# Engineered to please

### Germany's T+A has revamped its classic R series of components. Jon Myles lends an ear to the new PA 2000 R amplifier.

f any evidence were needed over the health of the German hi-fi industry then look no further than our report on the Munich High End Show in this month's issue.

Then take a roll-call of the established brands emanating from the country - Quadral, German Physics, MBL, Graff, Burmester. And, of course, T+A. The name stands for Theory and Application and the company produces a complete range of equipment and accessories from its base in Herford in Eastern Westphalia.

Prices range from the affordable to the truly eye-popping - but in the

middle of the scale stands its R series of components which first appeared way back in 1992 and have been steadily revised ever since.

The latest iteration of the range is the 2000 series of components - featuring a turntable, CD/network player and two integrated amplifiers. There's the large PA 2500 R priced at £5577 and its smaller, and rather more svelte, sibling - the PA 2000 R on review here which costs £4200.

And while that might seem a little expensive for a slim - 8.2cm x 46cm x 40.5cm (H/W/D) - amplifier, once you see it in the flesh and start to explore its various options then any misgivings start to fade away.

For a start, it is beautifully engineered, with brushed aluminium casework whose fit and finish is exemplary. There's a large, round window adorned with the T+A logo on the top which allows you to see the innards, while the buttons on the fascia have a firm, tactile feel to them.

You can use those buttons to access the various configuration options or default (as I did) to the clever remote which allows you to access all the settings. These include customising the display, naming inputs to match your sources and adjusting bass and treble levels - either individually for the right and left channels or in unison.



## HI-FI WORLD



T+A's dedication to engineering is reflected in the internal layout of the amplifier - neat and elegant.

In addition there are three loudness settings, aimed at matching the amplifier to the sensitivity of the chosen loudspeakers and the size of your room. So, as unassuming as it may look at first sight, the T+A is a feat of engineering in terms of its technical ability.



The front panel controls are well-judged - being firm and responsive. The rotary volume control operates in 1dB steps for fine adjustment.

That ability extends to its inputs - with three balanced XLRs and a trio of single-ended RCAs on offer, while there's also a pre-amp out - and an MM/MC phono module can be fitted if required.

#### **SOUND QUALITY**

Some amplifiers impress you with their outright drive and vibrancy. Others beguile you with their warmth. The T+A does neither of these. Instead it impresses with its sheer even-handedness and lack of colour. In essence it is relatively neutral and extremely detailed letting you really hear what's going when hooked up to high-quality standmounts.

Playing John Coltrane's 'Ascension' through a pair of Quadral Megan VIII loudspeakers, for example, the T+A cut through the dense free jazz improvisations to pick out the individual instruments. This album can often sound like a squall of sound on less capable amplifiers but the PA 2000 R brought out the subtle interplay between the various players - making it easy to track the spiralling tenor and alto sax lines as they revolved around each other.

Switching to Leftfield's 'Phat Planet' the low-end was well-judged firm and deep but without any bloom or bloat to it. It doesn't have the warmth of, say, a Naim NAP 250 DR but is slightly drier, giving a sense of pace to the music.

There was also bags of detail on offer. Indeed, the T+A unearthed extra elements from even the most familiar tracks - bringing out subtle electronic effects on the remixes of New Order's 'Bizarre Love Triangle' that I hadn't noticed before.

"The T+A seems to unearth extra elements from even the most familiar tracks - bringing out subtle electronic effects on the remixes of New Order's 'Bizarre Love Triangle' that I hadn't noticed before"

on with the music.

It also sounds more powerful than its quoted figures would suggest (see Measured Performance for more details). It had no trouble driving the big Martin Logan Renaissance electrostatics (see review elsewhere this issue) but was also just as happy The same quality extended to gentler music as well, female vocals having a lovely air and space to them. Margo Timmins voice on Cowboy Junkies' 'Blue Moon' was spinetinglingly good - projected well out into the room and dripping with emotion.



The bass/treble settings can be individually tailored for the left and right channels via the front panel.

REVIEW



Three balanced XLRs and a trio of single-ended RCAs mean the T+A can handle a variety of source components. The R2 link sockets allow for connection to other T+A products for total system control.

All this listening was done with the tone controls set to off, as is my usual preference. Switching them in does allow tailoring of the bass and treble but at the expense of a slight loss of definition.

There's also a loudness control that allows you to set the amplifier to match the size of your room and efficiency of the loudspeakers being used. In practice the effect of this was quite subtle and experimentation is recommended.

This feature does show just how wellequipped the T+A PA 2000 R is. At first sight it may look like a basic integrated amplifier but it, is in fact, a feature-packed feat of German engineering. And it is also extremely enjoyable to listen to.

#### CONCLUSION

The new T+A is a beautifully constructed amplifier that simply exudes quality and sounds as good as it looks. Add in a comprehensive range of features and it makes a strong case for itself.



Totally flexible: Users even have the option to individually name sources if desired.



Loudness control allows the amplifier to be set for specific speakers and room size.

#### **MEASURED PERFORMANCE**

The PA 2000 R produced 112 Watts into 8 Ohms and 196 Watts into 4 Ohms under test, so it delivers sufficient power to drive any loudspeaker loud under all conditions.

Distortion was very low, measuring 0.005% in the midband (1kHz) and 0.01% at 10kHz driving a 4 0hm load, our analysis showing just a small amount of innocuous sounding second harmonic here. With almost no change in the distortion spectrum from low to high output levels the T+A will sound clean and neutral under all conditions.

Frequency response was wide, extending from 1Hz up to 53kHz, a stepped attenuator volume control imposing no change irrespective of volume setting. Wide bandwidth usually provides a clean, open sound with airy highs.

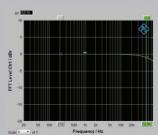
Sensitivity was on the low side, the amplifier needing 370mV to deliver full output from a unbalanced phono socket line input, and 600mV from balanced XLR input.

The tone controls were uneven in effect, the minimum available lift of +2dB giving +1.5dB, whilst -2dB setting gave -2.5dB. The latter value is quite high; analogue controls offer subtler levels of cut to finely trim tonal balance. By way of contrast the PA 200R's tone controls impose quite large steps in response variation.

The PA 2000 R amplifier delivers high power and low distortion. It also has wide bandwidth. It will sound clean and open as a result. The tone and loudness controls were coarse in action, not offering fine levels of tonal trim. **NK** 

Power	112watts
CD/tuner/aux.	
Frequency response	1Hz-53kHz
Separation	98dB
Noise	-100dB
Distortion	0.01%
Sensitivity	370 / 600mV

#### FREQUENCY RESPONSE



DISTORTION

Do 10135 % 2.1745 V 10.000 kHz

T+A PA 2000 R £4200

#### 00000

OUTSTANDING - amongst the best.

#### VERDICT

A classy-looking integrated amplifier with good power and a neutral, detailed sound. Will appeal to many.

#### FOR

- detailed sound - neutral - good bass

- facilities

#### AGAINST - not cheap

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