

# PERTRONIC INDUSTRIES LTD

## FIREBITS

June 2007

### Pertronic Analogue Addressable System Goes To Sea



The *RV Tangaroa* is one of three research vessels operated by NIWA, through a subsidiary company. The vessels are used for oceanographic, fisheries and coastal research, as well as for marine engineering and environmental studies. *Tangaroa* is the largest of the three vessels and is capable of working in conditions ranging from subtropical to Antarctic, right across New Zealand's Exclusive Economic Zone.

While *Tangaroa* has comprehensive heat detection and fire suppression systems (manufactured and installed to the relevant maritime Standards), an analogue addressable smoke detection system has been installed throughout the vessel. This system - supported by a Pertronic F100 panel - provides crew with early detection (and the precise location) of smoke in critical areas - laboratories storerooms, sleeping areas, etc. The F100 panel is located on the bridge, with a LCD mini mimic repeater in the crew mess, providing specific alarm information in plain English at two locations. The main panel and the LCD mini mimic can both be used to reset detectors in alarm once the smoke has been cleared from the detection chamber.



VESDA



## Pertronic Amplifier Update

Pertronic amplifiers are now extensively used for building evacuation systems - and not only in Pertronic fire control panels. A few installation suggestions follow:

Some technicians now carry a microphone preamp card and a microphone. When arriving on site for maintenance or testing purposes, they connect the preamp card to the amplifier and broadcast a message to building occupants that testing of the fire alarm system is about to commence. When testing or maintenance is completed, a "testing completed" message is also broadcast before disconnecting the preamp card.

Where amplifiers are being used on fire alarm systems in schools, and the school wants to utilise the system for public address messages, the comment has been made that the sound level of speech through the amplifier is low. This is a by-product of the type of sound waves involved, where speech gets transmitted at half the output level achieved for synthesized tones stored in the amplifier. The speech broadcast level can be boosted through the addition of an *External Microphone Signal Boost Preamp* card, installed between the microphone and the Pertronic preamp card. Product code for this signal boost card is PREAMP-RB.

A reminder that the 10k end-of-line resistors for Pertronic amplifier 100V audio lines should be a minimum of 1 watt - the 1/4 watt resistors used on detection circuits are inadequate. All amplifiers supplied by Pertronic Industries come complete with a 2 watt resistor.

## Changes to F4 LED Display

Pertronic F4 conventional fire control panels were released in a larger cabinet (350h x 245w) in mid-2006 to better accommodate a bigger mains switch, up to two 20W amplifiers (when needed), and more space for cable entry. As no change was made to the masterboard at that time, it meant that the LED's on rear service panels changed from being on the edge of the mimic index to a position closer to the centre. A production change has now been made to F4 rear service masterboards to reposition the LED's closer to the edge of the index, as with the earlier, smaller panels. A new drawing of the F4 rear service index is available on the Pertronic web site - [www.pertronic.co.nz](http://www.pertronic.co.nz) - under *Engineering/mechanical info/F4 Mk 11*.

Service companies please note - this introduces a different version of masterboard. So it is important - when ordering a replacement masterboard - to specify what cabinet type the board will be fitted to.

## A New Look To System Sensor Detectors

System Sensor's Photoelectric detectors - both conventional and analogue addressable - have been redesigned, internally and externally. The new chamber design provides improved resistance to dust and steam, and the reduced size of the mesh surround for the detection chamber further limits the ingress of bugs (bugs in detectors are a common cause of nuisance alarms). Externally, the detector heads have a more modern and rounded look, with the smaller size of the detection chamber quite evident. Importantly, these redesigned detector heads still fit into the same bases as the previous design. The new style Photoelectric detectors will be progressively made available on product codes 2251B (analogue addressable), and 2151B (conventional).

Recognising that the fit out on some projects occurs over many months, stocks of the existing design will be carried for some time to ensure that matching detector heads can be installed in the same area.



## FIRE-NZ Conference 19 & 20 September

This years FPA Conference will be held on 19 & 20 September at the Ellerslie Convention Centre, Auckland, and is an important annual event for our industry. The Exhibitors Hall will support more displays from the fire protection industry than in previous years, and Pertronic Industries will have its full product range represented, including some new and innovative technical developments. We look forward to seeing you at FIRE-NZ 2007. Details are available from [www.fireprotection.org.nz](http://www.fireprotection.org.nz)

## Detectors & Sounders Share Cables In Innovative 2-Wire System

Detectors and sounders usually require separate cables, or circuits - they function quite differently and have different voltage and current requirements. But with special “reversal relay boards” recently developed for Pertronic F1 & F4 panels, it is possible to have smoke detectors, heat detectors, manual call points and sounders all sharing the same piece of cable.

This innovative system was developed recently to simplify a number of installations for Housing NZ residential/community properties. Detectors and sounders are wired on the same pair of cables, and this circuit is still fully monitored by the control panel. Remote hush buttons can also be installed (on a separate cable) to mute the sounders if a smoke detector activates from cooking fumes or some other non-fire event. On the F4 panel each of the four detector/sounder circuits available can be wired to cover a separate flat or unit. The hush buttons in this type of installation are usually located in each flat to work on a local zone by zone basis, with a separate hush button mounted near the F4 panel to function as a “global” hush facility if necessary. Once a hush button has been pressed, the sounders remain muted for three minutes and will then operate again if smoke is still present. Or the system will self-reset if the smoke has cleared.

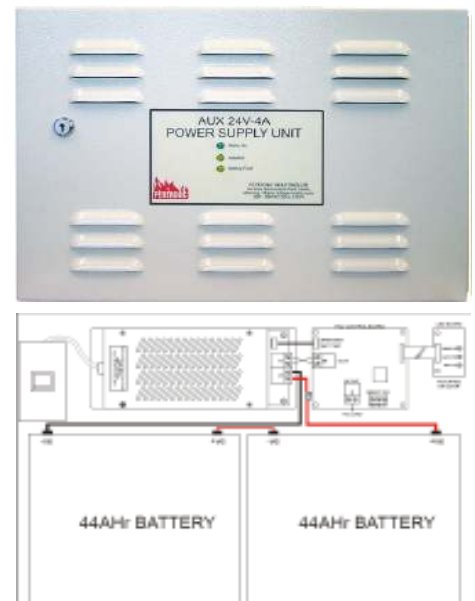


The diagram above shows the range of devices that can share the common detector/sounder circuit - from the control panel end; a heat detector, smoke detector, manual call point, PS1 sounder, 2WTA-B detector/sounder. The 2WTA-B is a photoelectric smoke & thermal detector with an inbuilt sounder that further simplifies installation by removing the need for separate sounders.

It must be emphasised that, while the standard F1 & F4 panels are NZS4512 compliant products, the overall installation and function of this 2-wire system does not completely adhere to NZS4512, and it can only be used in installations where full compliance to this Standard is not a requirement. The system does, however, provide some very real benefits for these types of installations - a fully monitored, hard-wired detection system with battery backup and sounder hush facilities. For further information on these residential 2-wire systems, please contact Pertronic Industries’ Wellington or Auckland offices.

## New Pertronic 4 Amp Auxiliary Power Supply

This new unit has been developed in response to demand for a power supply larger than the current 1.5 Amp model. The 4 Amp auxiliary power supply is capable of supporting a greater number of devices requiring ancillary power - for example, multiple amplifiers or multiple Vesda units. The new 4 Amp PSU and the existing 1.5 Amp PSU are both NZS4512 compliant, with voltage monitoring and 24 hour test facilities. The front panel display incorporates a green *Mains On* LED, a yellow *Auto test* LED and a yellow *Battery Fault* LED. The 4 Amp PSU cabinet can house battery sizes up to 44Ahr; charger current is 3A continuous and 4A peak. Up to 10 Amps can be supplied by the batteries and regulator to a load connected to the PSU. For more details, please go to the Pertronic website and look under *Products/Power Supplies*.



Product codes: 24V 4A Monitored PSU - code AUX24/4PSU  
 24V 1.5A Monitored PSU - code VESDAPSU

## PERTRONIC INDUSTRIES LTD

17 Eastern Hutt Rd, Wingate, Wellington. PO Box 35-063, Nae Nae. Phone (04) 5673229, Fax (04) 5673644.  
www.pertronic.co.nz email: sales@pertronic.co.nz

### AUCKLAND OFFICE:

119 Lansford Crescent, Avondale. PO Box 15-867, New Lynn. Phone (09) 820 8228 , Fax (09) 820 8284



### New Fire Alarm System Put To The Test

Christchurch's new YMCA is an impressive and deceptively large building. Developed as a multi-functional sports and community complex, the facility incorporates a fitness centre, several basketball courts or sports areas, a crèche and café.

The building is protected by an analogue addressable smoke detection system throughout, supported by a Pertronic F100 control panel. Within weeks of completion a faulty component in one of the two air conditioning units on top of the roof caught fire. Smoke was drawn back into the building and vented out through a duct in the gym area. The adjacent smoke detector picked up the smoke very quickly, the control panel went into alarm, the building was evacuated, the Fire Service were called and the damage to the building was minimised.

And it was only a week or so later when exactly the same event repeated itself in the second air conditioning unit. This time a manual call point was operated, with the same outcome as the earlier event.

It is not that often that a fire alarm system earns its keep - twice - within weeks of installation.

### A New Voice In Tech Support

Customers phoning Pertronic Industries' Wellington office for tech support will start to hear a new voice answering some of the calls. John Fuge has joined Brent Pells, Geoff Tustin and Derek Worsley in our tech support office. John started working for the company three years ago in the panel assembly area and has developed a sound knowledge of Pertronic fire alarm equipment. John has previous experience in customer help desk operations in the radio and electronics sector, so he brings a good blend of skills to this important role within our customer support team.

