



Home, *safe and sound*

Install a wireless alarm system and breathe easy

By SEAN WOODS

INDUSTRIAL-STRENGTH burglar bars, rolls of vicious barbed wire, remote-controlled security gates, electric fences, and snarling guard dogs wherever you look. Have we strayed into a top-security military installation? Nope – we're talking suburbia here.

Okay, we all understand the need to install some kind of security system to protect hearth and home. After all, we

read the newspapers and hear the stories (in fact, it's fair to say that most of us have first-hand experience of crime). But is this level of security really necessary?

Much depends on where you live, of course, and the level of crime in your area. Fortunately, the development of sophisticated wireless technology now provides you a choice of less intrusive yet highly affective domestic security systems. In other

words, you won't feel as if you're confined to C-Max while the bad guys are free to roam outside. According to one householder who's made the switch, the positive impact on family life is incalculable.

Hartebeespoort resident Richard Fearon was once a very frustrated man. Like many of us, he had a traditional analogue alarm system fitted to his home. Although his insurance company



Homeowner Richard Fearon chose to incorporate a network security camera with his new wireless alarm system. Now he can relax and check who's at the gate via his smart-phone.



Top: Just some of the extensive wiring and motion sensors from Fearon's old analogue alarm system. Above left: The scarred walls throughout Fearon's home are a stark reminder of the differences between the old and new technologies. Above right: Fearon feels sorry for his neighbour – he still relies on an analogue system and a quirky electric fence.

was happy, the system was forever on the blink. Recalls Fearon: "Over a period of about 10 months, seven different technicians attempted to fix it, but it never worked properly."

His experience isn't an isolated one, either. Alarm systems can be overly sensitive and infuriatingly picky if they're not properly installed or programmed – something that happens way too often, according to Fearon. Then they either refuse to work or do so intermittently. "And that's worse, because

then you're living in a perpetual state of insecurity."

Driven to distraction by "ghosts in the machine", Fearon splashed out on palisade fencing and enough expandable security gates to secure a medium-sized factory. These were definitely grudge purchases, he says, but he felt he had no choice.

After yet more system glitches, and feeling as if he and his family were living in a perpetual stage of siege, he threw in the towel and ripped out the cause of his grief – all manner of sensors, tangles of wire, touch panels and other hardware – and called in the wireless experts. Six hours later, they were out of there.

Says Fearon: "The installation was a painless affair, but more importantly, it worked properly right from the word go."

Communication plays a significant role in any successful security installation, according to Retief Bezuidenhout of Shop 4 Security. "When we first see clients, they invariably ask for perimeter beams

because they don't know about the range of products available," says Bezuidenhout, emphasising that the one-size-fits-all approach makes no sense.

His first job is to assess his clients' needs and work out a solution that suits their lifestyle – and pocket. Once installed, the system must be reliable and easy to operate. "The last thing we want is to discover that a client is reluctant to use his system because he has no faith in it."

Most people are concerned about protecting their property's perimeter, according to Bezuidenhout, and this makes sense because you need to be aware of intruders *before* they get into the house. "Even a few seconds' worth of advance warning increases your response time, allowing you an opportunity to call for assistance and get to a safe area."

But effective perimeter monitoring is by no means the final solution. "We still require sensors and some form of security around the home. A good system should



Left and below: Outdoor digital dual-optic passive infrared sensors (PIRs) sweep a 90-degree area and cover the ground to about 3 m up, making them virtually impossible for intruders to avoid. They can be fixed up to 70 metres from the receiver and can also be positioned to cover windows.

enable you to activate or deactivate certain zones so you can get on with your life. For example, the perimeter security looks after you while you're at home, but when you're on holiday, you need to protect property rather than people.

"In fact, you're tempting fate if you simply arm the perimeter before you go away," says Bezuidenhout. "Think about it: a neighbour's kid climbs over the wall to fetch a ball, and suddenly there's armed response all over the place."

He reckons wireless alarm systems make sense mostly because of their versatility. The fixed parts of the system – the keypad, receiver and siren – all require mains power, but the peripherals rely on batteries. This means that any number of door sensors, indoor passive infrared sensors (PIRs) and outdoor dual-optic PIRs can be positioned wherever you need them. There's no wiring, no clambering into attics, no sticking your fingers together with a glue gun.

Consequently, the entire installation is less complicated, looks neater, and there's a lot less to go wrong. The scarred walls throughout Fearon's home are a stark reminder of the differences between the old and new technologies.

Not all brands of PIRs use the same type of batteries, so it's always a good idea to do some research before committing your cash. Fearon chose sensors that run on penlight and AAA batteries so he would be able to change them himself. The batteries have a lifespan of about three years, and the control panel lets him know well in advance when they are running low on juice.

All sensors report back to the control panel every 120 seconds to confirm that they are functional and still in position. Any attempt to remove one of them from its mount immediately triggers the alarm, and being wireless, the system naturally has no wires to cut. The door sensors, with a range of about 36 m, can be connected to fixed panic buttons, and come



fitted with an anti-tamper switch. If you need to monitor two garage doors, you can install a sensor on each door and wire them together so they report to the control box as a single zone.

You may feel comfortable with infrared beams, but they are so 20th century. They also suffer from a major disadvantage, according to Bezuidenhout: because they operate on a point-to-point system, the beams can easily be bypassed by someone in the know. Their more modern counterparts – outdoor digital dual-optic PIRs – sweep a 90-degree area and cover the ground to about 3 m up, making them virtually impossible for intruders to avoid.

Above right: The wireless receiver passes signals from PIRs in its vicinity to the alarm system's main box. Right: Wireless door sensors have a range of about 36 m and can be connected to a fixed panic button. Below right: Indoor PIRs come in two types, simplex and "pet friendly" duplex. Far right: A good system should enable you to activate or deactivate certain zones so you can get on with your life.



They can be fixed up to 36 m from the receiver and can also be positioned to cover windows, since they see the glass as a wall and don't react to movement from inside.

Dual-optic PIRs are triggered by a combination of movement and heat. They have two lenses that cover the same area, each continually verifying the reaction of the other to prevent false alarms. Only when both sensors agree that a threat

less than 18 kg. It has a viewing angle of 88,5 degrees and a wireless range of 36 m. The only critical rule concerning indoor PIRs is that one unit must be installed to monitor the system's main box and prevent any malicious tampering.

The main box incorporates a radio that connects the system to your local security company. A transformer charges an inter-

and driveway gates. If you like, you could even link your system to a mobile network and control all the peripherals via cellphone. And it can be armed or disarmed remotely via a PC and ASDL line.

An alarm memory key is also available so you can download to a memory stick and save all the complex programming that makes your alarm system unique. Then, if your system is disabled – by lightning, for example – all you need do is install a new PC board and use the memory stick to restore your security system's memory.

At last, Fearon is a happy man. His family feels safer, and Max, his best buddy, is no longer obliged to stand guard at the gate. Max now spends his free time – of which he has rather a lot – harassing passers-by. Don't ask us why... it's a dog thing.

Fearon eyes an impressive pile of obsolete sensors and superfluous security gates, all wrapped up in a tangle of wires. He doesn't feel even slightly sentimental. In fact, he plans to dump the lot without a second thought.

● For more information on this and other security systems, visit www.shop4security.co.za

PM

'The installation was a painless affair, but more importantly, it worked properly right from the word go.'

exists will they raise the alarm. They ignore anything lower than 500 mm and weighing less than 45 kg (in other words, they won't be triggered by Fido or Fluffy). Internal settings allow you to tweak them to your specific requirements.

Indoor PIRs come in two types, the simplex and the duplex. Basically, the duplex sensors are pet-friendly and the simplex ones aren't. The pet-friendly version covers an area 11 m square, remaining passive in the presence of animals weighing

nal battery to ensure that everything remains on line when the power goes down. An entry-level model covers about 16 zones and is perfect for townhouses, but if you are especially security-conscious, you could opt for a system with as many as 96 zones.

In fact, now you'd be entering the realm of home automation. Choose one of the more elaborate models and you can automate virtually anything from garage doors to sprinkler systems, lights