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TEST

MERGING +PLAYER, +POWER EN +CLOCK-U



MERGING+PLAYER, +POWER AND +CLOCK-U

Digital meets analogue

Due to the greatly increased availability of network players, it is increasingly difficult for manufacturers to distinguish themselves in other ways. As a result, some adopt high-profile advertising campaigns, while the others jump on the train with the most options per square centimetre. The Swiss company, Merging Technologies has taken a different approach and, at the request of many, finally made the bold step to let the demanding audio consumer enjoy the quality of their renowned professional studio products. The MERGING+NADAC D/A converter introduced in 2015 was the first successful aptitude test. But the company wanted more and was also technically capable of achieving an even higher level of quality. The digital trio +PLAYER, +POWER and +CLOCK-U, presented in this test, is therefore designed to present the highest resolution and the most uncoloured realism of the moment.

Those who know Bert van der Wolf, are usually familiar with his particularly realistic sounding recordings. These are productions that he makes as a balance engineer and producer, not only for his own label Turtle Records®, but also for various other well-known companies. Although pop and rock recordings are not shunned entirely, his speciality is the recording of acoustic jazz and classical line-ups in multi-channel technology. In that capacity, Bert became involved at an early stage with both the designs and designers of the English dCS and Merging Technologies, among others. Completely independent of each other, both manufacturers have already taken the step years ago, to manufacture top-quality consumer products with this knowledge of professional recording. The Merging trio presented here is the latest attempt by this Swiss studio manufacturer to push the limits even further in the high-end field.

Merging Technologies

Merging Technologies is one of the world's leading manufacturers of high-resolution digital recording systems. The company was founded in 1990 by Claude Cellier in Chexbres, Switzerland, after this electrical engineering graduate worked for 10 years for the famous Swiss audio manufacturer Nagra Kudelski. Although Nagra is today best known to many music lovers for its idiosyncratic audiophile equipment of absolute top class, the company is better known worldwide for its current professional products and more particularly, for its legacy models. The Nagra IV-S and Nagra T-Audio TC analogue tape recorders are legendary, with Claude playing a crucial role in their design and development.

Shortly after the start, Merging quickly gained a solid reputation through its expertise in the field of digital signal processing and the associated hardware. With their Pyramix Virtual Studio, it was even one of the first companies to be able to produce a DSD recording system. Also, the famous DXD (Digital eXtreme Definition) studio format that works with 352.8 kHz / 24-bit PCM, was developed by Merging Technologies in collaboration with Philips and addresses the challenges of editing and mastering DSD for SACD files. The SACD legacy brought the world a large number of beautiful multi-channel recordings, so that thanks to the 8-channel MERGING+NADAC and the arrival of download sites, these can finally be enjoyed at home.

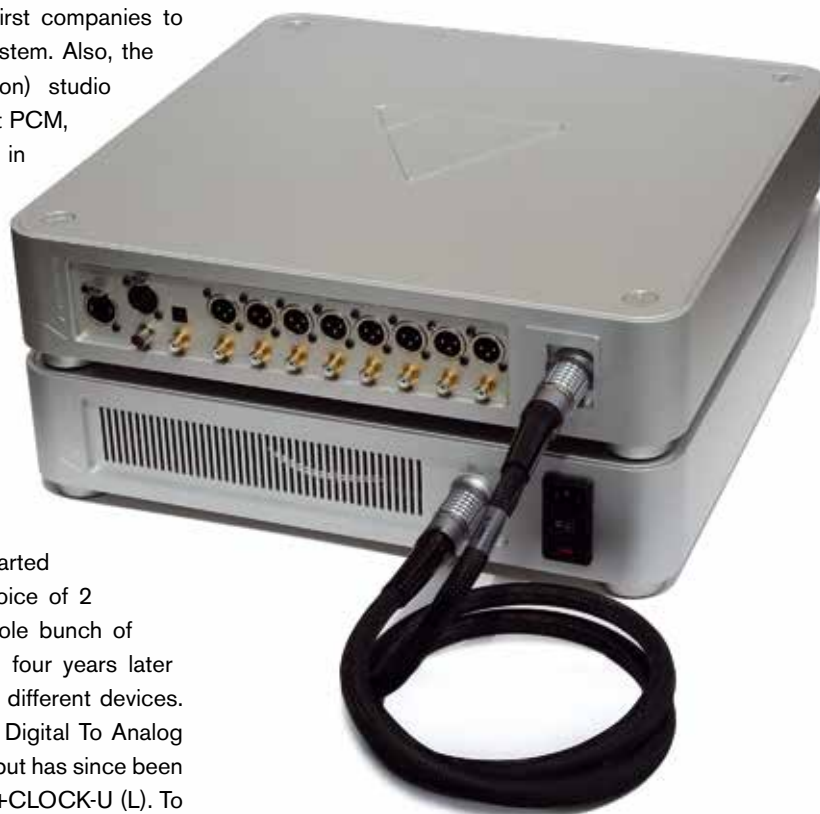
MERGING+PLAYER

While the Merging consumer series started in 2015 with the single NADAC - a choice of 2 or 8 channel D/A converters with a whole bunch of useful additions - the series has grown four years later into a complete series consisting of four different devices. The original NADAC (Network Attached Digital To Analog Converter) still exists in unchanged form, but has since been joined by the +PLAYER, +POWER and +CLOCK-U (L). To

begin with the former, this PLAYER rewrites the concept of the audiophile music server. It removes the annoying and especially unnecessary complexity, that even today, still characterizes many network players. According to Merging, this PLAYER is basically a combination of the best possible music player and the best sounding DAC in one device. You can directly access your entire collection using a tablet and the famous ROON 1.3 music library control software. Technically, the device has identical dimensions (43.5 cm wide, 9.5 cm high, 43.5 cm deep and 11 kg in weight) as the rest of the series and the device is also internally equivalent to the original NADAC. In the same way, the PLAYER also connects to every player, server or computer on the network and AES, optical and coaxial SPDIF inputs ensure that the other digital equipment can also be connected properly. Even today, one special feature on offer, in addition to a "normal" stereo version, is the 8-channel model. This is very special and I think it is still almost unique in the market. If you are now wondering what is in it for you as a purely 2-channel user, you should also bear in mind that even in stereo use, the eight channels of the ESS Sabre ES9008S reference DAC are merged into two channels. This results in a further improvement in linearity, the dynamic range is even greater and the noise floor is lower. A nice bonus because of this setup is the ability to play in different zones that can be controlled separately. It's possible for several MERGING+NADACs or PLAYERS to be independently set up with the same App but can be used completely independently of each other.

Well thought out

My comments in my 2016 test about the positive operation and well-thought out possibilities of the NADAC also hold



true for the new PLAYER. What has been changed in the meantime is the useful optional MERGING+POWER upgrade and the possibility to connect the existing Word Clock input to the new MERGING+CLOCK. Not only is 44.1 kHz - 384 kHz PCM, DXD, DSD64, DSD128 and even DSD256 supported, but the RAVENNA protocol from the studio world also provides the required precision with the elimination of the old cable and jitter related problems. An audible improvement is the direct consequence.

MERGING+POWER

It has been common knowledge for years that a separate power supply can significantly improve the audio performance of the source device. Yet despite its clear advantages, this valuable option is seldom offered today. With the arrival of the +POWER, Merging Technologies now also offers such a separate power supply, with the aim of bringing the sound properties of the +NADAC and +PLAYER to an even higher level. Just like the other models in the series, the +POWER also has identical dimensions. Although the layout at the front and especially the back does vary considerably. The original display, the volume control and the double headphone outputs have disappeared to make way for an LED status display with only a stylized cooling grid, euro plug connection and the output for the special external power cable at the rear. As expected, the +POWER is not just any external power supply, but is primarily focused on raising the performance of NADAC and PLAYER to unprecedented heights. To achieve this, the following things have been considered. The power supply is set up as a hybrid design. Which in this case means that the analogue sections are powered by a very silent toroidal transformer. The more power consuming sections such

as the DSP/FPGA and the media player, get their power supplied by a switching power supply. The +13 volt DC main power switch can handle 7.5 amps of continuous power and has an optimized second order filter to attenuate high-frequency noise while maintaining optimum transient performance. The other (+16 V / -16 V / + 6 V) analogue power supply circuits can handle 1 Amp continuous current. In addition, the optimized 2nd-order filter offers better performance and protection features than most discreetly constructed designs. Finally, a mix of three types of capacitors (polymer, aluminium and polypropylene) conforming to space travel/military specification is combined to obtain the most optimal sound properties.

MERGING+CLOCK

The component that initially intrigues me the most from these three is the MERGING+CLOCK. Not in the least because the Ultra-Low Noise version, which is also used for this test, has a really high price tag! The equivalent price of an electric car for just a digital clock, with which you can do little else but place it on your shelf and listen to it?! The engineers at Merging have the following to say about it: "The clocking of digital audio signals is crucial to achieve the highest transparency. Merging's experience in dealing with the challenges of perfect digital device synchronization has proved invaluable. For example, our RAVENNA network technology makes it much easier to distribute super-accurate timing information to all connected devices. But if that works so well, why not immediately make the Master Clock as accurate as possible? The MERGING+CLOCK is not only designed to synchronize the RAVENNA network, but also provides a direct high-performance connection to your





+NADAC or +PLAYER, which also offer automatic sample rate switching. The +CLOCK is furthermore equipped with two 10 MHz synchronous outputs for other high-quality components and finally also contains a set of no less than six Word Clock outputs for professional applications.

Application options

Merging the +PLAYER with +CLOCK in this case eliminates one of the last real compromises within the digital signal path. It may sound unbelievable to you at the moment, but at least within this Merging concept, this clock control almost contains unimaginable sound improvements. To begin with, the +CLOCK is available in two versions. The first is a so-called Low Phase Noise version, which already achieves an exceptional frequency stability of ± 50 ppb (parts per billion). The second variant is even an Ultra-LowPhase Noise design, where even the incredibly low value of only 20ppb is achieved! The core of both variants is formed by an extremely selected OXCO crystal oscillator that is linked to a Q-damping system. This setup reduces the effects of mechanical vibrations that may be present in your listening environment. Years of experience and research by Merging engineers have led to the discovery of these

critical points and where also short-term clock stability and phase noise performance have proven to be exceptionally important for sound quality. High-precision clocks are supplied by a limited number of manufacturers and there are recognized standards for devices that are not part of a network. The MERGING+CLOCK therefore offers four different connection types. The first is the RJ45 connector for RAVENNA/AES67 networks. The second a special 625 kHz signal for a direct NADAC or PLAYER connection, where +CLOCK replaces the internal clock. Then there are two 10-MHz BNC connectors for other High-End components and finally six standard BNC Word Clock connectors for each sampling frequency from 44.1 kHz to 1536 kHz. That is 32 times 1 FS (Frequency Setting)! A new phenomenon for me is that due to the extremely accurate operation, this clock cannot immediately do its salutary work cold out of the box. The clock signal can only be used after 10 minutes, while it is only completely stable after 2 hours of being switched on. The specified noise floor of both CLOCK and PLAYER manages to reach a new record with an ultra-low phase noise value of -160 dBc (!). In short, a whole pile of technical ingenuity and state of the art technology that make me extremely curious about the final rendition.



Listening 1 - studio Bert van der Wolf

The original MERGING+NADAC left such a good impression during my first test in 2016 that I am more than curious as to what the extra power conditioning and especially the additional clock can still add to it. Of course, we are now three years later; a lot has changed within my reference chain and I no longer have both devices (+NADAC and +PLAYER with separate power supply) next to each other. However, before I start working with the trio in my own listening room, I first travel to Bert's mastering and editing studio in the village of Haaften, in the province of Gelderland. There I receive the necessary background information, explanation and ultimately also a first listening session. When I enter the studio again, I immediately realise that it is a shame that such a facility is not accessible to ordinary consumers. Especially when the first notes of the multichannel sound preferred by Bert enter the space in an extremely phase coherent, creepy, realistic manner, I immediately realise again how close we can get to reality. So here nothing is thick, thin, bloated or blurred/sharp. No, what you hear with Bert is, even with your eyes open (!) a true-to-life reflection of what you will be able to see at the recording location. However, I also notice that the presentation now sounds even more stable and lifelike than I am used to with him. When I confront him with that, he says: "The realism that the +PLAYER manages to achieve together with the +POWER power supply is of course already very high and indeed, to an even higher degree than that of a standalone NADAC or PLAYER without the power supply. But now for something extraordinary because, after a series of earlier tracks, when he connects the extra cable between +PLAYER and +CLOCK, the difference turns out to be so huge that I can hardly believe it. While Bert studied the disbelief on my face, clearly amused, he continues: "I had that exactly the same experience. You first listen to the devices without a clock and it actually sounds super good. But when you involve the clock in the process, you suddenly realise what you've been missing all this time." I think that

"missing" is actually still an understatement, because what this extremely expensive clock does is best described as the switch from a complete digital to a complete high-quality analogue process, but without the disadvantages that can be typical of both. In other words, the very high resolution remains completely intact, but the rendering also appears, as if by magic, softer, more casual and more organic. In particular, the much greater immediacy and the feeling and the interaction between the musicians themselves are greatly improved by this. So much so that digital is for the first time able to match the unique qualities of analogue, but without the known limitations!

Shock reaction

Just when I have returned to earth a little, the next moment I am completely back on my feet with both of them firmly on the ground. The cause of this is the severe shock of the astronomical price tag of this innovation. The main question of how a product with an apparently simple function, has such an extreme price tag, keeps popping up in my head. "You know what it is like, Werner," Bert explains. "In addition to the enormous amount of research into known and less well-known aspects that can all have an effect on reproduction, technology must also be developed that can actually resolve all of these things. Not to mention the special clock crystals that rise exponentially in price when accuracy increases. If you add all this together, even this high asking price turns out to be fully explainable. What may also make it easier to digest is that this is the single biggest improvement I have ever experienced with a single audio component. Partly the reason is that with a source you are still at the very front of the signal chain and you will never be able to correct anything further down the road that you lose here. Everything you keep or improve here is pure profit." With this story in mind, we carefully pack the three devices and, at my request, I also receive a USB hard disk on which are stored a whole series of files from Bert's own recordings. This is not just because of the often-intriguing

music, another important reason is that, besides the original studio DXD format, a lot of music has been written on this hard disk in the other available PCM and DSD resolutions. It is ideal for my test for me to be able to experience the full extent of the Merging combination's ability to reproduce all these different sample rates.

Listening 2 - in your own listening room

And there you are with three devices that have to replace the recently returned Naim ND555 network player with dual power. A tough one, because at the time of this test, the Englishman was the most inspiring sounding all-round streamer I had heard to date. In this context you should read the word "inspiring" as the most musically satisfying and with the least annoying electronic influence on the experience itself. In terms of visual appearance, the Merging trio, which also consists of three devices, is no less successful. OK, the sleek black housings have now been replaced by a nice matte silver finish with beautifully rounded corners. Very different displays are also used on the devices themselves to convey their message. But here the differences become larger, Naim uses software written by themselves, while Merging deliberately uses the famous Roon for the PLAYER. Incidentally, it is fair to say that they both have their own pros and cons, but in daily practice you can work with either systems quickly and accurately. Many different amplifiers (Hegel H590, Moon Evolution 700i V2, Accuphase E-650, Zanden 6000) were used during the test, loudspeakers (Kroma Audio Julieta, Master Contemporary C) and cables (AudioQuest, Nirvana, Siltech, Essential Audio Tools, Kemp Elektronik) were used to exclude undesired interaction as much as possible and to achieve maximum system performance. Very important at this extremely high level is the awareness that cables here will play a much larger role than usual. So, try out many different power and network cables to find maximum synergy with your own chain. Or even better, ask your dealer for advice and assistance.

He came, saw and conquered

To refresh my auditory memory again, I decide to start

with the +PLAYER and +POWER without +CLOCK. Immediately intriguing is how strongly and especially quickly these kinds of memories can be recalled. Because the first word that comes to mind while listening is realism. In addition, I let out a sigh of relief when it once again appears that the current auditory trend of a (too) smooth sound with actually too much "false" warmth has happily passed the +PLAYER with +POWER. No, you buy Merging components because of their really neutral and natural character, in combination with such a sharp image, that it greatly facilitates listening. The clarity is even so good and is so little smothered, that for one of those rare times, I can again clearly hear the differences between 44.1, 96, 192 or 384 kHz PCM or between DSD 64, 128 or 256 of the same music files! What are the differences? The most bloom or actually a natural smear is present with the CD quality (44.1 kHz) which is the starting point today. The higher you go, the tighter and more accurate the image is focused. Also, the clarity increases with leaps and there is more and more air and space between the individual singers and instruments.

Listening - with +CLOCK

Could Merging's "secret weapon" still influence these findings? "Yes indeed" is the answer to this, because with the MERGING+CLOCK included, the sound is going through an almost extreme transformation. What remains is the extremely high resolution and the excellent accuracy. But precisely the reason why I often find the CD medium so good is now also being implemented at high resolution! So suddenly there is the glue between the notes, emotional turmoil increases, the connection between the musicians grows, I experience the natural softness of timbres that you mainly hear live and above all, a much higher credibility and self-evidence comes into being. A strange phenomenon is that the volume level suddenly appears considerably softer. So, on the ear 2 dB, but if you really measure the sound pressure nothing turns out to have changed?! What I think has changed is the perception of distortion. No matter how well something can measure, the ear judges differently and





experiences with the +CLOCK added, I find considerably less distortion and a greater phase clarity is evident in the music signal. In the past I have heard other clocks in a digital chain, but the effect has never been so startling as in this Merging set-up. After even longer listening period, the parallels with purely analogue are increasingly striking. Because just like with professional open-reel recorders, this Merging trio is also capable of reflecting the true connection between musicians. Possibly this has to do with the convenient disappearance of the typical "digital stereo image", where the channel separation can be so high that you mainly hear the left and right channels and the middle between the speakers is actually insufficiently filled. With professional analogue tape recorders, you always experience the sound building up from the centre between the speakers and only then to both sides. The credibility and connectedness in the music also increases at the higher resolutions because of this analogue-like characteristic. Sometimes the difference can turn out to be so large and emphatic that you can hardly believe that you have been happy with the "old" digital sound all this time!

Conclusion

Phew, what an extremely high total price, but what a bizarrely good end result. These two typical characteristics have once again shaken both the complete test and my musical world. In particular, the way in which the extraordinarily high resolution and the real uncoloured quality of the +PLAYER with +POWER can be turned into real tangible realism through the intervention of the +CLOCK,

remains astonishing time and again. The final end result even opens up new, undiscovered musical worlds, which makes this test exceptionally successful. It is also a situation where the unsurpassed uses of Roon packaged in a high-end network player are combined with expressiveness, soul, involvement, timbre and natural top-class analogue. It is unfortunate that this comes with such a high price-tag although luckily it can be explained well. Possibly the "entry clock" holds up a good part of the qualities at half the price? But no matter how we look at it, with the MERGING+PLAYER, +POWER and +CLOCK the brand makes history. These three products are ultimately intended for the wealthy music lover who is looking for the maximum musical reality in reproduction. In addition, it should be explicitly stated that a phased purchase plan can somewhat alleviate the financial pain and can also show many of these wonderful qualities. But once you hear the +CLOCK, there is no turning back.

Tekst: Werner Gro

Fotografie: Merging Technologies



PRIJZEN	
MERGING +PLAYER 8-KANAALS	€ 14.750,-
MERGING +POWER (VOEDING VOOR NADAC EN +PLAYER)	€ 7.250,-
POWER UPGRADE VOOR NADAC EN/OF +PLAYER	€ 360,-
MERGING +CLOCK LOW NOISE (LN)	€ 19.750,-
MERGING +CLOCK ULTRA LOW NOISE (ULN)	€ 39.250,-

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