the 🕮 button, which adds the video you're watching to your Favorites list so you won't have to hunt for it later.

Second is the ✉ button, which pauses the video and sends you to the Mail app, where a link to the video is pasted into an outgoing message for you.



The Done button at the top-left corner takes you out of the video you're watching and back to the list of YouTube videos.

Stocks

This one's for you, big-time day trader. The Stocks app tracks the rise and fall of the stocks in your portfolio. It connects to the Internet to download the very latest stock prices. (All right, maybe not the *very* latest. The price info may be delayed as much as 20 minutes, which is typical of free stock-info services.)

When you first fire it up, Stocks shows you a handful of sample high-tech stocks—or, rather, their abbreviations. (They stand for the Dow Jones Industrial Index, the NASDAQ Index, the S&P 500 Index, Apple, Google, and Yahoo, respectively. AT&T, one of the starter listings on the original iPhone, has been dumped.)

Next to each, you see its current share price, and next to *that,* you see how much that price has gone up or down today. As a handy visual gauge to how elated or depressed you should be, this final digit appears on a *green* background if it's gone up, or a *red* one if it's gone down.

Tap a stock name to view its stock-price graph at the bottom of the screen. You can even adjust the time scale of this graph by tapping the little interval buttons along the top edge: 1d means "one day" (today); 1w means "one week"; 1m, 3m, and 6m refer to numbers of months; and 1y and 2y refer to years.

Finally, to get more detailed information about a stock, tap its name and then tap the Y! button in the lower-left corner. The iPhone fires up its Web browser and takes you to the Yahoo Finance page for that particular stock, showing the company's Web site, more detailed stock information, and even recent news articles that may have affected the stock's price.

Landscape View

Here's one of the great unsung features of the iPhone 3.0 software suite: If you turn the iPhone sideways, you get a much bigger, more detailed, widescreen graph of the stock in question. (Flick horizontally to view the previous or next stock.)

Better yet, you can drag two fingers or two thumbs across the graph to isolate a certain time period; pop-up bubbles show you how much of a bath you took (or how much of a windfall you received) during the interval you've highlighted. Cool!

Customizing Your Portfolio

It's fairly unlikely that *your* stock portfolio contains Apple, Google, and Yahoo. Fortunately, you can customize the list of stocks to reflect the companies you *do* own (or that you want to track).

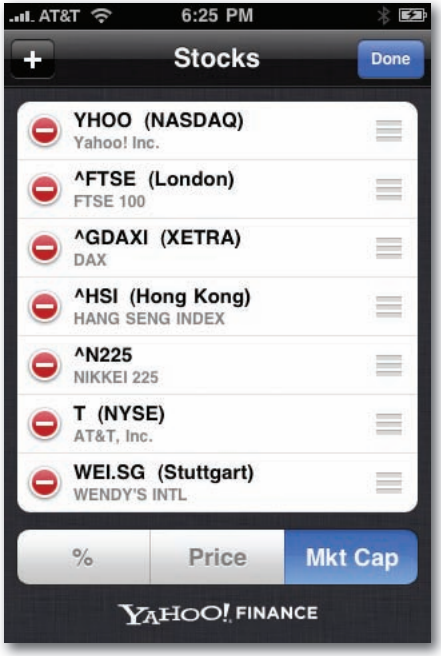
To edit the list, tap the ⓘ button in the lower-right corner. You arrive at the editing screen, where the following choices await:

- **Delete a stock** by tapping the ⊖ button and then the Delete confirmation button.
- **Rearrange the list** by dragging the grip strips on the right side.
- **Add a stock** by tapping the + button in the top-left corner; the Add Stock screen and the keyboard appear.

  The idea here is that you're not expected to know every company's stock-symbol abbreviation. So type in the company's *name,* and then tap Search. The iPhone shows you, just above the keyboard, a scrolling list of companies with matching names. Tap the one you want to track. You return to the stocks-list editing screen.

- **Choose %, Price, or Numbers.** You can specify how you want to see the changes in stock prices in the far-right column: as *percentages* ("+0.65%"), *numbers* ("+2.23") or as *market capitalization* ("120.3B," meaning $120 billion total corporate value). Tap the corresponding button at the bottom of this screen.

When you're finished setting up your stock list, tap Done.



Maps

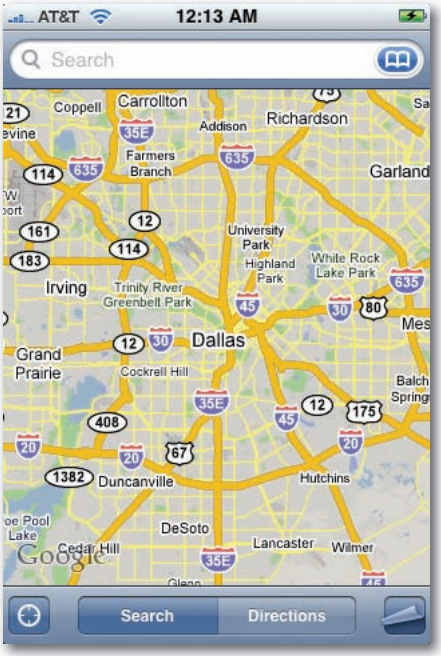
Google Maps on the Web is awesome already. It lets you type in any address or point of interest in the U.S. or many other countries—and see it plotted on a map. You have a choice of a street-map diagram or an actual aerial photo, taken by satellite. Google Maps is an incredible resource for planning a drive, scoping out a new city before you travel there, investigating the proximity of a new house to schools and stores, seeing how far a hotel is from the beach, or just generally blowing your mind with a new view of the world.

And now you've got Google Maps on the iPhone, with even more features—like turn-by-turn driving directions, a live national Yellow Pages business directory, GPS that pinpoints your current location, and real-time traffic-jam alerts, represented by color coding on the roads shown on the map.

Note Your happiness with Maps depends a lot on how you're connected to the Internet. A Wi-Fi connection is fairly snappy. A cellular EDGE connection may mean waiting a few seconds every time you scroll or zoom the map.

Browsing the Maps

The very first time you open Maps, you see a miniature U.S. map. Double-tap to zoom in, over and over again, until you're seeing actual city blocks. You can



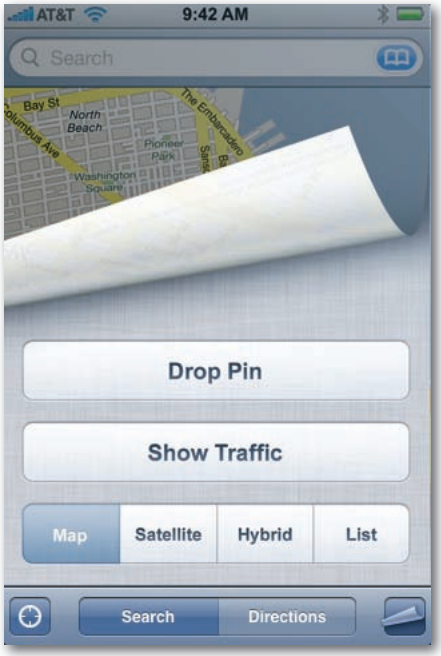
also pinch or spread two fingers to magnify or shrink the view. Drag or flick to scroll around the map.

To zoom *out* again, use the rare *two-finger tap.* So—zoom in with *two* taps using one finger; zoom out with *one* tap using two fingers.

At any time, you can tap the curling-page button in the corner of the screen (◪) to open a secret panel of options. Here you can tap your choice of amazing map views: Map (street-map illustration), Satellite (stunning aerial photos), or Hybrid (photos superimposed with street names).

There's no guarantee that the Satellite view provides a very *recent* photo—different parts of the Google Maps database use photography taken at different times—but it's still very cool.

Note If you zoom in far enough, the satellite photo eventually vanishes; you see only a tiled message that says, "No Image" over and over again. In other words, you've reached the resolution limits of Google's satellite imagery. Do some two-finger taps to back out again.



Location, Location, Location

If any phone can tell you where you are, it's the iPhone. It has not one, not two, but *three* ways to determine your location.

- **GPS.** First, in the iPhone 3G and 3GS, there's a traditional GPS chip, of the sort that's found in automotive navigation units from Garmin, TomTom, and other companies.

  Don't expect it to work as well as those car units, though. This is a cellphone, for goodness' sake—not some much bigger, single-purpose, dedicated-GPS car unit.

  Still, Apple's designers used every trick in the book to maximize the iPhone's sensitivity, including using the tiny metal ring around the camera lens as part of the GPS antenna. If the iPhone has a good view of the sky, and isn't confounded by skyscrapers or the metal of your car, then it can do a decent job of consulting the 24 satellites that make up the Global Positioning System and determining its own location.

  But what if it can't see the sky? Or what if you have an original iPhone, which has no GPS chip? Fortunately, all iPhones have two other fallback location features.

- **Skyhook's Wi-Fi Positioning System.** Metropolitan areas today are blanketed by overlapping Wi-Fi signals. At a typical Manhattan intersection, you might be in range of 20 base stations. Each one broadcasts its own name and unique network address (its *MAC address*—nothing to do with Mac computers) once every second. Although you'd need to be within 150 feet or so to actually get onto the Internet, a laptop or phone can detect this beacon signal from up to 1,500 feet away.

  A company called Skyhook had a huge idea: Suppose you could correlate all those beacon signals with their physical locations. Why, you'd be able to simulate GPS—without the GPS!

  So since 2003, 500 full-time Skyhook employees have been driving every road, lane, and highway in major cities around the world, measuring all those Wi-Fi signals, noting their network addresses and locations. (Neither these vans nor the iPhone ever has to *connect* to these base stations. They're just reading the one-way beacon signals.)

  So far, Skyhook's database knows about 50 million hot spots—and the precise longitude and latitude of each. The company licenses this information to companies, like Apple, who want to build location services into their gadgets.

If the iPhone can't get a fix on GPS, then it sniffs around for Wi-Fi base stations. If it finds any, it transmits their IDs back to Skyhook (via cellular network), which looks up those network addresses—and sends coordinates back to the iPhone.

That accuracy is good only to within 100 feet at best, and of course the Skyhook system fails completely once you're out of populated areas. On the other hand, it works indoors, which GPS definitely doesn't.

- **Google's cellular triangulation system.** Finally, as a last resort, any iPhone can turn to a system of location-guessing based on your proximity to the cellphone towers around you. Software provided from Google works a lot like Skyhook's software but relies upon its knowledge of cellular towers' locations rather than Wi-Fi base stations. The accuracy isn't as good as Skyhook or GPS—you're lucky if it puts you within a block or two of your actual location—but it's something.

Tip The iPhone's location circuits do eat into battery power. If you want to shut them down when you're not using them, use the Settings switch described on page 306.

Finding Yourself

All right—now that you know how the iPhone gets its location information, here's how you can use it. It does *not* give you GPS-like navigation instructions, with a voice saying, "Turn left on Elm Street"—at least not unless you buy an app that does that from the App Store (and, in most cases, pay a monthly fee forever).

What it can do, though, is show you where you are. Tap the Locate button (⊙) at the bottom of the Maps screen. The button turns blue, indicating that the iPhone is consulting its various references—GPS, Wi-Fi network, cellular network—to try to figure out where you are.

What you see now depends on what kind of luck the phone is having (read the illustration on the facing page from right to left):

- **Good: The Location circle pulsates.** The first thing that usually happens when you tap the ⊙ button is that a big, crosshairs-like circle appears on the map. That's the iPhone's first guess, a quick stab based on triangulation of the local cell towers. As long as it's bouncing inward and outward, it's saying: "I think you're around here. But hold on—let me see if I can be a little more specific."

Note Actually, the *first* thing that may happen is you may be asked: "'Maps would like to use your current location.' (A similar query appears the first time you use *any* program that uses the iPhone's location info.) It's just a little heads-up for the privacy-conscious. Unless you're paranoid, tap OK.

- **Better: The circle sits still.** The blue circle stops pulsing when it's exhausted all the iPhone's location technologies. It's saying: "You're in here somewhere, mate, but I'm afraid this is the best I can do."
- **Best: The blue pushpin appears—and moves with you.** If you're outdoors (so that the GPS can work), or indoors in a big city (so that the Wi-Fi location circuit works), the iPhone may drop a blue pushpin onto the map. That's it saying, "OK, pal, I've got you. You're *here*."

  The iPhone is now tracking you, moving along the map *with* you as you drive, ride, or walk. (The smoothness of the animation depends on the iPhone's success at getting a good location signal.)

The iPhone keeps tracking you until you push the button again.

Sometimes a blue, see-through disc appears around the pushpin, indicating the iPhone's degree of uncertainty. Still, in times of navigational confusion, that guidance can be extremely useful. It's not just seeing where you are on a map—it's seeing which way you're *going* on the map.

Tip Once you've found something on the map—your current position, say, or something you've searched for—you can drop a pin there for future reference. Tap the button; when the page curls up, tap Drop Pin. A blue pushpin appears on the map.

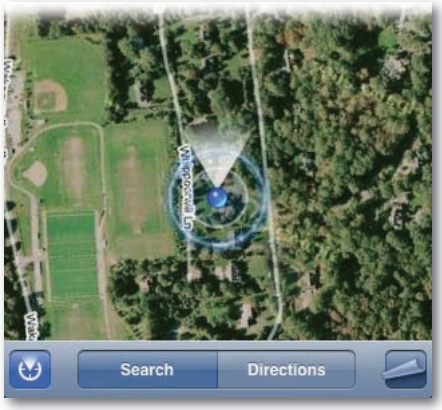
You can drag the pin to move it, or tap to add it to your Bookmarks (described in a moment), or use as a starting point for directions. And if you tap Directions, the iPhone lists "Dropped Pin" as your starting point—usually, a good guess.

Orienting the Map (iPhone 3GS)

It's great to see a blue pin on the map, and all—but how do you know which way you're facing? Legions of iPhone fans have developed a peculiar ritual known as the iPhone Circle, in which they run the perimeter of an imaginary 50-yard circle, holding out the iPhone before them, in an attempt to figure out which way is up on the map.

If you have an iPhone 3GS, you don't have to bother. Thanks to the built-in magnetometer (compass), the map can orient itself for you.

Just tap the button twice. The map spins so that the direction you're facing is upward. A "flashlight beam" emanates from your blue dot; its width indicates the iPhone's degree of confidence. (The narrower the beam, the surer it is.)



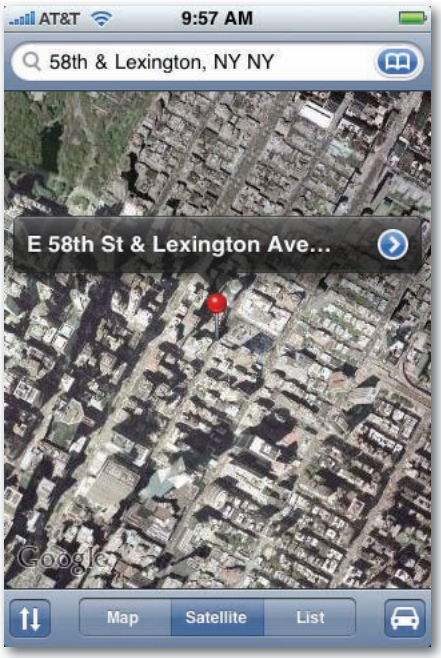
Searching the Maps

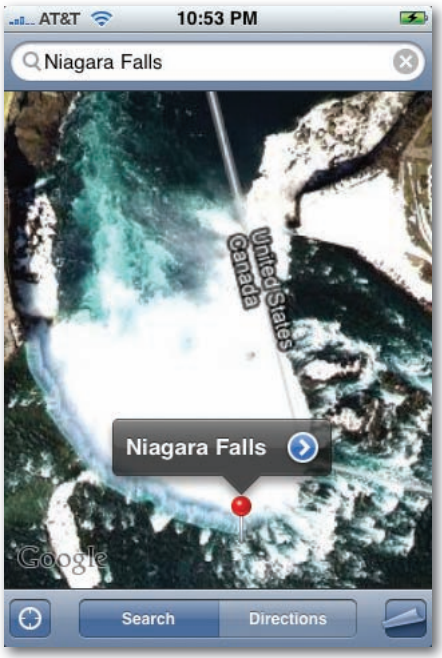
You're not always interested in finding out where you are; often enough, you know that much perfectly well. Instead, you want to see where something *else* is. That's where the Search button comes in.

Tap it to summon the Search box and the iPhone keyboard. (If there's already something in the Search box, tap the ⊗ button to clear it out.)

Here's what Maps can find for you:

- **An address.** You can skip the periods (and usually the commas, too). And you can use abbreviations. Typing *710 w end ave ny ny* will find 710 West End Avenue, New York, New York. (In this and any of the other examples, you can type a ZIP code instead of a city and a state.)
- **An intersection.** Type *57th and lexington, ny ny*. Maps will find the spot where East 57th Street crosses Lexington Avenue in New York City.
- **A city.** Type *chicago il* to see a map of the city. You can zoom in from there.
- **A ZIP code.** Type *10024* to see that region.
- **A point of interest.** Type *washington monument* or *niagara falls*.





When Maps finds a specific address, an animated, red-topped pushpin comes flying down onto its precise spot on the map. A translucent bubble identifies the location by name.

Tip Tap the bubble to hide it. Tap the map pin to bring the bubble back. Tap the ⓘ to bookmark the spot, to get directions, or to add it to Contacts.

Finding Friends and Businesses

Maps is also plugged into your Contacts list, which makes it especially easy to find a friend's house (or just see how ritzy his neighborhood is).

Instead of typing an address into the empty Search bar, tap the 📖 button at the right end of it. You arrive at the Bookmarks/Recents/Contacts screen, containing three lists that can save you a lot of typing.

Two of them are described in the next section. But if you tap Contacts, you see your master address book (Chapter 3). Tap the name of someone you want to find. In a flash, Maps drops a red, animated pushpin onto the map to identify that address.

Tip If you're handy with the iPhone keyboard, then you can save a few taps. Type part of a person's name into the Search bar. As you go, the iPhone displays a list of matching names. Tap the one you want to find on the map.

That pushpin business also comes into play when you use Maps as a glorified national Yellow Pages. If you type, for example, *pharmacy 60609,* those red pushpins show you all the drugstores in that Chicago ZIP code. It's a great way to find a gas station, a cash machine, or a hospital in a pinch. Tap a pushpin to see the name of the corresponding business.

As usual, you can tap the ⓘ button in the map pin's label bubble to open a details screen. If you've searched for a friend, then you see the corresponding Contacts card. If you've searched for a business, then you get a screen containing its phone number, address, Web site, and so on. Remember that you can tap a Web address to open it, or tap a phone number to dial it. ("Hello, what time do you close today?")

Tip If the cluster of map pins makes it hard to see what you're doing, then tap List. You see a neat text list of the same businesses. Tap one to see it alone on the map, or tap ⓘ to see its details card.

In both cases, you get two useful buttons, labeled Directions To Here and Directions From Here. See the facing page for details.

You also get buttons like Add to Bookmarks and Create New Contact, which save this address for instant recall (read on).

Bookmarks and Recents

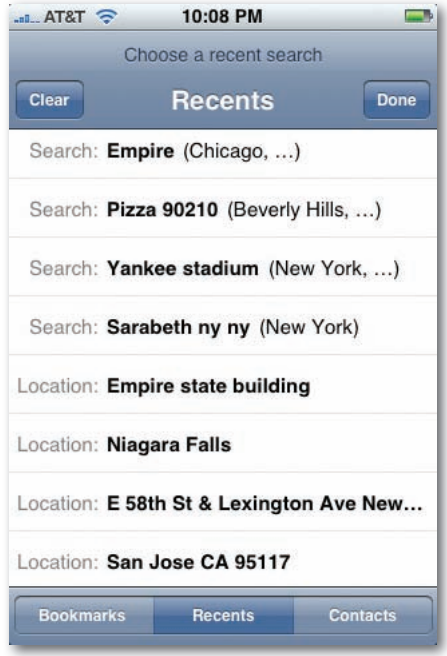
Let's face it: The iPhone's tiny keyboard can be a little fussy. One nice thing about Maps is the way it tries to eliminate typing at every step.

If you tap the 📖 button at the right end of the Search bar, for example, you get the Bookmarks/Recents/Contacts screen—three lists that spare you from having to type stuff.

- **Bookmarks** are addresses you've flagged for later use by tapping Add to Bookmarks, an option that appears whenever you tap the ⓘ in a push-pin's label. For sure, you should bookmark your home and workplace.

They'll make it much easier to request driving directions.

- **Recents** are searches you've conducted. You'd be surprised at how often you want to call up the same spot again later—and now you can, just by tapping its name in this list. You can also tap Clear to empty the list (if, for example, you intend to elope and don't want your parents to find out).



- **Contacts** is your iPhone address book. One tap maps out where someone lives.

Directions

If you tap Directions, the Search bar turns into *two* Search bars: one labeled Start and the other End. Plug in two addresses—if you've used the Location function, the Start address already says "Current Location"—and let Google Maps guide you from the first to the second.

The iPhone *does* give you turn-by-turn directions—but only as written instructions on the screen, not as a spoken voice. Also, you have to *ask* for each successive instruction; it doesn't display them automatically based on your current position. It's not a Garmin, in other words.

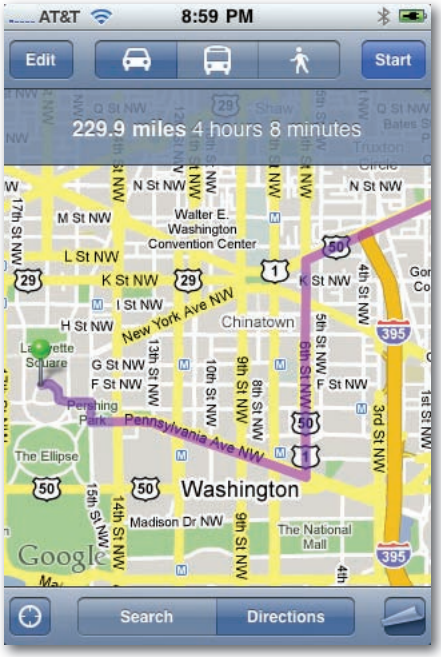
Still, for a phone, it's not bad.

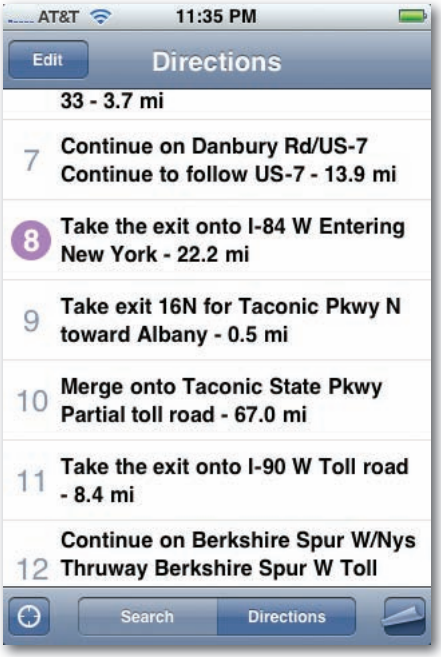
Begin by filling in the Start and End boxes. You can use any of the address shortcuts on page 163, or you can tap 📖 to specify a bookmark, a recent search, or a name in Contacts. (Or, after performing any search that produces a pushpin, you can tap the ⓘ button in its label bubble and then tap Directions To Here or Direction From Here on the details screen.)

Then tap Route. In just a moment, Maps displays an overview of the route you're about to drive. At the top of the screen, you see the total distance and the amount of time it'll take (if you stay within the speed limit). Amazingly, you also see buttons for 🚌 (public transportation) and 🚶 (walking) directions. These usually take you longer, and public transport isn't always available, but it's amazing that they're even an option.

Tap Start to see the first driving instruction. The map also zooms in to the actual road you'll be traveling, which looks like it's been drawn in with purple highlighter. It's just like having a printout from MapQuest—the directions at the top of the screen say, for example, "Head east on Canterbury Ln toward Blackbird Ave – go .5 mi." Unlike MapQuest, though, you see only one instruction at a time (the current step)—and you don't have to clutch and peer at a crumpled piece of paper while you're driving.

Tap the ⬅ or ➡ buttons to see the previous or next driving instruction. At any time, you can also tap ▭ and then List to see the master list of turns. Tap an instruction to see a closeup of that turn on the map.





To adjust one of the addresses, tap the current driving instruction; the Search boxes reappear. And to exit the driving mode, tap the ⇅ button again.

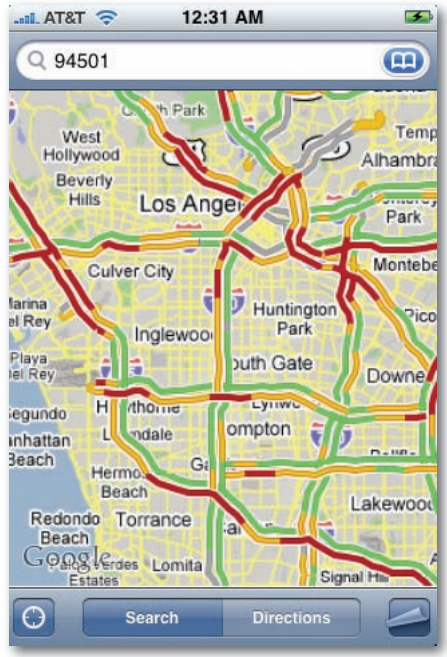
Tip If you tap the ⇅ button, you swap the Start and End points. That's a great way to find your way back after your trip.

Traffic

How's this for a cool feature? Free, real-time traffic reporting—the same information you'd have to pay Sirius XM Satellite Radio $10 a month for. Just tap (lower-right corner), and then tap Show Traffic. Now the stretches of road change color to indicate how bad the traffic is.

- **Green** means the traffic is moving at least at 50 miles an hour.
- **Yellow** indicate speeds from 25 to 50 mph.
- **Red** means the road is like a parking lot. The traffic's moving under 25 mph. Time to start up the iPod mode and entertain yourself.

If you don't see any color-coding, it's because Google doesn't have any information for those roads. Usually, the color-coding appears only on highways, and only in metropolitan areas.



Tip If you turn on Traffic on the very first screen of driving directions, the total-driving-time estimate updates itself to reflect what it knows about traffic speeds.

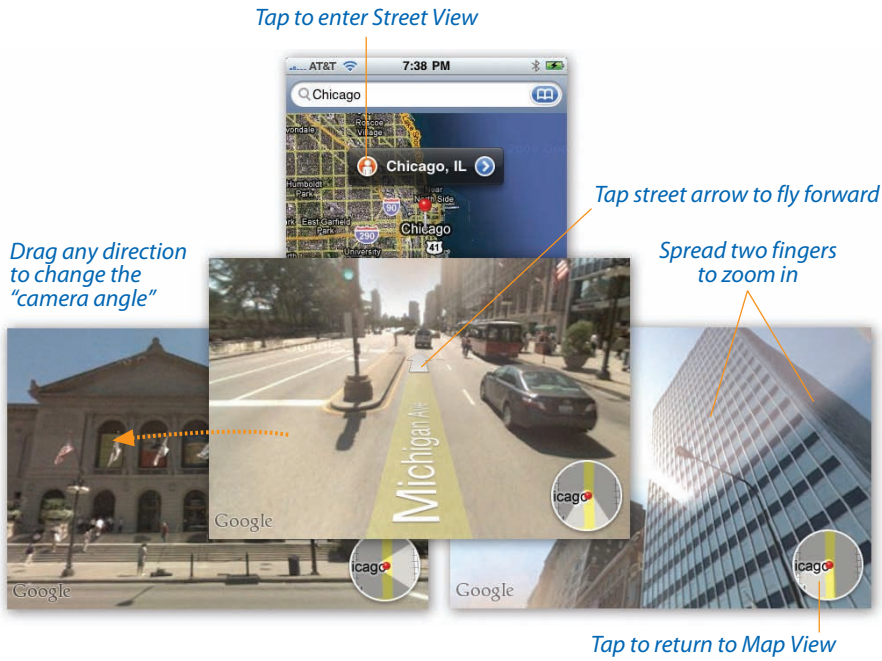
Street View

OK, if your brain isn't already boggled by the iPhone, this'll do it.

Most people think of Google Maps as an overhead view, like any other map. But these days, there's more to it than that. And it's all lurking in the little icon. Look for him on the red pushpin label after any search. He's likely to appear whenever you search for a street address in a suburb or city (or when you search for the city itself).

When you tap this guy, you open up Street View. It's a 360-degree photographic view of the entire area at street level. You can actually perform a virtual walk-through of an entire city this way! The illustration here tells you all you need to know.

What a great way to check out a neighborhood before you visit, shop—or move—there.



Weather

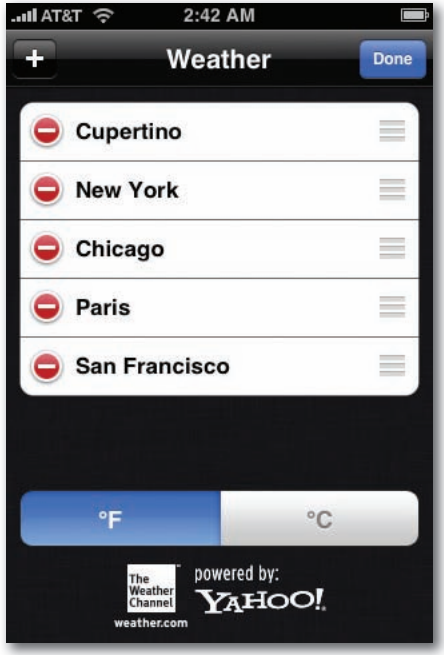
This little widget shows a handy current-conditions display for your city (or any other city) and, at your option, even offers a six-day forecast.

Before you get started, the most important step is to tap the ⓘ button at the lower-right corner. The widget flips around.

On the back panel, shown below on the right, you can delete the sample city (Cupertino, California, which is Apple's headquarters) by tapping ⊖ and then Delete. And you can add your own city, or cities of interest, by tapping +. The Add Location screen and keyboard appear so you can type your city and state or ZIP code. You can rearrange the sequence of cities by dragging the grip strips up or down.

Tip This Weather widget is world-friendly. You can type the name of any reasonably sized city on earth to find out its weather. Remember to check before you travel.

When you tap Search, you're shown a list of matching cities; tap the one whose weather you want to track. When you return to the configuration screen, you can also specify whether you prefer degrees Celsius or degrees Fahrenheit. Tap Done.



Now the front of the widget (facing page, left) displays the name of your town, today's predicted high and low, the current temperature, a six-day forecast, and a graphic representation of the sky conditions (sunny, cloudy, rainy, and so on).

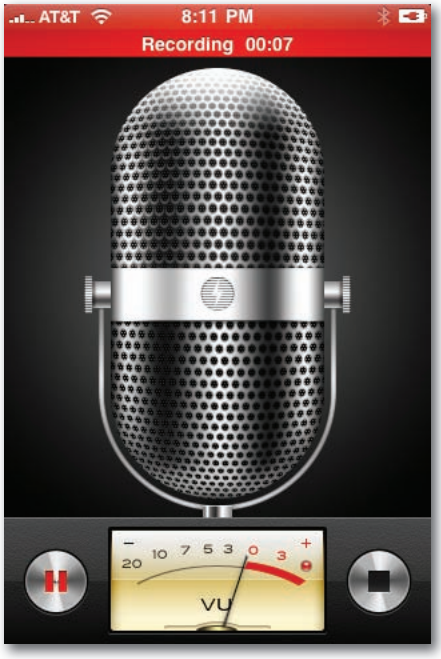
There's nothing to tap here except the Y! icon at lower left. It fires up the Safari browser, which loads itself with Yahoo's information page about that city. Depending on the city, you might see a City Guide, city news, city photos, and more.

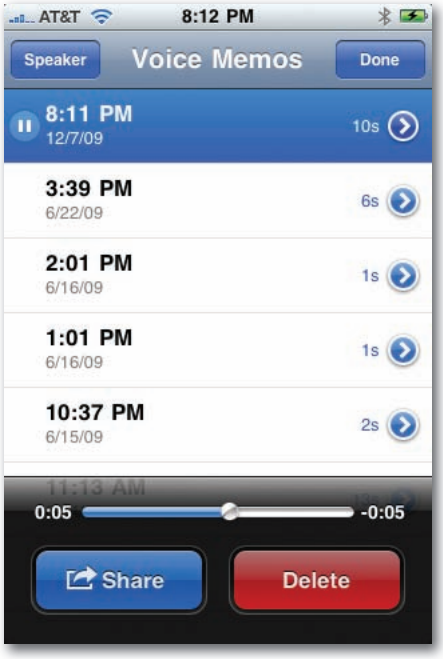
If you've added more than one city to the list, by the way, just flick your finger right or left to shuffle through the Weather screens for the different cities on your list. The tiny bullets beneath the display correspond to the number of Weather cities you've set up—and the white bold one indicates where you are in the sequence.

Voice Memos

Man, it must have been a bummer to be one of the 73,000 programmers who had written audio-recording programs for the App Store—and then watched as Apple built one right into the iPhone 3.0 software.

But anyway, here it is, ideal for recording lectures, musical performances, notes to self, and cute child utterances.





And the best part? When you sync your iPhone, all of your voice recordings get copied back to the Mac or PC automatically. You'll find them in iTunes, in a folder called Voice Memos.

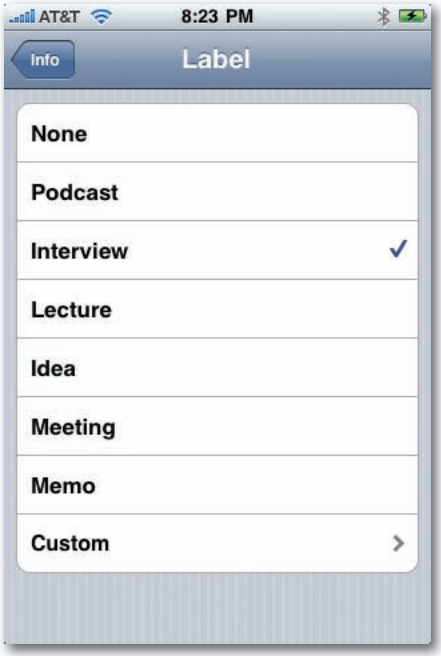
Start by doing a "testing, testing" check, and make sure the VU meter's needle is moving. (If it's not, maybe the iPhone thinks you're recording from the wrong source—a Bluetooth headset, for example.)

Tap the red Record button to start recording. You can pause at any time by pressing the same button (which now bears a pause symbol ⏸). Stop recording by tapping the Stop button (■) on the right.

To review your recordings, tap what used to be the Stop button, which now looks like a list (☰). This opens the recordings list. Tap one to hear it; tap Delete to get rid of it; tap Share to send it by email or MMS (page 84). (If the recording is too long for email or MMS, you're offered the chance to edit it, as described next.)

Editing Your Recording

You might not guess that such a tiny, self-effacing app might actually offer some basic editing functions, but it does. Tap the ⓘ button to the right of any recording to open its Info screen.



Here, you can give yourself some clue what it is by choosing a label (Podcast, Interview, and so on, shown here at left). Or tap Custom and type in any name you prefer.

If you tap Trim Memo, you get the display shown here at right. Drag the endpoints of the scroll bar inward to cut the dead air off the beginning and end, playing the sound as necessary to guide you (▶). Tap Trim Voice Memo.

Notes

The Notes app is the iPhone's answer to a word processor. It's simple in the extreme—there's no formatting, for example; let's hope you love that Marker Felt font. Still, it's nice to be able to jot down lists, reminders, and brainstorms. (You can email them to yourself when you're finished—or sync them right to your Mac or PC's email program.)

The first time you open Notes, you see what looks like a yellow, lined legal pad. Tap on the lines to make the keyboard appear so you can begin typing.

Tip Turn the iPhone! This is one of the blessed apps where you can get a much larger, widescreen keyboard by rotating the phone 90 degrees counterclockwise.

When you're finished with a note for now, tap Done. The keyboard goes away, and a + button appears at the top right. It opens a new note.

Whenever you put away the keyboard by tapping Done, a handy row of icons appears at the bottom of your Notes page. The rundown:

- ⬅, ➡. These buttons let you skip to the previous or next page without requiring a detour to the master Notes list.
- ✉. Tap to send your note by email to someone. The iPhone creates a new outgoing message, pastes the first line of the note into the Subject line, and then pastes the note's text into the body. All you have to do is address the note, edit the body if necessary, and hit Send. Afterward, the iPhone politely returns you to the note you were editing.
- 🗑. Tap to delete the current note. After you confirm your decision, the Trash's lid opens, the note folds itself up and flies in, and then the lid closes up again. Cute—real cute.

Tip **If you use Mail (on the Mac) or Outlook (on Windows), the iPhone can sync your notes back to the Mac or PC each time you sync. To set this up, see page 174.**

As you create more pages, the Notes button (top left) becomes more useful. It's your table of contents for the Notes pad. It displays the first line of typing in each note page you've created, along with the time or date you created it. (The + button appears here, too.) To open a note, tap its name.

There's a Search box hiding here, too. Drag down on the Notes list to bring the Spotlight box into view. Tap it to open the keyboard. You can now search all your notes instantly—not just their titles, but also the text inside them.

Clock

It's not just a clock—it's more like a time factory. Hiding behind this single icon on the Home screen are four programs: a world clock, an alarm clock, a stopwatch, and a countdown timer.

World Clock

When you tap World Clock on the Clock screen, you start out with only one clock, showing the current time in Apple's own Cupertino, California.

The neat part is that you can open up *several* of these clocks, and set each one up to show the time in a different city. The result looks like the row of clocks in a hotel lobby, making you look Swiss and precise.

By checking these clocks, you'll know what time it is in some remote city, so you don't wind up waking somebody up at what turns out to be 3 a.m.

To specify which city's time appears on the clock, tap the + button at the upper-right corner. The keyboard pops up so you can type the name of a major city. As you type, a scrolling list of matching city names appears above the keyboard; tap the one whose time you want to track.

As soon as you tap a city name, you return to the World Clock display. The color of the clock indicates whether it's daytime (white) or night (black). Note, too, that you can scroll the list of clocks. You're not limited to four, although only four fit on the screen at once.

Note Only the world's major cities are in the iPhone's database. If you're trying to track the time in Squirrel Cheeks, New Mexico, consider adding a major city in the same time zone instead—like Albuquerque.

To edit the list of clocks, tap Edit. Now you can delete a city clock by tapping ⊖ and then Delete, or drag clocks up or down in the list using the ☰ grip strip as a handle. Then tap Done.

Alarm

If you travel much, this feature could turn out to be one of your iPhone's most useful functions. It's reliable, it's programmable, and it even wakes ***the phone*** first, if necessary, to wake ***you***.

To set an alarm, tap Alarm at the bottom of the Clock program's screen. Tap the + button at the upper-right corner to open the Add Alarm screen.

You have several options here:

- **Repeat.** Tap to specify what days this alarm rings. You can specify, for example, Mondays, Wednesdays, and Fridays by tapping those three buttons. (Tap a day-of-the-week button again to turn off its checkmark.) Tap Back when you're done.
- **Sound.** Here's where you specify what sound you want to ring when the time comes. You can choose from any of the iPhone's 25 ringtone sounds, or any you've added yourself. Tap Back.

Tip **Alarm, Crickets, Digital, and Old Phone are the longest and highest sounds. They're the ones most likely to get your attention.**

- **Snooze.** If this option is on, then at the appointed time, the alarm message on the screen offers you a Snooze button. Tap it for 10 more minutes of sleep, at which point the iPhone tries again to get your attention.
- **Label.** Tap to give this alarm a description, like "Get dressed for wedding." That message appears on the screen when the alarm goes off.
- **Time dials.** Spin these three vertical wheels—hour, minute, AM/PM—to specify the time you want the alarm to go off.

When you finally tap Save, you return to the Alarm screen, which lists your new alarm. Just tap the On/Off switch to cancel an alarm. It stays in the list, though, so you can quickly reactivate it another day, without having to redo the whole thing. You can tap the + button to set another alarm, if you like.

Note, too, that the icon appears in the status bar at the top of the iPhone screen. That's your indicator that the alarm is set.

To delete or edit an alarm, tap Edit. Tap and then Delete to get rid of an alarm completely, or tap the alarm's name to return to the setup screen, where you can make changes to the time, name, sound, and so on.

So what happens when the alarm goes off? The iPhone wakes itself up, if it was asleep. A message appears on the screen, identifying the alarm and the time.

And, of course, the sound rings. This alarm is the one and only iPhone sound that you'll hear ***even if the silencer switch is turned on.*** Apple figures that if you've gone to the trouble of setting an alarm, you probably ***really*** want to know about it, even if you forget to turn the ringer back on.

In that case, the screen says, "slide to stop alarm."

To cut the ringing short, tap OK or Snooze. After the alarm plays (or you cut it short), its On/Off switch goes to Off (on the Alarm screen).

Tip With some planning, you can also give yourself a silent, *vibrating* alarm. It can be a subtle cue that it's time to wrap up your speech, conclude a meeting, or end a date so you can get home to watch *Lost*.

You have to set this up right, though. If you just turn on the iPhone's silencer switch (page 14), then the alarm will ring *and* vibrate. If you choose None as the alarm sound, it won't ring *or* vibrate.

Here's the trick, then: *Do* choose an alarm sound. And *don't* turn off your ringer. Instead, use the volume keys to crank the iPhone's volume all the way to zero. Now the phone vibrates at the appointed time—but it won't make a sound.

Stopwatch

You've never met a more beautiful stopwatch than this one. Tap Start to begin timing something: a runner, a train, a long-winded person who's arguing with you.

While the digits are flying by, you can tap Lap as often as you like. Each time, the list at bottom identifies how much time elapsed since the ***last*** time you tapped Lap. It's a way for you to compare, for example, how much time a runner is spending on each lap around a track.

(The tiny digits at the ***very*** top measure the ***current*** lap.)

You can do other things on the iPhone while the stopwatch is counting, by the way. In fact, the timer keeps ticking away even when the iPhone is asleep! As a result, you can time long-term events, like how long it takes an ice sculpture to melt, the time it takes for a bean seed to sprout, or the length of a Michael Bay movie.

Tap Stop to freeze the counter; tap Start to resume the timing. If you tap Reset, you reset the counter to zero and erase all the lap times.

Timer

The fourth Clock mini-app is a countdown timer. You input a starting time, and it counts down to zero.

Countdown timers are everywhere in life. They measure the time of periods in sports and games, of cooking times in the kitchen, of stunts on ***Survivor***. But on the iPhone, the timer has an especially handy function: It can turn off the music or video after a specified amount of time. In short, it's a Sleep timer that plays you to sleep, then shuts off to save power.

To set the timer, open the Clock app and then tap Timer. Spin the two dials to specify the number of hours and minutes you want to count down.

Then tap the When Timer Ends control to set up what happens when the timer reaches 0:00. Most of the options here are ringtone sounds, so you'll have an audible cue that the time's up. The top one, though, Sleep iPod, is the aforementioned sleep timer. It stops audio and video playback at the appointed time, so that you (and the iPhone) can go to sleep. Tap Set.

Finally, tap Start. Big clock digits count down toward zero. While it's in progress, you can do other things on the iPhone, change the When Timer Ends settings, or just hit Cancel to forget the whole thing.

Calculator

The iPhone wouldn't be much of a computer without a calculator, now would it? And here it is, your everyday memory calculator—with a secret twist.

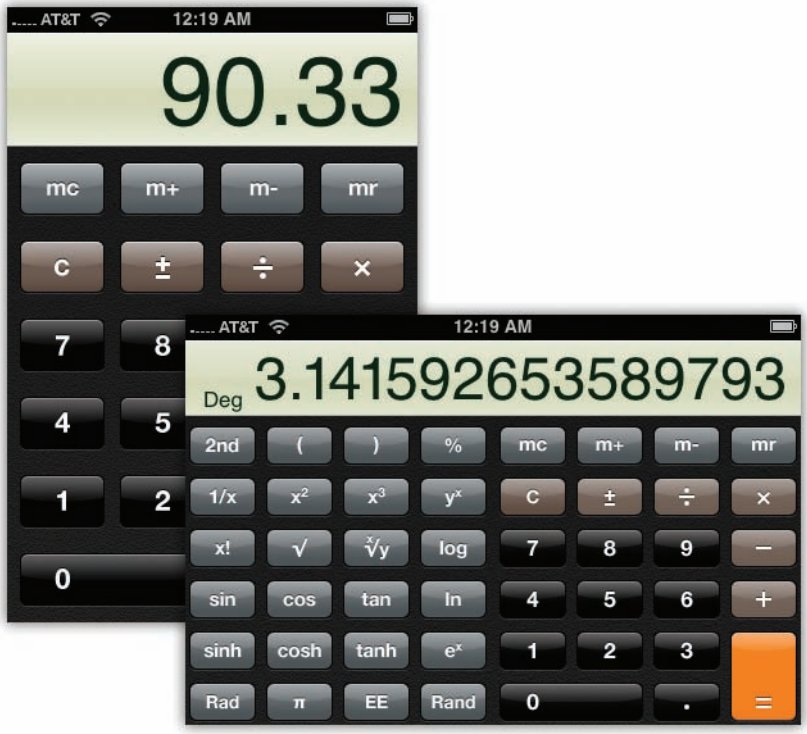
In its basic four-function mode, you can tap out equations (like *15.4 × 300 =*) to see the answer at the top. (You can ***paste*** things you've copied into here, too; just hold your finger down until the Paste button appears.)

Tip When you tap one of the operators (like ×, +, –, or ÷) it sprouts a white outline to help you remember which operation is in progress. Let's see an ordinary calculator do *that!*

The Memory function works like a short-term storage area that retains numbers temporarily, making it easier to work on complicated problems. When you tap m+, whatever number is on the screen gets added to the number already in the memory; the mr/mc button glows with a white ring to let you know you've stored something there. Press m– to ***subtract*** the currently displayed number from the number in memory.

And what ***is*** the number in memory? Press mr/mc to display it—to use it in a subsequent calculation, for example. Finally, tap mr/mc twice to clear the memory and do away with the white ring.

Now the twist: If you rotate the iPhone 90 degrees in either direction, the Calculator morphs into a full-blown HP ***scientific*** calculator, complete with trigonometry, logarithmic functions, exponents, roots beyond the square root, and so on. Go wild, ye engineers and physicists!



Compass (iPhone 3GS)

Man, you gotta hand it to Apple. What on earth can you put into your cellphone in its third annual version that it didn't have before—and that no other phone has? That's right. A compass.

There's an actual magnetometer in the iPhone 3GS—a magnetic-field sensor. When you open the Compass app, you get exactly what you'd expect: a classic Boy Scout wilderness compass that always points north.

Except it does a few things the Boy Scout compasses never did. Like displaying a digital readout of your heading (shown below, right) or displaying your precise geographical coordinates at the bottom, or offering a choice of ***true*** north (the "top" point of the Earth's rotational axis) or ***magnetic*** north (the spot traditional compasses point to, which is about 11 degrees away from true north). (Tap the ❷ to specify which north you prefer.)

The very first time you use the Compass (or anytime you're standing near something big and metal—or magnetic, like stereo speakers), you get the little message shown here at left. It's telling you to move away from the big metal thing, and to de-confuse the Compass by moving it through 3-D space in a big figure 8. (Yes, you look like a deranged person, but it's good exercise.)

Once the Compass is working, hold it roughly parallel to the ground, and then read it like…a compass.

For many people, the real power of the Compass isn't even on display here. It's when you're using the Maps program. (You can jump directly from Compass to Maps by tapping the ◎ button in the lower-left corner.)

As described on page 162, the Compass powers the map-orientation feature—the one that shows you not just where you are on the map, but which way you're facing. That's a rather critical detail when you're lost in a city, trying to find a new address, or emerging from the subway with no idea which way to walk.

But there may be even more magic yet. People who write iPhone programs can tap into the Compass's information, too, and use it in clever new ways. Here's an "augmented reality" app called Nearest Tube, for example. By using the Compass, GPS, and tilt-sensor information, it knows exactly where you are, which way you're facing, and how you're holding the phone—and so it superimposes, in real time, arrows that show you where to find the nearest London subway stop (and which line it's on—and a New York subway version is coming soon). Freaky.