

hardware review

## Silent Angel Munich MU: smooth streaming operator

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Dave Berriman



### Silent Angel Munich MU streamer

The Munich MU is the latest streamer from Silent Angel and aims for higher performance than the entry level Munich M1. To this end it has a double-layer aluminium chassis inspired by their Bonn NX audiophile network switch, for superior structural integrity, enhanced resonance damping and better electromagnetic interference isolation. To achieve higher transmission speeds and enhanced stability Silent Angel designed system software, a processor with a total of six cores, and a femtosecond TCXO (temperature compensated crystal) clock, optimised to minimise network latency and jitter, and achieve 'vanishingly low' claimed jitter levels.

Silent Angel also built-in 'a cutting edge' DAC, in an effort to create what's described as an 'unmatched digital audio experience' and deliver 'reference-grade analogue sonics' with 'authentic and natural music reproduction'. Also, they selected premium audiophile grade electrical components to deliver 'exceptional sound quality'. Bold claims indeed.

Silent Angel has gone all out to suppress electromagnetic interference (EMI) in the Munich MU, employing 'unique shielding technology to isolate interference between digital and analogue circuits', with 'precision EMI interference absorption technology' and suppression through 'optimal device positioning' (layout), but are keeping those exact technologies close to their chest.

The on-board DAC is an ESS Sabre, (which one is not mentioned), supporting up to PCM 384kHz and DSD 5.6MHz (DSD128) and outputting analogue signals via both balanced XLR and single-ended RCA sockets. The internal power supply is a switching type, which Silent Angel refers to as 'radar grade'. However, they do offer an external Forester F2 linear (i.e. conventional, non-switching) power supply as an upgrade which, like, the optional Genesis GX 10MHz external word clock and Bonn network switches, is claimed to enhance sound quality.

Another upgrade is the provision for adding storage in the form of an internal high capacity NVMe SSD, none of which were supplied for this review.

There are no inputs for analogue, or digital signals— other than the ethernet socket for streaming. So the Munich MU cannot be used as a DAC for, say, a CD player or TV streaming box, or as an analogue preamp. But with a decent sounding DAC on board as standard, I think they have missed a trick by not including at least a few digital inputs, which I for one would have welcomed. There is the provision to plug in external USB storage, however, the current is limited to 100mA. There is no mention of this limitation in the manual, but a warning is issued by the VitOS Ap, just prior to connecting a USB device, of potential damage to the Munich MU if this is exceeded. At this juncture, they recommend using USB storage with its own power supply.



I could not identify any USB sticks which used less than 100mA, for me to try, because I couldn't find any manufacturers' specifications for power or current drawn from their hosts by SSD sticks or drives. There were only various sources suggesting a wide spread of requirements for USB memory sticks, ranging from below to rather more than 100mA. If you wanted to read files from an SSD, you would have to risk a small low-power stick, or buy a hard drive with its own external power supply; in which case, you'd be best advised to add one to the inside, and Silent Angel provide the tool kit and instructions for adding up to 4TB of internal M.2 NVMe SSD.

Digital outputs on the Munich MU are comprehensive, in the form of SPDIF coax, AES/EBU via XLR, USB and I2S (via an HDMI socket) for connecting to suitably equipped DACs. However, there is no internationally agreed standard for I2S, so anyone wishing to use it is advised to check the pin connections of their DAC, against the detailed diagram in the manual to ensure compatibility. Streaming is available only via the ethernet socket, as there is no wireless option, and a short high-quality ethernet cable is supplied with the Munich MU, which I used to connect directly to my modem.





Source options include Tidal, Qobuz, Spotify Connect, DLNA, Airplay2, and internet radio (MQA audio decoding is included), and it is also Roon ready. Streaming and local music is managed by Silent Angel's own VitOS Orbiter app, which can manage up to 10TB of files, including local SSD, those in network storage, or on a computer, searching, selecting favourites, creating custom playlists, and categorising albums.

Instructions for installing the app were in Chinese, but the distributor provided them promptly in English, after which set up was simple and easy. I also found it quite straightforward to use VitOS for streaming from Qobuz. There is no front panel display, or controls, as it's all done via VitOS, which displays file details such as bitrate, sample rate, bit depth and format, etc. (e.g. DSD, WAV or FLAC), and album information from Qobuz and Tidal etc.

### Sound quality

The sound quality of the Silent Angel via its RCA analogue outputs, played through my Burson Conductor 160D (used as an analogue preamp), was characterised by a smooth, subtle and well-balanced delivery. For instance, playing Benjamin Britten's *Piano Concerto Op 13* with Sviatoslav Richter on piano (Benjamin Britten conducting the English Chamber Orchestra on Decca), string tone was sweet. There was a good sense of atmosphere from the Snape Maltings venue, despite this being a 16/44 transfer of this classic 1971 analogue recording. Likewise, when listening to Gregory Porter's *Liquid Spirit*, a 24/96 file (Qobuz), the voice was characteristically honeyed and expressive, with rich, silky sax accompaniment, full sounding piano, swishy cymbals without emphasis or added fizz, and well-defined upright bass. This was very easy-going, enjoyable sound. The Silent Angel neatly avoids the analytical but clinical sound of some. Indeed, it managed the trick of making streaming sound less 'digital' than it can so often be, particularly with legacy 16bit/44.1kHz files. The Munich MU clearly out-performs less expensive entry-level streamers and finds itself in a price range where there is some strong competition.

I have listened to a few at around the Silent Angel's price point. In general. I'd say the MU holds up pretty well: not quite as transparent as some, but its analogue-sounding warmth and sweet treble delivery holds it in good stead and, on extended listening, proved to be rather enjoyable. However, I wondered what the Munich MU could do when used purely as a streaming transport, so I connected its coax output to my Burson Conductor 160D (to use its internal ESS Sabre 9018 DAC instead of the one in the Munich MU). This also gave me the ability to switch quickly between the Munich and Burson DACs with the same stepped volume control and buffer amp.

Playing to the Modern Jazz Quartet's *Koko*, from their album the *Montreux Years* (Live at the Montreux Jazz festival 1989), (24 bit/96kHz), the Burson revealed a greater sense of vibrancy and liveliness, so that it sounded more like a live event, and this was repeated with many other tracks played. The Burson DAC is very good, though not particularly high end, adding a touch of characteristic treble crispness, but it showed that the Munich MU's internal

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DAC could be improved on. However, I preferred the smoother and more delicate nature of the internal DAC when, for instance, playing Gregory Porter's tracks, due to its more relaxed and sweeter sound. Although not providing the last ounce of hear-through clarity, it seemed pleasingly homogeneous and balanced across the frequency range.



### Conclusion

Used as it stands, via its analogue outputs, without add-ons, the Munich MU is a smooth performer. It's easy to sit back and enjoy the music instead of analysing it. Played into a separate DAC, it is capable of even more, so is clearly doing something right with the data. Silent Angel's engineers seem to have mastered the trick of achieving sonics that are both smooth – even with legacy 16/44 files – and deliciously open and alive when feeding an external DAC – more so with high resolution files.

So, there may be logic in Silent Angel not providing digital inputs. The Munich MU could be considered as a streaming transport and DAC, around which a higher performance system may be built, with potential for an external DAC and upgrades such as the Forester power supply, GX clock and network switch. Unlike many streamers, the Munich MU is not a fixed solution, and would be well worth considering for those who enjoy streaming and like to have a wide range of upgrading paths available.

### Specifications

*Type: network streamer with DAC*

*Distortion THD: not specified*

*Signal to noise: not specified*

*Streaming inputs: ethernet*

*Native streaming services: Qobuz, Tidal, Spotify, internet radio, dlna*

*Wi-fi inputs: Airplay 2*

*Digital inputs: none*

*Digital outputs: AES/EBU, I2S, coaxial, USB*

*Analogue input: none*

*Analogue outputs: single ended RCA, balanced XLR*

*Supported file formats: AAC, M4A, MP3, OGG, FLAC, WAV, ALAC, DSD (DSF, DFF), WAV64, AIFF, CUE Files, WMA, APE*

*Supported digital formats: up to PCM 768KHz/DSD256 (USB)*

*Headphone output: N/A*

*Control software: VitOS Orbiter, Roon, UPnP*

*Dimensions HxWxD: 73 x 360 x 220mm*

*Weight: 4.6kg*

*Warranty: 2 years*



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