

3 series



Reviving the Soul of Sound

METIS

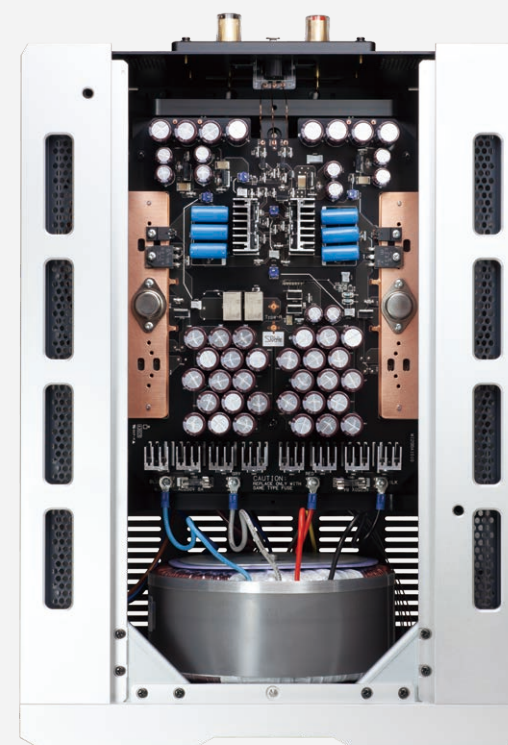
Music with Emotion that Transmits its Influence through the System



MONOBLOCK POWER AMPLIFIER M-3



Newly incorporated industrial grade can-type output transistors to achieve a perfect non-NFB single push-pull structure



A single push-pull output stage with 4-stage Darlington can-type transistors

We decided that a single-end and single push-pull output was indispensable in creating an emotional musical experience, thus eliminating the "blurring in the microscopic time domain" so often symbolized by improvements in sound quality through high-end clocks. However, there is a still problem that have to overcome the relatively low levels of current provided by the typical single push-pull configurations. As a result, the M-3 has adopted industrial grade can-type output transistors with a relatively small Cob and large current flow. The driver stage incorporates the same output stage transistors used in the A-2 to easily drive these large capacity cans for a total of four Darlington construction stages.

Bus bars with copper plate heat sinks

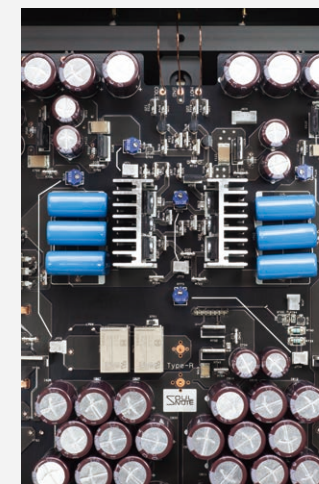


The main heat sink uses small, lightweight copper plate heat sinks – a rarity in conventional high power amplifiers. This heat sink also combines a bus bar to power the can transistors, while the can-type transistor terminals pass through the bus bar and are mounted directly on the board underneath. This eliminates wiring – the Achilles' heel of can-type transistors – while also removing instability from inductance components and deteriorations to sound quality caused by insulating sheet dumps in the device. Additionally, the heat sink is physically isolated from the chassis, which significantly impacts sound quality aspects such as transparency and providing a feeling of openness. This way, this heat sink kills three birds with one stone.

Extremely simple construction

The M-3 is discovered that large current power amplifiers should be dedicated to a single function. It features just one set of input terminals and speaker terminals. It is a single-function monoblock power amplifier with no selectors or attenuators. The signals input from the XLR terminals travel directly to the base of the first stage transistors, undergo single stage amplification, and are output via a single push-pull circuit. The only available operation is the power switch. As expected, the unit contains no unnecessary circuits or components like microcontrollers, etc.

For the voltage amplification stage equipped non-NFB differential circuits (new Type-R circuits) redesigned for power amplifiers



Only a single transistor is used to fully amplify the emitter follower, voltage, and differential circuits without any gain. The load impedance in this transistor is a "GND one-stage amplification single-end non-NFB circuit" that connects only to the GND. These new Type-R circuits were created using only 4 bipolar junction transistors and 10 resistors to extract ideal full swing output across a wide spectrum, even though this configuration is primarily the same as that used for single ended tube amplifiers. This ideal non-NFB circuit could easily be dubbed a

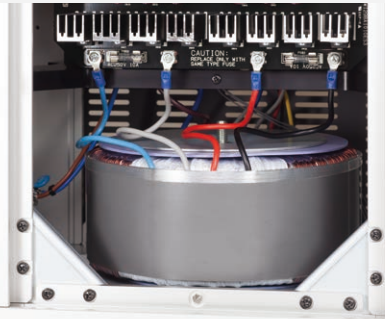
MONOBLOCK POWER AMPLIFIER M-3



Overwhelming music playback with outstanding spatial expressiveness



Ultra low loss 1600 VA non-epoxy resin-filling toroidal power transformer



We developed a large power transformer that can be carried by one person alone. This giant power transformer is mounted vertically to the front panel so that any leakage flux travels parallel to the circuit boards, and it is suspended on titanium washers and connected to a spike to ensure that harmful vibrations are not transmitted to the chassis.

High-speed non-NFB power supply



The commutating capacitors use specially selected 470 uF high resistance, small capacity, low magnification foil filter capacitors. Optimizing capacity according the number of capacitors used and minimizing the power supply load further improves real regulation in this heavy-duty power supply transformer. The rectifier diode uses newly adopted SiC diodes with the latest specs that reinforce the maximum input current value. This creates an unimaginably powerful and fast power supply structure.

Amplifier container completely separate from the main body, each grounded by three spikes



Three spikes ground both the main body and the amplifier container for a total of six spikes in the M-3. While these two components are completely physically separate, the power supply line from the power supply transformer has been shortened to eliminate any negative impacts as a result of vibrations and leakage from the transformer. This truly ideal construction results in an incredulous sound quality that can be experienced by attaching or removing the transportation screw. And of course, the audio board, AC adapter, speaker terminals, input terminals, and base plate are all non-rigid parts.



[Specifications] ●Maximum output 160W (4ohm) ●Total harmonic distortion 0.1% (1W) ●Frequency characteristic 2Hz ~ 200kHz (±1dB) ●Input sensitivity/impedance 2V/25kohm ●Gain 22dB ●Power voltage 115V AC 60Hz(M-3T), 220V AC 50Hz(M-3E), 230V AC50Hz(M-3H) ●Power consumption 110W/36W(no signal) ●Maximum external dimensions Main unit: 340(W)×251(H)×512(D)mm ●Weight 31kg Included accessories Special speaker cable, Special rack, Power cable ,Set-ting plate, Setting plate

MONOBLOCK POWER AMPLIFIER M-3

Premium Silver/Premium Black

[Included accessories]



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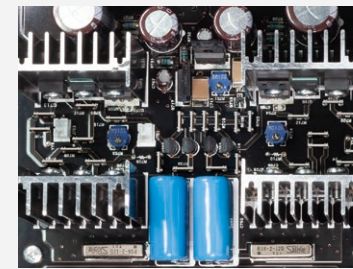
PREAMPLIFIER P-3



Fully integrated ultra low loss custom relay RSR-2-12D and naked foil resistor
A monster preamplifier for truly live and enjoyable music performances



Type-R circuits are used inside the non-NFB balance amplifier



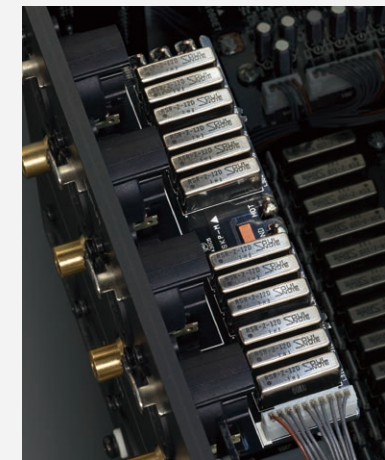
The output line amplifier uses Type-R discrete non-negative feedback balance circuits that have been finely tuned for pre-amplifier use. It also includes the newly-developed super high-quality naked foil resistors. With 1ohm emitter resistors and 3.9ohm output resistance, it delivers astonishing information detail and S/N presence for superior power preamplifier drive capabilities.

High-end resistance switching method audio volume control circuit

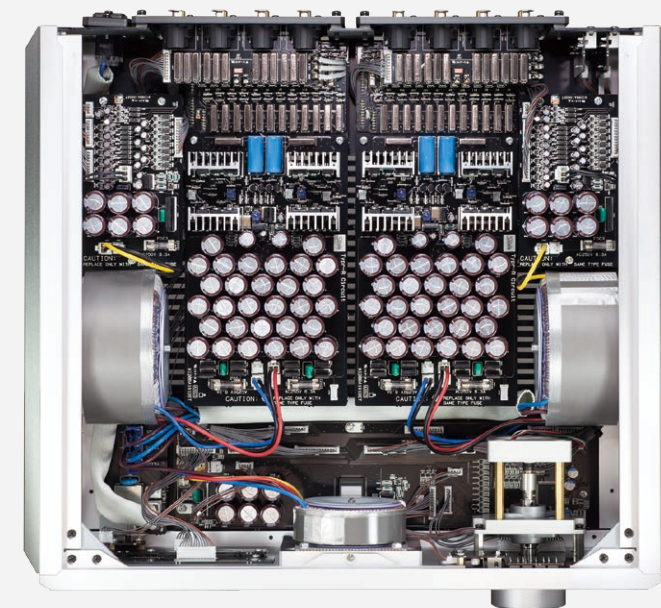


The best possible methods and the highest-quality parts create the best audio volume control. All the resistors in this unit are ultra high-quality, naked foil resistors. The switching relays also use the newly developed RSR-2-12D (Reference SOULNOTE Relay) ultralow loss custom relay. Volume control is configured with 144 steps in 0.5 dB intervals. Vibrancy and sound quality remain unaffected, even when lowering the volume.

GND switching input selector



One major factor affecting sound quality deterioration in preamplifiers is GND loops and noise intrusion when connecting multiple sound sources. One way to eliminate this problem is to adopt a switching method on the GND and signal end so that unselected devices are held in a state where their connectors are unplugged. And to avoid any interference from the relay connection, the selectors in this unit completely use the RSR-2-12D.



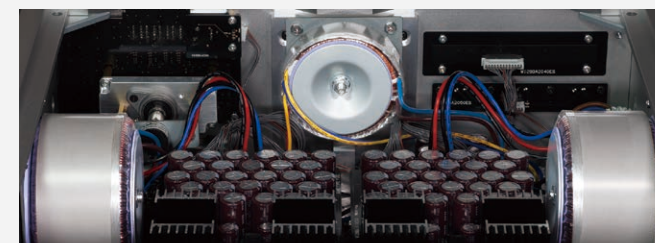
Perfect dual monaural construction

This unit utilizes a dual monaural construction that employs two identical and dedicated sets of I/O terminals, circuit boards, power supply circuits, power transformers, relay drive circuitry, and relay power supplies for the left and right channels. The microcomputer power supply, including the transformer, is also completely separate. A photocoupler keeps control signals completely separate from the relay, the only point of contact with the signal system.

Completely separate GND

The left and right channel, and control systems each have a ceramic-insulated chassis to achieve complete separation of the left, right and control GND. Each GND can be connected through the rear switch settings, but because each GND is completely separate, the listening experience offers an incredible expansive three-dimensional sound field with expressive, natural sound.

Extremely powerful power transformer



Each side of the analog power transformer uses a 280 VA large-scale non-epoxy resin filling toroidal transformer. Including the control transformer, this unit can reach a total 600 VA, equivalent to the A-2 and the strongest capacity in SOULNOTE history. The transformer's audible drive capacity improves in proportion to better regulation made possible by the larger capacity. The P-3's high drive capabilities will change the grade of the power amplifier and the speakers.

Vertical transformer mounting

The transformer is mounted vertically on the circuit board, so any harmful leakage flux is oriented parallel to the circuit board, to prevent possible circuit ingress.

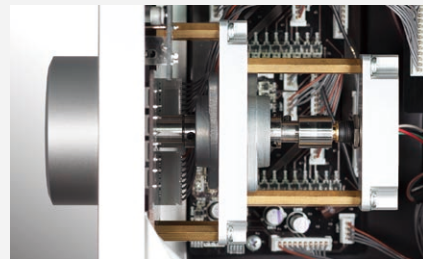
PREAMPLIFIER P-3



Nothing else but just Sensation is there



Optical rotary encoder with double bearings & flywheel



The flywheel effect from the large, solid aluminum volume knob and the two large-scale bearings used to eliminate mechanical backlash combine to create a solid and extremely precise volume control.

3-point spike grounding



The spike connected directly to each of the three power transformer bases (three spikes total) eliminate harmful vibrations from the transformers before they can propagate to the chassis.

Unfixed AC inlet base



The AC inlet uses the Jodelica ETP-600CU. By not mechanically fixing the aluminium AC inlet base, rear-panel dumping is prevented, resulting in more expansive sound quality.

Audiovisual source bypass function

Each XLR and RCA circuit has an audiovisual source bypass setting that can fix volume and output with zero gain.

Floating construction

The Type-R circuit board and top cover are mounted in a floating construction without mechanical fixing. Freeing the P-3 from mechanical stress and the harmful effects of air dumps creates a natural sound quality and soundscape similar to removing the top cover.

GND anchor

The left and right side metals are isolated from the main chassis by ceramic washers and are directly connected to separate left and right GND. This amplifies the benefits (more expansive soundscape and clearer feeling) of the left and right GND floating construction.

Multiple device connection system

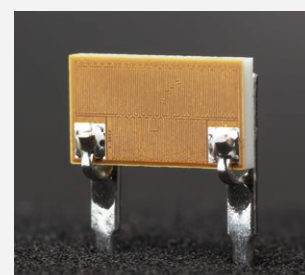
Multiple devices can be connected using UART signals. Master and slave settings allow all slave settings to follow those of the master. This allows duplicating differences in the master volume to the slaves. This feature enables, for example, multi-amplifier volume control via a digital channel divider following DA conversion. And, of course, these connections completely avoid GND loops or other issues thanks to the floating GND control system.

RSR-2-12D (Reference SOULNOTE Relay)



An ultra low loss glass tube sealed reed relay that performs similar to a mercury relay as a base has been further customized. This is an original custom relay created by SOULNOTE that can reach sound quality levels comparable to that of wire. Each P-3 contains 94 of these relays.

Ultra high-quality naked foil resistors



We have applied artificial satellite grade ultra-high precision foil resistors with exceptional temperature properties and have made additional customizations with an emphasis on sound quality. These ultra-high sound quality resistors were developed in-house and employ a naked foil design to eliminate dumps with mold resin. Each P-3 contains 156 naked foil resistors.

PREAMPLIFIER P-3

Premium Silver/Premium Black

[Included accessories]



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ZEUS

SOULNOTE ZERO LINK ULTIMATE SYSTEM



D/A CONVERTER D-3



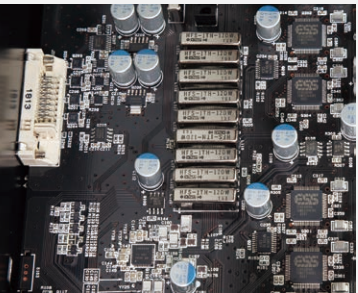
The ultimate D/A converter
with ZERO asynchronous circuits



ZERO LINK



Connecting a network transport equipped with ZERO LINK creates a network system that is completely synchronized with the DAC clock, achieving dramatic improvements in sound quality by eliminating asynchronous circuits. The input from the ZERO LINK terminals passes through a selector consisting of a mechanical relay that does not add jitter and connects directly to the DAC chip using a layout unique to ZERO LINK.

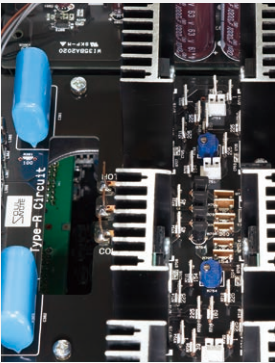


A dual monaural analog section



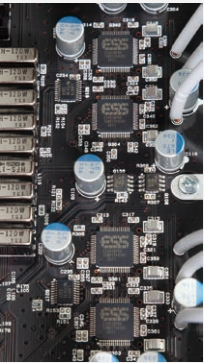
The D-3 utilizes a dual monaural construction that employs two identical and dedicated sets of terminals, Type-R circuits, power supply channels, power transformers, relay drive circuitry, and relay power supplies for the left and right channels. It is also fully separated from the digital power supply, including the transformer. A photocoupler completely separates the relay control signals that connect with the analog signal system. The mounting base for the aluminium circuit board is not fixed, laying the foundation for uninhibited and more impassioned sound quality. Analog circuit boards are mounted on independent right and left circuit board chassis and are also independent from the rear panel connectors. Similar to the P-3, foaming Teflon-covered cables connect the left and right independent side aluminium ground anchors to the respective aluminium ground anchors that are isolated from the chassis.

Type-R circuits are used inside the non-NFB balance amplifier



The output line amplifier uses Type-R discrete grade non-NFB balance circuits, similar to the P-3. It also includes the newly-developed super high-quality naked foil resistors. With 1ohm emitter resistors and 3.9ohm output resistance, it delivers astonishing information detail and S/N presence for superior power preamplifier drive capabilities.

Utilize four ES9038PRO circuits



Each channel in the DAC chip uses two ES9038PRO chips, for a total of four in the unit. Each channel's incomparably powerful 120 mA current output is an essential element of the discrete non-NFB DAC. One current voltage conversion resistor uses naked foil resistors to convert current output into voltage directly before the first stage of the Type-R Circuit.

Dedicated external clock generator design



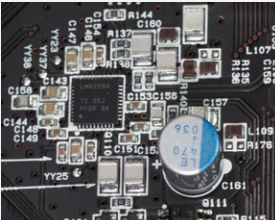
X-3

Since the clock significantly impacts D/A converter sound quality, we discovered that we can obtain better sound quality by quietly operating the clock in a separate housing unit with a separate power supply instead of housing it inside the unit. So we have stopped using internal clocks and now provide dedicated external clock generator equipment. The X-3 is the most suitable external clock generator for pure sound quality. We highly recommend the RCC-1 clock cable.



RCC-1

Femtosecond order DDS



With its extremely low jitter of 45 femtoseconds, the DDS LMX2594 gives rise to a high-quality master clock that aligns sampling frequencies from the 10 MHz clock input. As a result, it can drive the ES9038PRO in Non-DPLL mode (128 femtoseconds), i.e. the best sound quality mode. By generating a master clock that matches each track's sampling frequency transmitted from the transport during ZERO LINK, this achieves perfect synchronization with the transport without any use of PLLs or sampling rate converters.

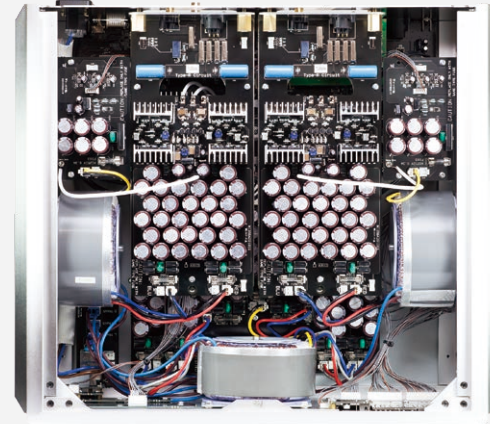


Releasing all the Soul in the sound source

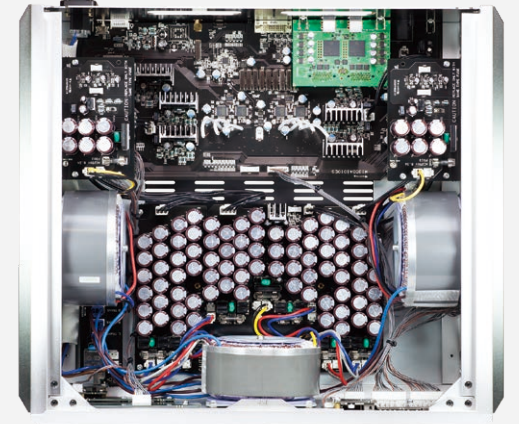


Independent left-right grounding for power transformers

The power transformer is divided into three independent transformers – digital, analog right, and analog left – with each section mounted independently on the side of an aluminium base that convey any transformer vibrations from each base to a grounding spike. Each of the three transformers is mounted vertically in parallel with the circuit board to prevent possible noise interference in the circuits caused by leakage flux. A vital component of sound quality, the transformer base's sandwich structure features an aluminium side floated at three points by titanium spacers and employs optimum materials, structure, and shape to eliminate resonance and avoid dumps. The 152 low-magnification electrolytic capacitors in the rectifier capacitor and 52 ultra high-speed SiC diodes in the rectifier diode demonstrate our unwavering dedication to sound quality. They constitute the core of this massive power supply.



[Upper level]



[Lower level]

NOS mode utilization

The D-3 uses the highly acclaimed NOS (Non oversampling) mode. This mode does not generate the pre- and post-echoes observed in FIR oversampling. * Non oversampling mode cannot be used with DSD.

- Impulse output waveform with an FIR oversampling filter



Pre- and post-echoes are artificial “sounds” created by data calculations before and after the data is interpolated. They make waveforms like sine waves appear smoother, but calculation algorithms can affect the sound quality or ambiguity and be added to the time-axis.

- Impulse output waveform in Non oversampling mode



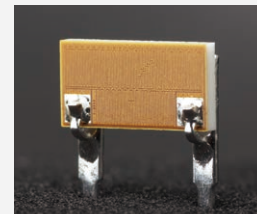
This waveform can only be achieved by combining a non-NFB discrete amplifier with superb transient response performance. Because music waveforms are actually a series of impulse waveforms of different heights, Non oversampling mode eliminates any ambiguity in the time axis information, creating a more realistic and natural sound quality and an expansive listening environment to the human ear, which is extremely sensitive to the time axis.

RSR-2-12D (Reference SOULNOTE Relay)



An ultra-low loss glass tube sealed reed relay that performs similar to a mercury relay as a base has been further customized. This is an original custom relay created by SOULNOTE that can reach sound quality levels comparable to that of wire.

Ultra high-quality naked foil resistors



We have applied artificial satellite grade ultra-high precision foil resistors with exceptional temperature properties and have made additional customizations with an emphasis on sound quality. These ultra-high sound quality resistors were developed in-house and employ a naked foil design to eliminate dumps with mold resin.

[Specifications] ●Supported sampling frequency(ZERO LINK,USB) /Maximum 768kHz(PCM)/Maximum 22.6MHz(DSD)●Supported sampling frequency (coaxial AES/EBU) /Maximum 192 kHz(PCM) /Maximum 2.8MHz(DSD64 DoPv1.1)●PCM quantization bit rate(ZERO LINK,USB) /16bit,24bit,32bit●PCM quantization bit rate (coaxial AES/EBU) /16bit, 24bit●Digital input /ZERO LINK, USB (Type B) 2,coaxial (S/PDIF), AES/EBU●External clock input /10MHz (SMA 50ohm)●Analog output /XLR 1, RCA 1●Analog output level (XLR) /5.6Vrms●Analog output level (RCA) /2.8Vrms●Frequency characteristic /2Hz~120kHz(+0/-1dB) ●S/N ratio /110dB●Total harmonic distortion /0.008%(NOS/176.4kHz)●Analog filter /Primary passive type●Power voltage /220V AC 50Hz(D-3H), 230V AC 50Hz(D-3E), 115V AC 60Hz(D-3T)●Power consumption /48W●Maximum external dimensions Main unit 454(W)×174(H)×407(D)mm ●Weight /28kg●Included accessories /Spike board, spikes, remote controller, power cable

D/A CONVERTER D-3

Premium Silver/Premium Black

[Included accessories]



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NETWORK TRANSPORT Z-3



Flagship Network Transport was born
to maximize the ability of ZERO LINK

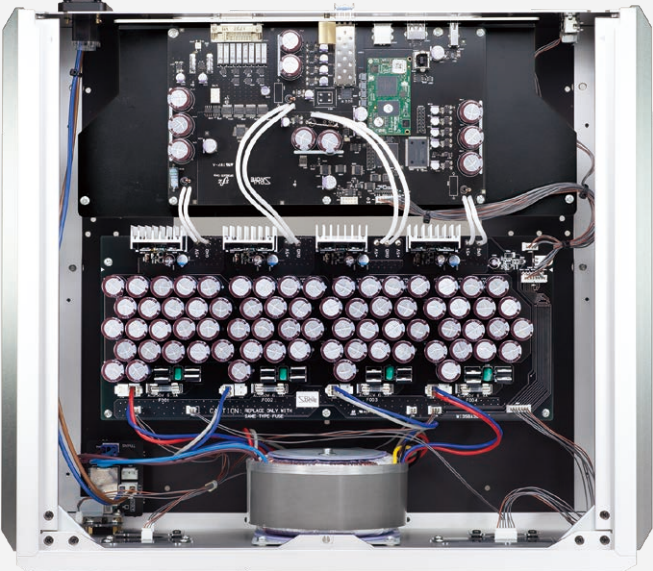


ZERO LINK



ZERO LINK is the ultimate link, jointly developed by SFORZATO and Soulnote to achieve the highest possible sound quality in digital playback equipment. ZERO LINK drastically reduces the work of the D/A converter and completely eliminates the use of asynchronous components in the D/A converter housing. In the Z-3, ZERO LINK replaces every asynchronous component to transmit only signals polished beautifully by the clock to the D/A converter. The resulting sound quality is an unprecedented leap forward in the sonic universe. This solution surpasses the highest levels of analog playback.
* Includes a dedicated ZERO LINK cable.

Ultra powerful non-NFB discrete power supply



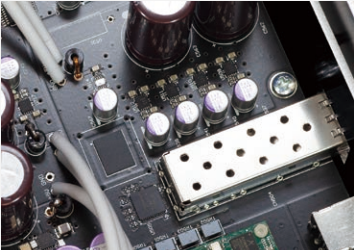
The Z-3 uses the same digital high-reguration transformer as D-3. An unprecedented 260 VA large-capacity transformer is used to create four non-NFB discrete power supply circuits separated from each circuit winding. It uses a total of 16 ultra high-speed SiC rectifier diodes and 70 low-magnification electrolytic capacitors. This provides endless expressive power with overflowing clarity and directness.

SFP port



By incorporating an optical link module, this opens up the door to optical cable connections. Besides the use of an SFP RJ45 module allows for compatibility with regular LAN cable connections.
* The optical link module, RJ45 module, optical cables, and LAN cables are not included with the Z-3. Please consult with your local retailer.

SC Cut ultra low phase noise OCXO



An SC Cut OCXO is installed in the dedicated SFP circuit clock. Although it is an asynchronous component, every effort was made to counteract its effects by maximizing the clock quality. When ZERO LINK is connected, the high-quality D/A converter master clock transmitted by ZERO LINK is used in the I2S generation circuit and Non-PLL Sync is applied.

NETWORK TRANSPORT Z-3



Sense of energy and spatial expression
that can surpass even the finest analogue playback



A dedication to non-stabilized housing



Beyond the plate, we went above and beyond to create a non-stabilized housing, including the AC inlet, I/O terminals, circuit boards, and circuit board chassis. We applied the full breadth of SOULNOTE expertise to components like titanium washers, spike placement directly under the transformers, and more. The air volume presented by the relatively large housing contributes to an unprecedentedly vast soundscape.



A variety of applications

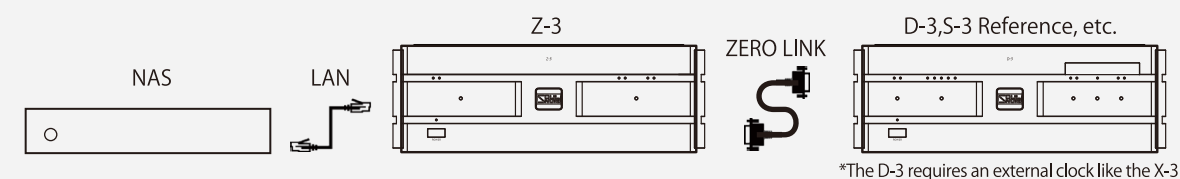
The Z-3 can be used in the following three ways.

① As a ZERO LINK network player (LAN input – ZERO LINK output)

You can create the ultimate separate network player by inserting an optical link module or RJ45 module into the SFP port and using it as a LAN input, then using a ZERO LINK connection with the D-3 or S-3 Reference. This connection method will create the highest quality sound.

* LAN input is compatible with DLNA, OpenHome, and diretta (LAN DAC).

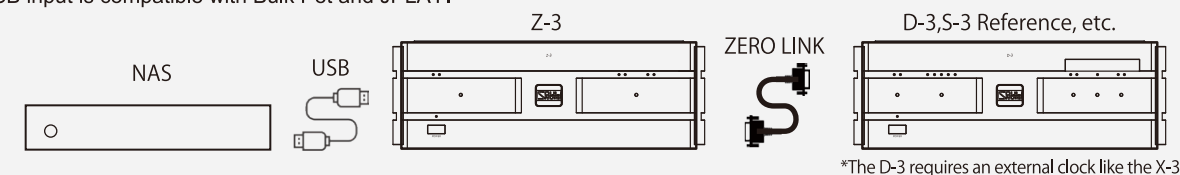
* diretta input is only possible when connecting with diretta compatible devices.



② As a ZERO LINK bridge (USB input – ZERO LINK output)

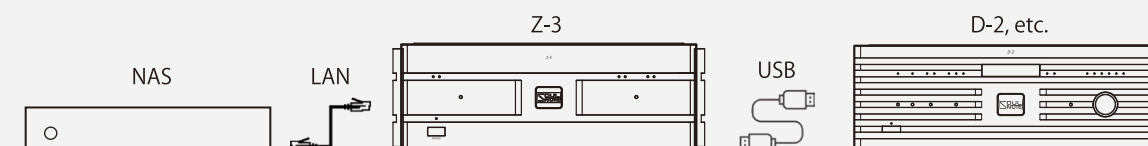
By using the USB input to connect to your computer or music server, you can use it as a ZERO LINK bridge with output from the ZERO LINK. High-quality ZERO LINK sound can be easily obtained by using the Z-3 in the same way as a general USB DAC.

* The USB input is compatible with Bulk Pet and JPLAY.



③ As a network transport (LAN input – USB output)

You can use it as a high-definition network player by connecting it to your USB DAC.



* USB input – USB output is not possible.

[Specifications] ●Input/SPF,USB●Output/ZERO LINK,USB●Supported format(PCM)/Maximum 768kHz(AIFF,WAV,FLAC,Apple Lossless,mp3,AAC)16bit,24bit,32bit●Supported format(DSD)/Maximum 22.6MHz(dsf,diff)●Power voltage/220V AC 50Hz(Z-3H), 230V AC 50Hz(Z-3E),115V AC 60Hz(Z-3T)●Power consumption/30W●Maximum external dimensions Main unit/454(W)×174(H)×393(D)mm●Weight/20kg●Included accessories/Spike board, spikes, ZERO LINK cable, power cable

NETWORK TRANSPORT Z-3

Premium Silver/Premium Black

[Included accessories]



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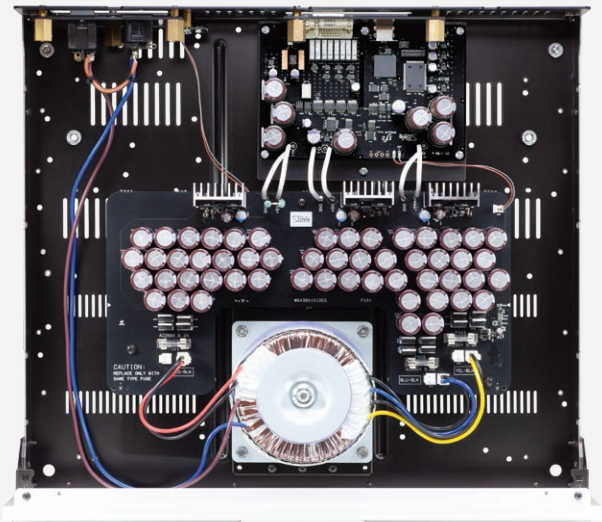
USB-ZERO LINK BRIDGE B-3



USB-ZERO LINK bridge to build the ultimate separate USB DAC



ZERO LINK



ZERO LINK is a standard formulated by SFORZATO and SOULNOTE. It is an ultimate link for achieving as high audio quality as possible. ZERO LINK dramatically reduces workload of the D/A converter and eliminates asynchronous circuitry from the housing of the D/A converter. This product handles entire asynchronous circuit and ZERO LINK transmits only signals that are polished by the sophisticated clock transmitted from the D/A converter, to the D/A converter. As a result, unparalleled audio quality can be obtained. ZERO LINK is a solution that surpasses even the highest-level analog playback.
*A ZERO LINK designated cable is supplied with this product.

High power non-NFB Power Supply



A 200 VA toroidal transformer which has an enormous capacity and which is usually used for power amplifiers has been adopted. For the rectifier diode, ultra-fast SiC diode is equipped for the first time. A multitude of electrolytic capacitors with low magnification and low capacity are connected in parallel to make up a group of rectifier capacitors. For regulators, SOULNOTE unique non-feedback power is supplied.

Housing designed with highest priority placed on Sound Quality



The top cover with the top-bottom sides unsecured can prevent air-dumping. In addition, an unsecured AC inlet, an unsecured output terminal, 3 spike supports located just under the transformer, titanium washers, and carbon washers are adopted. These parts and ideas were singled out as a result of placing the highest priority on audio quality.



USB-ZERO LINK BRIDGE B-3

Premium Silver/Premium Black

[Included accessories]



[Specifications] ●Input/USB●Output/ZERO LINK●BULK PET, JPLAY supported●Power voltage/AC115V 60Hz(B-3T), AC220V 50Hz(B-3H), AC230V 50Hz(B-3E)●Power consumption/23W●Maximum external dimensions Main unit/430(W)×111(H)×376(D)mm ●Weight/7.8kg●Included accessories Spikes, ZERO LINK cable, power cable

10MHz CLOCK GENERATOR X-3



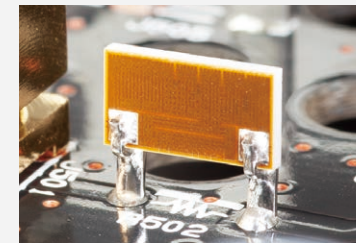
Born out of discovery of World-first designing principle
It's an incredible breakthrough in designing Clock generator



SC Cut ultra low phase noise OCXO

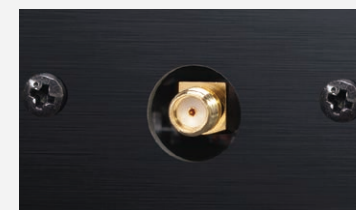
The X-3 incorporates an SC Cut ultra low phase noise OCXO (thermostatic bath-type crystal oscillator) selected for its unprecedented sound quality.

Naked foil resistors



As they greatly impact clock sound quality, the output resistors employ naked foil resistors adapted from artificial satellite grade ultra high precision resistors, with exceptional thermal properties and low thermal noise, and then further customized. We believe that at this stage, this is where extraordinary resistors are most effective.

SMA output terminal



The output clock signal originates from an SMA terminal with specs above 20 GHz. Only one output is provided for the ultimate in sound quality. The X-3 is supplied with an SMA–SMA 50ohm dedicated clock cable, but we highly recommend using the optional RCC-1 clock cable. Relive music that unleashes the ambiances of the soul.

Non-NFB power supply



A high-capacity 200 VA toroidal transformer normally used in 100 W power amps provides an abundant power supply to drive the crystal oscillator. The rectifier diode relies on newly adopted ultra high-speed SiC diodes. The rectifier group is composed of numerous low-magnification, small-capacity electrolytic capacitors connected in parallel, while the regulator incorporates SOULNOTE's unique non-NFB discrete power supply.

Quiet power supply domain

All unnecessary circuits like power supply LEDs, relays, etc. have been stripped from the crystal oscillator to provide a super-quiet power supply domain.

Housing prioritizing sound quality

The X-3 housing adopts unique new design. The housing consolidates features like air dump elimination through a dual non-rigid top plate, non-rigid AC inlets, non-rigid output terminals, three spike supports directly under the transformers, titanium washers, carbon washers, and more. Our core expertise has developed sound of the highest quality.



[Specifications] ●Output/SMA x 1●Output frequency/10MHz
●Output impedance/50 ohms●Output level/1.0Vp-p●Power voltage/115V AC 60Hz(D-3T), 220V AC 50Hz(D-3H), 230V AC 50Hz(D-3E)●Power consumption/2W●Maximum external dimensions Main unit/430(W)×111(H)×376(D)mm●Weight/7.5kg
●In-cluded accessories/SMA–SMA dedicated clock cable, SMA–BNC converter plug, spikes, power cable

10MHz CLOCK GENERATOR X-3

Premium Silver/Premium Black

[Included accessories]



See also our facebook page! https://www.kcsr.co.jp/sn_facebook_archives.html

SUPER AUDIO CD PLAYER S-3 Reference

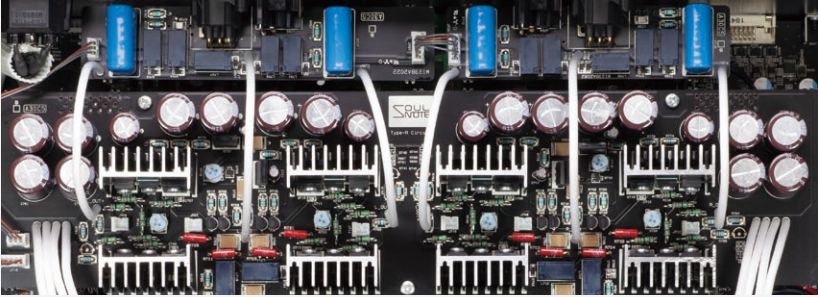


The ultimate digital playback system with clock synchronization

Extremely powerful Super Audio CD player that reproduces delicate natural soundscape and liveliness

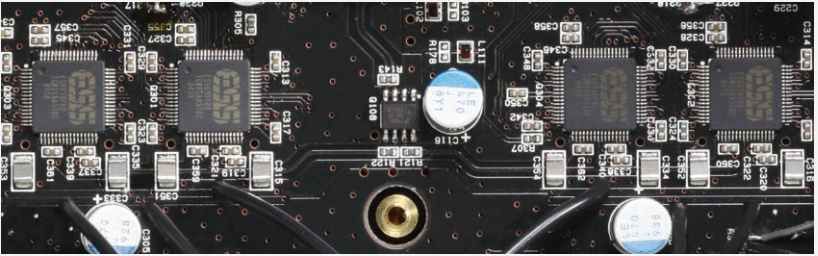


Type-R non-NFB circuits



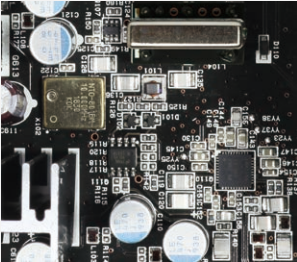
The analog circuits adopt the newly developed Type-R non-NFB circuits. These are balanced voltage amplifier circuits constructed using only 4 high-frequency bipolar junction transistors and 8 resistors. The first stage uses differential amplification without any gain. Gain is only generated in the second stage, which is a grounded single-end amp. And by changing the output stage bias from a LED solution to a transistor thermal coupling, the conventional emitter resistance of 22ohm has been successfully reduced to a mere 1ohm. This incredibly simple construction effectively eliminates power source noise to allow overwhelming drive power and enable the sound to truly shine with fresh and vivid expressiveness.

Utilize four ES9038PRO circuits



Each channel in the DAC chip uses two ES9038PRO chips, for a total of four in the player. Each channel's incomparably powerful 120 mA current output is an essential element of the discrete non-NFB DAC. One current voltage conversion resistor converts this current output into a voltage directly before the first stage of the Type-R Circuit.

Ultra low jitter clock



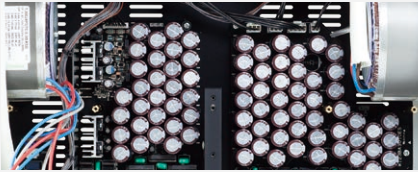
The master clock output from the DDS LMX2594 boasts an extremely low jitter of 45 femtoseconds to create a non-PLL sync from the DAC to the SACD mechanism. Without any transmission to the USB or LAN, the dynamic and transparent SACD playback with the DAC-driven I2S non-PLL sync (ES9038PRO's 128fs mode) completely overturns any conventional impressions of SACD. The S-3 features built-in ultra-low jitter crystals and can link with the ultra-high frequency external clock generator (10MHz) to further improve accuracy of the time axis. It uses a high-frequency relay for switching the standard clock to eliminate any chance of additional jitter.

RSR-2-12D (Reference SOULNOTE Relay)



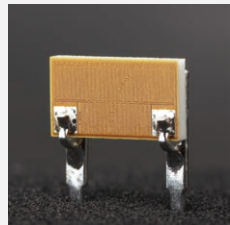
An ultra low loss glass tube sealed reed relay that performs similar to a mercury relay as a base has been further customized. This is an original custom relay created by SOULNOTE that can reach sound quality levels comparable to that of wire.

Massive power channels



The power channels comprise the majority of the S-3 body. The power supply for both the analog and digital systems are non-NFB power supplies using large, high-quality low magnification elec-trode foil capacitors housed under the SACD mechanism.

Ultra high-quality naked foil resistors



We have applied artificial satellite grade ultra-high precision foil resistors with exceptional temperature properties and have made additional customizations with an emphasis on sound quality. These ultra-high sound quality resistors were developed in-house and employ a naked foil design to eliminate dumps with mold resin.

ZERO LINK



SFORZATO Corp. and SOULNOTE teamed up to create ZERO LINK, the ultimate link that aims for high sound quality by eliminating asynchronous circuitry from D/A converters. Connecting a network transport equipped with ZERO LINK creates a network system that is completely synchronized with the DAC clock, achieving dramatic improvements in sound quality by eliminating asynchronous circuits in S-3 Reference.

Foaming Teflon-covered single copper wires

All wires for the analog signals and the power supply use a SOULNOTE foaming tefloncovered single copper wire reference cable. Soldering them directly to the circuit boards eliminates any contact points.

SUPER AUDIO CD PLAYER S-3 Reference



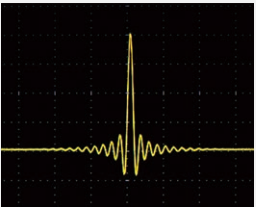
All for the music



NOS mode utilization

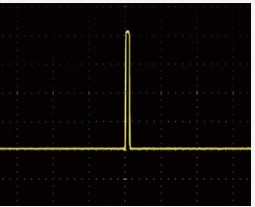
The S-3 uses the same highly regarded NOS (Non oversampling) mode used in the D-2. This mode does not generate the pre- and post-echoes observed in FIR oversampling. * Non oversampling mode cannot be used with DSD (SACD).

● Impulse output waveform with an FIR oversampling filter



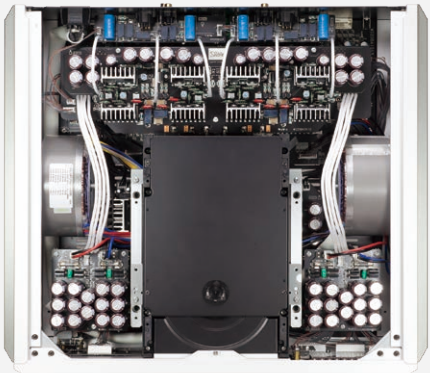
Pre- and post-echoes are artificial “sounds” created by data calculations before and after the data is interpolated. They make waveforms like sine waves appear smoother, but calculation algorithms can affect the sound quality or ambiguity and be added to the time-axis.

● Impulse output waveform in Non oversampling mode



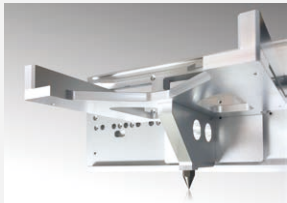
This waveform can only be achieved by combining a non-NFB discrete amplifier with superb transient response performance. Because music waveforms are actually a series of impulse waveforms of different heights, Non oversampling mode eliminates any ambiguity in the time axis information, creating a more realistic and natural sound quality and an expansive listening environment to the human ear, which is extremely sensitive to the time axis.

Independent left-right grounding for power transformers



The digital and analog systems are separated in the power transformer, with each system mounted independently on an aluminum base that transmits transformer vibrations from each base to a grounding spike. This eliminates motor or digital noise from entering the analog power supply while simultaneously avoiding intermodulation from two vibration sources, which commonly is a weakness of dual transformer configurations. A vital component of sound quality, the transformer base’s sandwich structure features an aluminum side floated at three points by titanium spacers and employs optimum materials, structure, and shape to eliminate resonance and avoid dumps.

SACD mechanism with direct grounding construction



The SACD mechanism is mounted directly on a grounding spike through the machined aluminum base. This ideal construction emits vibrations from the mechanism directly to the grounding spike, while maintaining the physical location of the mechanism with a high degree of accuracy.

Spike floating audio board



The floating audio board construction used in the SOULNOTE 2nd Series has further evolved so that the audio board itself is rests on three stainless steel spikes using spike receptacles engraved into the chassis. The parts of the aluminum audio board have been machined and made lighter, and the entire board has been meticulously tuned so that it almost sounds like there is no board at all.

[Specifications] ●Available Compact Disc/super audio CD and music CD (CD, CD-R and CD-RW)●Digital input/2 USB (Type B) inputs,1 coaxial input (S/PDIF),1 AES/EBU input●Supported sampling frequency(USB)/Max.768kHz(PCM)/Max.22.6MHz(DSD)●Supported sampling frequency(Coaxial, AES/EBU)/Max.192kHz(PCM)/Max.2.8MHz(DSD64 DoP v1.1)●Analog output/1 XLR output, 1 RCA output●Analog Output level Balanced/5.6Vrms (Adapted Load Impedance 5 k ohm or more)●Analog Output level Unbalanced/2.8Vrms(-Adapted Load Impedance 5 k ohm or more)●Analog Frequency characteristic/2Hz~150kHz(+0/-1dB)●S/N ratio/110dB●Total harmonic distortion/0.008%●Analog Filter/1st order passive type ●External clock input/10MHz (BNC 50ohm)●Power voltage/220V AC 50Hz(S-3H), 115V AC 60Hz(S-3T), 230V AC 50Hz(S-3E)●Power consumption/50W●Maximum external dimensions Main unit/454(W)×170(H)×393(D)mm●Weight/27kg●Included accessories/ Spike board, spikes, remote controller, power cable

SUPER AUDIO CD PLAYER S-3 Reference

Premium Silver/Premium Black

[Included accessories]



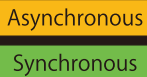
About ZERO LINK

ZERO LINK is the ultimate digital link system between transport and D/A converter developed for achieving a goal that “ Leaving asynchronous circuits out from D/A converters to aquire high sound quality” formulated by SFORZATO and SOULNOTE. The improvement in sound quality by leaving out asynchronous circuits from the D/A converter is actually overwhelming. And it is ZERO LINK that enables asynchronous circuits in D/A converters ZERO.

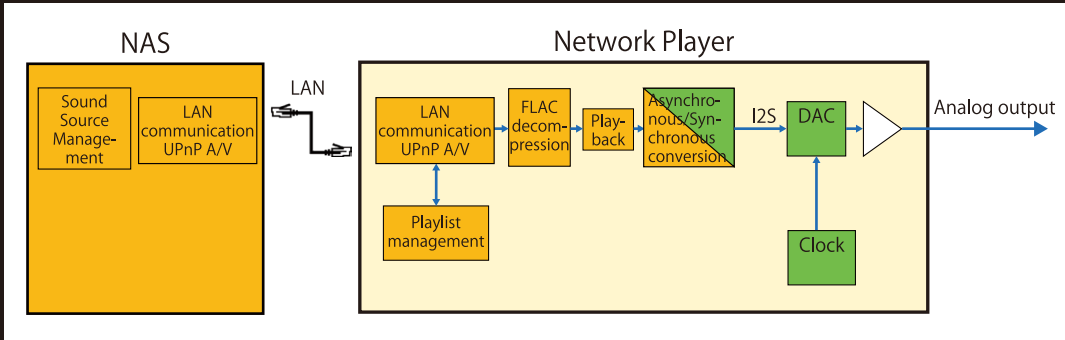
ZERO LINK not only sends Master clock signals and I2S signals, but also interactively communicates between Transport and D/A converter. That is, the transport transmits the format of the sound source to the D/A converter before playback first, and the DDS of the D/A converter generates a high-grade master clock synchronized to this format and sends it back to the transport. Then the transport generates a pure I2S signal synchronized to that master clock and sends it to the D/A converter again. As a result, ZERO LINK enables DAC and Transport completely synchronized with Master clock generated by DAC, and as a result enables completely leaving out synchronous circuits that can cause sound quality deterioration.

Internal operation of a typical network connection

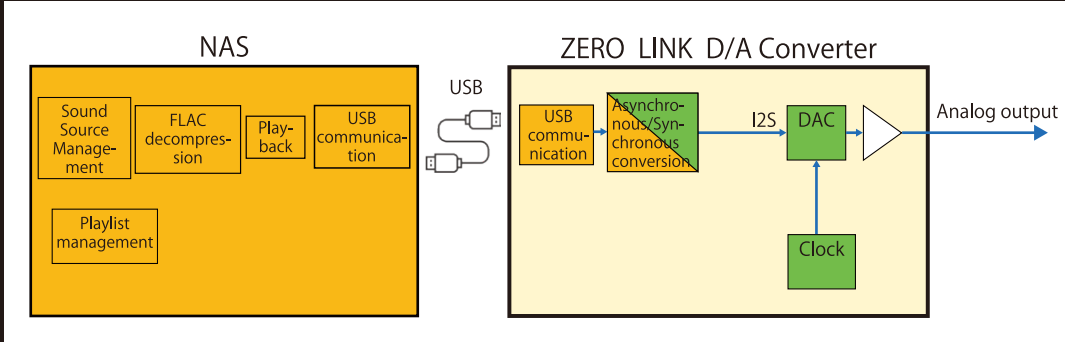
Both connection methods have asynchronous circuits in the D/A converter.



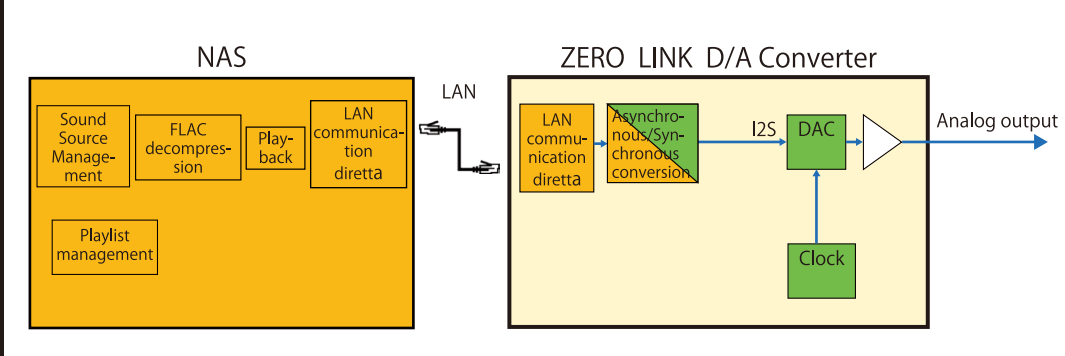
Network Player Configuration



USB DAC Configuration

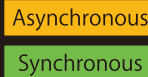


LAN DAC (diretta) operation

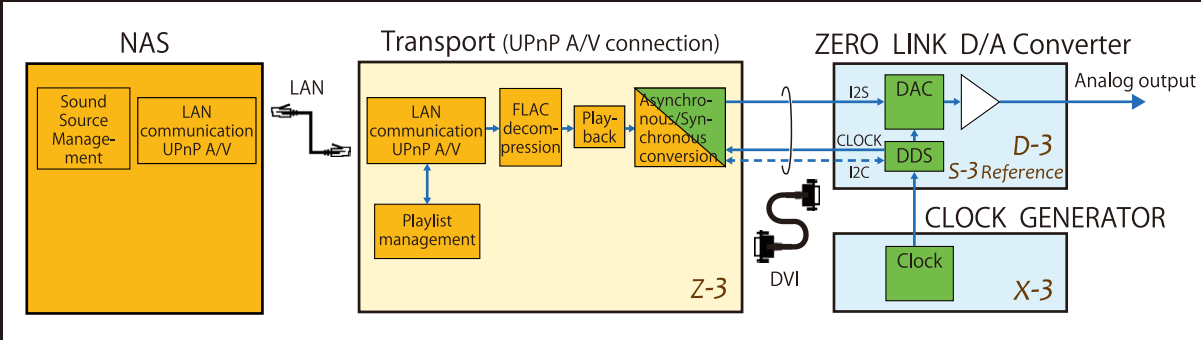


Internal operation of ZERO LINK connection

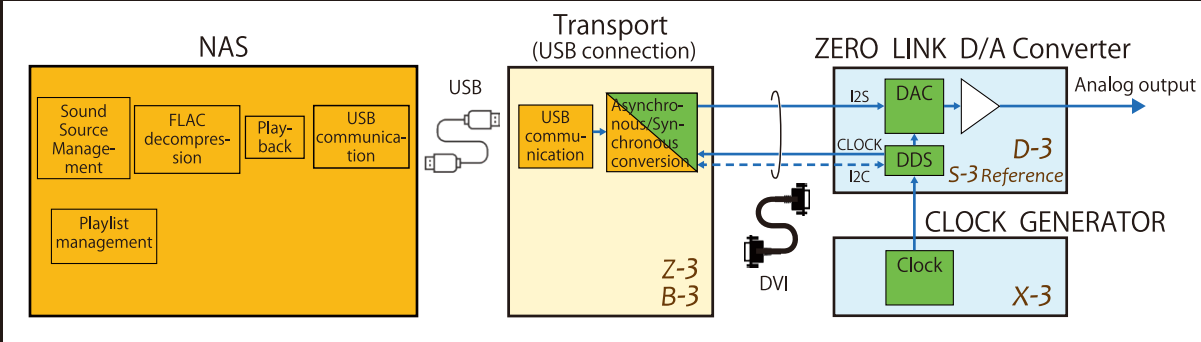
In ZERO LINK operation, the D/A converter has no asynchronous operation at all.



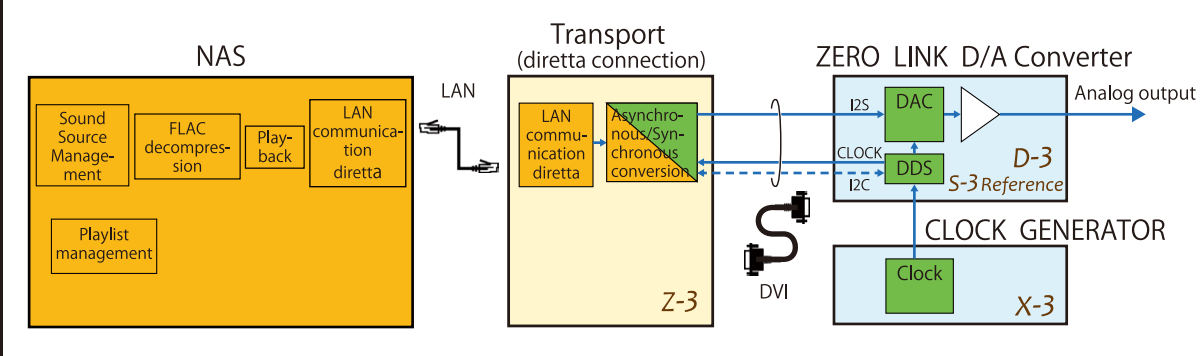
Configuration of ZERO LINK when the transport is operated with U/PnP A/V



ZERO LINK configuration when the transport is operated via USB connection



ZERO LINK configuration when the transport is operated with diretta





CSR, Inc.

5-33-4 Sagamiono, Minami-ku, Sagamihara-shi, Kanagawa 252-0303 JAPAN
TEL (81)042-703-5100 FAX (81)042-767-5300 https://www.kcsr.co.jp/soulnote_en.html

*As of October 2022 Specifications, standards, and appearance are subject to change without notice for improvement.

