

printout

Keystone MacCentral Macintosh Users Group ❖ <http://www.keystonemac.com>



iPad Pro planned for Sept. 9 debut with iPad mini 4; October pre-orders, November launch
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Apple's September 9th event is set to be one of the company's largest events in history, as is ...

Apple to Debut New Apple Watch Sport Bands at September 9 Event
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iPhone 6S release date rumours & new features: Apple event announced for 9 September
[Macworld UK](#) - 2 days ago

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Apple Events - Special Event September 2015 - Apple
www.apple.com/apple-events/september-2015/ ▼ Apple Inc. ▼
Join us here on September 9 at 10 a.m. PDT to watch the keynote live.

Why Apple's iPad, Watch may outshine iPhone at its Sept. 9 ...
fortune.com/2015/09/02/apple-ipad-smartwatch/ ▼
1 day ago - September 2, 2015, 11:16 AM EDT ... Most speculation about Apple's upcoming press event has focused on the iPhone, but for some insiders ...

Apple Likely to Introduce iPad Pro and iPad Mini 4 at ...
www.macrumors.com/2015/.../ipad-pro-ipad-mini-introducti... ▼ MacRumors ▼
Wednesday September 2, 2015 11:00 am PDT by Juli Clover ... and new Apple Watch Sport bands at its September 9 event, Apple is also likely planning to ...

iPhone 6S release date rumours & new features - News ...
www.macworld.co.uk > News > iPhone ▼
2 days ago - September 2015 has arrived, and that means that new iPhones are a matter of days away. Apple's iPhone ... Apple's 9 September launch event.

What to expect at September Apple event: iPhone 6S, Siri ...
www.marketwatch.com/.../what-to-expect-at-apples-sept-9-ev... MarketWatch ▼
What to expect at September Apple event: iPhone 6S, Siri-infused Apple TV.
By Jennifer Booton. Published: Sept 2, 2015 6:53 a.m. ET. Share ...

An Apple Event & 3D Printing

Our resident gurus will have time between Apple's September 9th event and our September 15th meeting to assimilate, consider, and digest what Apple announces. We can expect some commentary about the new Apple stuff.

Tom Owad will be on hand to demonstrate 3D printing. Should be a worthwhile meeting. Be sure to join us. ☺

Meet us at

Bethany Village Retirement Center

Education Room

5225 Wilson Lane, Mechanicsburg, PA 17055

Tuesday, September 15, 2015 6:30 p.m.

Attendance is free and open to all interested persons.

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Keystone MacCentral is a not-for-profit group of Macintosh enthusiasts who generally meet the third Tuesday of every month to exchange information, participate in question-and-answer sessions, view product demonstrations, and obtain resource materials that will help them get the most out of their computer systems. Meetings are free and open to the public. The *Keystone MacCentral printout* is the official newsletter of Keystone MacCentral and an independent publication not affiliated or otherwise associated with or sponsored or sanctioned by any for-profit organization, including Apple Inc. Copyright © 2015, Keystone MacCentral, 310 Somerset Drive, Shiresmanstown, PA 17011.

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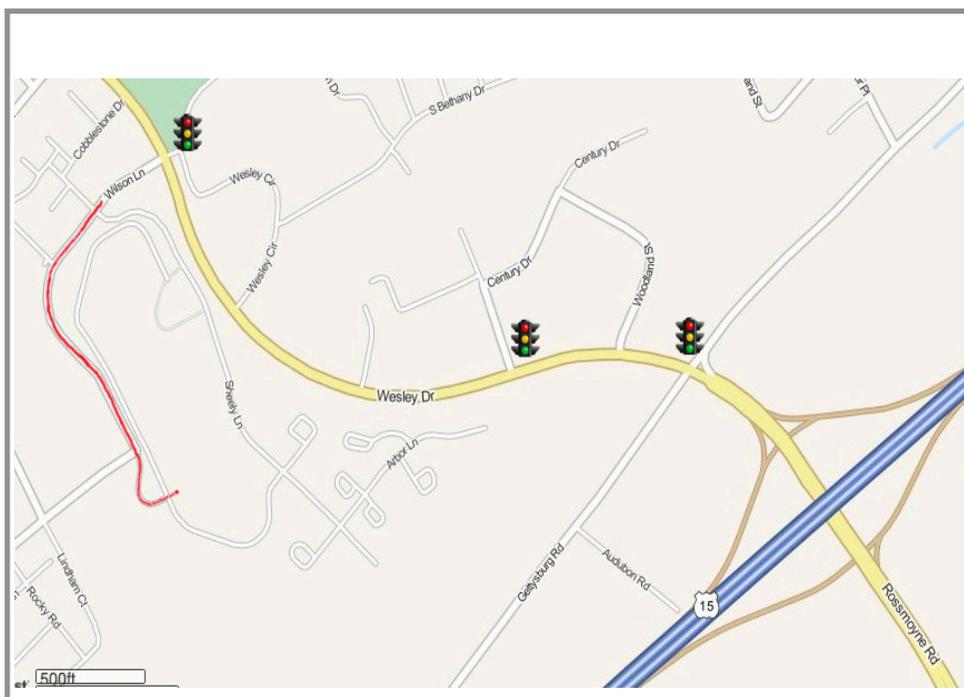
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Keystone MacCentral Minutes

May 19, 2015

Business Meeting

Eric Adams reminded members to let him know if their software downloads purchased at the auction did not work. Linda Cober announced our annual summer hiatus from meetings. We will reconvene on the third Tuesday in September.

Q&A & Comments

Gary Crossley told of his travails dealing with the Apple Store regarding problems he had with an iMac.

If you do not want Spotlight to index your external hard drives, you can stop that from happening using Spotlight Preferences.

Someone mentioned problems entering their password into 1Password. It took a number of tries for the password to be accepted. A member suggested that repairing disk permissions might help clear up that problem.

If you put the senders of any emails you want to accept into Contacts, their ensuing emails should always come through.

A member reported problems with Time Machine. When it has used about 700 MB on a 1 TB drive, he gets error messages saying that the drive is full. Someone suggested that the FAT32 file format could be causing the error messages.

Program Notes

Tom Bank encountered some initial difficulties logging into his account on the Mac Mini he had brought in for his demonstration. The hard drive the demo was on was not appearing on the Desktop. Fortunately KeyMac VP and tech guru Tom Owad was able to open the Mac Mini case with available tools and reconnect a loose wire so the program could begin.

Tom's demonstration of Artista Impresso Pro from JixiPix Software showed us some of the ways your photos can be turned into impressionist style paintings. The program can add a canvas effect and it contains many adjustable presets that can start your learning curve. You will want to freely experiment as Tom has done. He showed us some examples of his work.

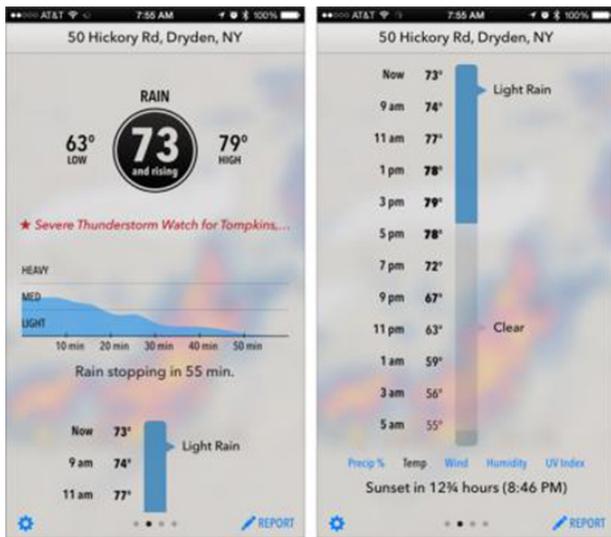
Tom's article in our June newsletter describes some of the program's features in more detail. He also has included a discount code for KeyMac members who want to purchase any JixiPix titles as well as links to videos he watched to get up to speed on the program. Please read that article for the additional information. 📖

by Adam C. Engst

Dark Sky 5 Offers Hyperlocal Weather Forecasts for iOS

For the last year or so, one of the prime spots on my iPhone's home screen has been occupied by [Dark Sky](#), a weather app that provides some smarts beyond the usual current conditions and 7-day forecasts. Most weather apps rely on the same set of data from the National Weather Service or other weather providers and differentiate themselves largely on interface. For years, my favorite of these was WeatherBug, which I reviewed back in 2010 in "[WeatherBug Elite 1.0](#)" (4 March 2010). And in fact, WeatherBug retains a spot on my iPhone, right next to Dark Sky, for reasons I'll explain shortly.

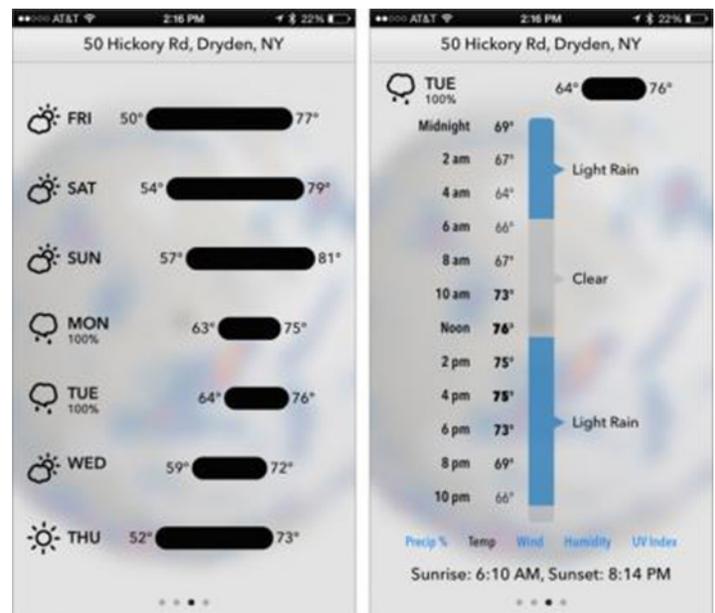
So why does Dark Sky stand out, and why it has become one of my most-used apps? On its initial screen, under the current conditions, it provides a forecast for the next hour that is usually on target. Not everyone will care about this, such as those in California or other places in the world where the weather doesn't change much. Nor will people who spend little time outside. But here in upstate New York, and speaking as someone who exercises outside most days, I care deeply about the weather. And more to the point, I care deeply what the weather is going to do soon, right where I am.



You can help out, too. In the recently released Dark Sky 5, if its conditions don't agree with what's actually going on outside, you can report your local weather back to Forecast.io to help improve its forecasts. Plus, if you're using an iPhone 6 or iPad Air 2, both of which feature a pressure sensor, a switch in Dark Sky's settings lets the app periodically send pressure data back to Forecast.io to boost forecast accuracy.

While Dark Sky's next-hour forecasts are unusual among weather apps, its 7-day forecast screen (swipe left) is less innovative, at least on its face. For each day, an icon indicates the general weather for the day, and a temperature bar shows the predicted high and low. If rain is predicted, a percentage appears under the icon. The problem with this display is that you can't tell from it if that 100 percent chance of rain for the day means it will rain all day, or that it's guaranteed to rain sporadically throughout the day.

However, tapping any row in the list expands that day's forecast to an hourly view, showing when Dark Sky thinks it will and will not rain, with tappable options to show the predicted likelihood of precipitation, temperature, wind speed and direction, humidity, and UV index. Personally, I care only about precipitation and temperature, but I could easily see sailors caring about winds, and those concerned about sun exposure checking out the UV index. Sunrise and sunset times appear at the bottom. This expanded hourly view is easily closed with another tap, or you can expand other days and see them all in one long scrollable list. It's an inspired interface, and nicely less modal than many other apps.

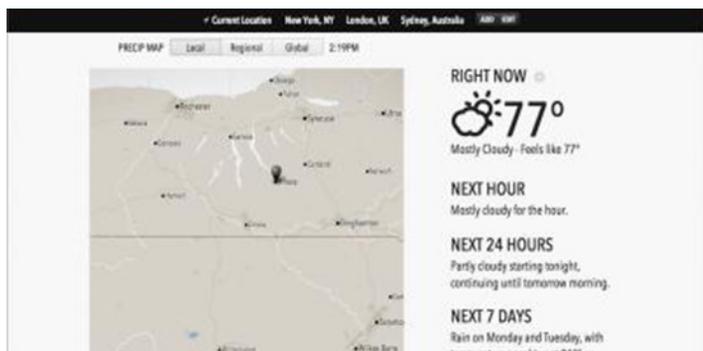


How accurate is Dark Sky's 7-day forecast? Honestly, although its broad strokes seem generally on target, it's hard to evaluate just how accurate it is (I'd love to see a weather app that reported back on its accuracy). It often doesn't quite agree with WeatherBug (which relies on its own independent weather service), but neither is shockingly good. Yes, it will probably rain next Tuesday, but will there really be an early morning rain followed by another band coming

Perhaps I want to go for a run, and it's raining. I don't mind getting wet, but I don't like to start that way, so if my check of Dark Sky's next-hour forecast tells me the rain will be passing in 10 minutes, I'll wait. Or if I'm heading out for a long ElliptiGO ride on a nice summer day, I'll check to make sure thunderstorms aren't likely to appear seemingly out of nowhere within the hour (this happens!).

Similarly useful are Dark Sky's precipitation alerts, which can be configured to alert you to rain that's going to dampen your specific location. While volunteering at an aid station during the Cayuga Trails 50 mile ultramarathon, I was mocked by my friends when I reported Dark Sky's notification that light rain would start in 8 minutes; they changed their tune after the drops started hitting our tent exactly on time. Later that day, when Tonya and I were browsing the craft booths at the Ithaca Festival, several vendors downloaded Dark Sky on the spot after seeing that it could tell them when to drop the sides of their tents. And on more than one occasion, we've packed up a picnic early due to a Dark Sky notification that hard rain would be starting in 15 minutes.

All this works because Dark Sky's near-future forecasting has proven itself quite accurate. Exactly how Dark Sky achieves this accuracy, I don't know, though I suspect it does what I previously did by feel in WeatherBug, where I used the animation of precipitation blobs in a radar map to estimate the likely destination and arrival time of the rain. More generally, Dark Sky relies on Forecast.io, a weather service from the same developers that's also used by many other weather apps.



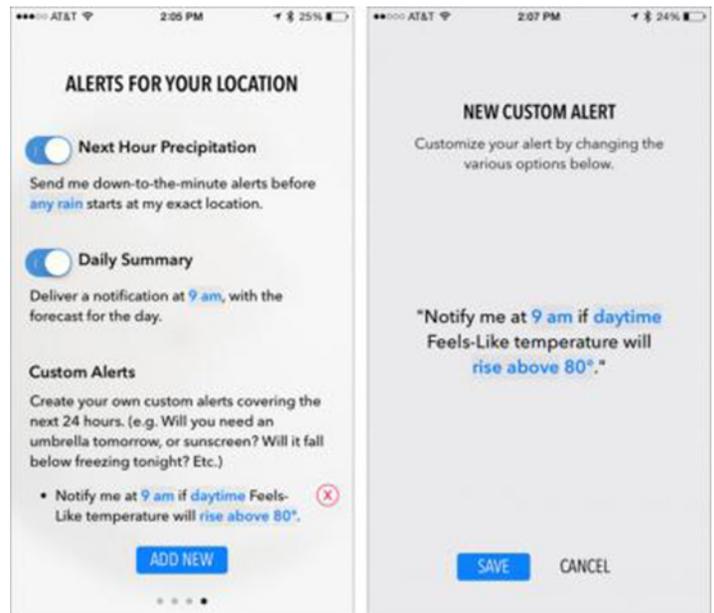
through in the mid afternoon? I wouldn't plan on it, since no forecast can yet predict exactly how fast a weather front is moving more than a few days in advance, and in this part of the world, we have what Tonya and I call "pop-up thunderstorms" — precipitation blobs on the radar that appear out of nowhere rather than marching predictably across the country, west to east.

As you can tell, I really like radar maps. I credit that to growing up on a farm, where we needed to know when we'd have 2–3 days of nice weather to cut and dry hay for baling. My parents watched a morning TV show called "A.M. Weather" every day in the summer (happily followed by reruns of "The Rocky & Bullwinkle Show"), and we listened to NOAA Weather Radio's constantly updated reports on a special weather radio throughout the day. We'd start with that morning image in our heads and then mentally update it based on the radio reports. So having an app show what we were imagining is nearly indistinguishable from magic.

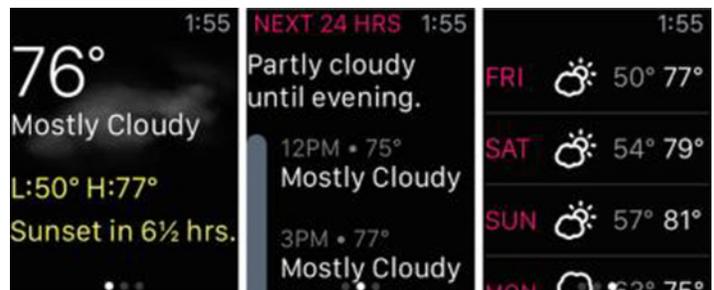
But that's the main place where Dark Sky falls down — its radar map (swipe right) is weak, at least in comparison to WeatherBug. Yes, it shows a pin at the current location, and you can pinch to zoom, and there's a triangular play button to animate the map's contents. All just like WeatherBug. But Dark Sky tries to get fancy with its map, eschewing a flat map for a spherical representation of the globe, and showing the entire planet at first. It's pretty, but annoying, since you likely don't care about the weather anywhere else in the world, and having to zoom in on your current location each usage is annoying. Plus, the globe simulation has inertia, so it continues to move after you stop scrolling. The map itself is topographical, showing hills and valleys, along with bodies of water and major roads, but it doesn't label the roads, or even towns and cities, making it harder to orient oneself. Perhaps because it's trying to do so much graphically, it's often slow to render as you zoom and pan. Sadly, the recent Dark Sky 5 release didn't improve the map at all, even as the developers tweaked and polished nearly every other aspect of the interface.

The main thing Dark Sky's map gets right is that you aren't limited to the automatic animation. Instead, you can also manually scrub through the past 3 hours of radar activity, and even 1 hour of estimated future activity. That makes it all the easier to see where a thunderstorm is heading, and if the map was more usable in general, I'd rely on it regularly.

Along with the longstanding precipitation alerts, Dark Sky 5 introduces a daily summary alert that gives you a forecast for the day, and custom alerts that can notify you at a specific time if temperature, precipitation probability, snowfall, wind speed, UV index, or humidity will hit certain levels. Then there are severe weather alerts (we've had several flash flood alerts this summer), and to ensure that rainfall alerts don't wake you up, there's even an in-app Do Not Disturb option that can have different times than the overall iOS setting.



A recent addition to Dark Sky is an Apple Watch app, complete with a glance, and while it's fine, I never find myself using it. The glance shows the current temperature and conditions, with the predicted high and low temperature and the time until sunset. That's replicated on the first screen of the actual app, swiping left once provides the hourly forecast for the rest of the day, and swiping left again shows the 7-day forecast. There's something about being able to see everything at once on the iPhone screen that makes me prefer it to the Apple Watch's tiny display.



Lastly, although Dark Sky defaults to showing you conditions and forecasts for your current location, you can add locations manually by tapping the location display at the top of the screen and entering the city's name (and state or province, if necessary). Bring up the location display again to see the forecast for where you're heading on vacation, for instance; you can swipe left in that list to delete unused cities. If you regularly want to check multiple widely separated locations, you'll probably want to use a different weather app that makes switching easier — Dark Sky is about hyperlocal forecasts, not checking the weather around the world.

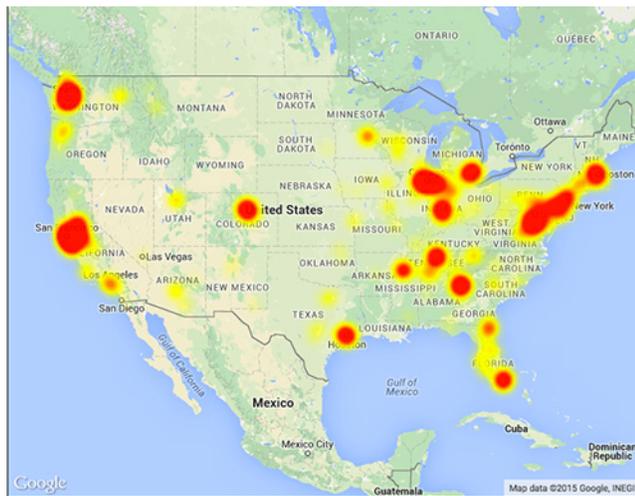
Dark Sky 5 costs \$3.99 from the App Store and works on the iPhone and iPad, although its iPad interface isn't any different from the iPhone interface apart from being presented on a larger screen. Nevertheless, if you're as weather-involved as I am, it's worth the price. 🍎

Dealing with Recent and Future Comcast Outages

My Comcast Business Internet connection has recently become increasingly flaky. I had one outage on 18 June 2015, which prompted Comcast to send an apology note. About a week later, I received an automated phone call telling me that there was a planned maintenance outage coming in the wee hours of the morning. But then on 12 July 2015, I had another outage that lasted from about 11 AM to 3 PM. For most people, these outages are merely inconvenient, but when you work remotely, they throw a wrench into your workday.



I'm not alone in my frustration. The [downdetector.com Comcast outage map](#) looks like a nuclear war broke out over the United States, with outages spanning from Boston down to Virginia, with hotspots in and around Tennessee, stretching to the Florida panhandle, and then skipping across the country into Colorado, large parts of California, and the Pacific Northwest.



I've actually been fairly lucky — many of the people I follow on Twitter have had much worse outages. So what is going on? Unfortunately, the answer may not be simple.

Scanning the headlines, I discovered a [Jersey Shore outage](#) in June that Comcast blamed on software problems. Another June outage was caused by [DNS failures](#). Another [West Coast outage](#) in May was pinned on a boring rig accidentally cutting fiber lines. An [earlier May outage](#) affected Washington State, though a cause was not disclosed.

I spoke to Comcast's Dave McGuire about the outages. He insisted that the incidents were isolated and coincidental. "We take reliability extremely seriously. While all networks experience unforeseen issues, we have worked hard and invested to build a network that is robust, redundant, and self healing. When we do experience issues, we work quickly not just to bring service back online, but also to understand the causes and make sure they don't happen again," he said.

If you do have an outage, here's what you can do to diagnose it and get back online as soon as possible.

Troubleshooting Your Connection — You're working away, and all of a sudden, a Web site won't load. Before you call your ISP, it's important to determine the source of the malfunction. Here are the common causes:

- * The Web server you're trying to contact is down.
- * Your computer needs to be rebooted.
- * Your modem or router is acting up.
- * There is a DNS failure at some point.
- * Your ISP is suffering from an outage.

First, be sure that you have a solid Wi-Fi signal or a wired connection and try visiting [Google](#) in a Web browser. If that doesn't work, try [Yahoo](#) or [Apple](#) or [Amazon](#) — it's nearly inconceivable that these large sites would be down at all, much less at the same time. If the large sites load, the problem is likely the particular server you were trying to contact being down — it happens, and the only solution is to wait until it returns.

On the other hand, if you have trouble accessing the big sites, try them again on another Mac, iPhone, or iPad. If pages load on the second device, reboot the first device, since it's the problem.

If Web pages won't load on your secondary device, you have to check the next link in the chain: your cable/DSL modem and your router (which are sometimes the same device). The easy way to test them is to unplug both, wait for 10–15 seconds, and then plug in first the modem and

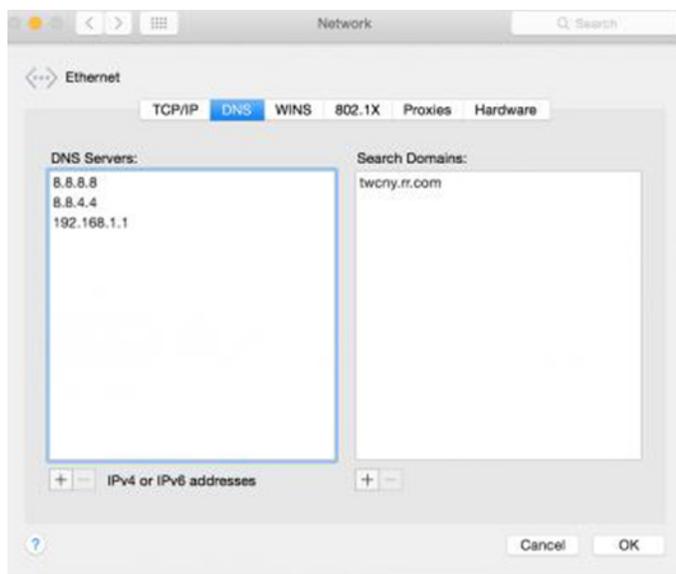
then the router. Give everything a few minutes to come back online, and then try loading a Web page again.

If you still can't make a connection, the problem is almost certainly an issue at the ISP's end. But if you don't mind getting a bit technical, there's one more workaround you can try.

Sometimes an ISP will appear to be offline, when the problem is actually limited to its DNS server. DNS, or domain name service, translates human-readable Internet addresses like tidbits.com into computer-readable IP addresses like 173.255.250.214. If a DNS server is down, it may seem as though your entire Internet connection is down. To see if that's the case, try visiting <http://173.194.115.78/> in your Web browser. That's currently a direct IP address for Google, and if it loads, you know the problem is with DNS (note that the IP address may change in the future).

The solution in that case is to change your preferred DNS servers on your router or computer — the former will affect the entire network while the latter will be localized to just your computer. [Google Public DNS](#) is one alternative, as is [OpenDNS](#) (soon to be [acquired by Cisco](#)). However, if you change your DNS server settings, be aware that it could have a negative impact on video streaming, as many ISPs offload high-bandwidth content to a content delivery network (CDN), and if you're not using the ISP's DNS servers, you may not get a nearby streaming server.

To change DNS servers on the Mac, open Network pane of System Preferences, and from the sidebar, choose your preferred method of connecting to the Internet: Ethernet or Wi-Fi. Click the Advanced button, and select the DNS tab. In the list of DNS Servers, there should already be one or more IP addresses, with one mapping to your router, which usually acts as a DNS gateway. Click plus (+), and you can add your preferred DNS servers (the previously entered ones may vanish). Feel free to add several servers, in order of preference. If the top-most DNS server fails to respond, your Mac will continue down the line until it finds one that works. You can also drag items in the list to rearrange the order.



Later on, if you find that having alternative DNS servers is causing problems, you can return to that screen, select the DNS servers and click minus (-) to delete them. If you delete all of them, your Mac reverts to its auto-detected defaults.

Here's a bonus tip: the free [namebench](#) utility will compare your current DNS providers against others, and let you know which ones are the fastest (be aware that namebench takes quite a while to run). Faster DNS can mean faster Web page loading, but remember that not using your ISP's DNS server could hamper streaming video performance, due to the aforementioned CDNs.

Once you've ruled out DNS failure, the only remaining logical conclusion is that your ISP is suffering some sort of outage. If you have cable Internet, it may be worth checking to see if you still have TV service, though the two aren't necessarily related. A cable cut would affect both, but a dead router high up in the ISP's datacenter might affect only Internet service.

For Comcast customers, the good news is that if you're experiencing a known network outage, a quick call to 1-800-COMCAST (residential) or 1-800-391-3000 (business) will provide an automated message letting you know when service should be restored. Otherwise, you may wish to let technical support know about the outage. Another outlet, if you have a backup Internet connection (via your iPhone's cellular data connection, for instance), is to reach out to [@comcastcares](#) on Twitter. I've found Comcast's Twitter team to be more responsive than its phone support crew. And if you do have a mobile Internet connection and your data plan supports it, you can tether your Mac to your iPhone and keep working; Apple's article, "[Use Continuity to connect your iPhone, iPad, iPod touch, and Mac](#)" explains how. You'll probably want to shut down data-intensive services like Dropbox, CrashPlan, and iCloud Photo Library while tethered — check out [Trip Mode](#) if this is a common need.

Regardless of your ISP, be sure to have a tech support contact number available in an offline location. You don't want to be stuck needing to search the Internet for the number when you have no connection! 🗑️



Five More Apple Music Tips

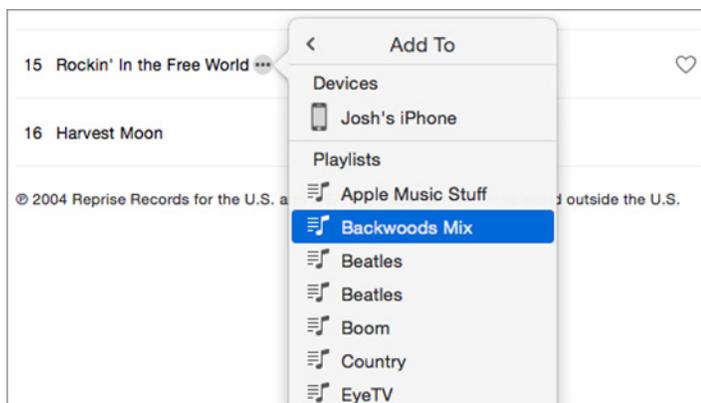
In “A Tour of Apple Music” (2 July 2015), Managing Editor Josh Centers gave an overview of the new Apple Music service and offered some tips on how to use it. Now we have even more tips to share with you.

Making and Sharing Playlists — There has been a lot of confusion as to how Apple Music works with playlists. It’s actually quite simple... at least as simple as iTunes gets.

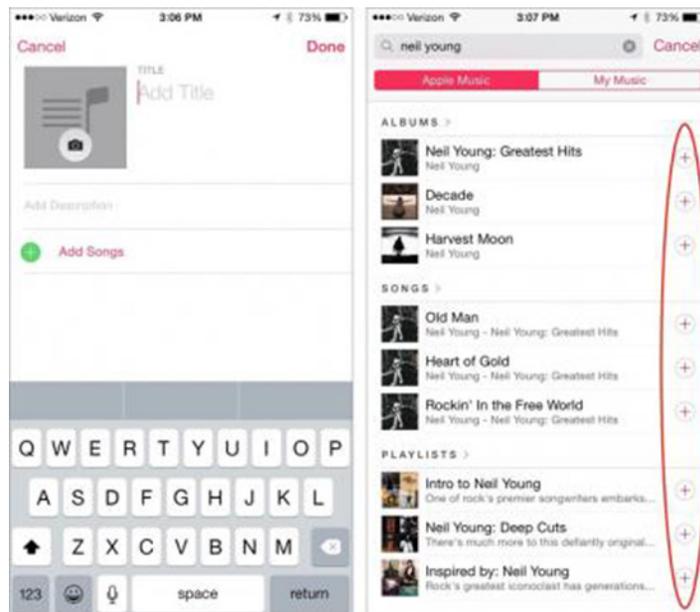
To create a playlist in iTunes, click the Music icon in the top left, and then Playlists in the center. Then, at the bottom of the left sidebar, click the plus ⊕ icon and choose New Playlist. It’s the same way playlists have always worked in iTunes 12.

The catch is that if you want to add a song from Apple Music that you haven’t already added to My Music, you can’t do so directly from the Playlists view. Instead, first find the song you want to add in Apple Music. Searching is the main way to do that, but if you hear a song playing in Apple Music Radio, choose Controls > Go to Current Song (Command-L) to jump to it quickly.

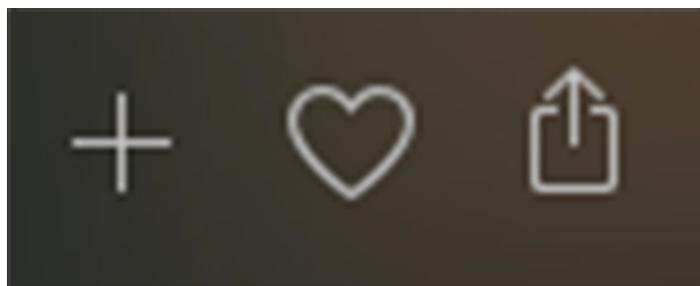
Once you can see the song, hover your cursor over it until the More... button appears, click it, click Add To, and then click the playlist you want to add it to. (That click on Add To is necessary — these things look like hierarchical menus, but aren’t, so your playlists won’t appear automatically when you hover over Add To like a normal menu would.)



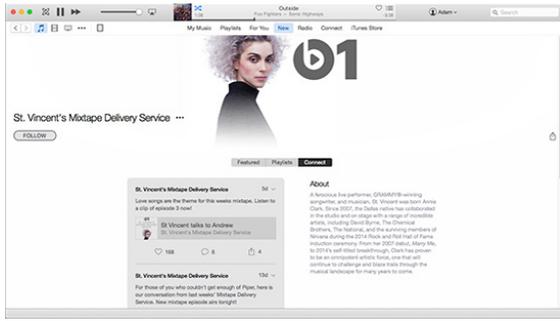
On iOS, things are a bit more straightforward. Open Music, go to the My Music tab, and tap the Playlists tab at the top. To add a playlist, tap New. You’re prompted to add songs immediately. Unlike in iTunes, you can search for and add songs from both your own music and Apple Music directly by tapping the ⊕ next to a song or album.



With Apple Music, you can now share your playlists with others. In either iTunes or Music, find the sharing icon, tap it, and select how you’d like to share your playlist.



What if your playlist includes music that isn’t available on Apple Music? Things can get strange here. First off, if you try to add a song that’s not in your iCloud Music Library, iTunes tells you that iCloud Music Library playlists (which you probably didn’t know you were creating) can contain only music from iCloud Music Library, and if you continue, the playlist will exist only on your computer. Second, if your playlist includes songs that aren’t in Apple Music, but that you have uploaded to your iCloud Music Library, they’ll appear in the playlist for you just fine. But if you try to share that playlist, the songs not in Apple Music disappear silently. Third and finally, if you share a playlist containing only songs not in Apple Music, iTunes freaks. Josh created a playlist of songs by The Beatles, which aren’t available on Apple Music, and then shared the playlist link with Adam. The shared playlist had only one track, “I’ll Keep You Satisfied” by The Dakotas and Billy J. Kramer, which, when played, was actually “I Wanna Hold Your Hand” by The Beatles. Weird...



Note that you can't remove songs from the Songs list, but it holds only five at a time, so the list won't grow indefinitely. Even if you remove the download for an Apple Music song in the Songs list, it will remain listed, and if you preview it from that list or use it in an alarm, it will download again.

Sound Effects — Apple Music has oodles of albums containing nothing but sound effects, such as [300 Sound Effects](#). You never know when you'll need to play a thunderclap, the sound of a jackhammer, or a crowd cheering, and Apple Music likely has an effect for anything you can imagine wanting to play.

To add to the fun, you can ask Siri to play sound effects by track title, such as the following:

- Play a drumroll
- Play a sad trombone
- Play bees buzzing
- Play a burp sound
- Play a telephone ringing

While there are undoubtedly many practical uses for these sound effects — being able to combine Apple Music sound effects with alarms could make for some amusing pranks. Not that we'd encourage such childish behavior, of course. 🗑️

Set An Apple Music Alarm — This may seem obvious, but maybe you haven't considered it yet. By saving an Apple Music track to play offline, you can assign it to an alarm. Here's how to do that on an iPhone:

- Search for a song in Apple Music.
- Tap the ellipsis (...) next to the song.
- Tap Make Available Offline.
- Open Clock and either create an alarm or edit an existing one.
- Tap Sound.
- Tap Pick a Song.
- Search for the song you want to use for the alarm.
- Tap the song.

by Josh Centers

How to Replace a Cracked iPhone 5c Screen with Screasy

My wife's iPhone 5c is only a little over a year old, but it's already a wreck. We tried protecting it from our toddler with a Lifeproof case, but since our Amazon-branded Lightning cables weren't compatible with the case, my wife would often remove it to charge her iPhone. One thing led to another, and before long, she had a screen that was not only cracked, but had a chunk missing from one corner.



As a tech writer, I get tons of press releases from companies, many of which are completely uninteresting (no, sorry, I don't cover "past life regression therapy," self-help books for teenagers, or anything to do with the zodiac). But I received one that caught my eye from Corey Schard, co-founder of [Screasy](#), which sells all-in-one screen replacement kits for every iPhone model from the iPhone 5 to the iPhone 6 Plus. I told him about my wife's iPhone, and he graciously agreed to send me a kit to test it out. (Besides, I wanted to see how things had changed in the six years since Jeff Carlson wrote "[How to Replace a Cracked iPhone 3G Screen](#)," 30 June 2009.)

Getting Started with the Screasy Kit — Screasy claims that most repairs are completed within 15 minutes or less. I don't doubt that, because if everything had gone well, that's all the time I would have needed. Unfortunately, not everything went according to plan, and amusingly, in roughly the same way Jeff had problems back in 2009 with a completely different iPhone.

But before we get to that, here's what the kit includes:

- 1 replacement screen, with front-facing camera and Home button

- 1 #000 Phillips screwdriver
- 1 pentalobe screwdriver
- 1 flat-head screwdriver
- 2 plastic spudgers
- 1 iSesamo opening tool (for our review, see [“iSesamo: Building a Better Spudger,”](#) 16 January 2012)

In theory, the Screasy kit includes everything you need to replace the screen. However, I recommend a few more things: a good pair of tweezers, a powerful flashlight or headlamp (I used this [\\$4.99 UltraFire LED flashlight](#)), and maybe another #000 Phillips screwdriver for stubborn screws. Also, you’ll want something that can keep the tiny screws from getting lost. Fortunately, I had recently installed Allure flooring in our bathroom, so I had some scrap pieces laying around — the adhesive strip was a perfect storage medium. You could instead use double-sided tape or a segmented container, but you want something that can hold the screws in a set pattern.

Before you start, enable AssistiveTouch in Settings > General > Accessibility. As I explained in [“Work Around a Broken iPhone Button with AssistiveTouch”](#) (24 July 2013), this feature is handy if a button on your iPhone stops working, and in this case, it saved me a lot of trouble later.

Screasy also offers [video instructions](#). However, there are lots of little details they don’t mention, so I recommend also studying the screen-replacement instructions for your iPhone from [iFixit](#).

Disassembling the iPhone 5c — First, power off your iPhone 5c by holding the Sleep/Wake button, and then sliding the Slide to Power Off switch to the right.

Next, remove the two pentalobe screws on the bottom of the iPhone, which are on each side of the Lightning connector. Although the included pentalobe screwdriver is magnetized, you may have to pull the screws out with your thumbnails or tweezers.

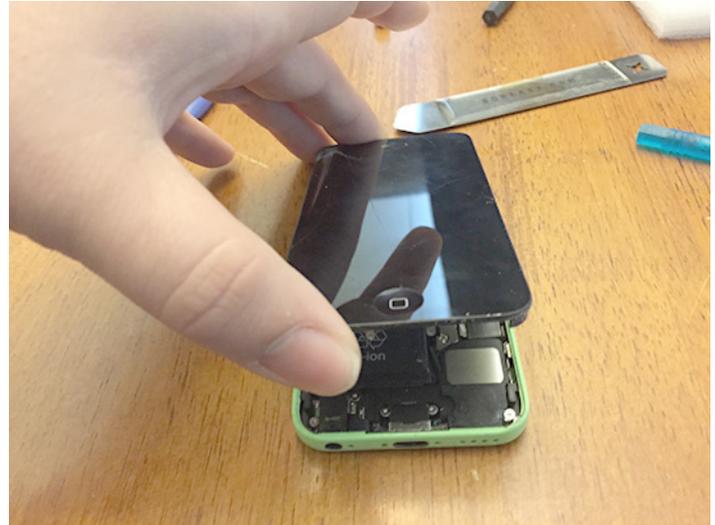


Unfortunately, I wasn’t careful enough, as one of the screws popped out of my fingernails and went flying onto the floor. Finding a dark screw on a dark floor was

not easy, and the flashlight was especially handy. After a few minutes of careful searching — a magnet might have helped too — I recovered the screw.

Next, you need to carefully separate the screen from the case. Take the iSesamo tool, and gently insert the pointy end in the gap between the bottom of the screen and the casing. Pry up gently, and then steadily work around the screen, prying until you’ve freed it.

You now need to lift the screen up from the bottom. Don’t raise it more than 90 degrees from the case, as that could damage the ribbon cable that attaches the top of the screen to the body of the iPhone.



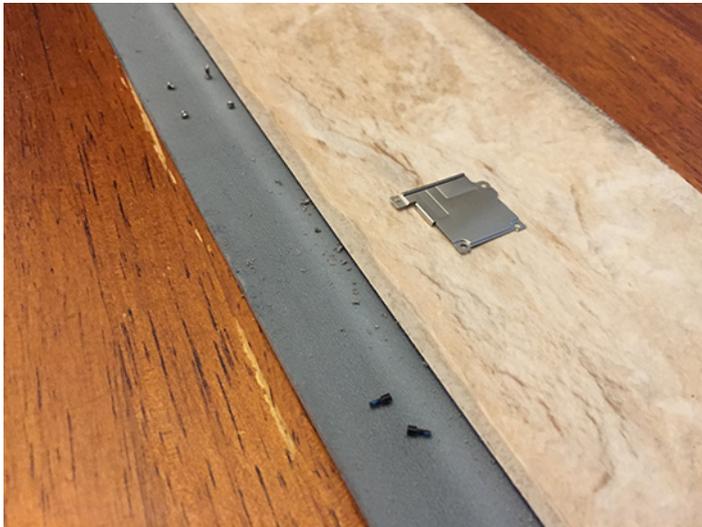
Now look inside your iPhone. There are two spots to be aware of. The first is a metal square in the bottom right — this is magnetized and Screasy recommends using it to magnetize your Phillips screwdriver, by gently rubbing the tip over the square (the square is visible in the above picture). If you’re uncomfortable with that, another magnet of sufficient strength should work. The second spot is where the real work will happen: in the upper right there is a metal shield with four screws.



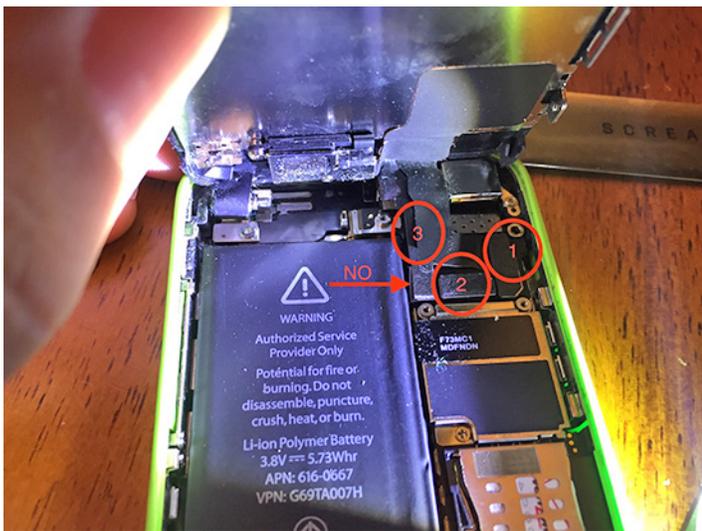
Begin removing the screws from the shield, but be aware that the screws are all different lengths, so you need to

keep them arranged in the proper order once they're out. I recommend starting with the upper-left screw and working counter-clockwise. The upper-right screw, which is the longest, is not magnetized, so it can be trickier to remove. Use tweezers if necessary.

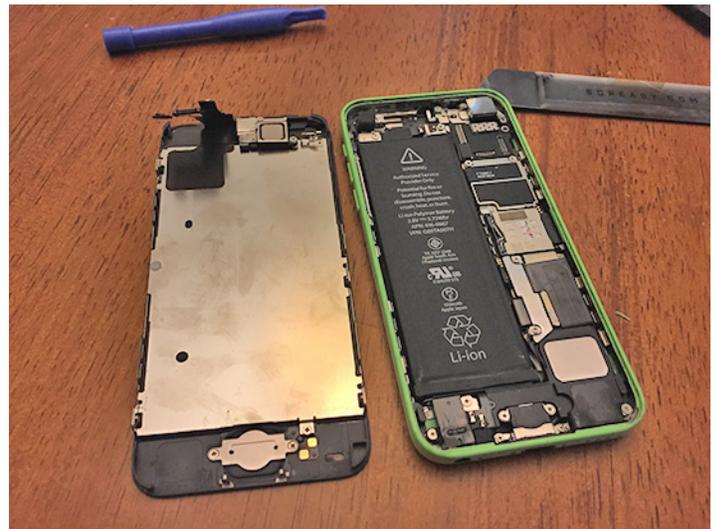
With the screws removed, you should be able to lift the shield out of the iPhone and set it aside. Be sure to maintain its original orientation.



Now you're looking at the connectors that attach the screen to the body of the iPhone — they're small black rectangles. There are three that connect to the iPhone, and the ribbons overlap the connectors, so you have to remove them in order. Note that there is a fourth connector, on the bottom left, that attaches to the battery — you don't want to remove it.



Take the plastic spudger and use the hooked end to gently pry the connectors up, one at a time, starting with the right-most connector, then the middle connector, and finally the upper-left connector, making sure to skip the battery connector. After the third is free, your display will be completely disconnected from the iPhone. The easy part is over. Yes, that's the easy part.



Reassembling the iPhone 5c — Now, remove the new display from its styrofoam container, making sure to pull away any adhesive residue that may be left behind.

Now you're going to reverse the previous instructions. Begin by attaching the upper-left ribbon connector, followed by the middle, and finally the right-hand connector. It can be tricky to line these up. What I did was place my finger over the connector and sort of rub it into place, pressing down gently until I felt a click. Once the connector is engaged, gently apply pressure to all parts of the connector to ensure a full connection.

Then you need to replace the shield and screw it back into place. Start with the magnetic screws, attaching them to the magnetized Phillips screwdriver head and carefully inserting them into place. For the non-magnetic upper-right screw, put the head into your tweezers and slip it into the hole, and then screw it down. If you drop a screw inside the chassis, pick up both halves of the iPhone, hold them upside down over the table, and gently shake them to drop the screw. A loose screw inside the case could cause an electrical short.

With the shield back in place, it's time to test things out before you finish reassembling the iPhone. Carefully lower the screen onto the body, so as to protect the innards, and then press the Sleep / Wake button to turn the iPhone on. Give it time to boot up, and ensure that the screen looks good, the touchscreen works, the front-facing camera works, and the front speaker plays audio. This is where AssistiveTouch comes in handy, since you can tap the on-screen button to activate the Home button while it's disconnected.



Your Home button won't work at this point, because when you press it on the front half of the iPhone, it pushes contacts onto two gold pins on the back half. If you want to make sure that the Home button is connected upstream, you can bridge these two gold pins with a screwdriver — the iPhone should act as if you pressed the Home button.

If you see lines on your screen or if something doesn't work, turn the iPhone back off, remove the shield, pull up the connectors, and reseat them.

As you fumble around with your iPhone, you may wonder why the shield is necessary. It protects the screen from electronic interference from other components. Without it, you'll see lines on the screen, which could lead you to think that something isn't connected properly.

When you're satisfied that everything is working, it's time to reassemble the iPhone. Starting at the top, gently press the screen back into the case. Be very careful here, because if you're not, you could pop one of the ribbon connectors loose, or worse, damage it.

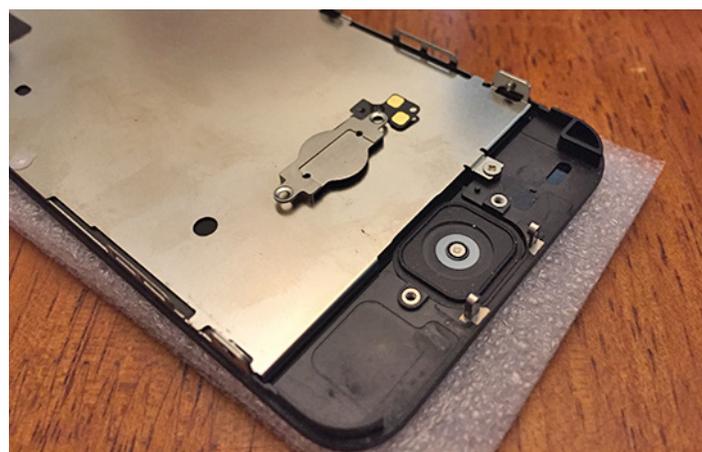
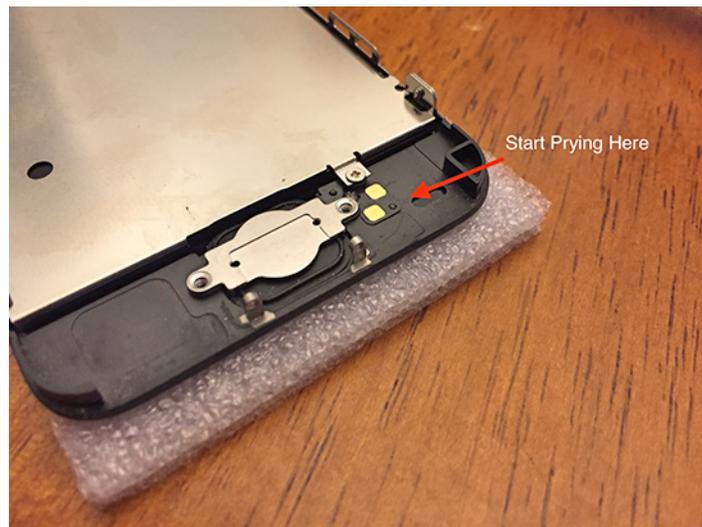
Once the screen is back inside the case and seated properly, before replacing the pentalobe screws, test the Home button to see if it works. If yours does, great, reinstall those pentalobe screws and you're done. But my Home button didn't, so I had some more work to do.

Fixing the Home Button — I knew that the ribbon cables were attached correctly, because I could bridge the two gold pins to activate the Home button functionality. I decided to contact Screasy to see what they would recommend.

Screasy's Corey Schard responded promptly with two options: replace the Home button bracket with the one from the original screen, or send the screen back for a replacement. I decided to try the former, given that the Home button on the original screen still worked fine.

To remove the Home button bracket from the original display assembly, I first had to remove the two Phillips screws holding it in. The right-hand one came out with no problem, but the left-hand one wouldn't budge. Thankfully, I had a slightly larger #000 Phillips screwdriver that managed to break it free.

Next, I had to pry the Home button cable loose from the display assembly. Screasy recommended using the flat-head screwdriver for this, but I found that the iSesamo worked better. I gently slid the iSesamo's tip under the edge of the cable and carefully pried it from the assembly. Once that was done, the bracket was free.



I then had to repeat the process with the new display to remove the bum bracket. The recommended approach would be to disconnect the display completely, but I just flipped the whole thing over and held the iPhone body in my hand as I worked on the back of the new display assembly.

Once the old Home button bracket was off the new display, I slipped the new one in and screwed it into place. Unfortunately, I dropped one of the screws while I was doing this, and I had only one hand free, as the other was holding the back of the iPhone. Luckily, I had two spare screws from the original display that I had attached to my adhesive strip. I picked another one up with the magnetized screwdriver and dropped it into the hole.

This time, when I put the two halves back together — Siri, play a drumroll — I had a fully functioning iPhone 5c again! A few quick turns on the pentalobe screws and I was done.

Recommendations — Would I recommend that you attempt to replace your iPhone screen? No. I have decades of experience building and modifying electronics, assembling computers, and even cracking open an iPhone or two, but even with the best preparations, this project was challenging for me. You'd likely be better off taking it to a professional repairer or an Apple Store. Adam Engst came to much the same conclusion when he replaced the battery in his iPhone 5 (see "[Replace a Dying iPhone 5 Battery](#)," 5

March 2014). Repairing modern-day iPhones isn't for the faint-of-heart.

The Apple Store charges \$99–129 for a screen replacement, or just \$49–79 if you have AppleCare+, and as [former Apple Genius Scotty Loveless points out](#), Apple will not touch a device that you've repaired yourself. The extra cost for labor and peace of mind is well worth it. (However, I will point out that my iPhone 5's rear camera stopped working shortly after the Genius Bar replaced the battery — whether that was consequence or coincidence, I can't say. See ["Replace a Dying iPhone 5 Battery: Take Two,"](#) 28 August 2014, for my other tale of iPhone-related woe.)

But if you insist on replacing your own screen, would I recommend the Screasy kit? Yes, with some caveats. Their iPhone 5c screen repair kit costs \$64.99, about \$5 less than a comparable kit from iFixit, and with more tools than the iFixit kit, including the iSesamo, which is about a \$10 value on its own. So if an Apple Store isn't handy, or you want the least expensive fix, the Screasy kit is worthwhile.

by Tim Sullivan

Rumors and Reality

Around Apple

- Apple, over the last few years, has been working toward becoming a map provider. Maps have moved well beyond the printed, folded paper maps. Currently the electronic versions can offer street views, mass transit directions and times, walking directions, 3D Flyover mode, and satellite views.

Apparently Apple is exploring new ways to present Street View imagery. The feeling is that Google's version is not very intuitive. Also look for for new Augmented Reality and Browse Around Me features for the iPhone and iPad Maps applications.

But Apple tripped a bit a few years back, and their version of Maps was not well received. The initial data errors reported by Apple Maps users were in part the result of Apple aggregating several data sources, instead of building its own singular database as rivals Google, MapQuest, and Nokia HERE have done for years. They have been relying on Tom Tom to provide their database. Apple is planning to shift to an in-house base map database by 2017.

BTW Apple is also developing an indoor mapping features that should do for the indoors what Maps does for the outdoors. The company has let loose autonomous robots with iBeacon sensors, similar in size to iRobot's Roomba vacuum cleaners, to collect data for its indoor mapping project.

- Catching up with Siri
- Check Twitter: "What is (*insert Twitter name here*) saying?"

As for the screen itself, the quality is outstanding. It's virtually indistinguishable from the original. Many after-market screen replacements are inferior, with unwanted tints and telltale digitizer grids. As far as screen quality goes, Screasy offers a high-end replacement.

But I was disappointed that Screasy's Home button assembly did not work. I was also unhappy with the Phillips screwdriver included, as the head was not pre-magnetized and it didn't offer enough torque to remove one of the Home button bracket screws. However, Screasy earned points back with responsive support that helped me resolve my Home button issue quickly.

That said, my wife now has a good-as-new iPhone, protected by a new OtterBox case that accommodates our third-party cables and that will hopefully stand up to toddler abuse. So even though I'm not sure I ever want to go through this again, it was worth it in the end. We'll be purchasing AppleCare+ with her next iPhone. 🍷

- Open the camera app: "Take a Selfie" (It will open whichever camera orientation that was last used.)
- Get directions: "Get directions to (*an address*)"
- Name that tune: "What song is this?"
- Get movie plot: "What is (*movie name*)"
- Where is that plane flying to: "What planes are flying overhead?"

- El Capitan

- Disk permissions: I'm not sure what this means to me, but next version of OS X El Capitan uses something called "System Integrity Protection" to prevent the alteration of critical system files. There will be no "Repair Disk Permissions" to be found, not even in Disk Utility. The need to occasionally repair system permissions is no longer necessary because they're automatically protected in OS X 10.11.

If the El Capitan installer finds unauthorized files in certain protected directories that don't belong there anymore, perhaps from a long forgotten installation, it will delete them. This could lead to some of your important software not operating as expected—or at all.

Migration of existing applications may be problematical. It's probably a smart idea to do a clean install of El Capitan and then reinstall just the software, updated for El Capitan, that you need.

- Lost your cursor? Shake your mouse. This will magnify the cursor, easily revealing its location.

– The menu bar, like the Dock, can be hidden. Check the box in System Preferences > General to activate this feature. To see the menu bar, slide the cursor to the top of the display and the Menu bar springs back into view.

– Some web page has fired up a video with really annoying message or music. In the new Safari any tab that is playing audio will have a sound icon in the tab itself. Just click to kill the audio. Or click the blue icon in the address bar. You don't even have to search the tabs.

Flash storage, we knew ye well. Intel has developed a storage technology that is 1,000 times faster than the current-generation NAND flash chips upon which modern solid-state drives are built. Look for its introduction next year. The technology is called 3D XPoint (that's "crosspoint"). Besides being fast, it is 1,000 times more durable, giving it a much longer lifespan than current NAND storage.

A lingering concern that I have about my iOS devices is maintenance. Stuff goes in. It probably stays "in" forever. I did find an article recently which, when I finally take advantage of it, will help manage the files and space on my iPhone and iPad. Check out [How-To: Clean your iOS device](#) with free downloads, recovering lost space. I have made a copy of the article to keep on my computer. BTW there are some interesting comments at the end of the article. Good reading with some additional hints.

We mentioned awhile back that third-party sites would gold plate your Apple Watch (for a lot of money.) If you have a stainless steel Apple Watch, [The Midas Touch Kickstarter](#) project can provide, for about \$100, a DIY kit. Should be enough gold to touch up your watch later on as needed.

Watch the [video](#) to see if this is something you want to try.

What a concept! Expensive printers and cheap ink. Epson has introduced EcoTank series of printers. The ink cartridges have been replaced by refillable tubs that can hold, maybe, years worth of ink. You fill up a four-chambered reservoir with ink from plastic containers included with the printer. When you need more ink, Epson will sell you a whole set of replacement canisters for \$52. That same amount of Epson ink, in XL cartridges, would cost more than 10 times as much. Here's the math: If you play by Epson's rules, a \$100 printer using Epson ink could cost

you as much as \$800 over two years, so the EcoTank model is just half that. But paying full price for ink cartridges is a broken concept. If you only buy off-brand ink for your \$100 printer, your total cost, even after two years, is less than \$200.



ET-2550 Product Image



Intuit will be selling Quicken.

The new iPhones are coming! Going to sell your current iPhone? Considering the intimate relationship between your iPhone, your data, iCloud, and your computer, you should really consider preparing your iPhone for sale or trade-in. Check out [How-To: Safely prepare + wipe your iPhone](#) for resale or trade-in. There is a lot to do before you set it free. 🗑️



Software Review

Apple Updates

MacBook Pro Flash Storage Firmware Update 1.0

Jul 22, 2015 – 1.9 MB

System Requirements

- MacBook Pro (Retina, 15-inch, mid 2015)

This update is recommended for MacBook Pro (Retina, 15-inch, mid 2015) models. This update addresses a storage firmware issue that, in rare cases, may cause data corruption.

Java for OS X 2015-001

Jul 22, 2015 – 63.98 MB

Java for OS X 2015-001 installs the legacy Java 6 runtime for OS X 10.11 El Capitan, OS X 10.10 Yosemite, OS X 10.9 Mavericks, OS X 10.8 Mountain Lion, and OS X 10.7 Lion.

This package is exclusively intended for support of legacy software and installs the same deprecated version of Java 6 included in the 2014-001 and 2013-005 releases. Quit any Java applications before installing this update.

OS X Yosemite 10.10.5 Combo Update

Aug 13, 2015 – 2.12 GB

System Requirements

- OS X Yosemite 10.10

The OS X Yosemite 10.10.5 update improves the stability, compatibility, and security of your Mac, and is recommended for all users.

This update:

- Improves compatibility with certain email servers when using Mail
- Fixes an issue in Photos that prevented importing videos from GoPro cameras
- Fixes an issue in QuickTime Player that prevented playback of Windows Media files

iTunes 12.2.2

Aug 13, 2015 – 233.2 MB

System Requirements

- OS X version 10.7.5 or later

This update includes the following improvements:

- Click on the Beats 1 banner to see what's currently on, or view a complete broadcast schedule so you never miss a show
- You can now view a list of the artists you're following on Apple Music
- Resolved an issue where iTunes loses its place when you go back to a previous page in Apple Music

- Addressed a problem where artists may be sorted incorrectly in My Music
- Fixed a problem where playlists displayed in the action menu may not match the playlists in your library
- Artists can now share thoughts, photos, music, and videos to Connect, right from iTunes

Security Update 2015-006 Mavericks

Aug 13, 2015 – 257.2 MB

System Requirements

- OS X Mavericks 10.9

Security Update 2015-006 is recommended for all users and improves the security of OS X.

Security Update 2015-006 Mountain Lion

Aug 13, 2015 – 206 MB

System Requirements

- OS X Mountain Lion 10.8

Security Update 2015-006 is recommended for all users and improves the security of OS X.

OS X Yosemite 10.10.5 Update

Aug 13, 2015 – 1.02 GB

System Requirements

- OS X Yosemite 10.10.4

The OS X Yosemite 10.10.5 update improves the stability, compatibility, and security of your Mac, and is recommended for all users.

This update:

- Improves compatibility with certain email servers when using Mail
- Fixes an issue in Photos that prevented importing videos from GoPro cameras
- Fixes an issue in QuickTime Player that prevented playback of Windows Media files

iOS 8.4.1

This release includes improvements and fixes to Apple Music.

- Resolves issues that could prevent turning on iCloud Music Library
- Resolves an issue that hides added music because Apple Music was set to show offline music only
- Provides a way to add songs to a new playlist if there aren't any playlists to choose from
- Resolves an issue that may show different artwork for an album on other devices
- Resolves several issues for artists while posting to Connect
- Fixes an issue where tapping Love doesn't work as expected while listening to Beats 1

Digital Camera RAW Compatibility Update 6.06

Aug 17, 2015 – 7.8 MB

System Requirements

- OS X 10.10 or later

This update adds RAW image compatibility for the following cameras to OS X Yosemite:

- Canon PowerShot G3 X
- Leica Q (Typ 116)
- Panasonic LUMIX DMC-GX8
- Sony Alpha ILCE-7R II
- Sony Cyber-shot DSC-RX10 II
- Sony Cyber-shot DSC-RX100 IV 

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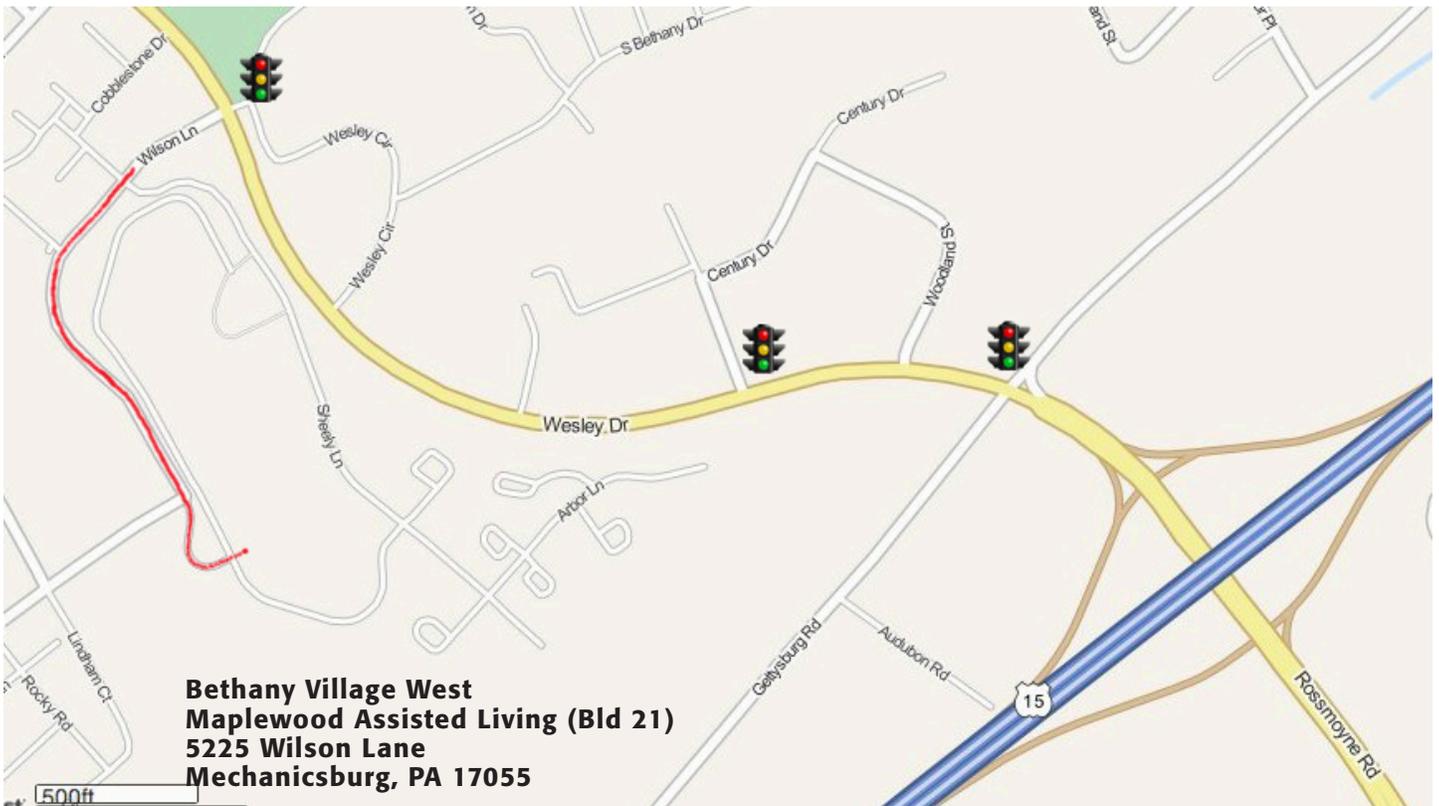
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Turn onto Wilson Lane from Wesley Drive. Follow Wilson Lane until you see Bld 21 straight ahead. There is parking to the right.

If the door to Bld 21 is locked, press the "Intercom" button. Tell them you are attending the Keystone MacCentral computer meeting.

We will be in the Education Training Room. In the lobby turn left, go to the end of the hall, and turn right. The Education Room is about half way down the hall, on the right.

