

Getting to grips with telematics

■ Cut running costs, improve productivity, outsmart thieves

■ Provides detailed information, but straightforward to install

By James Andrews

Just hearing the word telematics is enough to make many farmers start nodding off.

But behind this pretty unexciting noun is a whole new world of technology that could improve the way farmers and contractors manage their kit. Telematics can also help cut running costs, improve productivity and outsmart pesky thieves.

So what exactly is telematics all about and how can it help farmers look after their machinery?

In short, telematics systems allow a vehicle to send its personal information to a computer, including where it's working, what it's doing and how much fuel it's using.

This means farmers and contractors can make sure machines are where they should be and are operating correctly.

At the computer end, there's usually a password-protected website that the owner can visit to view all this information. There is usually an annual fee for the privilege, too.

The box of tricks that makes all this happen is quite simple. It usually includes a GPS receiver that transmits the machine's location and a mobile phone modem to send the information to the internet.

More advanced ones plug into the machine's on-board computer to transmit more information such as fuel consumption and machine settings.

They are also pretty straightforward to install and require no input from the operator once they're fitted. The amount of information the farmer gets back depends on the package and there are usually two types: basic and advanced.

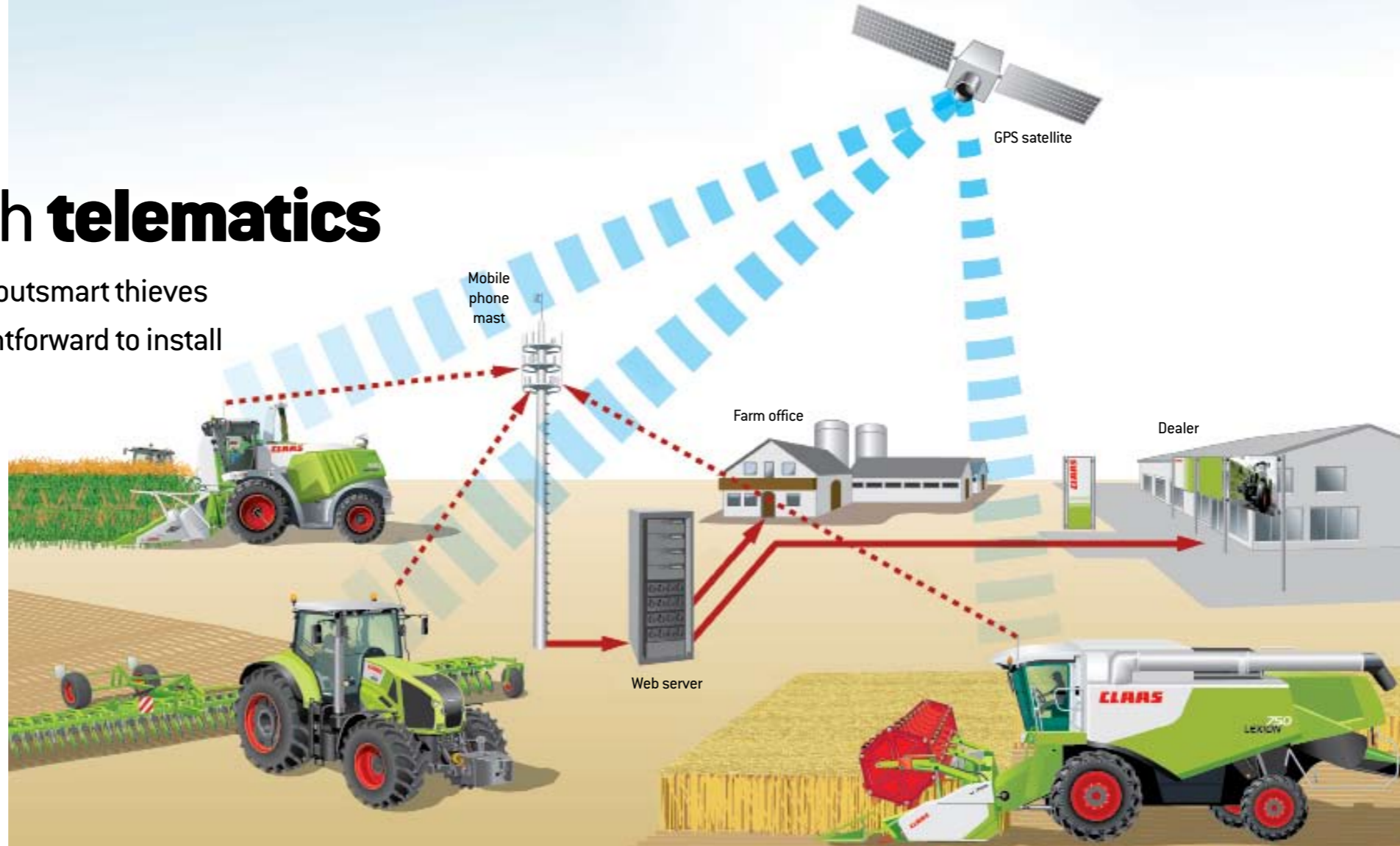
BASIC TELEMATICS

Basic services usually allow users to track the location of all machines on a map and set a virtual operating area called a Geofence. This means the computer knows where the machines should and shouldn't be and will send a text message to the owner if one of them goes astray.

Owners can also set curfew times that the machine can operate within. These will trigger a similar message if someone tries to start it outside those times.

The basic systems will also often give details of engine hours and how long the machine spends idling, working and in transport. This helps farmers work out if their drivers are using the machine efficiently. For example, if the machine is spending much more time idling and moving between fields than it is working, the farmer can change the way a field is tackled to make the whole process more efficient.

One of the big positives with these basic systems is that they can usually be set up on any machine that has a battery. That means farmers and contractors with lots of different coloured kit can keep tabs on the whole fleet with just one system.



ADVANCED SYSTEMS

The fully fledged telematics packages go further and get detailed information about the machine's settings from the CanBus connection. This means owners can see information on each machine, such as its computer settings, fuel consumption and details of any faults.

On more complicated machines such as combines, the advanced systems allow owners to look at all the major settings such as concave width, fan speed, sieve settings and grain losses from the comfort of the farm office. If they have more than one combine they can also often compare the performance figures of each machine to see which one has the best set-up.

These more advanced systems generally can't be installed on other maker's kit. But those wanting to look at multiple brands on one screen can set up the rest of the fleet with the manufacturer's basic version.

Some manufacturers are now fitting advanced telematics systems as standard on their higher-end machines and are offering free subscriptions to their websites for the first year so the owner can try it out.

Farmers can usually let dealers see this information, too, so they can diagnose problems in the office before heading out to fix them.

WHAT'S ON THE MARKET?

Most of the big machinery manufacturers have either launched a telematics system or are just about to. Generally they offer a similar level of service, but Claas offers a particularly advanced set-up on its combine harvesters.

This is what some of the key players are currently offering.

Claas – Telematics

Claas was one of the first to get into the telematics game and it has been offering an advanced system – called Telematics – on its top-end combines since 2006. There are now about 500 people actively using it.

The system is plugged into the combine's CanBus connection and gives the man in the office more information about its performance and set-up than the man sitting in the seat.

Everything from the drum speed to the amount of grain it processes an hour is recorded and sent back to the office computer via the Claas servers in Germany.

The system is fitted as standard as part of the firm's business pack on flagship 770 and 780 machines and is an optional extra on other Lexion and Tucano combines. It can also be fitted to some older machines, but the amount of information that can

be extracted varies according to the type of CanBus connection.

Automatic field recognition is one of the latest additions to the system. This means a combine will immediately recognise a field when it drives into it and will automatically send a yield map back to the office computer once it's been harvested. All this happens with no input from the operator.

The system is also available on all 900-series Jaguar foragers and the firm is about to start offering it on tractors, too. The tractor version will have a new feature that captures information from implements fitted with an Isobus connection. This could potentially be used to automate the

keeping of field records for jobs such as spraying or fertiliser spreading.

Claas also has a basic telematics offering called Agro-Scout that can be installed on almost any machine.

GUIDELINE PRICES TELEMATICS

- Installation – £3,500 per machine (includes one-year subscription)
- Subscription – £800 a year per machine

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Agco – Agcommand

Agco's Agcommand telematics system also comes with two versions. The advanced package is available on most Massey Ferguson, Valtra and Challenger kit and all machines can be viewed in the same system. Fendt uses a slightly different system that isn't currently compatible with Agcommand.

Unlike some other manufacturers' options Agcommand isn't usually fitted as standard and has to be picked off the extras list.

It offers the usual features and can pull information from the tractor's

CanBus connection. It can also harvest information from Isobus implements.

Agco's Blair Hardie says there has already been interest from a large baling contractor which would be able to use the system to keep tabs on the number of bales produced in each field. There are also smartphone apps available that show selected information.

GOING INDEPENDENT

Trimble – Connected Farm

Although most machinery manufacturers are offering their own telematics systems, there is also the option of going for an independent.

Trimble offers one such system. Connected Farm uses a Trimble GPS receiver and mobile modem that allows any vehicle on the farm to communicate with the site.

This offers pretty much the same features as the manufacturer's basic offerings, plus a bit extra.

All the information that's in the industry standard CanBus format can usually be extracted, says Will Mumford from Trimble dealer AS Communications. "Even if

GUIDELINE PRICES

- Basic system including three-year subscription – £1,300
- Upgrade to three years of the advanced service – £1,100

John Deere – JD Link

Deere's basic version of its JD Link telematics system (JD Link Select) can also be fitted on to other manufacturer's machines.

But like others on the market, it only offers information on machine location, running times and maintenance schedules.

Deere's top-end JD Link Ultimate adds the usual advanced-level features, but can only be fitted to John Deere machines.

JD Link Ultimate is fitted as standard on 7R, 8R, 9R tractors, all 80-Series foragers and all T and S-Series combines, plus the W660.

It can be factory-fitted on 6Rs and is available as a retrofit option on older 30-Series tractors and 50-Series foragers, too.

There are also iPhone and Android smartphone apps available so owners can keep track of their machinery when they are out.

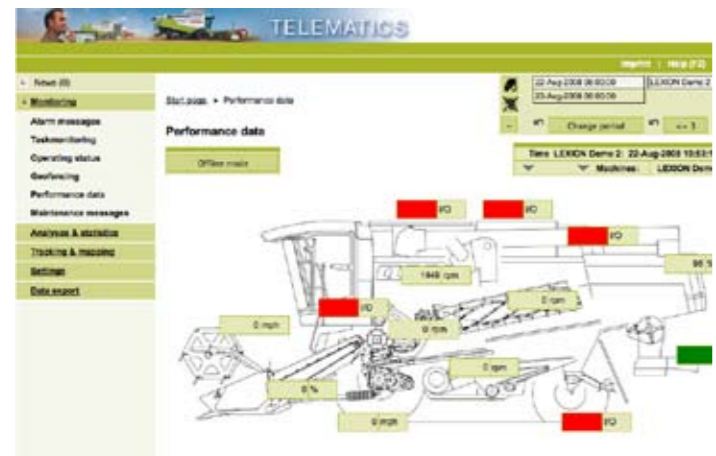
GUIDELINE PRICES JD LINK SELECT

- Installation – £450
- Subscription – £200 a year per machine

JD LINK ULTIMATE

- Free one-year subscription when buying a new machine
- Subscription – £400 a year per machine
- Retrofit kit – £690

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All systems include a protected website farmers can visit to track their kit.

Some kit can also be tracked with a phone.

