



“A tune as well-worn as ‘Green Onions’, admittedly delivered here as gloriously pointless high-res two-channel mono, had heads nodding and feet tapping...”

promise of performance. It has a four-core ARM Cortex-A72 processor to keep things nippy, but doesn't require a fan to keep its internals cool; indeed Silent Angel is proud of its specially-designed heat sink for the CPU, which says lowers the operating temperature by 20°C, while the chassis also has an embedded EMI absorber to filter electromagnetic noise both in and out.

There's no Wi-Fi connection possible here; you must give it an Ethernet connection, and the Munich M1 has Gigabit Ethernet which, assuming your network can match it, offers plenty of speed for accessing the largest of files (as we'll see) from network attached storage. There's SMB for such NAS access, and a DLNA renderer on board too. There's a nice bonus in having AirPlay2 on board for direct streaming, and as noted the Munich M1 is also Roon ready.

As you can see from the pictures here, the Munich M1 has nothing on its front panel other than the logo, the headphone output and a few LEDs. There's not even a volume knob, either for the variable analogue outputs or the headphone output. Nor do you get a remote control. Instead it's all done by an app called VitOS Orbiter, which points to the use of VitOS as the operating system within the Munich M1, as on other Silent Angel products. VitOS is a customised Linux based operating system designed for music players, so this combination is designed to prioritise music performance — no interruptions while the processor goes off to do something else it considers more important. The VitOS Orbiter app then brings together control of the various streaming services with internet radio, the

AirPlay 2 streaming and DLNA rendering, as well as network playback and file-based replay from USB drives or sticks.

Performance

Often when we're reviewing a new unit, we'll be just running through the various sources and inputs to check all is working, and a track will come up which suddenly makes us realise that some very good is going on. That happened here, as we checked navigation through the USB hard drive we had connected, loaded with our entire high-res music collection. We were checking its ability to play DSD files, using a remaster of Yes playing *Run Through The Light* (a single version, from when Jon Anderson and Rick Wakeman had been shockingly replaced by the Buggles). The app quickly declared it to be 5644kbps / 2.82MHz 1-bit DSD stereo, and boy it sounded every bit of it too, with spectacular crispness and clarity, some tight weight behind the kick drum, Trevor Horn's slightly strained vocal with its oddly gated reverb competing against some searing guitar. This was good first notification of the quality we would enjoy from this tiny little box.

We quickly established that 5.64MHz DSD was also no problem, nor 24-bit/352.8kHz PCM at a blistering 10772kbps. Indeed you can double that again, since from USB the Munich M1 is specified as handling up to 768kHz sampling from its USB input, and up to 11.2MHz DSD.

From our selection of high-res standards, up came Holly Cole with *Girl Talk*. David Piltch's upright bass was impressively present, its finger-fretting rattling slightly to the right, while the left-panned piano sounded perfectly

Silent Angel
Munich M1
streamer

Actual size shown

It's not often we can picture hi-fi at actual size in the magazine, but Silent Angel has 'shrunk the hi-fi', delivering a delightfully dinky streamer with high-end performance.

SUMMARY

Silent Angel Munich M1
streamer \$1840

- + Excellent performance, even better with F1 power supply
- + Robust and effective app
- + So small!
- No full manual
- All control is via app; no remote control or on-device buttons

It would divert from other matters of more musical pleasure to harp on for too long about how very small the Silent Angel Munich M1 is... but its dimensions are inevitably going to be the first things that take you by surprise when you encounter this versatile little streamer and music server. It's just six inches wide (that's 15cm in new money) and two inches high. Yet it's going to present all the world's music from streaming services, plus all your accumulated music files at what, given the price, with various versions running to just over \$2000, one might hope to be approaching audiophile quality. Can it deliver the goods from a box so teeny-tiny?

Equipment

We're certainly not complaining about the size. While we have a nostalgic penchant for full-width 'trad' hi-fi components, the attraction of 'honey-I-shrunk-the-hi-fi' components is obvious. Silent Angel's Munich M1 could easily be used as a desktop music source, especially since it includes

a solid headphone amplifier (with proper quarter-inch socket, not a minijack). Being also Roon ready or able to stream from Tidal, Qobuz, Spotify Connect, Amazon Music and more (subject to an active subscription where required), the M1 could be used on its own for headphone listening, in which scenario its dinkiness delivers extraordinary positional versatility; you could easily shift it around the home, or take it to work.

Yet its abilities go beyond that. The choice of various digital outputs offered in addition to the RCA analogue outputs means it can supply a high-quality digital signal to an even more able DAC or digital input upstream. For this you can take the digital output from a choice of four rear-panel sockets — AES/EBU, coaxial digital, USB Audio, or I2S from its HDMI-like socket.

Or you can simply do what we did, and plug its analogue inputs straight into a full-sized amplifier, thereby enjoying its own abilities as a DAC.

Indeed since its analogue outputs are, by default, variable under the control of its app for iOS and Android, you could, as we did ultimately, connect it directly to power amplifiers, or even more neatly to

active speakers for a wildly neat and minimalist system, if streaming is all you're going to need.

When plugging the Munich into an integrated amp or preamplifier, the analogue outputs can beneficially be fixed at full level in the app's device settings (internal DAC > volume control > off), although be aware this also has the undesirable side-effect of also fixing the headphone output at full volume, thereby rendering it useless until this is reset.

What the dinky box's back panel doesn't include is any digital inputs in terms of optical or coaxial digital, so it's not doing to do duties as a DAC for other sources. You can, however, connect sticks and drives to its generous three USB-A slots, which are labelled as 'storage expansion', although it's not really expanding anything as there's no user-accessible internal storage built in here. So if you see different versions advertised as having either 4GB (the default reviewed here) or 8GB (\$2150) — that's not internal storage for music (you wouldn't get a whole lot of high-res on that anyway), it's an offer to expand the dynamic RAM, which together with 32GB of flash memory smooths the way for its processing abilities.

These abilities certainly seem considerable, with the M1's specs certainly proffering the



Inputs

Most of your music will probably be coming through the Gigabit Ethernet connection from streaming services or NAS drives, but there are three USB slots for drives or sticks of files.

Outputs

The analogue outputs can be set to variable (default) or fixed. There are four separate digital output options, should you want to use an external DAC.

natural in tone and attack, so that we could turn up the levels until Cole's vocal arrived sounding simply real, unadorned, not a scintilla of spit on the sibilants, not a suggestion of softness.

But it wasn't only audiophile fare which emerged sounding well, audiophile. A tune as well-worn as Booker T & the MGs' *Green Onions*, admittedly delivered here as gloriously pointless high-res two-channel mono, had heads nodding and feet tapping as we cranked the low-noise Munich M1 output to meatily large levels in the listening room.

Such was the silence behind the intro to Holst's *Jupiter* (Carl Davis/LSO) that we couldn't help but slam out this celebration of melody at the reference levels that the quality encouraged, and amid all the intertangling threads of arrangement a rattling tambourine moment still stood alone, isolated perfectly within the soundstage and without any hint of compression from the activity all around.

High-res Led Zeppelin from the 2007 O2 concert? No problem, sir, and massively weighty it emerged too, with subterranean bass pedal work from John Paul Jones on the opening bars of *Since I've Been Loving You*, massive thwack to young Jason Bonham's kick drum, and a delightfully varied tone from Page's 1959 Les Paul, first edgy as hell on the opening notes and solo, then lightly tempered thereafter so as not to bite across a perfectly neutral Plant vocal. The whole O2 reunion recording can come over a bit stodgy on systems that lack resolving power, but with the Munich M1 reliably slicing out the bits we just sank into the atmosphere, delighting in every twiddle of Jones's Korg organ, swaying with Page through his tightrope solos, and

applauding with the O2 crowd at the close. We don't remember hearing this better delivered (and it's been played a fair bit).

App control

We often make the point that products that live by an app can die by the app too, meaning we prefer that products can be operable without the app, even if some versatility is reduced. After all, what happens if the app disappears in five years? Hundreds of apps did just that on Apple devices when iOS banished 32-bit apps a few years ago and many original creators weren't around to update them. The Silent Angel brand is part of Thunder Data Co, an eight-year-old company headquartered in Zhuhai, Guangdong Province; we wish the company a healthy longterm future, but what happens if it doesn't have one?

So we look for on-device controls, a physical remote, or a browser-based interface, all of which will hold out the promise of a lifespan beyond any app issues. But the Munich M1 doesn't have any of those. At least its availability to AirPlay, Spotify Connect and Roon do provide possible ways for it to work without its app. It certainly ran happily from Roon, to which it appeared twice, once with full 'Roon Ready' status, and secondarily as an AirPlay source.

What we did like, very much, about the VitOS Orbiter app was its robustness in its connection with the M1. We had the app running on an iPad Pro, and if we switched apps, even shut up the VitOS app for a number of days, when we opened it

again it had instant contact with the Munich M1. Many control apps, sometimes from major companies who should do better, drop the connection and go searching for the networked product all over again, which can make app control annoying very quickly, especially if the phone is ringing and, as here, there's no way to stop the Munich playing other than opening the app. Having said that, if you're running the M1's output into an amp, you'll likely have a remote control for that. But when we were running the variable outputs into our power amps, it was app control only.

Overall we found the app here to be very intuitive, well-designed, notably easier than most to return to the home screen without endless backtracking, and also fairly impressive at its implementation of Tidal and other services within the app itself, where many third-party apps show little more than small covers and alphabetical lists. Firmware updates were also quietly highlighted and efficiently downloaded, requiring only an app reboot at the end. The only disappointment in the app was for internet radio, which played fine but seems to lack a search function, offering only themed collections of stations, so that finding a favourite was near-impossible. On the other hand the lists of internet radio stations showed their quality and, where available, the current track playing, something we've not seen before and which is a better pointer to content than just a station's name.

A second box: the Forester F1

Silent Angel's Australian distributor Absolute Hi End also supplied a second little box, of identical dimensions, but with no headphone socket. This was the Forester F1 linear power supply. It's by no means essential; the Munich M1 has everything required to run independently. But the F1 is certainly a neat addition; you just remove the power cable and transformer block from the M1, run a small DC jump-lead from F1 to M1, and plug the Forester into the mains instead. The jump lead is so short that the obvious solution is to have the F1 atop the M1 (neither seemed to get particularly hot in use).

Regular readers will know that power supply upgrades often don't much impress us. But we have to give the F1 the nod, as prior to its use we had considered the M1 a competent, enjoyable and versatile streamer, whereas with the F1 feeding the power, it became an exceptional-sounding streamer as well. At this point we also took our preamp out of circuit and used the M1's outputs (set to variable!) straight into our power amps.

The clarity was now startling. Playing the high-res unlimited remaster of *Every Night* from 'McCartney', the right-channel snare had the whipcrack quality that we only hear from sources with exceptional timing (and

The VitOS app which controls the streamer proved well-designed, responsive and robust. Shown right is the main menu for services & settings, streaming from Tidal, a selection of Tidal Masters which use MQA to unfold (and which seemed to unfold only once), and the useful feedback information on file information, here playing Buggled Yes at 2.8MHz DSD.

through a system that can reproduce the rapid dynamics). Lesser systems can all too easily reduce this raw sharpness to an unremarkable snare slap.

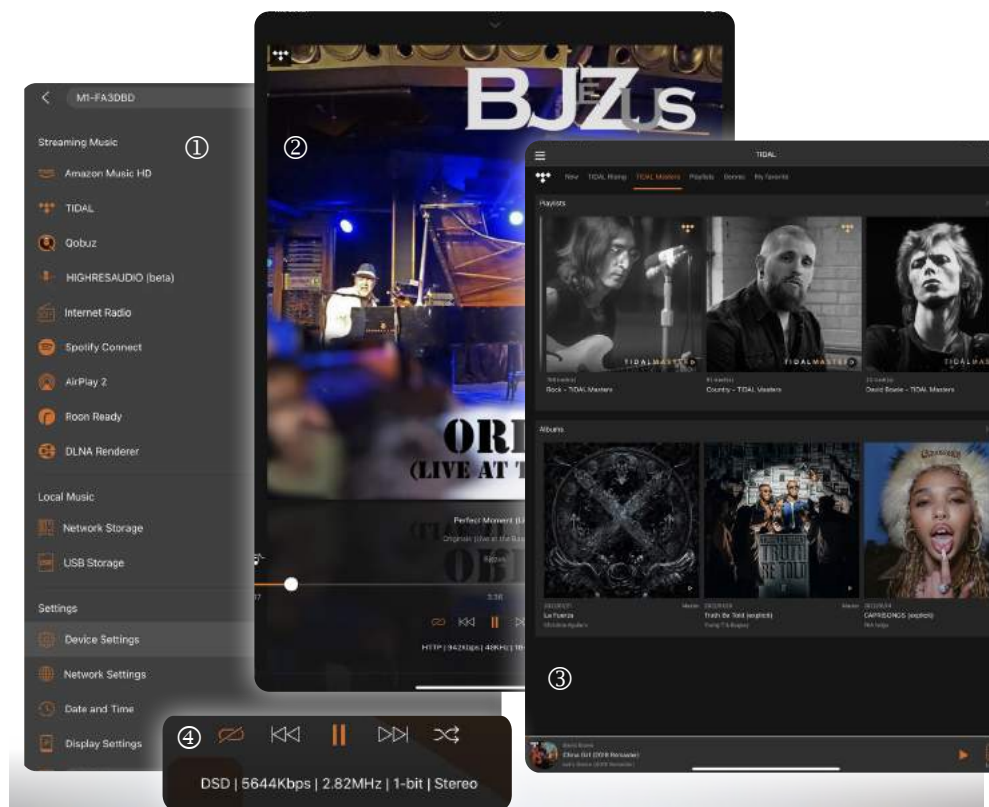
Playing Diana Krall's *Here Lies Love* we raised the levels high to give the opening vocal and piano a full room presence, so that when the band burst in after the first verse things were at rollicking levels indeed, but the Munich M1/F1 combo just threw this wide mix across and into the room, acoustic guitar picking left, Mark Ribot's more alarming electric over at 2 o'clock, living in its own mini acoustic. This was dynamite stuff; how we wished we'd connected the F1 earlier, rather than saving it for our last week with the M1!

One of the last things we played was John Coltrane's *My Favorite Things*, and its ping-pong separation was so accurately delivered that you might have taken away our right speaker and put the real Mr Coltrane on a high stool there instead, and we doubt we'd have picked the change.

Despite its duplicate dinkiness the F1 fits in symmetrical toroidal transformers and paralleled low-noise MOSFETs to deliver its improved low-noise supply. It offers two DC outputs, indeed, so that you can power a third Silent Angel device if desired, such as one of the "Bonn audio-grade network switches" available in 8- and 16-port versions.

With the F1 in place, our evening music sessions became a real battle. Along with Tidal Masters and Roon, our entire high-res music collection was attached to the Munich M1 on a USB hard drive, its files now sounding so clean and tight and musical that we just wanted more of it. Yet at the same time we had taken delivery of a very nice turntable (for next issue's big focus on vinyl; see *News*). With both these fine playback units on mere temporary visits, we had to choose how to spend our evenings — analogue, loading up classic vinyl, or digital, tapping the iPad Pro to access instant high-res results. It's testament to the Munich M1/F1 combo that our time was divided perhaps equally.

We have one final compliment, more systemic than specific, being that the streamer box and the app worked entirely reliably throughout their time with us.



▼ In this issue's 'Spot the Hi-Fi' competition, you're invited to find the Silent Angel M1 and F1 stack hidden somewhere in this image.



The app connection never once dropped, and everything worked, every time. This is uncommon in the world of streaming and app control, in our experience! The compulsory Ethernet connection is one contributing factor, of course, but it also speaks to the careful consideration behind the control craft as well as the audio engineering here.

Conclusion

We realise that our conclusion was sitting there in the brand name all along — the Munich M1 is indeed a Silent Angel, succeeding through its effectively noiseless and tightly-timed delivery of digital music through its own DAC, and potentially outward through still finer external conversion, with the result that beautiful music flowed effortlessly without restraint, with this delight notably enhanced by the power supply upgrade of the Forester F1 linear power supply. +

SPECS	
Silent Angel Munich M1	\$1840
Also tested with Forester F1 power supply	\$750
M1 inputs: 3 x USB-A, Gigabit Ethernet, M-IO, MLink, Spotify Connect, AirPlay 2, Roon ready	
M1 outputs: RCA analogue out, 4 x digital out (coaxial, AES/EBU, I2S, USB Audio), 6.35mm headphone out	
PCM sampling rates: 768kHz (USB); 384kHz (AES/EBU, coaxial, I2S),	
DSD sampling rates: 11.2MHz (USB); 5.6MHz (AES/EBU, coaxial, I2S),	
Dimensions (whd): 155 x 50 x 110mm	
Weight: 1.0kg	
Contact: Absolute Hi End	
Telephone: 0488 777 999	
Web: absolutehiend.com	