

BBC Learning English

6 Minute English

Satellite navigation systems



NB: This is not a word for word transcript

Alice: Hello, I'm Alice.

Stephen: And I'm Stephen.

Alice: And this is 6 Minute English! This week we're talking about sat navs.

Stephen: Sat navs – that's short for **satellite navigation systems**.

Alice: They're the **gadgets** people put in their cars to help give them directions.

Engineers have been asking if we're becoming too reliant on them. Before we find out more, here's a question for you, Stephen:

Stephen: Ok – I'm ready and waiting.

Alice: When we talk about 'satellite navigation' in English, there is an **abbreviation** we use called GPS. Do you know what it stands for? I'll give you some choices. Is it:

- a) greater place signal
- b) global positioning signal, or
- c) global positioning system

Stephen: I'm pretty sure I know the answer – but I won't spoil it for everyone else. I'll tell you at the end of the programme.

Alice: That's fine. Sat navs using GPS have become very popular in recent years. But they can sometimes get people into trouble. The BBC News website has lots of examples about people driving into rivers or getting stuck on roads which are too narrow. This woman is talking about the lorries which keep getting stuck under a 15th century stone archway in her town because they're following directions on their sat navs.

Insert 1: Woman

The amount of lorries that we see nearly every day - they get to that point and there's no signs anywhere. At the bottom of the road, it doesn't say: "Don't go down there - there's a bridge." And they get to this point here and every one of them have to reverse - and there's cars everywhere. It's just absolute mayhem.

Alice: Oh dear – she says it's **mayhem**. Lorries either get stuck under the bridge or they cause lots of problems trying to turn around - or to go backwards, **to reverse** - on a very narrow road. She says it's absolute mayhem.

Stephen: Mayhem – chaos.

Alice: In another incident, a car got stuck on the edge of a steep hill when its sat nav directed it down a path which wasn't suitable for vehicles any more. Antony Chmarny, who works for a satellite navigation manufacturer, says the gadgets should only be used as an **aid** to driving:

Insert 2:

Sat nav voice: Turn around when possible – then turn right.

Antony Chmarny: If it doesn't look suitable, don't drive down it, don't drive down a one-way street the wrong way if a sat nav tells you to do that.

Alice: I think he means, use your **common sense** – don't drive down a one-way street the wrong way even if a sat nav tells you to do it!

Stephen: I like the sat navs which you can programme with different voices – so you can have your favourite singer or actor with you in the car as your **navigator**!

Alice: What a good idea! Let's hear now from an engineer who is worried that we're becoming too reliant on sat nav and GPS technology. Professor Martyn Thomas from the Royal Academy of Engineering says the weak radio signal it uses can easily be **messed up**.

Stephen: Messed up – that's interfered with, or destroyed.

Insert 3:

Professor Martyn Thomas: You can get interference – either deliberate or accidental interference, because it is a very weak radio signal.

BBC interviewer Justin Webb: Yes, it's quite easy, isn't it, to mess it up?

Professor Martyn Thomas: Oh, extremely, yes. The radio signal is about the strength... in light terms, it's like looking at a 100 watt bulb from 12,000 miles away.

Justin Webb: So someone who really wanted to put out a large area – satellite navigation systems, could do so?

Professor Martyn Thomas: Yes, you could. It would essentially have to be jammed line-of-sight, so you'd have to do it from high ground.

Alice: Researchers were able to **interfere with** GPS signals on a ship using a transmitter on high ground.

Stephen: A transmitter produces radio signals or interference - signals which, if strong enough, can block other signals.

Alice: Professor Martyn Thomas said all kinds of things went wrong with the onboard equipment on the ship.

Stephen: Without saying anything was wrong – incorrect – the ship reported that it was travelling ten miles inland and moving faster than the speed of sound:

Insert 4: Professor Martyn Thomas

All kinds of things went wrong. The onboard equipment, that was reporting where they were, at one point said that they were ten miles inland and moving faster than the speed of sound. But more alarmingly, quite often the onboard systems, without saying anything was wrong, was reporting their position as being just subtly wrong. And of course, the onboard systems would broadcast that position and information to other ships.

Alice: Professor Martyn Thomas from the Royal Academy of Engineering who thinks we should be careful about becoming too reliant on GPS and sat navs, because they can be interfered with. Apparently some people buy blocking gadgets to put on their sat navs in company cars, so their employers won't know where they've been! Well, before we go, Stephen, can you tell us about the abbreviation 'GPS'?

Stephen: So, does it stand for global positioning system?

Alice: Yes, well done. So, before we go - a chance to hear some of the words and phrases we've heard in the programme today: would you mind, Stephen?

Stephen: Sure.

satellite navigation systems

gadgets

abbreviation

mayhem

to reverse

aid

common sense

navigator

messed up

interfere with

Alice: Thanks, Stephen.

Stephen: You're welcome.

Alice: Well, that's all we have time for today. We'll have more 6 Minute English next time.

Both: Bye!

Vocabulary and definitions

satellite navigation systems	computer systems that are installed in some vehicles which tell you the best way to get to a place
gadgets	pieces of technology which are used for everyday tasks, e.g. mobile phones
abbreviation	shortening of a phrase, often to just one letter of each word, e.g. NHS – National Health Service; words can also be abbreviated to fewer letters, e.g. Dr – doctor
mayhem	chaos, confusion
to reverse	to move backwards
aid	help, assistance
common sense	natural ability to think clearly and make sensible decisions
navigator	something or someone which tells you which way to go during a journey
messed up	spoiled or damaged
interfere with	get involved with in a damaging or unhelpful way

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