



T+A's home hub

With the functionality of a server, a CD player, a tuner, a DAC and an amp, T+A's latest could free up any equipment rack, says **Richard Black**

T+A is one of those company's that takes care not to make the products that others are making. Obviously in the fine details that's true of most manufacturers, but here we're talking about quite substantial differences. Music streamers are becoming quite familiar and the idea of the receiver is as old as the hills; T+A has brought these concepts together with a few other features to create an impressively flexible system that basically does everything you could want from a hi-fi system, except turning electrical signals into sound – you'll still have to buy speakers (perhaps from

T+A, which offers a few models) for that task.

Many routes to the music

Running down list of ways in which you might access music, the receiver offers CD (there's a transport built in), FM radio and Digital radio. Now, if by that you mean DAB, then the answer's 'no'. However, unless you are among the last diehards with no internet connection, you'll surely prefer internet radio which, in most cases, offers more choice in better quality than DAB, so make that a 'yes' after all.

Naturally, since the Receiver connects to the internet via your

► DETAILS

PRODUCT:
T+A E-Series Music Receiver

ORIGIN:
Germany

TYPE:
CD player/streamer/receiver

WEIGHT:
10kg

DIMENSIONS:
(WxHxD)
440x120x390mm

FEATURES:
• CD transport
• Ethernet and wireless server
• FM tuner
• USB connection to music player (inc. iPod)

• 5x digital inputs (3 electrical, 2 optical)

• Digital output (electrical)

• Headphone out (mini-jack, front panel)

DISTRIBUTOR:
Acoustic Brands Limited

TELEPHONE:
07917 431 280

WEBSITE:
taelektroakustik.de

router, it can also get access to music stored on your computer network that's accessible to a uPnP server, so that's another source covered.

Connect up with an Ethernet cable and you can play high-res files; wireless connection is also available but doesn't guarantee higher-than-CD bitrates (though we did actually manage to play 24-bit/96kHz WAV files wirelessly).

Portable music player? Yes, there are two USB-A sockets at the rear, for USB hard discs and portable players of all kinds, including Apple models. (That's digital iPod connection, of course, being USB – analogue via USB is physically impossible so this way you know you are getting the bits, all the bits and nothing but the bits.) LP? This is the only flat 'no' – but then you can buy a variety of very decent LP preamps for under £500, some for under £100, so it's not hard to add this as an upgrade. The Receiver has three line-level analogue inputs, so you can also connect your cassette deck and open-reel recorder.

Almost superfluously, there are five digital inputs. Obviously it's great to be flexible, but we're not sure we could imagine having that many sources. Freeview box, satellite



receiver, DVD player, DAT, MiniDisc? Only the most encyclopaedic gear-head will ever run out here. There are also various ways of getting outputs, apart from the speaker terminals. There are 'recording' and 'line' outputs, which are basically the same thing, plus 'pre', which tracks the volume control.

In control

It would be hard to control this lot without a fairly sophisticated user

interface and, accordingly, there's a large graphics display on the front of the Receiver, that shows up to three lines of text with the active line shown in larger type, plus various bits of ancillary information. That's good, but we have reservations about how everything is controlled. Both front-panel and remote are rather confusing, with buttons requiring short or long presses for various functions and labelling that isn't always as clear as one might wish. 'SRC'? 'SCL'?



ONE OF THE long-standing arguments against receivers is that the various functions can interfere with each other electronically – basically, noise generated by one bit (such as the radio tuner head) may interfere with other bits. That's certainly a valid point. Indeed, as Lothar Weimann points out in his answer (see p74) to our question about wired versus wireless LAN connection, it's still an issue. But it's becoming less of one as the years go by.

Part of the reason for this is the decreasing physical size of circuit modules, which makes them less likely to radiate unwanted radio waves. The FM head in this unit is minute and the WLAN circuitry is on a tiny circuit board.

But, perhaps, even more importantly, modern circuit-designing software allows designers to check on noise-generating potential and minimise it before even a prototype is constructed. And indeed, we were not aware of any ill effects from the Receiver's multitudinous circuit blocks during our testing.

The trouble is that we've been spoiled, as far as user interfaces are concerned, by the absolutely delightful Logitech Squeezebox (HFC 351) with its full-colour touch screen. Having seen what's possible we're much more inclined to be intolerant of awkward controls and unclear labelling. This Receiver isn't bad and it did (just) pass the test of basic operation without reference to the manual, but we could imagine it done better, especially at this price.

Build quality is very good, with the satin-finish aluminium top and front being no surprise; you may raise an eyebrow at the use of plastic for the side panels, but this is, we reckon, rather a shrewd move. It's a very nice-looking plastic, for a start, and it doesn't mark easily, a strong point in

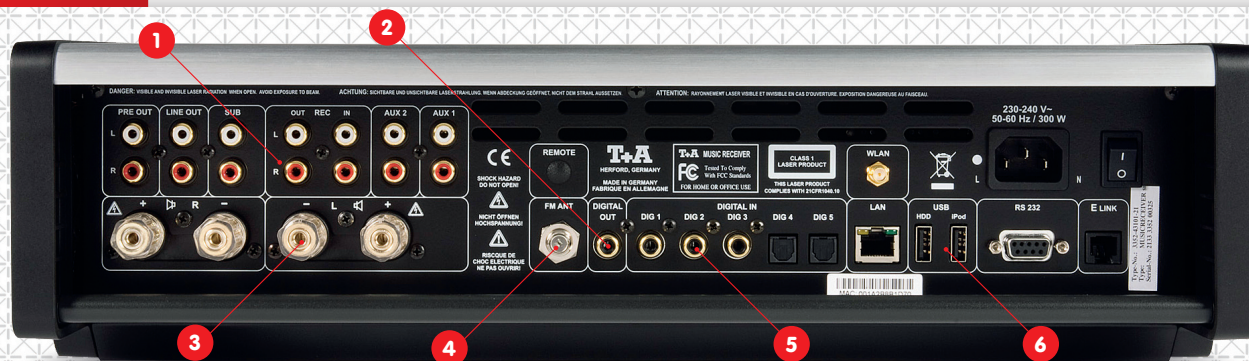
“The concept is a winner and the performance never less than decent.”

its favour compared with wood, for instance. Underneath the unit, feet are eschewed in favour of felt-covered ridges, which help the unit sit very securely on any surface. Sockets at the rear are very well protected by a substantial overhang from the top cover. Actually, that makes them basically impossible to access from the top, but we imagine most users of a device like this won't be plugging and unplugging equipment all the time.

Digital equality

With so many options available, we tried to give each one a fair turn, but seemed to end up spending rather more time with computer-stored

CONNECTIONS



1 Line-level analogue inputs and outputs

2 Digital output

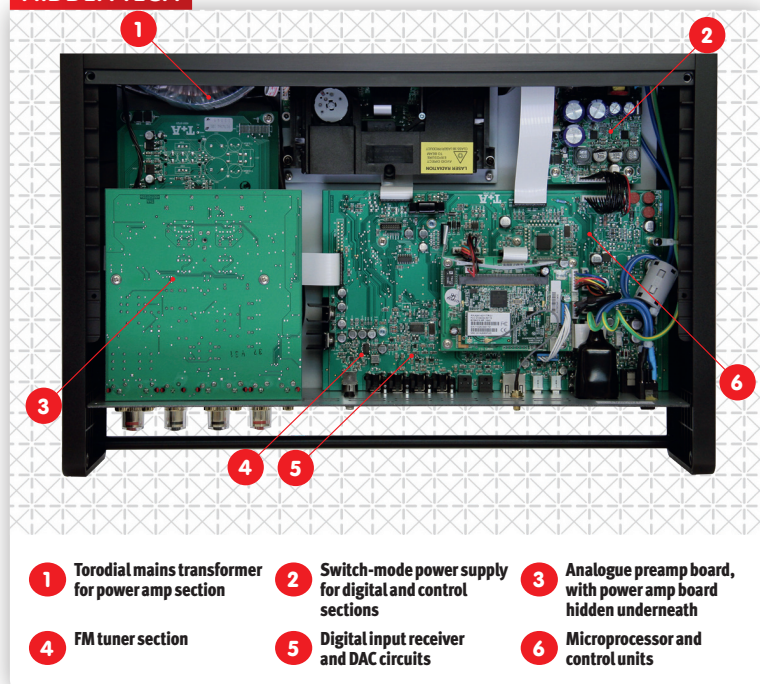
3 Speaker outputs

4 FM antenna connection on US-style F socket

5 Plentiful digital outputs

6 USB sockets for all kinds of devices

HIDDEN TECH



files. It's not that they sounded dramatically clearer, nor that there was more choice that way, it's just yet another illustration of how the fully connected life is making us all alarmingly lazy. That said, we'll get up and change CDs happily enough if they sound better!

But they don't, in this case at least. Indeed, there's no reason why they should, all else being equal. We store all our music in lossless format, so a properly functional digital connection should deliver them to the DAC at the heart of a unit in identical form to that read off CDs. Maybe there's the occasional hint of bias towards one flavour (Ethernet, Wireless LAN, digital input, CD) or another, but in every case when we thought we spotted something it was so small and intangible that we ended up regarding them all as equal. The only one that seemed slightly below par

was the optical digital input, which for some reason struck us as a touch subdued in the detail department, but even there it was pretty marginal.

Detail would tend to be where one notices any change in sound, because this unit's just so darn good at it. By any standards, its powers of analysis are prodigious and it can get right inside familiar recordings and bring out things one didn't know were there.

There's something of a downside, though, in that the sound can sometimes seem a little clinical and detached. Searching for the root cause of that, we realised that the integration between bass and higher frequencies is not quite perfect. In turn, that's down to a very slightly lazy quality to bass, which doesn't quite have the energy and attack of midrange and treble. It's not something one comes across very often and it's not major, but it does



WE SPOKE TO
Lothar Weimann,
head of R&D at T+A

HFC: There are plenty of off-the-shelf Class D amp modules available. Why did T+A decide to build its own?

LW: Simply because we could not find an off-the-shelf amp that really met all our requirements, so eight years ago we developed our own Class-D technology. Our approach differs in many ways from the Class-D mainstream. The distortion spectrum of our amps is very similar to a good analogue amp. We also use a traditional toroidal transformer power supply instead of switch-mode PSUs, because transformers don't show hard current limiting.

HFC: Why is there no USB socket to connect to a computer?

LW: We prefer S/PDIF for digital audio signals because of better noise and interference isolation between computer and audio equipment. When needed, an external USB/S/PDIF dongle can be used.

HFC: Apart from hi-res files, are there any advantages to wired LAN connection that would justify the trouble of running wires around the place?

LW: When using a wired LAN connection we switch off all the RF components in our devices resulting in less high-frequency interference. Running a W-LAN means more work for the processor, resulting in less idle states and in even more digital interference. A wired LAN means higher performance, higher bandwidth

have some effect on one's perception of a whole musical event.

All the same, we found plenty to like in this unit's presentation. As is often the way, it seems more at home with some musical styles than others and we found it most successful with the highly structured world of classical music, but also very convincing in big-scale rock. Some folk music seemed at the other extreme and it didn't do very much for heavily processed contemporary pop music either. At best, though, the Receiver created some very lifelike symphonic and operatic sounds, as well as truly epic-scale glam and prog rock.

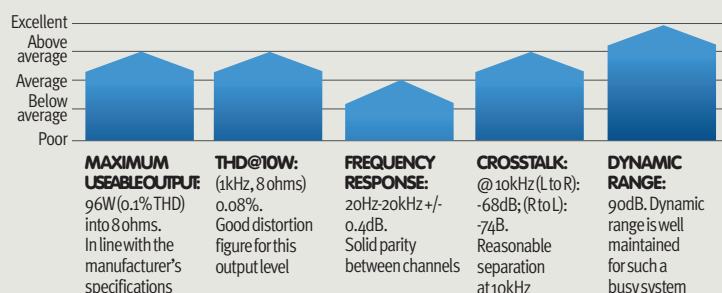
Incidentally, FM reception is really rather special. The Receiver needs a pretty strong radio signal but, given that, it has very clean and clear sound that recalls some of the better FM tuners we've reviewed over the years. All the same, we'd prefer internet connection for many major stations.

The sum of its parts

Summing up a unit like this is bound to be hard, principally because of the lack of comparisons. If you tried to get together separate CD player, server and radio sources and put them together with an amp of similar rating, you'd have trouble assembling anything of comparable sonic attainment, and it would obviously waste a lot more space in your home and probably require more remote controls.

On that basis, value is very good, but we still have some reservations, looking at the issue of control and ergonomics as well as listening to that slightly disjointed bass. In the end, though, the mere concept is quite a winner and performance is never less than decent, so we'll give the E-Series Music Receiver a warm welcome, with compliments to T+A for a job well done. ●

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Excellent bass extension; clean midrange and treble

VALUE FOR ★★★★★ **DISLIKE:** Bass doesn't always have the attack of midrange and treble

BUILD QUALITY ★★★★★ **WE SAY:** Few single units offer as many features. Attractive on both practical and sonic grounds

FEATURES ★★★★★

OVERALL

