

# Accuphase

MDS SA-CD PLAYER

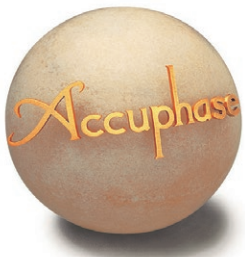
## DP-570

- High-grade SA-CD/CD drive
- MDS+ type D/A converter with four parallel circuits
- Direct Balanced Filter with separate line and balanced signal paths
- Programmable playlist
- Sampling frequency and quantization bit display
- Data disc playback
- Numerous transport outputs and digital inputs
- Digital connection with voicing equalizers
- Phase selector for balanced outputs



  
SUPER AUDIO CD

  
COMPACT  
disc  
DIGITAL AUDIO



# A high-quality integrated SA-CD/CD player born from a synthesis of the latest technologies

Equipped with quiet and smooth disc loading, the high rigidity and low center of gravity of the SA-CD/CD drive vastly improves readability, while the MDS+ type D/A converter with four parallel circuits accurately reads disc information and converts analog signals. It also supports a digital connection with a voicing equalizer and provides a programmable playlist feature that lets you enjoy listening in the order you prefer. Enjoy listening to the DP-570, the next step in the pursuit of the ideal disc playback experience.

## The Technology of Precision

### Features and Functions of Transport Section

#### ■ Accurate Reading

A high-rigidity SA-CD/CD drive mounted on a triple layer bottom plate with exceptional vibration reduction properties and all supported by high-carbon cast iron insulators. This configuration creates a strong integrated structure that suppresses the effect of external vibrations on the traverse mechanism. Four newly developed high-quality butyl "elastic dampers" connect the traverse and disc mechanisms, drastically reducing external vibrations from being transmitted to the traverse mechanism and protecting the lens actuator that reads discs. Music information is read accurately thanks to these vibration protection technologies and then sent to the digital processor.

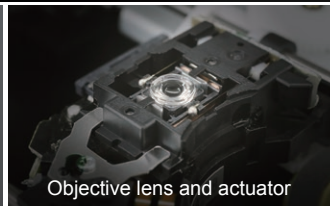
#### ■ Quiet Operation

Vibrations from spinning discs are typically transmitted to the chassis, which then resonates and amplifies the operational sounds. The "elastic dampers" on the traverse mechanism greatly reduce chassis resonance. The five-layer large bridge cover surrounding the traverse mechanism also shields against air-vibration noise from high-speed rotation. This improvement allows the DP-570 to operate quietly without being affected by rotation.

#### ■ Smooth loading

Carved from an aluminum block and then finished by a hard anodized aluminum and satin treatment, the elegant and elaborate disc tray uses steel bearing shafts to open and close smoothly and quietly.

#### ■ High-rigidity, high-precision SA-CD/CD drive



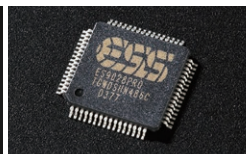
### Features and Functions of the Digital Processor Section

#### ■ MDS+ type D/A converter with four parallel circuits

The MDS+ (Multiple Delta Sigma+) conversion principle is a revolutionary D/A conversion routing that employs multiple delta-sigma type D/A converters connected in parallel for drastically improved performance. By driving four outputs from a high-performance ES9028PRO DAC chip (ESS Technologies) in parallel, the DP-570 almost doubles ( $\approx\sqrt{4}$ ) overall performance for distortion, noise, linearity, and more. Because the improvements provided by the MDS principle are independent of signal frequency and level, output signal noise at very low levels is also minimized, a feat that conventional delta-sigma converters find extremely difficult to achieve.



DAC assembly



High-performance ES9028PRO DAC chip

#### ■ Direct Balanced Filter circuit

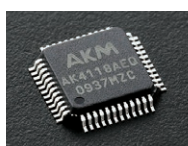
By making the line output circuits and balance output circuits independent of each other, the Direct Balanced Filter circuit does not affect the output signal even with two preamplifiers connected.



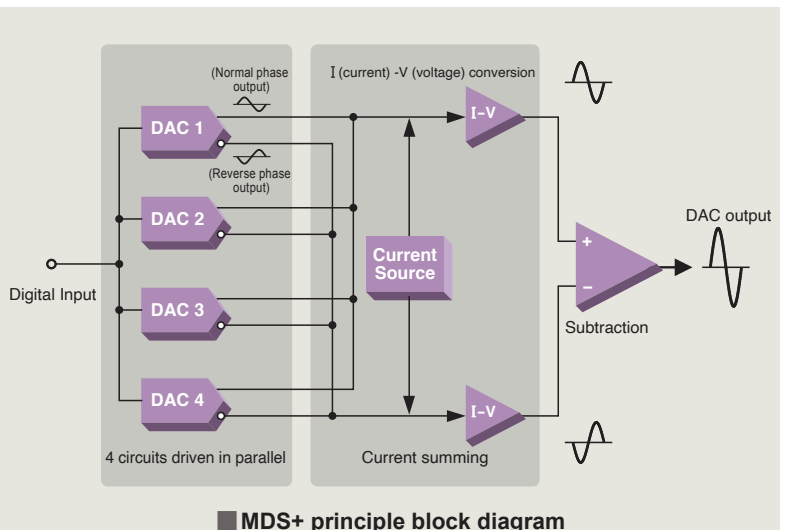
Filter amplifier assembly

#### ■ High-precision clock playback

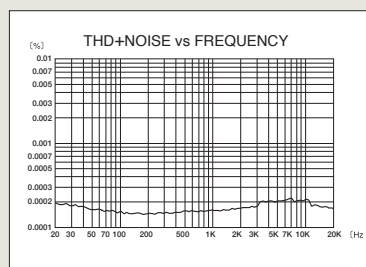
The high-performance (digital) audio interface chip AK4118A (Asahi Kasei Microdevices) drastically reduces jitter for high-precision clock playback.



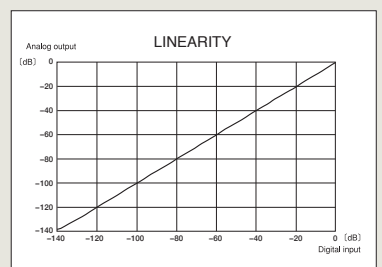
AK4118A



■ MDS+ principle block diagram



Total harmonic distortion (incl. noise) vs. frequency response



Linearity (digital input vs. analog output)

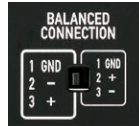


## Advanced features

- High-grade SA-CD/CD drive
- MDS+ type D/A converter with four parallel circuits
- Direct Balanced Filter with independent line and balanced signal paths
- Power supply using analog circuits in a discrete configuration for low noise
- Large power transformer with separate analog and digital windings
- Customized smoothing capacitors for optimum sound quality
- Programmable playlists
- Display with sampling frequency and number of quantization bits
- Playback of DVD-R and other data discs containing music files
- Output level control allows adjustment down to -80 dB
- Digital interface for Accuphase Voicing Equalizer
- Abundant transport outputs (HS-LINK, OPTICAL, COAXIAL)
- Abundant digital inputs (HS-LINK, USB, OPTICAL, COAXIAL)
- 2 (balanced, line) analog outputs
- Balanced output phase selector
- Aluminum hairline finish top plate

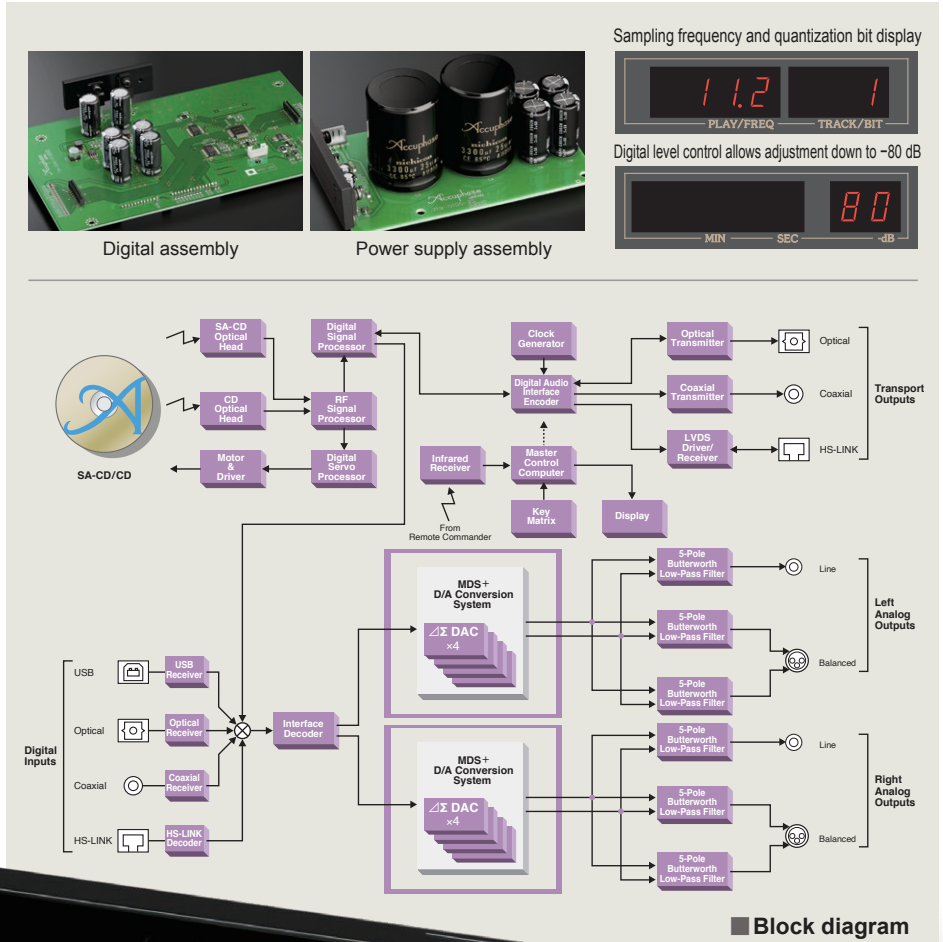


Aluminum hairline finish top plate



Phase selector

- Supplied remote commander RC-140



Sampling frequency and quantization bit display



Digital level control allows adjustment down to -80 dB



## About HS-LINK Version 2

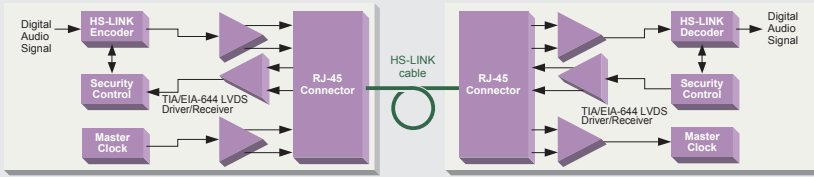
HS-LINK Version 2 is an enhanced version of the Accuphase HS-LINK interface, providing expanded sampling frequency and quantization support.

- The DP-570 supports both HS-LINK Ver. 1 and HS-LINK Ver. 2 signal transmissions.

Input	Format (2-channel)	Sampling Frequencies	Number of bits
HS-LINK (Ver. 1)	DSD	2.8 MHz	1
	PCM	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz	16~24
HS-LINK (Ver. 2)	DSD	2.8 / 5.6 MHz	1
	PCM	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 / 352.8 / 384 kHz	16~32

\* HS-LINK cables can be used both for HS-LINK Ver. 1 and HS-LINK Ver. 2 signal transmissions.

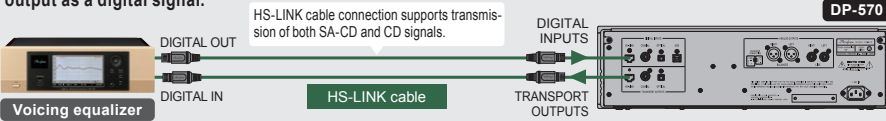
\* With HS-LINK Ver. 2, the data and clock signals are transmitted separately, and high sampling frequencies up to 5.6 MHz 1-bit DSD and 384 kHz 32-bit PCM are supported.



■ HS-LINK Ver. 2 Signal Transmission Block Diagram

## Voicing equalizer connection example

A voicing equalizer can be connected between the transport outputs and digital inputs of the DP-570 (using the HS-LINK, coaxial, or optical connectors). This allows for sound field compensation of the signal from the CD transport output as a digital signal.



## Using the USB port

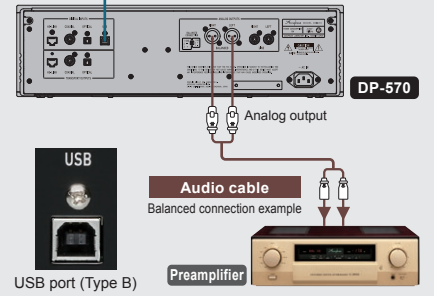
Because sampling frequencies up to 384 kHz / 32-bit and 11.2 MHz / 1-bit DSD (11.2 MHz is for ASIO only) are supported, even very high-resolution music files can be reproduced with impeccable sound quality.



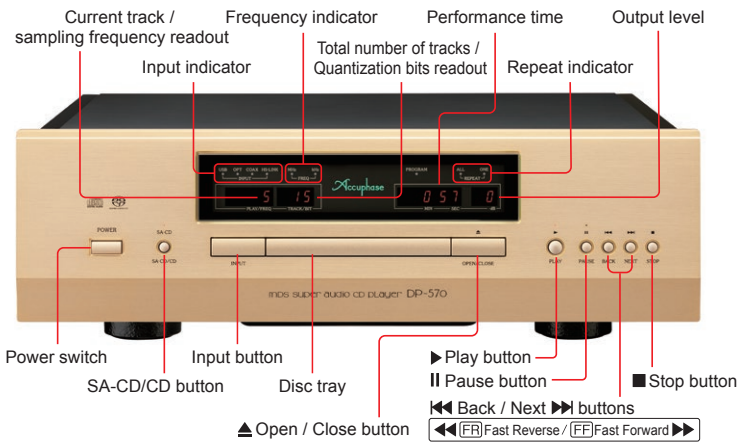
\* Depending on the computer, it may be necessary to install the necessary software from the supplied "USB Utility 3" CD-ROM.

\* Playback of music data via USB depends on the operating system and software on the computer.

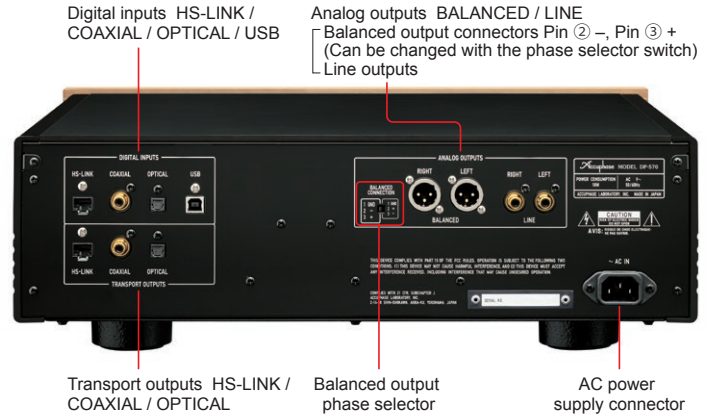
\* For information on settings for USB, refer to the computer documentation.



## Front Panel



## Rear Panel



## DP-570 Guaranteed Specifications

[Guaranteed specifications measured according to JEITA standard CP-2402A / Measurement disc: PHILIPS 3122-783-00632]

Compatible Disc Formats	2-channel Super Audio CD		
		CD	
Data Read Principle	DSD disc	DVD-R/-RW/+R/+RW	DSF file format
	Data disc	CD-R/-RW DVD-R/-RW/+R/+RW	Supported formats: WAV, FLAC, DSF, DSDIFF
Laser Diode Wavelength	SA-CD	655 nm	
	CD	790 nm	
Transport Outputs	HS-LINK	Proprietary standard	Dedicated HS-LINK cable
	OPTICAL	JEITA CP-1212 compliant	JEITA standard optical fiber cable
	COAXIAL	IEC 60958 compliant	75-ohm coaxial digital cable
Digital Inputs	HS-LINK	Proprietary standard	Dedicated HS-LINK cable
	USB	USB 2.0 Hi-Speed (480 Mbps) compliant	USB 2.0 cable with Type B connector
	OPTICAL	JEITA CP-1212 compliant	JEITA standard optical fiber cable
	COAXIAL	IEC 60958 compliant	75-ohm coaxial digital cable

Sampling Frequencies	HS-LINK (Ver. 1)	DSD	2.8 MHz	1 bit
		PCM	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz	16 to 24 bits
	HS-LINK (Ver. 2)	DSD	2.8 / 5.6 MHz	1 bit
		PCM	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 / 352.8 / 384 kHz	16 to 32 bits
	USB	DSD	2.8 / 5.6 / 11.2 MHz (11.2 MHz: ASIO only)	1 bit
	PCM	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 / 352.8 / 384 kHz	16 to 32 bits	
	OPTICAL	PCM	32 / 44.1 / 48 / 88.2 / 96 kHz	16 to 24 bits
	COAXIAL	PCM	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz	16 to 24 bits
D/A Converter		4MDS+ principle		
Frequency Response		0.5 to 50,000 Hz		+0, -3.0 dB
THD + Noise		0.0006%		20 to 20,000 Hz
Signal-to-Noise Ratio		120 dB		
Dynamic Range		117 dB		
Channel Separation		117 dB		
Output Voltage and Impedance	BALANCED	2.5 V 50 ohms		Balanced XLR type
	LINE	2.5 V 50 ohms		RCA phono jack
Output Level Control		0 dB to -80 dB		In 1-dB steps   Digital
Power Requirements		120 V, 220 V, 230 V AC (voltage as indicated on rear panel), 50/60 Hz		
Power Consumption		18 W		
Maximum Dimensions		Width 465 mm (18.3") × Height 151 mm (6.0") × Depth 393 mm (15.5")		
Mass	Net		19.0 kg (41.9 lbs)	
	In shipping carton		25 kg (55 lbs)	

### Supplied accessories

- AC power cord
- USB Utility 3 CD
- Audio cable with plugs AL-10
- USB Utility 3 Setup Guide
- Remote Commander RC-140

### Remarks

- ★ This product is available in versions for 120/220/230 V AC. Make sure that the voltage shown on the rear panel matches the AC line voltage in your area.
- ★ The 230 V version has an Eco Mode that switches power off after 120 minutes of inactivity.
- ★ The shape of the plug of the supplied AC power cord depends on the voltage rating and destination country.



ACCUPHASE LABORATORY, INC.