



Hi-res magic
Bargain network player
with high-end sonics

DAB minitest
Four great portable radios
with Bluetooth streaming



Hi-Fi Choice

PASSION FOR SOUND

Issue No. **393**

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Music master

Why this Primare pairing is all the amp you'll ever need

**WIN
CHORD
COMPANY**
cables worth
£1,890

Record revival

How to keep your valuable
collection sounding great

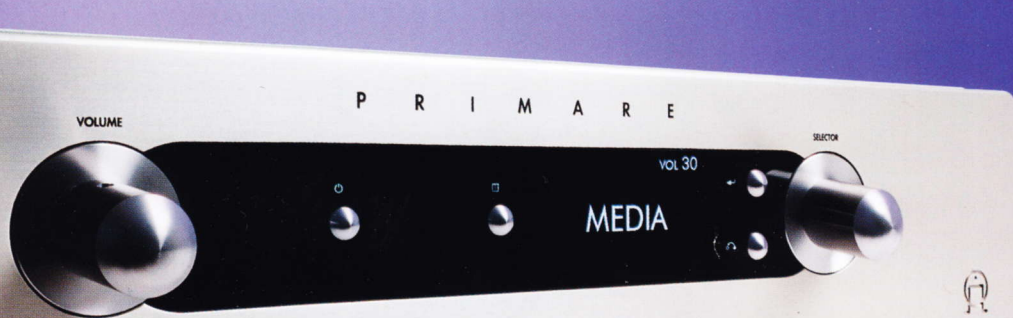
30

PRODUCTS ON TEST:

B&W, Denon,
Grado, NAD,
Pure & Usher

Art of noise

Compact
floorstander –
big on sound



PRE32

BEAUTIFUL SYSTEM

Stunning vinyl setup
puts you in the groove



GROUP TEST

USB DAC pack

Essential converters for hi-res
music at home and on the go



Different class

Pairing a feature-rich preamp with mighty Class D muscle,
Andrew Simpson asks if this could be all the amp you'll ever need



DETAILS
PRODUCT Primare PRE32/A34.2
ORIGIN Sweden
TYPE Preamp with media board and Class D power amplifier
WEIGHT 10.5kg each
DIMENSIONS (WxHxD) 470 x 109 x 343mm
FEATURES
• Preamp with vTuner internet radio, upsampling DAC, network and aptX Bluetooth streaming
• Quoted power: 150W/8ohms
• Balanced inputs/outputs
• Burr-Brown PCM1792 DAC
DISTRIBUTOR Karma-AV Ltd
TELEPHONE 01423 358846
WEBSITE karma-av.co.uk primare.net

From the release of its flagship 60 series amps to the ongoing evolution of its DACs and streamers, Primare's engineers have clearly been cracking the whip over the last year and it seems that they're not about to slow down now.

Sitting below the 60 series, the 30 lineup is Primare's most populated range, comprising a standalone streamer, DAC and phono stage alongside a selection of amplifiers. Because of how Primare is designing its kit around clever upgrades via optional plug-in modules with extra functionality, there's a wealth of integrated or separate solutions to suit most system needs.

The PRE32 is the range's dedicated preamp, equipped with plenty of analogue inputs and outputs (including balanced), remote control and an OLED front display. Our test model also comes packing Primare's MM30 media board, which simply slots into a dedicated port on the amp's rear and ups its cost to £3,000. While this may seem like a bit of a price hike, this add-on is great value given the MM30 is lifted directly from Primare's £2,000 NP30 streamer (HFC 387) and comes brimming with

They're blessed with a sonic finesse that opens up the music to show it at its best

a range of digital inputs, upsampling DAC and app-controlled streaming. Our test model is also the first to get Primare's new aptX Bluetooth module inside its case, which costs £180 fitted, taking the fully-loaded PRE32 up to £3,180. Unlike many Bluetooth-equipped amps, the Primare outputs the Bluetooth receiver's signal directly to its own sample rate converter and DAC for improved sound quality, where it's upsampled to 192kHz.

Sharing the streamer module from the NP30 means the PRE32 gets the same Burr-Brown PCM1792 DAC and SRC4392 24-bit/192kHz upsampling converter for digital duties. On the analogue side of things, all signal paths are kept short and fully balanced with source selection, volume and balance controls all performed in the analogue domain. The PRE32 uses an R-core transformer and is DC coupled from input to output, with no capacitors in the signal path, as Primare has instead opted to employ active servos to compensate for DC present.

CONNECTIONS



Partnering the PRE32 is Primare's A34.2 power amp that's housed in the same case as the preamp with a simplified logo-embossed face plate. Internally the A34.2 side steps the more traditional Class AB approach of Primare's £3,300 A32 power amp, to employ the same UFPD (Ultra Fast Power Device) Class D technology as the £6,500 A60.

The A34.2 incorporates a preamp stage comprised of Burr-Brown OPA2134 and Analogue Devices AD8512 op-amps, with two discrete UFPD amplifiers giving a substantial 2x 150W into 8ohms (claimed).

The add-on is great value given it's from Primare's £2,000 NP30 streamer

If you have the need and wallet for even more power, you also have the option to run two A34.2 amps in bridged mono mode, whereby each amp will give you a massive 550W to play with.

Feature comforts

But focussing on what's inside only tells half the story, as befitting products from Primare, their external build, look and feel are pure Scandinavian chic. From its customisable front screen for naming inputs and tweaking screen colour to selecting source and tailoring settings, the PRE32 is utterly intuitive to use. What's more, the onboard streamer also gives you access to Primare's excellent app (for iOS and Android portable devices), which makes the supplied remote control seem so last century. Alongside useful features including random and repeat settings for stored music and with access to bit-depth and sample rate info, the



Costing nearly £5k all in, the Primares have plenty of high-end rivals vying for your cash. If you're after a state of the art streaming amplifier package that goes against the traditional Class AB grain, Devialet's 120 at £4,490 and 200 at £6,390 are one-box solutions boasting app controlled streaming and with phono stages to boot. While the extra cash between them buys you more power and settings, both amps have the same hybrid Class A/digital Class D heart and present a sound that's fluid and beguilingly natural. If compact is king then combining Cyrus' Stream XP₂ Qx preamp/streamer and X Power power amp costing £2,009 and £1,070 respectively, offers a wealth of digital inputs via the slick n-remote or a dedicated app. This system marries the latest digital tech to a Class AB power amp for a clear sound with impressive power and bass control.

app also opens the door to internet radio via vTuner, and Mac users can stream directly from Spotify.

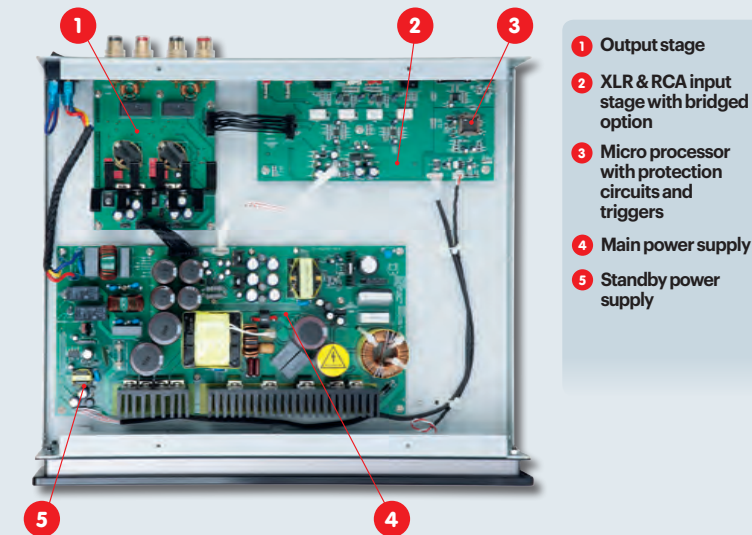
Sound quality

Whether streaming music over Bluetooth or piping hi-res audio through hard-wired USB and Ethernet connections, these amps have clarity in abundance. Streaming The Handsome Family's *Far From Any Road* at 320kbps via Spotify through my laptop certainly doesn't draw attention to the shortcomings of this compressed format. Male and female vocals

have surprising levels of depth and lifelike timbre while the trumpet's edges don't have that sense of being unnaturally curtailed. Compared with other similarly priced streaming devices that I've recently plumbed into my reference system, the Primares certainly sound less boxed in over Bluetooth. Channel separation and, consequentially, stereo imaging is impressively well rendered to the point that you sometimes have to look twice to realise you're not hearing a higher bitrate version. But while Bluetooth makes for a worthwhile inclusion, you really need to serve the Primares a richer diet to properly benefit from what they have to offer.

Exploring a 16-bit/44kHz FLAC rip of Future Islands' *Singles* album streamed over Ethernet, lets you know that these amps relish having more to play with. Percussion on *Like The Moon* is razor sharp, while being so foot-tappingly rhythmical, it's addictive. Bass guitar notes take on a textured, robust quality, and the keyboard's atmospherics go deep and wide within the soundstage as their delayed echoes trail off into the distance for a genuine sense of scale. But it's not just the Primares' timing and musical size that grabs your attention, it's the way these amps

A34.2 POWER AMP

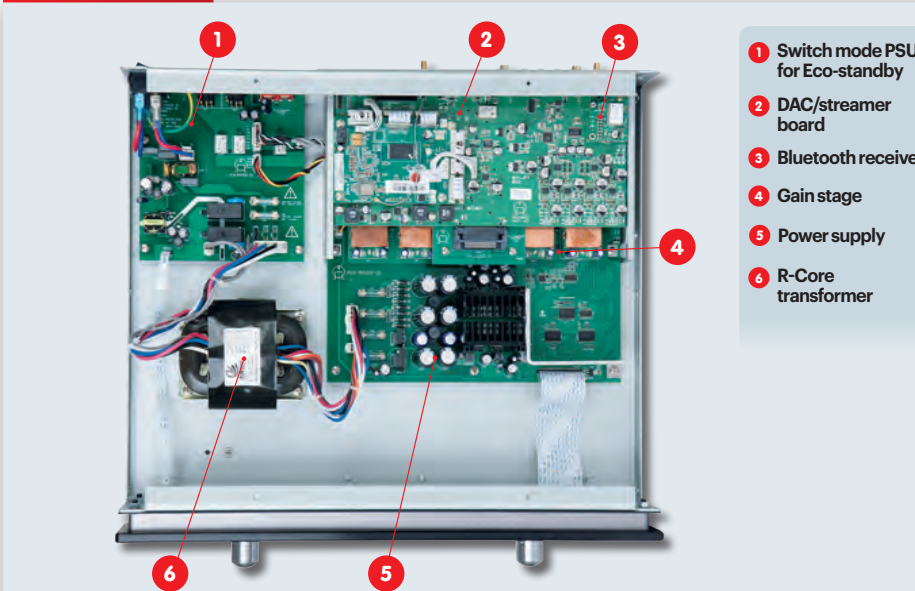


ULTRA FAST POWER DEVICE

Primare's proprietary UFPD modules are based on switch mode, analogue pulse-width modulation (PWM) Class D tech. While this type of amp typically gives great results for power verses eco efficiency, it's criticised in more traditional hi-fi circles for producing a harsher sound. Primare says this is because the output stages of Class D amps can become unstable with variations in speaker impedance and frequency, unless they're controlled by sufficient feedback.

To counteract this, Primare's UFPDs give a consistent feedback loop across the entire audio range that's stable beyond the audio band. The UFPD module then actively adapts the loop gain for stability, compensating for changes to the filter output and adapting the amount of feedback required. In reacting in this way, the UFPDs claim to treat all signals equally regardless of frequency or slew rate and with the ability to suppress filter resonance, resulting in ultra-low distortion.

PRE32 PREAMP



ON TEST

The PRE32 is a very low distortion, low noise, wideband design. As an 'analogue preamp' it offers just 0.0001-0.0013% THD and a 95dB A-wtd S/N ratio (re. 0dBV) with a response that stretches out to -2.4dB/100kHz. Its digital heart is impressive too - the response(s)

reaching -0.5dB/20kHz (44.1/48kHz media), -3.4dB/45kHz (96kHz files) and -15.9dB/90kHz (192kHz files) with distortion as low as 0.001% at -20dBFS and the A-wtd S/N only fractionally below average at 103.5dB via its balanced outs. Jitter is very low at <10psec at all sample rates from

48kHz-192kHz. The partnering A34.2 power amp beats its 150W spec. at 2x 200W/8ohm and 2x 400W/4ohm though there's little extra dynamic headroom. The 80dB S/N (re. 0dBV) is adequate but, unlike some Class D amps, its response (-0.4dB/20kHz) is unaffected by speaker load. **PM**

seem to stay true to the purity of the music, without being overly clinical. Despite this album's synthpop origins, the Primares are never artificial sounding. Even at low levels the way the music comes across undiluted nicely portrays all the fervour of the band's performance, while cranking up the volume brings the rawness of Samuel T Herring's vocal even closer. But that's not to suggest that these amps are in any way forward sounding, because they're not. They are very well focussed across every aspect of the audioband, and without any hint of colouration.

While the A34.2 power amp's casework barely gets warm to the touch in use, it certainly sounds ready for anything driving my Dynaudio Focus 260 floorstanding loudspeakers. These speakers typically welcome plenty of muscle to really open them up, and the poweramp shows no hesitation in taking control. My 24/96 FLAC download of Håvard Gimse's *Apreggione Sonata D821*, Adagio from Schubert & Schumann can sometimes sound flat and lacking life with the wrong amp behind the Dynaudios, but the A34.2 shows its character, adding real weight to the piano combined with delicacy when needed. The strings fill the midrange with purpose and poise, highlighting

how much control these amps are able to orchestrate over proceedings.

Conclusion

Despite covering all bases from amp to DAC and network streamer, you'll never be found lost in a muddle of menus and button pressing, as the Primares come top of the class for an enjoyable, accessible and rewarding user experience. And it's not just the interface that scores highly, as they're also blessed with a sonic finesse that opens up the music to show it at its best, while being equally forgiving of poorer sources. Treat them to some hi-res material and they'll really show you just what they're capable of ●

HI-FIChoice

OUR VERDICT

SOUND QUALITY

★★★★★

VALUE FOR MONEY

★★★★★

BUILD QUALITY

★★★★★

FEATURES

★★★★★

OVERALL

★★★★★

LIKE: Class build and user interface; great streamer; balanced and clear sound

DISLIKE: Remote is no match for the app

WESAY: This elegant duo has poise and clarity in spades, and makes a refined and dynamic sound

Q&A

Lars Pedersen
Primare MD



AS: Why did you opt to move towards Class D instead of traditional Class A or AB designs?

LP: Primare has used Class D since the introduction of the CDI-10 compact system in 2007. We decided to start using our UFPD implementation of Class D because it has the potential for a naturally fast and dynamic sound due to very low distortion and high efficiency.

Will all of your amplifiers use UFPD technology going forward? Or will you continue to also make Class AB amps as well?

We'll continue to use UFPD because we think it sounds more life-like. All new Primare amplifiers since 2007, including the EISA award-winning I32, are based on UFPD. We have an open-minded approach, but when it's all about improving the sound UFPD is the best we can do right now.

Have you considered fitting an internal phono stage to the PRE32?

No, the very sensitive phono amplifier will perform much better in its own dedicated, isolated housing with its own power supply.

What were your biggest challenges in developing these amps?

To make UFPD sound better than our previous AB designs. We knew we had low distortion, detail and dynamics with our Class D implementation. Improving the rhythm, soundstage and the tonal balance from Class D was the most demanding aspect of the development. Our success is down to the active application of feedback and a careful choice of components. We spent many months listening before we were satisfied and we think our UFPD technology marries the best virtues of Class D with those of AB.

What's next for Primare?

In the immediate future we'll continue to add functionality to the app. For instance, it now automatically lets users know when firmware updates are available.