

CELEBRATING 40 YEARS

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Then and now: Alarms

By Rod Cowan*

THEN AND NOW: ALARMS

The nascent alarm industry of 1969 consisted mainly of commercial installations, with home security rare, except for the rich and famous.

Circuits with relays: Alarm systems used to be about electrical circuits and relays. Control panels were metal boxes with a series of relays operated by a toggle switch and using non-rechargeable dry cell batteries.

For detection, believe it or not, until the early 1970's trip wires were still used. There were also pressure mats, which were pretty ordinary in terms of performance. If the job was done properly, a carpet layer was called in to pull up the carpet, cut a space in the underfelt, in which the mat was placed. (Otherwise, the edges of the mat would wear the carpet revealing the location of the pressure mat.)

Another popular tool was foil tape, which you still occasionally see around the edges of windows. Tape – which installers could buy for around \$2.30 a roll – was reasonably reliable, if you knew what you were doing. The trick was to >

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create a continuous loop and, frustratingly, any slight tear or break resulted in false alarms. Less experienced installers, not knowing how to create corners, would line the tape across the top of windows, then cut the tape. They would then put the vertical line straight over it. If they were lucky, they would get a connection when they finished the job. The problem being, any change in temperature or some moisture, invariably happening during the night, would activate the alarm.

Doors generally relied on push button switches, though surface mounted reed switches, usually consisting of glass and a magnet, became increasingly popular, with roller shutter contacts (a reed switch encased in a housing with a bigger magnet) coming into being much later.

Volumetric detection also came into vogue, using all manner of ultrasonic, radar, and microwave detectors, until Passive Infrared (PIR) became an industry standard.

Monitoring was by direct telephone line to control rooms, which was an expensive exercise. Later, it would be possible to cut the cost by having a number of direct lines taken to an exchange and linked back to central stations through a single link.

There were voice or tape diallers, at times in timber boxes, from the likes of Voca and Ademco. Pretty simple devices, you programmed a telephone number, which was stored on a tape as a pulse, and recorded a message. When triggered by an alarm event, the device would dial out, the tape would generate a tone with the number, and the recorded message would announce that the alarm had been activated with details of location.



There were no standards, nor were there any protocols for the police. If you contacted the police and asked for permission to program their number as one of three that would be called, you got a different answer from different stations, with some agreeing and others refusing to take such calls.

Training was generally on the job. Some companies, notably Wormald (later acquired by Chubb), offered cadetships and apprenticeships, with a training school run out of its Wormald Fire premises in Brookvale, Sydney, in what is now an Office Works.

Transistors and integrated circuits: It was not until the early to mid-seventies that alarm modules for control panels were being produced. Even then, finding decent alarm gear was still a struggle. For example, in some cases the modules alone would false alarm, as if the detection equipment was not causing enough hassle.

Digital diallers, such as Silent Knight, Ciscoa, and Ademco, emerged in the late 70s and early 80s. Remember the Ademco 685 receivers? It became something of a standard in alarm monitoring. However, you still had to be a pretty large organisation to afford building a central station.

The late 70s also saw the emergence of four zone plus 24-hour zone panels, such as the Nessesity Five Plus, and by the early 80s, 16-zone panels were being developed.

By the mid eighties, the market was hotting up with manufacturers, such as Ness and EDM, slugging it out to offer panels that did more and more. Alarm wholesalers, too, were springing up with imported equipment – not to mention Friday afternoon barbecues for installers.

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The main players were Wormald, Chubb, TNT, and MSS. By now companies were being bought and sold by – at times highly leveraged investment companies, which not surprisingly expected a return on their investment. Companies, realising cadets and apprentices, if any good, went on to do their own thing or were poached, saw them as a poor return on investment and, as such, training went the way of the whale.

In the late 80s, direct line was still the go for high-risk premises, until Telstra introduced the Securitel transmission system, which constantly polled systems to ensure continuous monitoring and availability. Revolutionary stuff, if only the people selling alarms could get to understand it. Many did not.

The early 80s market was still primarily commercial, with home security being dabbled in at best, or scoffed at. By the end of the 80s, that was becoming a very different story.

In 1988, one-time motivational speaker Brad Cooper, predicting explosive growth in alarms, started his alarm business. In 1990, Cooper persuaded Rodney Adler to help finance the company, which became FAI Security. By 1996, through a network of independent distributors buying kits wholesale and selling to householders retail, FAI was selling 5,000 home alarms a month. It had to end in tears. High pressure sales tactics for a basic \$2,200 kit – consisting of a smoke detector, alarm, fire blanket and extinguisher – led to problems: Run-ins with the likes of the assistant commissioner for police in New Zealand; a Channel Nine A Current Affair programme, alleging among other things that burglars had been stealing alarms; and angry buyers launching a class action resulting in a \$1 million settlement. FAI disappeared when its eventual owner, HIH Insurance, became the largest corporate collapse in Australian history.

Towards a new future: It was not all bad news from the 90s on. To be sure, problems remain with what some prefer to call “unwanted” alarms. But, the industry is making efforts to work with police on the problem to develop protocols, such as alarm verification, for handling what some still call false alarms. Detection equipment has certainly improved and the range has expanded as, too, have standards. Indeed, Australian Standards now cover everything from risk-based alarm design through to monitoring performance.

The alarm industry, however, does not lend itself to technological change.

The problem is – apart from telephone rebates discouraging companies from developing new monitoring technology adopting new products means taking time off the road to learn new equipment and techniques. Companies, therefore, tend to keep to using a product until forced to change by competition or circumstance. That time may be coming.

At the end of this year, Securitel will be closing its doors and both the major telcos, Telstra and Optus, plan a complete rollout of fibre by early 2010, with all PSTN services migrated to a Multi-Service Access Network with an IP core by the end of 2010.

So, by the time ASIAL puts away the party hats and streamers for its 40th birthday, the alarm industry's history will continue on into the world of IP technology.

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THE HISTORY OF HOME SECURITY

When they were first available in the early 1900's, house alarms were expensive to install and difficult to monitor. As a result they were not something bought by Mr. Average but instead reserved for those with lots of cash and lots to protect. As technology has improved however, house alarms have found their place in the common market and are now a feature of many homes.

Original house alarms worked by signaling a 'local' alarm when the system was triggered. This worked well so long as people hearing the alarm responded to it. As house alarms became more common, the number of false alarms increased to such a degree that many 'local' alarms began to go unnoticed and unreported. Intruders also learnt how to disarm the system so could quickly and easily stop the alarm. If you were relying on this for the safety of your property you could be in trouble. Nowadays, many people use external monitoring centers to protect their property. Here, not only does a 'local' alarm sound but the alarm is also picked up by staff at the monitoring center who will then respond accordingly.

When first invented, house alarms were triggered by the release of a pressure button fitted into a door or window frame. This basic alarm was fundamentally flawed as all the intruder needed to do to silence the alarm was to close the door or window. Nowadays there are various systems on the market ranging from inexpensive DIY alarms to highly sophisticated systems requiring professional installation. All modern alarms are based on the same foundation, the electric circuit which is completed either when the door is opened or closed depending on the system you choose. The alarm is triggered when the circuit is altered and will not be silenced until a code is punched into the control panel. The most expensive and complicated alarm systems might also involve a combination of motion sensors and pressure pads to ensure even the most cunning intruder doesn't get his hands on your treasures.

Unsurprisingly, house alarms have changed a lot over the last century and no doubt will continue to improve as technological knowledge expands. The market is filled with a wide range of systems and companies offering a variety of deals. So whatever you want to protect, and however much you have to spend there will be an alarm out there to suit your needs.

SOURCE: guide4home

