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Pre / Power amplifiers:

Primare Pre 60 + A 60

It was already late in the afternoon on a Thursday shortly before the end of March. I had secretly slipped away to finally listen to music peacefully. And I was lucky that nobody noticed my almost three hours of absence. So on the occasion of my visit at the Primare company, I could for the first time calmly deal with the new Pre 60 preamp and A 60 power amp duo, whose debut had been scheduled for the High End in Munich and which has populated my listening room since the fair closed its doors. Already during the first minutes I caught myself thinking that today more and more often high-class music reproduction requires an extra step. Whereas we had formerly learned that after a careful setup it was time for listening, today the more or less comprehensive, sometimes easy and sometimes impassible step of configuration is also inserted.

In practice this means for the Pre 60 preamp that each input can be activated or deactivated, renamed and adjusted in level. Of course, this makes its everyday operation more comfortable. Which is a good cue at this point: not only the »operational experience« is supposed to become more comfortable, but also the integration of new music sources – irrespective of their quality, that much is clear. Who purchases a modern preamp today, wants to have at least the option of listening to internet radio or files from his iPod or tablet. Likewise music stored on harddisks shall be managed, compiled as playlists and controlled via app. However, for some high-end companies this ought to be an unsolvable task within the foreseeable future, both under financial and technical aspects.

Not so with Primare, for things like app control and media board have already become a reality with the Swedes. The Pre 60 offers an integrated D/A converter which can handle signals of 24 bit at 192 kilohertz sampling rate at the max. When counting the digital input options I'm almost getting short of breath: one coaxial and three fibre-opticals, USB-A and USB-B plus internet connection either wireless via WLAN or tethered via the Ethernet interface

which, in addition to the reception of countless radio stations, also allows to control the unit via the Primare app. But the Pre 60 does not only have a lot to offer in the digital world, the analogue domain with two balanced XLR and four RCA inputs is in no way inferior. For connecting active speakers or power amplifiers two pairs of WBT Next-Gen sockets and another two pairs of Neutrik XLR outputs are available. Bi-amping is therefore possible in both output variants. Viewed from the rear side, the phase of the IEC mains socket is left. Regrettably this piece of information is still not marked on the rear housing panel, but hidden in the manual and noteworthy for plausible sonic reasons.

Despite all of the Primare Pre 60's complexity that's beginning to show, its massive, detached front panel is pure joy: there are two rotary controls for source and level selection plus four pushbuttons for the basic operation. Due to the clearly readable OLED display, whose brightness can be adjusted in four steps when necessary, the configuration is an instant success. This holds true even for the integration into the WLAN network. If you don't want to busy yourself with a controlling app for your music listening session, you may fall back on the included standard remote.

Contrary to Primare's 20 and 30 series, which were designed in Sweden and manufactured in the Far East, the pre/power amp combo – available either in an attractive bi-colour look or all black – is also produced in Sweden. Primare Product Manager Siemen Algra justified this by stating that »the manufacturing in close proximity will greatly facilitate, if not enable at all, the access with changes and modifications and also the surveillance of the series standard«.

The high ambition of the Swedes also shows when we take a look under the cover lid. Starting from the transformer, we can spot seven individually protected power supply circuits which, among other things, strictly separate the digital and analogue sections. The storage bank of electrolytic caps has a total capacitance of 43,000 microfarads, and

Test: Pre/Power Amp Primare Pre 60 + A 60

With their Pre 60 preamp and A 60 power amp combination Primare proves to be open for a multitude of sources.

Universal Team



according to Primare none of the components exceeds a one per cent tolerance value. The actual circuit features a balanced layout which requires a balancing of the signals fed in via RCA. From this design Primare expects a better protection against radio interference. The task of a reliable D/A conversion has been given to the CS 4398 from Crystal. The output stage which comes next has a discrete layout, and even the contacts of the media board for the connection to the analogue preamp section are gold-plated. That way a lot of prerequisites have been met to deliver an adequate sonic performance.

But for this purpose it still takes the A 60 as game partner. Like the preamp, the power amp also rests on merely three housing feet, which safely prevents even the tiniest wobbling on the surface. As we all know, the stability of the reproduction components is a sound-influencing factor. How do you imagine a power amplifier that pumps 675 watts into four ohms and 314 watts into eight ohms? Perhaps as a walk-in type, maybe with huge, sprawling heatsinks, but by all means totally heavyweight. The A 60 weighs in at only 12.5 kilograms and has standard venting slots in its cover and bottom lids which, of course, instantly reveals the use of the switching power

supply technology. Primare conceals the digital amplifier made of four class-D modules behind the token »UFPD« (Ultra Fast Power Device) and even gives a comprehensive explanation that a class-D amplifier is based on analogue circuit concepts. However, the concern of the designers that with such an amplifier audiophiles might not take them seriously, is losing ground. This is partly due to the fact that manufacturers like Burmester or Jeff Rowland have meanwhile proven that they can indeed build convincingly sounding products using this technology. Apart from this fact the high efficiency of the switching power supplies is, of course, more enjoyable for the user's electricity bill than with bulky class-A power amps.

From the year dot, Primare has been confronted with the prejudice of making design

Inside the tidy Primare A 60 the four class-D amp modules (two per channel) produce the extremely high output power.

hifi exclusively. To nip this suspicion in the bud, the A 60 was also equipped with WBT's Next-Gen RCA inputs and eight WBT output terminals for optional bi-wiring, complemented by a pair of Neutrik XLR sockets for the balanced connection. A small selector switch is used to toggle between the inputs.

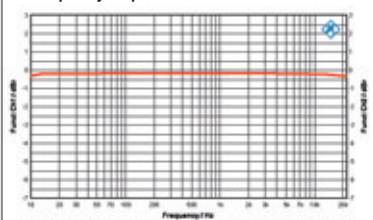
Like in the preamp the low-tolerance components are mounted on quad-layer circuit boards to keep the signal paths short and, above all, to achieve a clean earthing. An eye-catcher are the vanden-Hul cables laid inside for connecting the terminals, whose conductor material consists of silver-plated copper. Rarely did I see such an accumulation of renowned brand accessory parts before like in this Primare combination. It seems that in terms of sound quality the designer team definitely wants to hedge their bets.

True to the motto 'the more sophisticated your tactics, the higher your probability of failing', the first listening impressions are fairly ambiguous. Right from the start I notice an impressive, because acceleration-free high speed which is definitely amazing. On the other hand I can hear a strange seeming fundamental tone weakness and a sound image which is rather punched than flowing. This is how I do not want my music

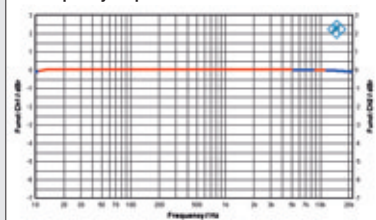


Lab Report

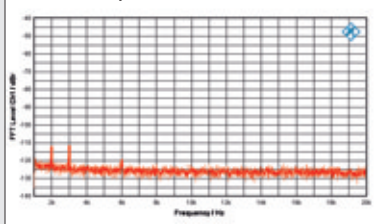
Frequency response: Primare Pre 60



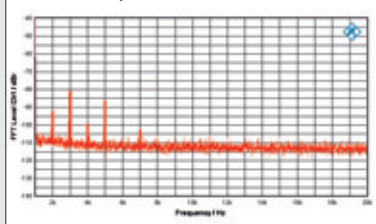
Frequency response: Primare A60



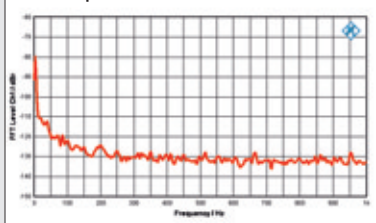
Distortion spectrum: Primare Pre 60



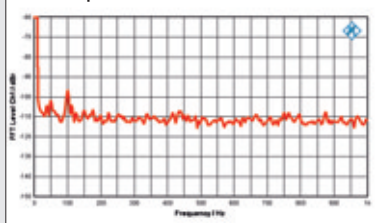
Distortion spectrum: Primare A60



Noise spectrum: Primare Pre 60



Noise spectrum: Primare A60



Preamp Primare Pre 60

Gain factor	6.9-fold / 16.8 dB
Max. output voltage	13.8 V
Distortion factor (THD+N)	0.0018 %
IM distortions (SMPTE)	0.0008 %
IM distortions (CCIF)	0.0005 %
Unweighted noise voltage	-87.6 dB
Weighted noise voltage (A-weighted)	-90.9 dB
Upper limit frequency (-3dB)	112 kHz
Channel deviation	0.044 dB
Input impedance (1kHz)	29.5 k Ω
Output impedance (1kHz)	290 Ω
Power consumption (idle state)	33 W

The Pre 60 preamp shines with very low distortions and a perfect distortion spectrum, where the first two harmonics appear from the noise only beyond -110 dB. The frequency response chart is dead straight, although the Primare preamp has not even been trimmed to maximum bandwidth, but laid out rather conservatively. The most striking feature of the A 60 power amp is its enormous output power, the power bandwidth is limited to 90 kilohertz. When measuring the S/N ratios the UPV

Power amplifier Primare A60

Nominal output power 8 Ω (1% THD)	314 W
Nominal output power 4 Ω (1% THD)	675 W
Gain factor	20.1-fold / 26.1 dB
Distortion factor (THD+N, 10W / 4 Ω)	0.0021 %
IM distortions (SMPTE, 5W / 4 Ω)	0.011 %
IM distortions (CCIF, 5W / 4 Ω)	0.0052 %
Unweighted noise voltage	-101.8 dB
Weighted noise voltage (A-weighted)	-102.5 dB
Upper limit frequency (-3dB / 10W)	90 kHz
Channel deviation	0.015 dB
Sensitivity (full modulation 4 Ω)	2.5 V
Input impedance	19 k Ω
Power consumption (idle state)	33 W

analyser got slightly out of step; the best values were calculated with an AES17 measuring filter, these were flawless (depending on earthing, bandwidth and filter worse figures could also be observed). The A 60's distortion spectrum reveals a dominance of the odd-numbered harmonics, the channel deviation is excellent. In idle state the Primare power amp is content with 30 odd watts and when push comes to shove, it can unleash impressive power reserves. ■

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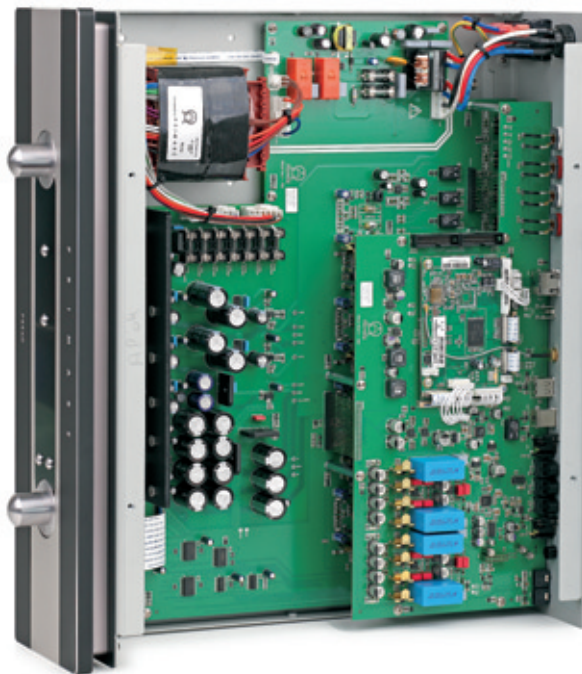
listening, and so I grant the Primares 24 hours powered on before making myself comfy again in front of the connected Ktêmas from Franco Serblin. As already seen with the Burmester integrated amplifier 101, wondrous things do happen in these amplifiers during the first hours on the mains grid favouring the sound image. In practice this means that the Primares, too, must have spent sufficient time on the power grid first before they can call up their full potential.

From that measure »My Man« by Santana benefits off the cuff, for the guitar no longer cuts acoustical patterns into my ear drums like a scalpel, but rather puts itself in front of the musical happenings in an impressive, because unobtrusive way. Interpretative dominance à la Carlos Santana is not a question of volume levels, as can be observed here. Acoustically far more minimised, yet by

On the second floor of the Pre 60 the D/A converter sits right behind the six digital inputs.

no means with less intensity Pat Metheny and Charlie Haden are going about their work. »He's Gone Away« is a piece that becomes unbearable with even the smallest trace of harshness in the listening chain. Hence I consider it daring to have the Primare duo handle this track right at the beginning of the listening checks, both in the analogue (from the Marantz SA-KI Pearl) and digital format. Fed with analogue diet, the Primares succeed in reproducing each detail of the strings correctly. Harmonically Haden's double bass takes care of the lowest octave, that sounds nice and elegant. As soon as the Pre 60's internal D/A converter takes on the task of generating the analogue signal, the performance reveals a bit more shine, and the reverberation is reproduced more precisely as well, which I like better. Via the app I can also send the track directly from my iPad to the pre-amp; this works perfectly, but sounds definitely duller and more dreary than straight from the CD.

Sure, with the iPad on my knees I have an incredibly comfortable access to music which I consider noteworthy for being listened to, but very soon I realise that the sound loss is too big for my ears. Yet this statement is totally reversed with high-resolution tracks, for now the Primare duo is soaring to an unexpected level. At first it's the immediacy of reproduction that wins me over, because it refuses to show even the tiniest time offsets, which leads to perfect homogeneity. Furthermore, fundamentals and low-end are rather black and contoured



than impertinent and diffuse. This is not only pleasant listening, but also creates a good mood which gets me to dig deeper in my record collection and finally hold »Here Comes The Flood« by Peter Gabriel in my hands. The vocal reproduction is characteristic and on par with that of top amplifiers. However, a striking feature is the enormous stability in sustained piano chords and the reverb on Gabriel's voice, which I have rarely ever heard in such a 3D sculptured manner.

Result With their new combination of preamp Pre 60 and power amp A 60, Primare has accomplished the feat of accomodating very good sounding high-end electronics in compact housings which, under aesthetical aspects, stand out positively from the usual. The enormous range of applications based on the analogue and digital interfaces, which allow anything from elevator music in the morning through internet radio to serious listening of high-resolution data files in truly amazing quality, is highly attractive. *Olaf Sturm ■*



Primare Pre 60 / A 60

WxHxD	43 x 14 x 38,5 cm
Warranty	2 years
Price	each 7.500 euros
Web	www.primare.net

