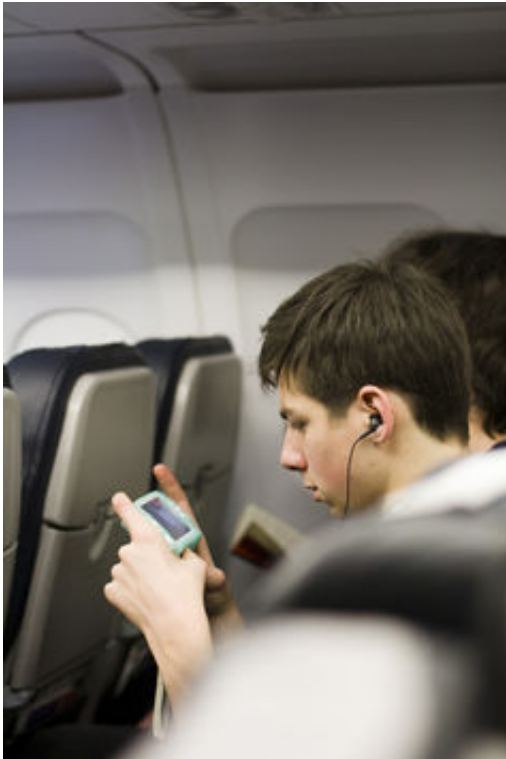


What a turn-off: why your phone must be powered down on flights

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It's a fact of life for anyone boarding a plane: all electronic devices need to be turned off during take-off and landing.

Most airlines have had this rule in place for more than a decade now, even though there has been no definitive documented instance in which

passengers leaving their devices on caused a [plane crash](#).

So why are we forced to stop listening to music or reading a Kindle during take-off and landing?

Many passengers simply ignore instructions, as shown by a recent [US study](#), which found a third of passengers admit to not always turning off their devices during take-off and landing.

The US Federal Administration Authority (FAA) has responded to growing public [scepticism](#) to its "everything must be switched off" blanket rule by setting up a body to look into the issue and has started to slowly relax some rules.

Some US airline staff are now using iPads to replace paper flight manuals and get more information about their passengers.

Last month, [British Airways](#) became the first European airline to allow passengers to switch on their mobile phones just after landing.

What's the point of airplane mode?

Airplane mode or flight mode is a setting available on most electronic devices, such as eReaders and smartphones, which suspends many of the device's signal transmitting functions.

So why are we still asking passengers to completely power down all electronic devices before take-off and landing, especially when staff are allowed to use tablets?

The argument that electronic devices on a flight (commonly referred to in the industry as "portable electronic devices" or PEDs) have never resulted in a plane crash is beside the point.

As aviation expert and New York Times columnist Christine Negroni wrote recently, there actually have been reported cases of pilots reporting electronic devices interfering with [flight systems](#) on commercial flights – issues that subsequently disappeared when the flight crew spotted the offender(s).

In 2001, NASA put out a report compiling data on PEDs attributed to having anomalies with aircraft systems. The report concludes that: *the data clearly indicates that not only were some events judged as having a critical effect on a system, but they also happened during critical states of flight specifically landings and take-offs.*

In 2003, it was found that a charter pilot had called home during a flight and the call remained connected. The plane crashed at Christchurch Airport when the plane flew into the ground short of the runway. Eight people died, including the pilot.

The investigation that ensued from the New Zealand Transport Accident Investigation Commission stated that the pilot's mobile phone may have interfered with the plane's navigation system.

In 2011, the ABC in the US reported on a confidential report from the International Air Transport Association STEADS program which uses data provided by the world's airlines.

The database showed 75 events over the past seven years in which interferences occurred that pilots and engineers think are linked to cellphones or other [electronic devices](#).

And even in airplane mode, a [smartphone](#) still emits some electromagnetic radiation, as do devices that can't connect to the internet, such as MP3 players.

A systems approach to aviation safety

Safety in commercial aviation is not to be viewed as an isolated aspect but as being part of a larger system made up of many interlinked avionics components.

For example, do you think those in-flight safety demonstrations and airplane seatbelts are useless? They're not.

New generation aircraft are more robust and better shielded to electromagnetic interference – disturbance affecting an electrical circuit due to either electromagnetic induction or radiation emitted by an external source – but how many passengers know how old the aircraft they're boarding actually is?

Another argument that usually comes up involves the use of in-flight Wi-Fi that is offered by certain airlines. If there's in-flight internet, why can't I use my phone on the plane?

But those systems are tested and verified according to the aircraft model and the overall system they're part of – and some don't make the cut.

There have been [reports](#) of electromagnetic interference testing for particular in-flight Wi-Fi systems that showed interference with aircraft avionics display units.

International inconsistencies

It is also worth pointing out that there are no set international rules on precisely when passengers are allowed to turn on their devices. Most US airlines only allow their use above 10,000 feet (about 3km in altitude).

When landing, some airlines prefer to wait until the plane reaches the gates (as most Australian airlines do) while in China passengers typically pull out their phones as soon as the wheels hit the runway.

In recent years, there have been several moves, as previously discussed, to allow more extensive use of electronics devices in-flight, and the discussion on the matter is still going.

Is your mobile phone going to take an entire aircraft down just because you texted your better half? Probably not.

But what you can potentially create is a distraction to the pilots and aircraft crew and if that happens at the wrong time (say during critical flight phases like take-off or landing) then it may have an impact on safety – is it really worth that risk?

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