

A SPECIAL EXPE»R«IENCE



The very high-quality remote control transmitter controls the entire system, even if not all network functions

After the great success of the high-end HV series, T+A not only completely refurbished its previous top-of-the-range "R" series, but also equipped it with the superb sounding HV technology. Inevitable success?

T+A has only recently sold out its legendary R-series stock – to now start with a new class. Obviously inspired by the success of the HV-series, and with the certainty that quality finds its buyers, a lot of the knowledge gained with the flagships flowed into the new R-series, which is why it had more in common with the HV siblings than with their predecessors. The price was also matched to the enhanced qualities, it

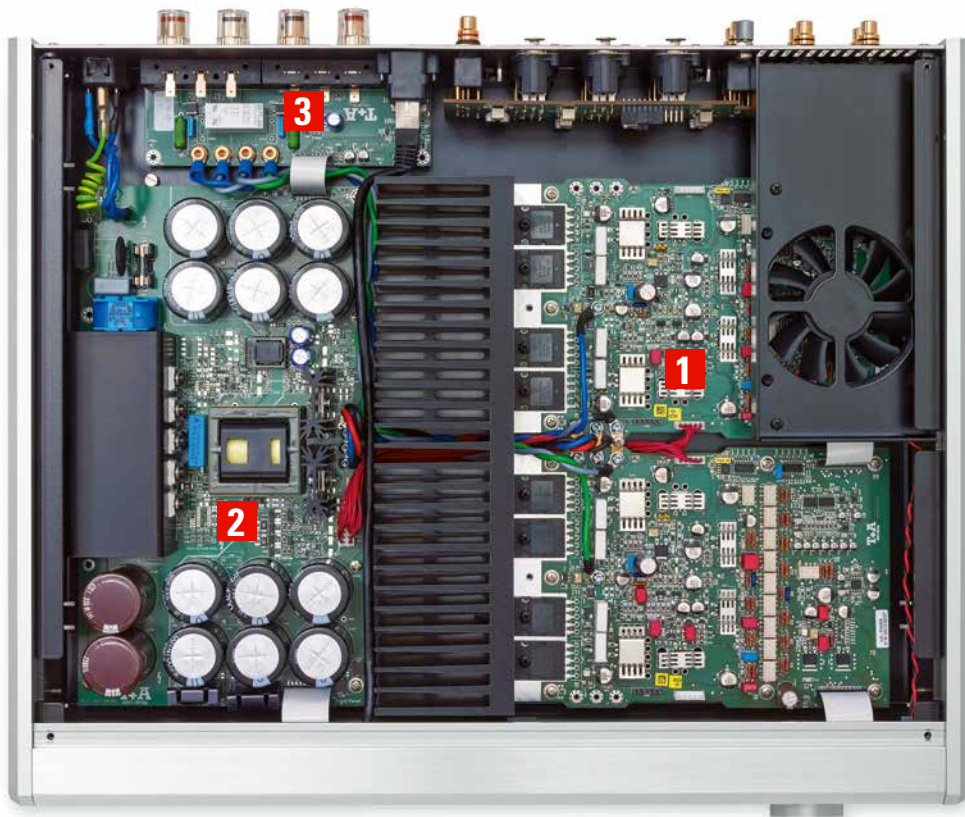
floats between, that is, well below the HV and above the E components. The R-series was for several decades undoubtedly the most important series from and for T+A, a design icon. The balancing act to continue the series, yet to signal a new beginning, succeeded with the choice of the R-series model numbers 2000 and 2500 not used until now. The housings are beautifully finished and very stable, but do have the charm of an armored cruiser of

the more expensive siblings only because of its space-saving dimensions, which is of course reasonable. The equally timeless as elegant and functional design must be described as extremely successful. It reminds one both of its predecessor and of the clean lines of the best product designers ever. As this comparison is always attempted, it is however noted here that even the most sophisticated creations, for example by a certain Dieter Rams from the now defunct company Braun in terms of Hi-Fi products, were nowhere near the "R" league. We find the decision to offer a similar and equally powerful all-round machine in the MP 2000 R multisource player, which can literally do everything from CD playback

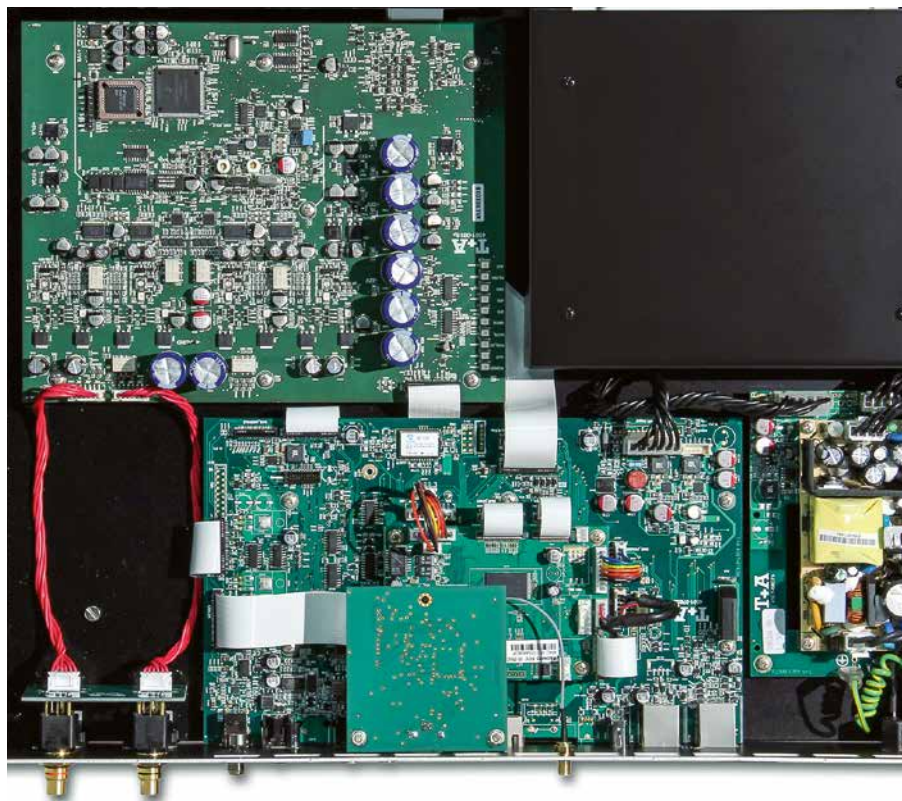
over high-performance DAC, FM and internet radio (free vTuner) through network player, without tangible compromises, at almost half the price of the MP 3000 HV a clever one.

Digital jack of all trades

T+A was once one of the first manufacturers to equip their CD player with auxiliary functions, not only with regard to the DAC that is also accessible for external sources, but also other integrated sources. The extremely stable CD drive with two stainless steel pushrods is float-mounted and resonance-damped to protect it from harmful effects. The streaming client being used is not standard solution, but a UPnP network-enabled, audiophile processor board with distinctive HD qualities for virtually all relevant formats up to 24 bits/192 kHz. In the 32-bit Sigma Delta DAC four converters per channel, which process the PCM up to 384 kilohertz and DSD 64/128/256 and even DSD 512 (meaningful to about 80 kilohertz), are used in double-differential quadruple configuration. Remote control via the supplied FM 100, even more elegantly and completely via an optional FD 100 or a corresponding app.



▲ The image of the inner workings of the T+A integrated amplifier demonstrates the complexity of its operations. To be seen here **1** are the two identically designed amplifier boards with the fans and on the left, shielded by large heat sinks, the power supply **2** and output unit **3**.



▲ In the MP 2000 R the encapsulated drive (top right) as well as the elaborate, functionally separate boards for the analog output stage (top left), the power supply unit (bottom right) and the DAC/streaming block (center) attract the attention.

Ultra-strong control center

The PA 2000 R integrated amplifier, although the “lesser” of two available models, packs a powerful punch. Whereas on paper the specifications are 100 watts at 8 ohms and 200 watts at 4 ohms as output power, we could actually measure even 130 (+30%) and almost 240 (+20%) watts – quite a noble understatement. To avoid magnetic distortion, only non-magnetic input and output terminals with hard gold-plated contacts are used, and all bushings are screwed to the aluminum rear panel to ensure high stability. Gas-tight encapsulated gold-contact relays for input selection and volume control guarantee wear-free functioning and short signal paths, which in turn eliminates noise and distortion. One of the line-level inputs can be fitted to connect a turntable available as an option with very high-quality phono amplifier modules (phono MM or MC).

The HV “secret”

As in the HV models, the preamplifier and power amplifier parts in the R-series are also structured according to the dual mono principle, while the absolutely

identical boards, separated in two channels, each comprises an input section, volume control, high-voltage amplifier and current amplifier stage. The circuit almost doing without negative feedback loop based of its quality relies on a cross-coupled cascode differential amplifier, followed by a single-ended class A large-signal stage. Among others, the amplifier stages are fitted completely discreetly with hand-selected J-FET transistors – in other words, without operational amplifiers.

Combined with the unusually stable operating characteristics based on the high supply voltages, high linearity and extreme dynamic capabilities are achieved. According to T+A, signals up to 60 volts peak voltage can be processed without distortion! Voltage and current amplifier stages are electrically isolated from each other. This way load dependencies cannot even occur through the retroactive speaker currents on the voltage amplifier. The current amplifier or output stage is equipped with MOS FET drivers and the latest generation of bipolar “thermal tracking” power transistors with integrated thermal diodes, so that the operating points can be kept constant at minimum distortion. Due to the limited space in the solid flat aluminum housings, T+A forthwith developed a controlled and high-frequency sine wave power supply unit with 100-kilohertz sine (!) equipped with appropriately lavish screening in house to nevertheless ensure a hard and sturdy power supply. It works without the usual switching frequency interference and can deliver large currents problem-free and inertia-free and uninterrupted 700 and briefly up to 1200 watts.

EXTENDED “R” OPTIONS

If the already quite lavish range of services offered by the “small” PA 2000 R integrated amplifier is not enough, the larger sibling PA 2500 R is worth looking at. The double-height housing packs the same basic circuit and instead of one, two high-performance power supplies with double screening capacity are used; in addition, another speaker and high-level connection and another balanced pair of preamplifier outputs were included. The extra space was therefore not used only as heatsink to dissipate the heat generated by the 40 percent higher output power. The PA 2500 R costs € 6,500*. The P 2000 R is also a high-quality, belt-driven turntable. He is available as a drive or with a modified Rega arm without system, optionally also with an Ortofon MM or a Clearaudio MC system. T+A recommends the optional PH G 10 phono amplifier module, which can be directly built into the chassis. The basic turntable with arm and MM system costs € 4000*..



▲ The new turntable is a further development of the G 1260 R from the previous R-series.



▲ The PA 2500 R has even more power and features.

The components used in both devices largely meet extreme military requirements and are of exquisite quality. That one also hears this tremendous effort is hardly surprising. The T+A team produces enormous clarity and projects a very spacious, open and fantastically illuminated stage between the speakers. You do not miss the smallest detail, while the features of the MP 2000 R used as sources try to mutually surpass each other. But it is not the single, perfect mosaic pieces such as high resolution or plasticity that enthrall us, it is the total offered event.

KEYWORD

HF sine-wave power supply: Unlike a switching power supply, a sine-wave power supply does not turn on and off. And unlike the conventional linear power supply, it works with 100 kilohertz instead of 50 hertz.

Especially since the amplifier mobilizes forces that can shake the listening room – particularly on a T+A transmission line from beats of the Criterion 110 S – regardless of its slender form. Whether we insert the “Audiophile Voices” with exquisite voices like Eva Cassidy into the CD drive, let it rip with “Children Of Sanchez” or stream HD from the server, T+A musically delivers a superior presentation that is not dramatically inferior to the HV siblings. No question, the new

R-series from Herford is a huge cinematic experience. If given the choice, I’d probably choose the larger integrated amplifier while my wife would probably go for the slimmer model. When it comes to multiplayers we would probably agree more quickly, because with network player, CD player and DAC (at least) it combines a triumvirate of selected components in one device at a single price. On closer inspection it relativizes itself amazingly quickly. No doubt, you too will succumb to the charm of this new T+A class “R”.

Tom Frantzen



Balanced and unbalanced outputs, FM/DAB+/internet radio, LAN/WLAN and numerous digital connections are features that distinguish the multi-functional player.



The amplifier provides three balanced and three cinch inputs, pre outs and connections for one pair of speakers. It can (optionally) be modified with a high-level input for turntable connection.

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*All prices listed are German retail prices incl. VAT valid at the time of evaluation.

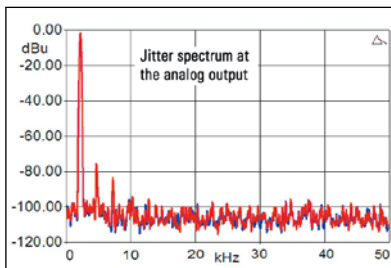
T+A MP 2000 R



About € 4,900*
Dimensions: 46 x 8 x 40 cm (WxHxD)
Warranty: 3 years

The multisource player from T+A is a top-class CD player, combined with an adequate PCM/DSD-DAC and a high-performance network player in one. Although not cheap, as an extremely well-sounding jack of all trades it ultimately does make absolute top quality affordable. Superb!

MEASUREMENT RESULTS



Signal-to-noise ratio Digital 0	110 dB
Signal-to-quantization-noise ratio (400 Hz/0 dB)	97 dB
Distortion factor (400 Hz/-60 dB)	0.11%
Converter linearity	up to -90 dB 0.1 dB
Scanning reliability	very good
Reading time	9 s
Output resistance cinch/XLR at 1 kHz	280/110 Ω
Output voltage cinch/XLR at 0dB FS	2.1 / 4.3 V
Channel deviation	0.1 dB
Jitter	2.6 ns
Deviation from the sampling frequency	-3.9 ppm
Power input	Off Standby Idling 0 <2 17 watts

LABORATORY COMMENTS: Outstanding measured values in all respects, especially in noise, distortion and jitter. The converter part is also impressive with values such as 116 dB (signal-to-noise ratio "digital zero") without any ifs and buts.



FEATURES

Remote control, FM/Internet Radio and DLNA/UPnP, USB/LAN/WLAN, HD streaming and DAC up to 24/192, DSD 64/128/256/512 with true 1-bit converter, Bluetooth aptX receiver, R system bus.

STEREOD -TEST

SOUND QUALITY CD	93%
SOUND QUALITY DAC	93%
SOUND QUALITY STREAMER	93%

PRICE/PERFORMANCE



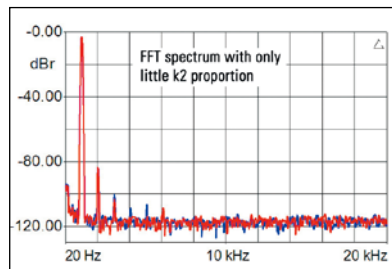
T+A PA 2000 R



about € 4900*
Dimensions: 46 x 8 x 40 cm (WxHxD)
Warranty: 3 years

For such a powerful amplifier with such an attractive slim-line look, the new T+A unleashes a magnificent, colorful and down to the finest detailed soundscape with verve and vitality. For half the price almost the ultimate sound of the HV series. Fantastic!

MEASUREMENT RESULTS



Continuous power to 8 4 Ohm	130 237 watts per channel
Pulse power to 4 ohms	- watts per channel
Distortion factor	
At 50 mW 5 watts Pmax -1 dB	0.003 0.005 0.02%
Intermodulation	
At 50 mW 5 watts Pmax -1 dB	0.002 0.004 0.04%
Signal-to-noise ratio CD at 50 mW 5 watts	85 102 dB
Channel separation at 10 kHz	64 dB
Damping factor at 4 ohms	-
Upper cut-off frequency (-3 dB, 4 Ω)	>80 kHz
Connected load values oriented to practical operation	
Crosstalk tuner/CD (10 kHz/5 kOhms)	94 dB
Volume control clocking error up to -60 dB	0.03 dB
Power input	Off Standby Idling 0 <2 54 watts

LABORATORY COMMENTS: High performance and absolutely outstanding, partly superior measured values, especially for noise, distortion and crosstalk as well as the synchronization of the volume control.



FEATURES

Remote control, 3 x XLR inputs, 3 x cinch; phono optional, tone control/loudness, pre out, headphone output, dimmable display, R system bus, connection for one pair of speakers.

STEREOD -TEST

SOUND QUALITY	91%
PRICE/PERFORMANCE	



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