

# New Wireless PA System has... LESS WIRES!

“Hands on” Review  
By Ross Tester



**A**ltronic Distributors are no strangers to the Public Address market. SILICON CHIP has reviewed several of their amplifiers and peripherals over the years, including at least two of their portable PA amplifiers.

We've always found the Altronics equipment, sold under several "house" brands, to be extremely well made and, more importantly, to have performed very well under "real world" conditions.

They are widely found in professional installations and have a good name in the trade.

We've set up some of the Altronics gear at major sporting events and it has out-performed some significantly more expensive products.

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For example, I've had to run PA amplifiers from small generators on occasions and where a couple of well-known Japanese amplifiers didn't like the less-than-perfect supply one bit (popped fuses were the order of the day), the "Redback" (Altronics) amplifier just kept going and going!

## Portable PAs

Not long ago, Altronics' General Manager Brian Sorensen rang to say they had just received the first shipment of a brand new range of Portable PA Amplifiers – and he'd like us to have a look at them.

I have to confess at first I was of the "ho-hum, seen one, seen 'em all" mindset. But then Brian told me that, as far as he knew, these were unique in

Australia because they had the option of being set up to cover a large area completely without wires.

With a plug-in option, one box could transmit its program to the next box, which could receive and re-transmit on yet a different frequency to the next box and so on. And with battery operation (as well as mains) that meant you could take a few of these to a venue, turn them on and be instantly "on the air".

As someone who has spent many an early morning and late night running speaker cables along beaches for surf carnivals, my "ho-hum" disappeared. I suddenly became very interested!

## Wireless

Of course, wireless microphones



At left is one of the new Okayo portable PAs from Altronics (all models look the same from the front!) while at right is a fully-tricked-up model with two wireless mic receivers (top), CD/MP3 player (next down) wireless link module (2nd from bottom) and the common input/output/control unit (bottom). The units are designed to mate with Altronics heavy-duty tripods (C0521A) which fit into a "top hat" mount in the base of the box.



are nothing new. And many portable PA systems have inbuilt wireless microphone receivers so you could talk through multiple boxes within range.

That is the point: within range. What is new is that each of these boxes can be fitted with a "wireless link" transmitter as well as a receiver in the ~800MHz wireless microphone band. So all-of-a-sudden, the coverage area is as large as you want it to be – just keep adding boxes with transmitters and receivers and it doesn't matter how far away the first box and wireless microphone are.

Wireless mic coverage (or more correctly, wireless mic dropout as you approach their limit) is the bane of any PA operator. With this system, that has now ceased to be a problem: you just make sure the first box is within range and go from there.

There are 96 channels to choose from (selected by push-button) so you're not going to run out of available frequencies. And as the boxes are fixed in position (and usually mounted high on a stand or pipe) they are not going to suffer from another bane of wireless microphones: the user shielding the transmission with his/her body.

Therefore, range between boxes will be significantly higher than using a "normal" wireless mic. Claimed range is 50-70m line-of-sight and we veri-

fied that this could be easily reached. During a couple of tests along a beach, we were able to reliably achieve 250-300m range. And that was without mounting the boxes on their tripod stands, which almost certainly would have increased the range.

The receivers and wireless links are options to the basic box (which we'll look at shortly).

My first question to Brian was "are the receivers and transmitters available as separate items" thinking about the portable PAs I already used (including SILICON CHIP's "PortaPAL" from February/March 2003).

Unfortunately for me, they're only as an option; they were specifically



**Here's the bit that made me sit up and take note: the wireless link transmitter. It has 96 channels (like the wireless mic receivers) and in fact looks similar from the front. This transmits to another PA system fitted with a wireless mic receiver, thus extending the range of the PA.**

made to suit the new systems. Oh well, can't blame me for trying.

## The Altronics systems

The portable PA system is available with several options. There are three standard models with various options and then you can add other goodies.

The \$749 base unit (Cat C7180) contains a 50W power amplifier with both balanced and unbalanced wired microphone inputs, stereo line in/line out, level controls for mic and line plus bass/treble controls. It has inbuilt batteries as well as mains power supply/charger and can operate from 3-4 hours from battery only.

As we said, it is ready for near-instant operation: just plug in a mic, turn on and talk.

The first "optioned" model contains a UHF wireless microphone receiver. This is supplied pre-fitted and suits a range of wireless microphones. With the receiver, it becomes Cat C7182 and sells for \$950.00. Note that the wireless microphone is extra.

A second UHF wireless microphone receiver (C7187) can be added for \$249.00 to give dual-channel operation (maximum of two receivers).

The other "standard" option model is the \$1299 C7184, with the UHF wireless mic receiver above plus a quality, anti-skip and MP3-compatible CD player.

The C7187 wireless link add-on transmitter is a simple plug-in option which sells for \$249.00.

So a fully tricked-up, dual channel radio mic model with wireless link and CD player would sell for \$1797. If you regard this as the “master” unit, all you need for the add-on units in the system is the C7180 model with C7187 wireless receiver – \$998.00 total.

Those prices might sound expensive – until you start comparing the nearest equivalent models from other suppliers. And when we say “nearest” equivalent, we mean it – because as far as we know, there is nothing else out there which compares with the Altronics models with wireless link.

Incidentally, there is also a Karaoke Echo module available with adjustable repeat and delay, plus provision for two (wired, 6.35mm) microphones.

## Wireless microphones

Altronics have various microphones available for the system. The first is a traditional hand-held type (C7192) selling for \$199.00 It's a very nice mic to use – comfortable to hold and has a very nice sound to it – ideal for entertainment as well as speech. Its two “AA” cells give up to 14 hours use.

Next comes a beltpack transmitter (C7195, \$169.00) which accepts several different types of wired mics – a headset (lavalier) microphone (C7198, \$69.00) which is ideal for sports/gym/trainer use; a lapel mic (C7197, \$55.00)



Here's the range of wireless microphones suitable for the system. At left is the traditional handheld model, while above are a lapel (above left) and headset (above right) designed to plug into the beltpack transmitter shown at right. On the left edge (hidden) is a 3.5mm “aux in” socket – unfortunately, using this socket cuts out the microphone socket at top left of the beltpack unit.



or virtually any of Altronics' range of low impedance (dynamic) microphones which can fit, or be adapted to, a 3.5mm plug. The 3.5mm plug has a thread on it which matches that on the lapel or headset mics, making them captive. Nice touch!

## Ah, the beltpack

I have to say it works very well indeed – but it hasn't been completely thought through.

I got excited when I first saw the beltpack transmitter because it also sported a “line in” socket. I thought that it might solve a long-standing problem I've had – the ability to plug in a music source (eg, MP3 player) and transmit it back to the receiver at the same time as speech.

Alas, it can do so but only at the expense of the microphone input – in other words, one or t'other – not both. (That's no better than the way I've done it until now using other beltpacks: throttle back the line-in and use the mic socket. But swapping plugs is a little less than convenient. And what if you want to commentate over the top of music?)

When I explained why this was a problem for me, Altronics agreed and said they would see if the manufacturer could change the inputs to a “mix” rather than exclusive.

## The box

We've neglected to give you the good oil on the amp/speaker itself. We mentioned before that the amplifier is rated at 50W RMS. The speaker setup is a 200mm woofer and high frequency horn. Sensitivity is 95dB 1W @ 1m and maximum sound pressure level is 112dB. Frequency response is a very respectable 20Hz to 20kHz with a signal-to-noise ratio of <70dB.

Overall box dimensions are 300 x 230 x 470mm and it weighs in at 12kg. That's not overly light (especially if you have to carry it a long distance) but it is certainly light enough to be classed as “portable”. Construction is of tough ABS and the carry handle and feet are moulded into the case.

Each box can also drive an 8-ohm external speaker if you want extended range without going to the expense of additional units. But that means running wires – something we'd try to avoid at all costs with this system!

## The verdict

It's a wee ripper! Performance of the system left nothing to be desired and that wireless link is like gold. Overall, we were very impressed. **SC**



One option not mentioned in the text is the C7199 soft carry case, designed to house a microphone, power lead and other accessories.