

Brothers in Faith

Our southern neighboring country has always been crafting products that are blessed with the precision of a Swiss watch and impress with premium quality. These virtues also give hi-fi devices from the Alpine state their very own charm.



At trade fairs and exhibitions the Klangwerk and Weiss Engineering companies love to showcase their products jointly. With good reason: They fit together very well. One offers the sound transducers and the other provides the matching electronics. This kind of concept is a real treat for magazines like EINSNULL and we readily picked the exact combination which Weiss and Klangwerk so enthusiastically present.

The Electronics

In the realm of recording studios Daniel Weiss is a respected authority. He equips the most renowned studios with his DACs, A/D converters, limiters and FireWire interfaces. Fortunately Daniel makes his accumulated knowledge available to private music lovers too and provides computer audiophiles in particular with technically perfect converters. And when someone like Daniel Weiss sets out to jazz up the network player scene, people justifiably are getting nervous.

Peripheral Device:
– RipNAS Solid



The brand new MAN301 is a hybrid of network player, DAC, preamplifier, server and automatic ripper and everything is well thought-out down to the last detail. Basically the network player contains a Weiss DAC202 which is one of my favorites. This exceptional piece of equipment with its 8-channel ESS DAC (four channels per side) and an elaborate jitter suppression named JET PLL is technically state-of-the-art and produces an unbeatably clear and pristine sound quality. I love its unerring

fidelity and neutrality, its high resolution and the resulting almost perfect transparency. Not to forget the integrated hybrid volume control that I highly praised already years ago. It enables you to coarse-tune the output level in four stages and adapt it to the sensitivity of the connected amplifier, so that the intelligently dithered digital volume control will always have nearly the same resolution.

If you already own a D/A converter and love it dearly, you can dispense with the Weiss converter and order the MAN as a network player. Your DAC can be connected via S/PDIF, AES, and even USB, whatever you like best.

Either way, the MAN has only one button: the On/Off switch. You must use an iPad to tell the MAN what you want. Without the Apple tablet it will stay a plain looking box with connectors on the back. This places very high demands on the human machine interface, which has been developed completely by the Weiss company and comprises the vast experience with file-based music reproduction that Daniel Weiss and his team have gained over many years.

At first you have to set up a user, so that dad, junior, and mum can access different albums (and dad will never hear the MP3 jewels of his junior). Then you can check on the display which device the MAN301 has chosen for storage. The music files are accessed via direct network share of the folder - UPnP facilities are not implemented. After the setup the 301 takes more or less time to register the music collection and set up the library. If required, album covers can be cached locally on the iPad, so that they are displayed with maximum speed.



Audio Material:

- **Tracy Chapman**
Tracy Chapman
(FLAC, 44.1 kHz, 16 Bit)
- **Roachford**
Permanent Shade of Blue
(FLAC, 44.1 kHz, 16 Bit)
- **Peter Gabriel**
Red Rain
(FLAC, 44.1 kHz, 16 Bit)
- **Hoff Ensemble**
Quiet Winter Night
(FLAC, 192 kHz, 24 Bit)
- **Michael Formanek**
Small Places
(FLAC, 96 kHz, 24 Bit)
- **Various Artists**
Manger, Musik wie
von einem anderen Stern
(FLAC, 44.1 kHz, 16 Bit)
- **Beth Hart & Joe Bonamassa**
Don't Explain
(FLAC, 44.1 kHz, 16 Bit)

One of the options I really love is ripping CDs directly to the NAS. The data is buffered on the absolutely inaudible internal SSD and transferred unnoticed onto the network hard disk specified as storage drive.

By default the target format is FLAC, but you can choose from many different formats including AIFF, WAV, ALAC, or MP3. In the Settings menu you can also define the storage structure for the files.

Album covers are downloaded automatically from the internet, while you have full control and are free to choose alternatives with a touch of your finger. In fact before the actual ripping starts you could use the iPad camera to take a quick photo from the cover, knock out its background with a few editing steps and specify it as the picture to be shown.



The active electronics trust in analog technology. Even the crossovers and frequency response correction are not implemented as DSPs but by means of analog filters.

The Ella has become a lean sound sculpture and differs fundamentally from high-end loudspeakers with the size of a wardrobe.



you simply swipe with your finger. This is very stylish and looks pretty cool. As soon as your finger touches the song the music starts almost latency-free. Gapless playback is also offered – a detail that many demanding listeners consider to be a crucial criterion. Simply put: This network player is the most complete and mature of its kind that I know of.

By the way, this also works with albums that are already stored on the NAS. Hence you can edit meta data belatedly without using a computer. But it will rarely be necessary as the MAN was able to find even pretty exotic albums in our test run. Thanks to the meticulous error checking the ripping quality is very high. Even several CD relicts that were scattered in our listening room since the days of old could be successfully regis-

tered with album covers and the whole shebang. Daniel Weiss has thought of everything a listener could expect from a computer-based music archive. That's why establishing and playing back a music collection is pure fun. You scroll smoothly through the menu structure and insert your songs into the playlist exactly as it should be. After you're done with your selection you can switch the screen view so that only the most important operating controls and a pretty large picture of the album cover is displayed. To proceed to the next song

The Loudspeakers

Together with the Weiss MAN we ordered the matching loudspeakers which go by the name of Klangwerk Ella. In this case „matching“ means that the owner of Klangwerk, Markus Thomann, is a good friend of Daniel Weiss and that both developers like to attune their products to each other. So it is not surprising that the Ella with its active speakers and the MAN with its preamplifier together make up a complete



External audio sources can be input via a multitude of connectors. Even external clocks are accepted.



Daniel Weiss' excellent DAC processes the data received from the network.

audio system. The Ella loudspeakers are well suited for living areas. With a height of 43" and a width of less than 8" they are of lean and dainty stature – compared to high-end speakers with the size of a wardrobe commonly feared by spouses. The speaker is clad in white (also available in black) and its tapered top is rather reminiscent of a sound



The Audax drivers with their Aerogel membranes can cope with any high-end assembly.

sculpture than a loudspeaker enclosure. Technically speaking the Ella is a 2-way system, although a quite unusual one. Three 5" low/mid speakers and a 1" dome tweeter are used per unit. Both transducer models are manufactured by the French company Audax. The 5" speakers use the famous Aerogel membranes – the Audax rendition of a light (air-filled) and nonetheless stiff high-end membrane.

As these membranes are sufficiently sturdy in the bass region and exhibit very few resonances in the mid and treble regions, they are perfectly suited for low/mid loudspeakers. The two laterally mounted transducers are not adapted for radiating to the sides, rather each of the three 5" speakers receives identical signals. At first glance this might seem odd, but makes sense on closer examination. The low/mid trio is mounted at equal distances to the tweeter and thus facilitates a clean transition to the treble speaker range. In addition this configuration radiates the sound up to the mid range more consistently into the room. And this is pretty remarkable for a low/mid speaker which is relatively large in comparison with the tweeter. Ella's rather small membrane diameters are advantageous in this case. On

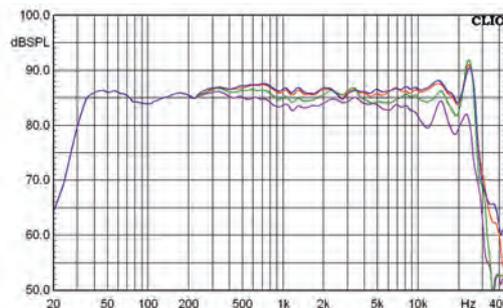


The French tweeters belong to the best that loudspeaker technology has to offer. This one uses a magnesium dome membrane.

the other hand the three low/mid speakers used for bass reproduction combine to a woofer unit that can cope with the membrane surface of a 8.5" chassis. Ella's tweeter is equipped with a coated magnesium membrane and exhibits the same beneficial ratio between stiffness and weight, although the dome has distinct membrane resonances beyond 20 kHz. But for more than 15 years Audax belongs to the few manufacturers that are able to build excellent metal dome tweeters and they should still know how to do it in 2013.

The Ella enclosure consists of a material mix of MDF and Creanite. The latter is a kind of hybrid between plastic and stone. The slightly slanted and angled Creanite front panel is perfectly joined to the MDF body so that both parts form a very solid and well damped enclosure. Together the light grey Nextel surface and the white surface of the Creanite front panel give the Ella its elegant high-end look. The speaker stands on a small socket, which is used to conceal the bass reflex ports. They end in slots on the bottom of the right and left side panels. The electronics are of

The Ella boasts an almost flat frequency response and a pretty low bass range considering the size of the bass transducers. Slightly emphasized mids around 700 Hz and a small dip around 100 Hz. Directivity under different angles (0, 15, 30, 45°) is excellent: the crossover frequency of 2 kHz is invisible and there are no sharp dips across the whole frequency range.



high quality and generously equipped. A powerful toroidal coil transformer with 150 watts of power consumption is more than sufficient for a loudspeaker like the Ella. What's special about this amplifier circuit is its completely analog concept, which makes it pretty exotic in our modern times. Instead of relying on the inexhaustible functionality of a digital sound processor, Klangwerk trusts in discrete analog filters for sonic reasons. Of course, this requires more efforts regarding filter design, if phase-correct and amplitude-linear results are expected, but it's possible. Therefore the Ella's electronics are much larger than digital solutions and there are fewer options that can be (incorrectly) adjusted by the user.

Except for the mandatory gain control which adapts the sensitivity to any preamplifier, there is only one more potentiometer that attenuates the bass range below 300 Hz and allows you to position the Ella near a wall. As the lean loudspeaker system produces more than enough bass when this control is turned fully up, you can finetune the over-



The internal hard disk houses the operating system and buffers ripping data. The fan in the center is absolutely inaudible.

all sound to your liking. Which takes us seamlessly to our soundcheck, for which we also used the terrific „830“ Lindemann preamplifier – simply to test the Ella detached from the Weiss MAN. I am bound to say that it's difficult to define the sonic characteristics of the Ella as it nearly exhibits none. It is completely neutral in the very best

sense. The perfect loudspeaker for people who want to hear the original uncoloured recording. The Ella does not omit or add anything. Even after a long listening session I cannot tell which frequency ranges sound particularly excellent. The treble range is pretty concise and provides a wealth of nuances and details, but it never sounds obtrusive or harsh.

The reproduction of voices is simply precise and the music in general is very authentic. The speaker system gives listeners the assurance to be very close to the action. After all I was particularly impressed by the bass range which deserves extra praise. Given the compact format of the Ella, the bass reproduction is especially spectacular. It is really tight and by no means undefined. Aficionados of natural music reproduction will love the perfect punch of the precise kick drums. The lean loudspeaker has enough power for large living rooms where it readily unfolds its ambient qualities. The sound easily frees itself from the speakers and naturally fills the room. Frankly, such a performance is extraordinary, even for high-end loudspeakers. The Ella is the perfect combination of elegant look and superior sound quality.

By itself the MAN301 turns out to be a true Weiss: competent, absolutely neutral and highly transparent.

Matching the sound characteristics of the Ella it offers flawless reproduction, depicts the slightest nuances of the frequency range, and creates a virtual space that is simply sensational. This duo is not a bargain, but their performance is worth every cent. And when you consider the low-key and compact format of the system, the sonic result is even more impressive. These team mates complement each other perfectly. They enhance modern living spaces and satisfy even the most demanding listeners. Another perfect example of highly sophisticated engineering from Switzerland.

Christian Rechenbach/Elmar Michels

As an alternative to the depiction of music archive and playlist in text form the album covers can be displayed almost full-screen on the iPad. The previous and subsequent titles of the current playlist are also displayed as thumbnails on the bottom.



Whether newly purchased CDs or existing music collection: New titles are registered directly on the iPad without using a PC. Manual editing is rarely required.

Klangwerk Ella

- Price: ca. 13,800 EUR/per pair
- Distributor: Klangwerk, CH-Zurich
- Phone: +41 (0)43 8184490
- Internet: www.klangwerk.ch

- W x H x D: 8.5" x 44.5" x 7.5"
- Inputs: 1 x analog XLR
- Functions: Sensitivity, Bass (+2 ... -8 dB)

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„A lean sound sculpture that can cope with the largest speakers? Klangwerk's Ella belongs to this very rare and sought-after species. Its active electronics and its loudspeaker assembly do a brilliant job – technically and first and foremost in the listening room.“

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Weiss MAN 301

- Price: 10,000 EUR
- Distribution: WOD Audio, Nidderau
- Phone: +44 (0)618 7900077
- Internet: www.wodaudio.de

- Inputs: 1 x S/PDIF TosLink
1 x S/PDIF RCA
1 x AES/EBU
2 x FireWire
- Outputs: 1 x Wordclock
1 x S/PDIF RCA
1 x AES/EBU
1 x analog RCA
1 x analog XLR
1 x Wordclock

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„Perfekt sound and blessed with an excellent user interface. The Weiss MAN301 sets the standard.“

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