



Above: **Mission 778X** integrated amplifier in black finish

## Mission launches first amp since the 1980s

**With copious digital and analogue inputs and captivating sound quality, the 778X is the first integrated amplifier produced under the Mission banner for almost 40 years**

*Cambridgeshire, England* – In 1983, six years after the company's formation, British loudspeaker specialist **Mission** launched its first integrated stereo amplifier. The **778** was a design of narrower width than typical hi-fi amps and was praised for the quality of its build and internal circuitry, the simplicity of its controls and its useful range of inputs, all at a relatively affordable price. Importantly, its adroitly balanced sound was a great match for the engaging musicality for which **Mission** speakers were already famed – that, of course, was **Mission's** aim.

A year later, **Mission** launched the Cyrus brand – an offshoot for its amps and, eventually, other audio electronics – leaving **Mission** to focus solely on loudspeakers. For that reason, the **778** has remained the only integrated amp ever branded solely as a **Mission** product.

Fast forward to 2022 and **Mission** is ready to launch another integrated amp under its own banner. The new **778X** has much in common with its forebear from 40 years ago – a compact, half-width design that exudes elegant simplicity and delivers a sound that belies its diminutive footprint. Like the original it sports a useful range of inputs, albeit thoroughly updated to suit modern-day music lovers. And while its circuitry has been entirely redesigned to meet and exceed contemporary standards, the new amp is a great sonic match for **Mission's** current range, just as the **778** was in its day.



Left: The **778X**'s rear panel packs in an impressive array of digital and analogue inputs and outlets

## Well connected

When the original **778** launched, the predominant music formats were vinyl records and cassette tapes. CD had just arrived on the scene, ushering in the dawn of digital audio, but was still several years from becoming a mainstream format. 40 years on and the source devices we use for music, be they digital or analogue, are many and varied – from smartphones and computers to CD players and turntables. The new **778X** is built to cater for them all at a high level of quality and an affordable price – with an RRP of £549, it costs considerably less than the original **778**'s price of £240 when adjusted for inflation (about £745 in today's money).

Inputs for digital sources comprise asynchronous USB Type B and three S/PDIF sockets (one coaxial and two optical), while digital outputs are provided in optical and coaxial flavours. Analogue signals are catered for by three stereo RCA inputs – two line-level plus an MM phono input for turntables – while pre-out sockets permit the addition of an external power amplifier. Bluetooth reception facilitates wireless audio streaming from smartphones, tablets and the like, with support for multiple codecs including aptX and AAC.

The front of the amp sports a pair of smooth-acting rotary controls – one for source selection, the other for volume – surrounded by white LEDs to show current settings. Between these controls are the IR sensor, power button and 6.3mm headphone output – compact, uncluttered design with attractive symmetry, built and finished to a high standard.



Left: With tactile rotary controls accompanied by white LEDs, the **778X**'s front panel is refreshingly clean and simple

### Digital delights

Digital sources connected through the USB, coaxial and optical inputs, or paired for Bluetooth reception, take full advantage of the **778X**'s built-in hi-res DAC. This is based around the ES9018K2M chipset from the Sabre32 Reference family, enabling the amp to benefit from ESS Technology's 32-bit HyperStream architecture and Time Domain Jitter Eliminator to deliver excellent dynamic range and ultra-low distortion. Hi-res PCM is supported to 32-bit/384kHz, alongside DSD to 11.2 MHz (DSD256).

Though technically excellent, Sabre32 Reference DAC chips can be challenging to implement to maximum effect. If the circuitry that accompanies them is not of a sufficient standard, the resulting sound may appear hard and bright; treat them right, however, and the level of detail and musical expression these chips dig from the digital signal is captivating. One such critical element is the post-DAC active filter; **Mission**'s design team has paid great attention to this circuit, using op-amps that were specifically chosen for their synergy with the ES9018K2M.



*Left: Measuring 235x95x380mm (WxHxD), the **778X** is a neat and smartly appointed amp in silver or black*

### Amp it up

The **778X**'s power amp stage is a Class AB design incorporating a low-noise 200VA toroidal transformer. This is followed by 2x15000uF reservoir capacity (30000uF in total), helping to maintain firm control of the music whilst enabling excellent dynamic range. The amp's output from its gold-plated speaker terminals is conservatively rated at 45W into eight ohms and 65W into four ohms - there's plenty of power on tap to drive any speakers the amp is likely to be partnered with to high volume levels with consummate ease.

The preamp section is kept as simple as possible to maintain signal purity, with line input signals passing to a precision, microprocessor-controlled analogue volume stage. Much effort has gone into the physical layout of the **778X**'s circuitry, protecting the sensitive preamp section from noise interference. This, plus the use of independent low-noise power supplies for all critical stages, helps the amp to excel sonically across all manner of digital and analogue sources.

### Turntables and headphones

Vinyl lovers will appreciate the addition of a phono stage for moving magnet cartridges. This high-quality, low-noise, JFET-based circuit provides precise RIAA equalisation, adding to the amp's already impressive format flexibility.

Headphone listeners are equally well served by the **778X**'s dedicated headphone amp. With its current-feedback design and high slew rate, a dynamic and detailed performance with all manner of headphones is assured.

### Perfect partners

The **778X** is an ideal amp to partner with a wide range of speakers, from models costing as little as £200 per pair to upmarket designs at several times that price. It isn't designed to solely suit **Mission** speakers; but it does match them superbly!

To prove the point, **Mission** is promoting two package deals that combine the **778X** with popular standmount models from its range, forming great-value, high-quality audio systems. The first includes a pair of **Mission** LX-2 MKII speakers at a package price of £649, saving £130 from the individual RRP's. The second upgrades the speakers to the **Mission** QX-2 MKII at a package price of £799, saving a total of £150. In both cases, the speakers are available in a choice of matt black, matt white or walnut.



*Left: At a package price of £649, the **778X** makes a great-value system with **Mission**'s LX-2 MKII speakers*

### Mission accomplished

**Mission's** official slogan – music leads, technology follows – inspires every **Mission** product design, not least the **778X**. It feels like a traditional hi-fi amplifier, with its uncomplicated front-mounted controls and simple remote, yet its specification is tailor-made for modern-day music lovers. Above all, every part of its technical design is focused on delivering sonic excellence – a means to achieve a marvellous musical end.

Its sound is free-flowing and fleet of foot, smoothly controlled yet fully engaging the listener in their music of choice. Crisply defined detail reveals the character of voices and instruments, impressive dynamic range conveys natural impact, and the amp's transient ability keeps feet tapping with rhythmic music. For all its versatility, this is an affordable amp that always puts the music first.

The **Mission 778X** integrated stereo amplifier is available from December 2022 in a choice of silver or black, at an RRP of £549.



*Clockwise from top left: **Mission 778X** in black with LX-2 MKII speakers in matt black; **Mission 778X** in silver with LX-2 MKII speakers in matt white; **Mission 778X** in black with QX-2 MKII speakers in matt black; **Mission 778X** in silver with QX-2 MKII speakers in matt white*