



*A-S3000* Integrated Amplifier / *CD-S3000* Compact Disc Player

**S3000** series



*Powered by music*



Yamaha invented the Floating and Balanced Power Amplifier—the only such power amplification method in the world. And now we proudly introduce the new S3000 Series—the supreme stage on which to demonstrate the unlimited potential of that unique technology. It delivers perfect symmetry in amplification with a circuit layout that can truly be called beautiful, and all-stage fully balanced signal transmission for absolutely accurate reproduction. The passion of our engineers, who strove to give audio enthusiasts something truly original and with everlasting value, bore fruit through an excruciatingly long period of development.

We realise that tradition can only be inherited and maintained through an endless series of revolutions. Now in 2013, the time has finally come for us to pass the torch of Yamaha's stellar HiFi tradition to the next generation.

A u t h e n t i c   a n d   S u p r e m e



Yamaha boldly offers a completely unique and exceptionally advanced technology, combined with an elegant design based on traditional aesthetic sensibility. We do this because a true revolution is essentially invisible, being born in the minds of those who aspire to something new. However, if you look closely, you'll see that the precision and hidden details—works of art in their own right—quietly but proudly radiate undeniable presence and create fresh surprise in the eyes of the beholder. One example is the window of the meters at the centre of the front panel. By bevel cutting the edges of the window and panel at an angle of about 60°, polishing the glass and applying pressure from behind to secure it without using screws or bonding agents, we have integrated the glass and metal as if they were two parts of the same material. And that's just one of the elegant exterior details of the S3000 Series. Many more discoveries await you. Take a closer look, touch and experience it—and sense the pride we put into it.

Q u i e t P r i d e

**A-S**  
AUTHENTIC & SUPREME



No matter how wonderful or famous the performance or recording, no one would think to praise the instruments and ignore the artists who played them. An instrument is a tool for expression. However, it is a tool that is intimately embraced by the musician, one that effectively becomes an extension of the musician.

In the same way, we believe that the ideal audio component is a tool of expression, intimately embraced by the recorded music, and completely faithful to that music—an unadulterated “transducer” that transparently brings the performance to the listener’s ears.

The A-S3000 features an extraordinarily high signal-to-noise ratio, low distortion and unmatched drive power for all types of speakers. Moreover, to satisfy listeners who want to actively control and customise the sound, it utilises unique and ingeniously designed tone control circuitry, which maintains the shortest possible signal route. Finely polished rectangular knobs let you recognize the setting status even from a distance, giving you elegant, expressive tools for intimately embracing the music yourself.

C o m m i t m e n t t o M u s i c

**A-S**  
AUTHENTIC & SUPREME

HiFi began with Yamaha.

1974 NS-1000M



This top-end monitor speaker was created by utilising electron beam vapor-deposition method in a vacuum, and applying Yamaha's own LSI and special alloy technologies in mass producing beryllium—universally recognized as an ideal material for speaker diaphragms. This unit enjoyed a very long production run, having been manufactured and sold for 25 years, and had wide acceptance: For example, it was adopted as the official monitor speaker for state-run broadcasting in Sweden.

1977 PX-1



Yamaha's first high-class turntable, this unit employed a linear tracking method. It boasted a left-to-right symmetrical linear arm, light in weight, and high in sensitivity. It also featured a 5.6 kg ultra-heavy duralumin platter, and DC motor with a starting torque of 2kg/cm. Despite the imposing and even stiff appearance, it had a remarkably soft and musical sound.

1986 CX-10000 / MX-10000 / HX-10000 / CDX-10000



The CX-10000 was the control amp of the 10000 Series, developed as limited models commemorating Yamaha's 100th anniversary. It included DEQ and DSP functions, new and highly unusual at the time. The unit was designed throughout to deliver the highest sound quality, employing the straight wire with gain concept, while the parametric DEQ was 1/6-octave with 61 steps, and the DSP provided 16 different programmes to help create the ideal acoustic sound field space.

1990 YST-SW1000



This excellent Sub-woofer system achieved ultra-low-range reproduction of 16Hz thanks to Yamaha's proprietary Active Servo Technology, which is based on the sonic ideal of an air woofer. The unit uses air itself as the diaphragm, delivering low frequency reproduction equal to that of a large speaker, despite the compact cabinet size.

1991 GT-CD1



This CD player embodied the GT (Gigantic & Tremendous) concept, championed by the GT-2000 and other GT-Series turntables. Boasting an independent structure, which featured complete separation between the player section and the DAC part, as well as being equipped with 1-PDM method 1-bit DACs and all-stage Class A amplifiers, it delivered the ultimate in sound quality.

1994 MX-1 / CX-1



The MX-1 was a complete Class A stereo power amp, equipped with high-efficiency Class A operation HCA circuitry. The control amp CX-1 included a system remote controller for also operating Yamaha RS-compatible source machines and conveniently turning the MX-1 power on and off. Its thin design and reasonable price made it a long seller as a separate amp.

Our aim is to create unique audio components that can only be made by Yamaha—products with exceptional value that no one else can imitate or equal, and which are renowned worldwide. Since making the Yamaha HiFi Player, which in 1954 was the world's first audio component beginning with the word "HiFi," we have consistently aimed to create a totally new, inspiring sound—born by combining the most advanced materials and technologies with our long tradition of crafting fine musical instruments.

Perhaps we haven't manufactured as many products as others have, but not one of them have been commonplace. Nor could any have come into existence without first having been imagined and created. We are confident that the new S3000 Series will gently open the door to the future of audio. Step inside and experience that future yourself.

# A-S3000

Integrated Amplifier

Profoundly accurate sound with the full expressive power of the music.  
Exceptional sonic purity, elimination of signal loss—in an exquisite, elegant design.  
The supreme culmination of the Yamaha line—the A-S3000.



## Rigid Streamlined Construction—provides strict anti-vibration protection, and enables shortest cabling routes

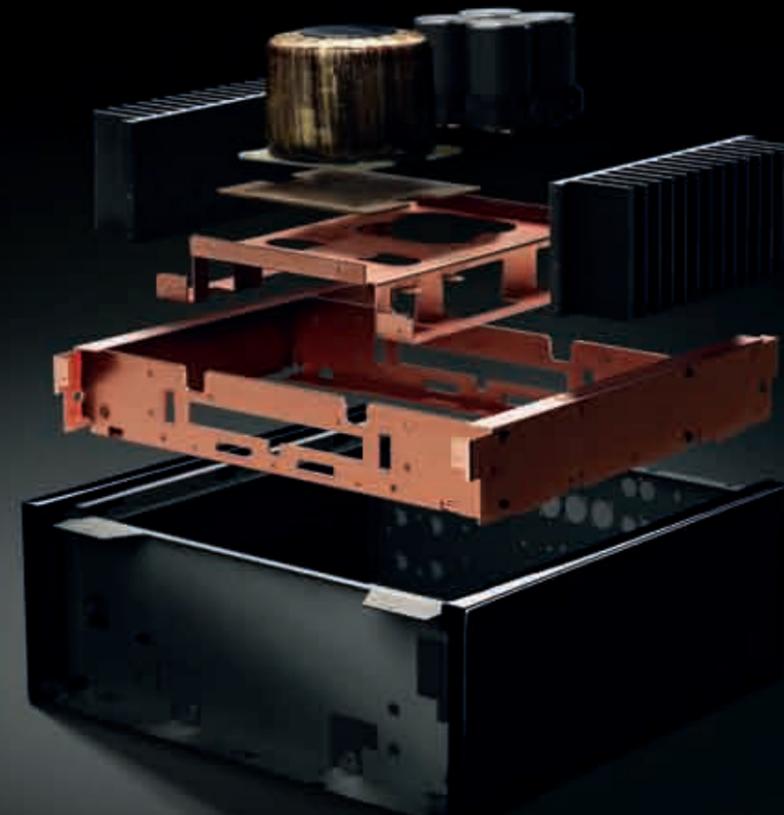
The A-S3000 has adopted a newly designed highly rigid double structure construction in order to achieve profoundly pure and accurate audio amplification. The bottom chassis and insulator ward off external vibration, and provide each circuit board a floating structure supported by an independent inner frame, thoroughly eliminating the impact of vibration. And the power source unit, which consists of a power transformer and capacitors, which are major sources of internal vibration, is fixed firmly with a three-dimensional structured inner frame, and is supported solidly by the front panel and the rear panel. The power amp circuit board and the weighty heat sink are attached to the left and right inner frames. The power supply unit and amplifier circuits are thus structurally isolated, achieving an ideal chassis structure which thoroughly blocks the transmission of vibration. Moreover, the inner frame that supports the power transformer is shaped with ample space below it, allowing passage of the wiring to each circuit over the shortest possible route. The newly developed chassis with this innovative structure helps to minimise the length of the signal paths and achieve low impedance, as well as providing high rigidity and anti-vibration benefits. The result is a dramatic reduction in signal loss, for remarkably pure audio amplification.

## Large toroidal transformer, solidly mounted with independent three-dimensional inner frame

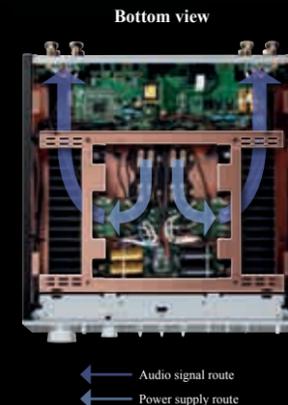
An independent three-dimensional inner frame has been employed in order to provide a more solid mount for the large toroidal transformer, which is installed in the centre of the A-S3000, considering the ideal weight balance. The completely copper-plated inner frame has a structure which integrates the front-back and left-right frames with a convex-shaped highly rigid main frame as its base, reducing vibration coming from all directions. For the base, to which the power transformer is installed on the inner frame, brass was selected by strictest examining the particular sonic properties of various materials by exhaustive listening tests. This material effectively reduces vibration caused by the power transformer, helping to create sound of greater clarity and spaciousness.

## Comprehensive low impedance design, shortened signal paths and copper-plated chassis

In order to achieve the absolute purest signal transmission, capable of communicating even the most subtle nuances of the music and its powerful dynamism—for example, reproducing powerful, agile low frequencies, and portraying all the emotional nuances of the human voice—we've methodically pursued low impedance throughout the A-S3000. Using a



double construction design creates space for cables under the bottom of the chassis, enabling the shortest cable path for the supply of power from the transformer to the power stage and for the audio signal transmission path. This helps to eliminate signal transmission loss and to smoothly supply power, even during high-volume transients, and allows more direct audio reproduction without even the slightest adverse effect on the music. Also, the three-dimensional inner frame to which the power transformer is mounted is copper plated. Extremely low impedance is assured by lowering the ground potential. This sharply lowers the impact of noise, and delivers a profound and richly emotional sound—one that perfectly communicates all the original expression of the artist.



## Six mm thick top panel made of non-magnetic aluminium plate

The top panel and the front panel are made of aluminium, a non-magnetic material, in order to eliminate any adverse effect on the audio signals. In the course of strictest examination of the sound quality, the front panel thickness was set at 7mm and the top panel was set at 6mm. This helps to realise an exceptionally natural, spacious sound by providing a highly rigid chassis structure, and at the same time, skillfully controlling the impact of vibration. Moreover, heat dissipation openings on the top panel were formed by high precision cutting from both sides—front and back—of the panel, and finished with thorough scrupulous attention to every detail. Stylish slits in the centre, matching the companion CD-S3000 and its design, strongly emphasise the powerful power source unit inside by having the same width as the power transformer.



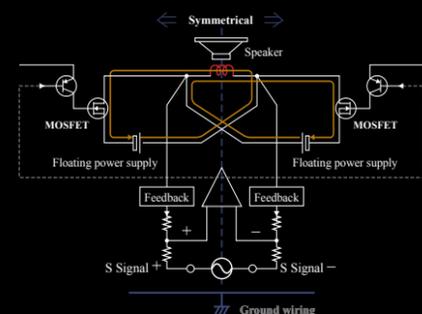
**Left-right symmetrical design for independent pre amp and power amp blocks**

The amplifier circuit design features independent pre amp and power amp blocks, and perfect left-right symmetry. Separation of the pre amp, which handles low energy signals, from the power amp, which handles high-energy amplified signals, greatly reduces sound deterioration caused by mutual interference. Moreover, the left-right symmetrical design, which keeps the left and right power stages completely separate, ensures greater channel separation and enhances clarity of the stereo image.

**Floating and Balanced Power Amplifier with MOSFETs**

The basic design of the power amp circuit adopts Yamaha's proprietary Floating and Balanced Power Amplifier technology. Adopting output

**A-S3000 Floating and Balanced Power Amplifier**



elements with the same polarity on the plus and minus sides of the output stage, and also completely separating the NFB (Negative Feedback) circuit and power supply into a total of four plus and minus sides of the left and right channels, results in thoroughly symmetric push-pull operation of the output stage. Completely floating the entire power amp circuit from the ground removes any negative impact of minute voltage fluctuations or ground noise. Moreover, the output elements are comprised of MOSFETs, which provide a warm and natural sonic character. The use of MOSFETs, which have the same polarity on the plus and minus sides, further evolves the ideal of a complete symmetrical design, to eliminate sound quality variations due to difference in polarity—a major distinguishing characteristic of the Floating and Balanced Power Amplifier—resulting in sound with a superior signal-to-noise ratio and a superbly well-defined sound field.

**All-stage balanced transmission**

The A-S3000 features fully balanced signal transmission. Moreover, the control system circuits (volume, tone, etc.) of the pre amp feature totally balanced operation, realising ideal balance in all stages.

**Direct drawing toroidal transformer for complete elimination of signal transmission loss**

The cabling of the power transformer adopts an ingenious method in order to significantly reduce impedance. The winding of the transformer itself is directly connected to the terminal with a screw, unlike with conventional cabling. This enables a



power supply which thoroughly limits connection loss and energy loss caused by soldering. The toroidal transformer was selected with top priority on sound quality, contributing superior strength, as well as a profoundly natural and spacious sound.

**Exceptionally low impedance through secure screw connections**

In order to completely eliminate signal energy loss, important parts of even the circuits employ screw connections. In addition to wiring of the block capacitor of the power unit—which is the real heart of the amplifier and as such requires high power—screw connections were adopted for all crucial spots of signal transmission, including the connection of the pre amp circuit with the power amp circuit, and the cabling to the speaker terminals from the output stage of the power amp. In addition to making the signal path as short as possible, this significantly lowers the impedance, and greatly reduces signal loss.



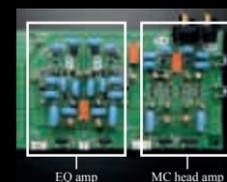
**Superior quality electronic volume control for optimum sound**

We've utilised a high-quality digital volume control specially designed by New Japan Radio Co., Ltd., which consists only of ladder-type resistance, removing the impact of slew-rate decline or colouring of the sound, delivering higher purity in the sound, and excellent, fast response to large volume changes and steep transients.



**Discretely configured phono amp**

The phono amp is comprised of an MC head amp and an equaliser amp, each of which are discretely configured, resulting in a rich sound with pronounced musicality, when playing vinyl records with both MC and MM phone cartridges.



**Exquisite, large level meters reflect the dynamics in the music**

The A-S3000 features large level meters on the front panel, giving a direct visual sense of the dynamics and pulse of the music. These beautiful meters are softly illuminated by LED, lending a warm, lamplight look. The meter indicators can, in addition to the VU display, be switched to peak display, and can be selected according to the user's preference. Moreover, the glass window of the meters is diagonally cut and precision-fit to the back surface of the front panel, leaving no gaps and using no screws for connection—lending an exceptionally elegant appearance to the unit.

**Meticulously designed and beautiful in appearance—just like a musical instrument**

As befits a top-end audio component, the A-S3000 gives off the presence of a fine musical instrument, with absolutely no screws or fasteners that can be seen from the outside. Every single aspect of its construction and design exudes master craftsmanship and reflects an obsession with quality—a truly musical quality possible only for Yamaha, a world class musical instrument

manufacturer. The amplifier with its refined design has been meticulously finished by the skillful use of advanced processing technologies: integrating the top panel and side wood connection, leaving no gaps while using different materials—metal and wood—for the connection.



**Original speaker terminals for high sound quality, as well as beauty and ease of use**

The speaker terminals are the final link in the audio chain of this amplifier, and have also been designed with meticulous obsession. They are screw-type terminals with large handles featuring an original design, and have been crafted by cutting pure brass to enable a secure connection with no reduction in sound quality. Moreover, the shape conforms nicely to the human fingers—not only creating an elegant visual impression, but also allowing users to turn them easily and to firmly tighten them with minimal force.



**Obsessive, meticulous switch design—elaborate, richly textured, easy-to-use**

Since the controls—the volume dial, switches, and so on—are the parts of the amplifier which users actually touch and feel directly, their surface texture and design were created with the strictest attention to detail. Individual controls such as the volume or input switching dials, emanate a richly elegant feel thanks to the use of cut aluminium knobs. Switches, including the power switch, were made with obsessive attention to texture in every detail; they were shaped with refined craftsmanship so that when they are raised or lowered, the gap between the switch and panel surface is impossible to see.



**Remote control with simple design and superior texture**

The supplied remote control features a design complementary to the aluminium panel of the amplifier itself, with a simple, easy-to-understand button layout and gorgeous metallic texture. In addition to the basic volume adjustment and input switching controls of the A-S3000, it can also be used for operation of the companion CD-S3000.



# CD-S3000

Compact Disc Player

High-rigidity drive mechanism and innovative circuit design for loss-less audio. Breaks through to the ultimate in audio reproduction—and the very essence of music. Introducing Yamaha's highest class CD Player—the CD-S3000.



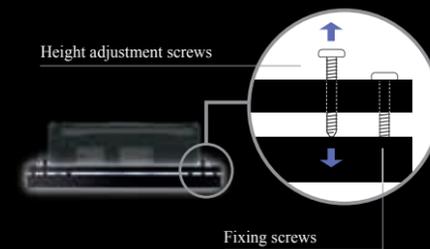
## Optimised High-precision Rigid CD Mechanism with heavy anchors improves vibration control and achieves ultra-precise signal reading

The CD-S3000 was created with meticulous care to ensure rigidity with superior vibration control properties and ultra-precise reading—to draw out all the music recorded to the disc. We incorporated a newly designed drive mechanism with added heavy anchors for Yamaha's own original loader mechanism. Installing it on the chassis through the heavy anchors in front of and behind the loader mechanism achieves the highest rigidity and blocks the effects of vibrations from outside.

At the same time, it also prevents vibration caused by rotation of the disc from affecting the circuit board. The anchor on the front features two layers and a screw-based adjustment mechanism. This allows for highly precise adjustment of the horizontal level of the front-back and left-right sides of the loader mechanism. Each CD-S3000 unit is assembled by first attaching the drive mechanism to the chassis, then carefully performing minute horizontal adjustments. While this process is time-consuming and labor-intensive, it demonstrates Yamaha's genuine desire to realise



the ultimate in precise signal reading. These efforts eliminate any minute tilting of the mechanism, achieving stable rotation and ultra-precise signal reading. Reducing the load of the servo which drives the pickup, in order to minimise the impact of servo current changes to the signal, provides a clean signal output that is virtually unaffected by noise. In addition, the loader mechanism has a structure in which a highly rigid chassis designed for integration with the loader mechanism supports the entire CD drive. Moreover, we've applied only the strictest selection of parts for the pickup, which aims a beam of light at the disc as it rotates at high speed to read the signals, and a drive mechanism which stably rotates the disc. This is how audio data on the disc is read with high precision to achieve the highest purity in reproduction.



## High rigidity aluminium CD tray

The CD tray is made of high rigidity aluminium, reducing secondary vibrations due to resonance of the disc and the high-speed motor rotating the disc, resulting in improved audio signal-reading precision and quieter operation. In addition to the smart design and luxurious texture, we've fine-tuned the opening/closing action by adding a specially designed meshed wire drive, achieving smoother and gentler operation. We obsessively strove to give the unit a luxurious operating feel that perfectly matches the superior sound quality.

## High rigidity main chassis improves anti-vibration properties and left-right symmetrical construction

The main chassis, which supports the loader mechanism, was also made as strong as possible, and reinforcing each part improved the rigidity of the chassis itself. Moreover, the front panel is made of 7mm thick aluminium, contributing to the high rigidity of the entire chassis. The unit is constructed by placing the loader mechanism, which is a rotating body, in the centre, then placing the digital power supply and circuit board on its left, and the analogue power supply and circuit board on its right, to achieve a total symmetrical structure with the digital and

analogue parts separated, achieving the ideal weight balance. Finally, to minimise impedance as much as possible, the bottom chassis, which is the standard ground, has been copper plated.

## Insulators allow use of spikes or pads

The insulators are crucial parts that block outside vibrations. They adopt Yamaha's original metal legs in order to maximise vibration control performance, and are the same as used on the A-S3000. The user can select point installation by applying the supplied spikes or plane insulation with the supplied pads, and use these combined with an interlocking rack if desired.





**Independent configuration of digital and analogue circuits**

The CD-S3000 has adopted a twin power transformer method, which completely separates the digital and analogue circuits from the power supply and equips each with its own dedicated power transformer. Separating the digital/analogue circuits from the transformer eliminates sound quality deterioration caused by interference and noise between



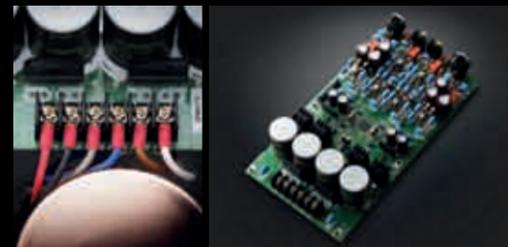
the digital and analogue circuit blocks, which occur when there is one digital/analogue power supply. This results in exceptionally clear and low-noise reproduction of analogue audio. The power transformer is a toroidal transformer with low magnetic leakage which, for both the digital and the analogue units, lowers adverse impact on the signal read from the disc. Following detailed research based on trial listening, we enclosed the power transformer in a copper-plated case, in order to reduce the

impact of magnetic leakage and vibration. This realises a gentle, calm and even spacious sound, due to enhanced reproduction of detailed signals. This is one of the main aims of the S3000 series, to make sure that even gentle, soft sounds, such as those of stringed instruments, are reproduced accurately with rich expressive power.

**Digital/analogue boards with integrated power supply circuits**

The internal design of the CD-S3000 does not separate the power supply circuit boards, which include the power transformer; the block capacitors are mounted directly on the respective digital/analogue circuit boards. Thus, an original board configuration which integrates the power supply circuits was adopted. Eliminating cabling from the

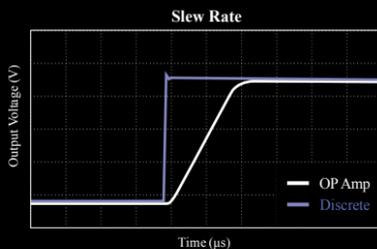
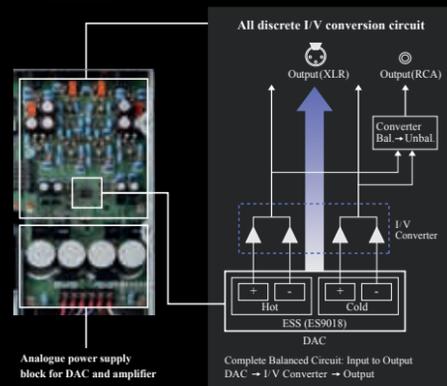
power supply circuits to each circuit board and mounting directly have the benefit of reducing connection loss, as well as achieving low impedance. Moreover, cabling from the power transformer utilises the same screw-type connections we've given the companion A-S3000 Integrated Amplifier. Connecting directly without soldering achieves thorough contact point loss and low impedances.



**Single-stage configuration I/V conversion circuit enables direct analogue output**

To thoroughly eliminate audio signal loss, the CD-S3000 adopts an innovative circuit configuration for the analogue circuit. The signal from the D/A converter is conventionally output as an analogue signal through an I/V conversion circuit configured in multiple stages. However, in the CD-S3000, the signal is output by a single-stage configuration based on a discrete design of the I/V conversion circuit. This single-stage configuration with high slew-rate sharply lowers audio signal loss compared to a multi-stage configuration circuit, and lowers NFB (Negative Feedback), eliminating any sonic suppression, resulting in a natural, spacious sound. The circuits beyond these D/A converters perform

balanced transmission with a circuit configuration marked by symmetrical plus and minus sides. Using a balanced connection with the A-S3000 Floating and Balanced Power Amplifier lets you enjoy profoundly pure sound reproduction without any impact of transmission loss.



**Exceptionally high performance 32-bit D/A converter**

The D/A converter for the CD-S3000 is the ES9018 from ESS Technology, Inc. We selected this after careful examination of all points—not only its high-precision processing of 32-bit audio, but also the ability to handle large amounts of audio data, strength in the low register, and high-quality definition in the high register. Since it is constructed with the master clock inside the D/A converter, it is also features an original Jitter Eliminator function, permitting D/A conversion with extremely low impact of clock jitter. Moreover, an 8-channel D/A converter is housed inside the chip, and applies double differential operation using 4-channel D/A converters on the right and left sides respectively. It delivers exceptional high performance and high-quality signal output with superior signal-to-noise ratio, since it employs an analogue signal processing circuit with balanced configuration.



**Built-in USB DAC functions**

With high-resolution audio sources becoming more and more common today, we designed the CD-S3000 for optimum enjoyment of those sources with superior D/A conversion and the unit's balanced signal output, and equipped it with a built-in USB DAC function which allows direct input of digital audio (from a computer, etc.) through a USB terminal. The USB DAC employs an original IC, developed specifically for Yamaha. It has an internal master clock, and can perform low-jitter transmission based on asynchronous transmission, or receiving signals without being synchronised with the master clock in the PC. The unit is compatible with digital audio of up to 192kHz/24-bit resolution.



**ASIO 2.0 Yamaha Steinberg USB Driver**

The CD-S3000 supports the ASIO 2.0 protocol to take full advantage of the sound quality of the USB DAC function. The ASIO 2.0 protocol is a standard protocol for professional use digital audio or DTM, with a significant sound quality benefit: the ability to achieve lower delay and higher throughput than with a standard OS sound driver. The driver software is the ASIO 2.0 Yamaha Steinberg USB Driver\*, and allows high quality playback of digital audio data stored to computer.



\*The software is available as a free download from the Yamaha web site.

**Pure Direct Mode further enhances the quality of analogue sound**

The CD-S3000 incorporates a special Pure Direct Mode: When playing back analogue audio, the display is turned off and the digital output circuitry is stopped, improving the quality of analogue output. This enables a warmer, more natural sound with greater musicality, further enhancing the value of a fully balanced connection with the A-S3000.

**Meticulously designed and beautiful in appearance—just like a musical instrument**

As befits a top-end audio component, the CD-S3000 gives off the presence of a fine musical instrument, with absolutely no screws or fasteners that can be seen from the outside. Every single aspect of its construction and design exudes master craftsmanship and reflects an obsession with quality—a truly musical quality possible only for Yamaha, a world class musical

instrument manufacturer. The player with its refined design has been meticulously finished by skillful use of advanced processing technologies: integrating the top panel and side wood connection, leaving no gaps while using different materials—metal and wood—for the connection. On the CD tray, the gap between the front panel and the tray is uniformly precise. Moreover, the beautifully finished half-mirrored glass window of the display is precision-fit to the front panel smoothly without gaps—lending an exceptionally elegant appearance to the unit.



**Remote control with simple design and superior texture**

The supplied remote control is designed in the same way as the aluminium panel of the CD player itself, with a simple, easy-to-understand button layout and gorgeous metallic texture. In addition to the basic CD track selection and play controls, it can also be used to adjust the volume and switch input sources on the companion A-S3000.

## A-S3000 Main Specifications

<b>[AUDIO SECTION]</b>	
Maximum Power (4 ohms, 1 kHz, 0.7 % THD, for Europe)	170 W + 170 W
IEC Power (8 ohms, 1 kHz, 0.02 % THD, for Europe)	105 W + 105 W
Rated Output Power (8 ohms, 20 Hz—20 kHz, 0.07% THD)	100 W + 100 W
(4 ohms, 20 Hz—20 kHz, 0.07% THD)	160 W + 160 W
Maximum Power (JEITA) (8 ohms, 1 kHz, 10% THD)	130 W + 130 W
(4 ohms, 1 kHz, 10% THD)	210 W + 210 W
Dynamic Power/Channel (8/6/4/2 ohms)	120 W/150 W/200 W/300 W
Damping Factor (8 ohms, 1 kHz)	250
Input Sensitivity/Impedance CD	200 mV/47 k-ohms
Phono MM	2.5 mV/47 k-ohms
Phono MC	100 μV/50 ohms
Main In	1 V/47 k-ohms
Frequency Response CD, etc. to Speaker Out, Flat Position	5 Hz—100 kHz +0 dB/-3 dB
CD, etc. to Speaker Out, Flat Position	20 Hz—20 kHz, +0 dB/-0.3 dB
RIAA Equalization Deviation Phono MM (20 Hz—20 kHz,)	±0.5 dB
Phono MC (20 Hz—20 kHz,)	±0.5 dB
Total Harmonic Distortion (20 Hz—20 kHz) CD Balanced to Speaker Out	0.025% (50 W/8 ohms)
CD, etc. to Speaker Out	0.025% (50 W/8 ohms)
Phono MM to Rec Out	0.005% (1.2 V)
Phono MC to Rec Out	0.02% (1.22 V)
Signal-to-Noise Ratio (IHF-A Network) CD, etc. (200 mV, Input Shorted)	103 dB
Phono MM (5 mV, Input Shorted)	93 dB
Phono MC (500 μV, Input Shorted)	85 dB
Residual Noise (CD, etc., IHF-A-Network)	33 μV
Channel Separation (1 kHz/10 kHz) CD, etc., Input 5.1 k-ohms Terminated	74 dB/54 dB
Phono MM, Input Shorted, Vol: -30dB	90 dB/77 dB
Phono MC, Input Shorted, Vol: -30dB	66 dB/77 dB
Tone Control Characteristics Bass Boost/Cut (at 50 Hz)	±9 dB
Bass Turnover Frequency	350 Hz
Treble Boost/Cut (at 20 Hz)	±9 dB
Treble Turnover Frequency	3.5 kHz
Audio Muting	-20 dB (approx.)
<b>[GENERAL SECTION]</b>	
Dimensions (W x H x D)	435 x 180 x 464 mm 17-1/8" x 7-1/8" x 18-1/4"
Weight	24.6 kg 54.2 lbs.



Silver finish (piano finish sides)



Black finish (piano finish sides)



## CD-S3000 Main Specifications

<b>[AUDIO SECTION]</b>	
Media Compatibility	SA-CD, CD, CD-R/RW (MP3, WMA) , USB
Frequency Response CD	2 Hz—20 kHz
SA-CD	2 Hz—50 kHz -3dB
Harmonic Distortion CD (1 kHz)	0.002%
SA-CD (1 kHz)	0.002%
Signal-to-Noise Ratio (IHF-A Network) CD/SA-CD	116 dB
Dynamic Range CD	100 dB
SA-CD	110 dB
Output Level CD/SA-CD (1 kHz, 0 dB)	2 ± 0.3 V
<b>[GENERAL SECTION]</b>	
Dimensions (W x H x D)	435 x 142 x 440 mm 17-1/8" x 5-5/8" x 17-5/16"
Weight	19.2 kg 42.3 lbs.



Silver finish (piano finish sides)



Black finish (piano finish sides)



