IN REVIEW:
BLUEWAVE AUDIO BTA-1000 BLUETOOTH/ AMPLIFIER MODULE

WHO WANTS TO PULL CABLE THROUGH A CEILING? **STEPHEN DAWSON** LOOKS AT A SIMPLE SOLUTION FOR A COMPLEX PROBLEM.

The worst part of doing any speaker installation is the wiring. The speakers themselves can usually be installed simply by cutting appropriately sized holes, inserting them and turning their mounting screws clockwise a few dozen turns. But getting the wires plugged into the back of them to your equipment usually involves ceiling incursions, attempting to snake cables through narrow wall cavities and holes in studs and a great deal of frustration.

Often that's unavoidable. But what we have here from Altronics is what we have been calling a 'puck': a device that can help you avoid all that.

THE EQUIPMENT

The puck is a combination Bluetooth receiver and stereo power amplifier. The origin of the nickname is obvious. Just look at the picture.

You put the puck in your ceiling. It weighs nothing (less than a quarter of a kilogram) and is only 93mm in diameter, and 32mm high. The bottom has a self-adhesive patch so you can stick it to something if you like, but it has just enough weight to stay the right way up even with cables attached.

You put wires between the puck and a pair of ceiling speakers. The only thing you need up there is a power point to plug the puck's power adaptor into.

That done, you go down into your room, take one of the many modern devices that support Bluetooth audio, pair the device with the puck and start playing music. You control the volume with the smart device's volume control.

The puck – formally, the Bluewave Audio BTA-1000 Bluetooth receiver and amplifier – also has a pair of line level inputs, so you could (if you're up for that wiring) use it to power a couple of rear or height speakers in a home theatre system. The unit is set up so that when any music is being sent to it via Bluetooth the line inputs are switched off.

It is rated at delivering 20W per

channel 'RMS', which I take it to mean 'continuous' (technically, RMS is not a valid calculation to perform with power measurements). The plug pack power supply is rated at 15V output at 2A, which implies 30W maximum (assuming little phase shift). The puck has some slots around the circumference at the top to allow a little air cooling. Blue lights are visible through the dark translucent plastic of its case indicating its status. In practice you won't ever see them, it being in the ceiling.

Altronics also provided a pair of reasonably priced installation speakers to help with my assessment of the Bluewave device. These are from its Opus One Platinum line. They are two way units with a 25mm titanium dome tweeter and a 165mm woven carbon fibre bass/midrange. The tweeters do not appear to be able to be swivelled. It wasn't mentioned in any of the literature, and while I attempted unsuccessfully to swivel them with a moderate amount of force, I didn't want to push too hard.

Altronics says that these speakers are suitable for indoor and outdoor installation. They are slim in profile – able to fit in most wall cavities, and only poke above the installation surface by around 4mm. Their white grilles are made of aluminium, so rather than being magnetically secured they have a deeper than usual rim of around 12mm that slips into main body of the speaker. They are able to be painted.

They are rated at 60W power handling, 90dB SPL sensitivity (for 1W input) and a frequency response of 55 to 20,000Hz.

LISTENING

Pairing and connecting is done in the usual way using the Bluetooth settings of your phone or tablet or music player. The puck appears on the settings list under the name 'Bluewave Audio'. To switch to using a different device you have to unpair it from the currently paired device, switch off Bluetooth in that device, or switch off the device completely. When you do that the puck goes right into pairing-ready mode.

I switched frequently between several devices and all worked perfectly. Specifically, I bounced between an Android phone, an Android tablet, an iPod Nano, an iPad Mini, a Mac Mini computer and a Microsoft Surface Pro 4, essentially covering all the major likely sources, and so long as I properly

SPECIFICATIONS

BTA-1000

Inputs:	Bluetooth 1 x line level
Power outputs:	2 x 20W 'RMS'
Dimensions:	93 x 32mm

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Drivers:	1 x 25mm titanium dome tweeter 1 x 165mm woven carbon fibre cone bass/midrange
Frequency Response:	55-20,000Hz
Impedance:	8Ω
Power handling:	60W 'RMS', 100W max
Sensitivity:	90dB SPL
Grille diameter:	240mm
Cut out diameter:	204mm
Mounting Depth:	94mm

The Opus One Platinum C0555 installation speakers were surprisingly good and must be considered to truly be a bargain.

disconnected from the previous device, connection and performance was quick and sure.

Neither the aptX nor AAC codecs are mentioned in the specifications so I assume that the lesser quality (although still generally adequate) SBC codec was employed.

In these pages we tend to review installation speakers that cost several hundred dollars each, if not more. Here we have a 20W per channel amp driving into speakers selling for $299 a pair, so you'd think performance would be so, so. Actually, it turned out that this system was really quite respectable in all areas of performance. To be sure, if you were using the speakers in a home theatre system, a modern receiver might tweak their EQ a little, but with one flick of the switch they sounded very effective without any such intervention.

The speakers started off with very hot treble, with cymbals really ringing out. This is presumably since the speakers are likely to be installed off axis. For my listening I moved the treble switch to the '-' position, which resulted in the speakers delivering a solid tonal balance. To be sure, that was in my 190L chipboard installation speaker test box. Your installation will almost certainly be different. Nonetheless, the performance

was promising.

For example, listening to the cover of *I Will Survive* by Cake, the bass guitar – very important for this track – was solidly handled and well articulated and delivered at just the right level with respect to the other elements of the music. *London Calling* by The Clash was well balanced and very punchy, with good dynamics. *Rock the Casbah* was similar, except with a slightly prominent treble. Again the upper and mid bass was strong. Kick drums were muted, with the fundamental being too low for the speakers to properly reproduce.

Yet with less aggressive material – the harp and voice of Joanna Newsom, there was fine musicality and excellent bite on the harp.

One matter that's important in implementing a Bluetooth amplifier combination, particularly when it has no trim level adjustment, is getting the gain right. You don't want the amp to amplify the signal so much that it will be easily driven into overload. But if you don't provide sufficient gain then users might not be able to turn up the volume on their devices high enough to achieve a satisfying output level.

The Bluewave Audio amp seems to have gotten this just about right, at least with these speakers (remember,

sensitivity of 90dB for 1W at 1m). With all the tracks I played I turned up the device to perhaps 90% volume level for very good, room filling levels. Pushing through to 100% allowed tracks recorded at a low average level to come through nicely loud, while those tracks which were encoded at a high level were, perhaps, too loud and edging on distortion, but not to a sufficient degree to endanger any of the equipment.

Even after several hours of running the amp at rather high levels, neither the puck nor its power supply were more than very slightly warm to the touch.

CONCLUSION

The Bluewave Audio BTA-1000 Bluetooth receiver and amplifier is a clever low cost solution to what could otherwise be difficult installations, and provides good performance. Meanwhile, the Opus One Platinum C0555 installation speakers were surprisingly good performers and must be considered to truly be a bargain. **C**

DETAILS

Product: BTA-1000 Bluetooth/Amplifier module

Manufacturer: resi-linx

Altronic Distributors
www.altronics.com.au