

Accuphase

PRECISION MDS SA-CD PLAYER

DP-700

- High-rigidity, high-precision SA-CD/CD drive
- Innovative digital signal processor with MDS technology
- MDS++ D/A converter with eight DACs driven in parallel
- "Ultra Jitter-Free Plus" PLL circuit
- "Direct Balanced Filter" with totally separate balanced and unbalanced signal paths
- Transport outputs and digital inputs
- Accuphase HS-Link digital interface





The ultimate integrated SA-CD/CD player — High-rigidity, high-precision SA-CD/CD drive combined with exquisite disc tray and ultra-smooth loading mechanism. Ground-breaking MDS (Multiple Double Speed DSD) digital signal processing circuitry constitutes a moving average filter for straight D/A conversion. Superior quality digital audio interface HS-Link.

When Accuphase introduced the ultimate separate-type SA-CD/CD player, the models DP-800 and DC-801, a new epoch in audio history had begun. Garnering worldwide acclaim both for their technological excellence and sound quality, the transport and processor pair has become the new reference for SA-CD reproduction.

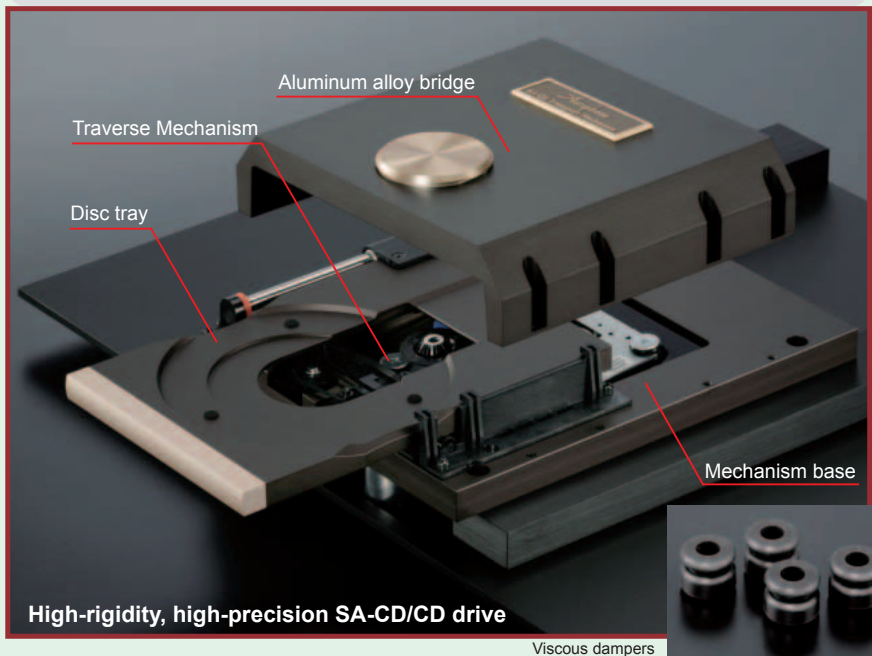
The new DP-700 is an integrated type SA-CD player incorporating that very same state-of-the-art technology. Major highlights are the ultra-rigid SA-CD/CD drive assembly and the MDS principle that takes the DSD signal straight from the digital to the analog domain. Latest digital signal processing technology is in evidence throughout. Extensive series of listening tests were conducted to shape the DP-700 into the world's foremost integrated SA-CD/CD player. As with all other Accuphase players so far, a conscious decision was made not to support multi-channel formats but rather focus on extracting the ultimate in musical fidelity from two-channel SA-CD music sources.

In the transport section, a dedicated DSP chip controls the digital servo to assure accurate readout of the signal recorded on the SA-CD. Another vital aspect is the single-lens/twin laser diode pickup mounted to a high-speed positioning mechanism, providing a significant improvement in read access times and accuracy. The processor section features the innovative MDS principle forming a sophisticated moving average filter circuit, together with the MDS++ D/A system that keeps conversion errors to an absolute minimum and at the same time acts as high-cut filter efficiently removing noise components in the high frequency domain. The Direct Balanced Filter provides separate low-pass filtering for the balanced and unbalanced signal paths, and the analog balanced output circuitry eliminates interference during signal transmission. The overall result is simply outstanding sonic performance that removes the last veil from the music and beautifully demonstrates what the SA-CD format is all about.

Internally, the transport and processor sections of the DP-700 are kept entirely separate. Digital inputs allow independent use of the processor section for external sources to enjoy music reproduction with the same superb quality.

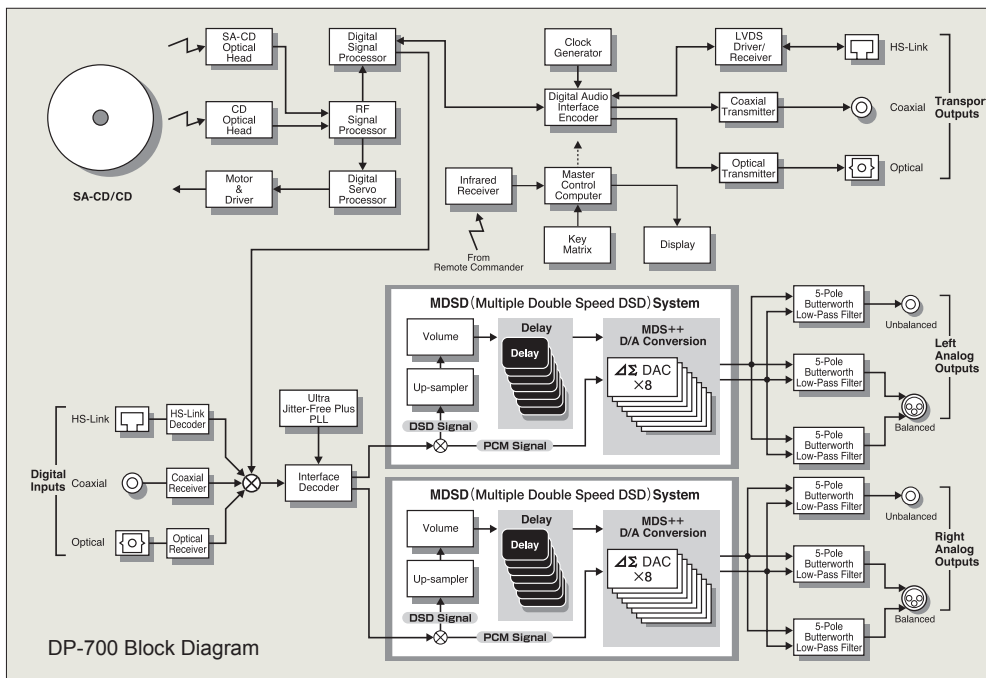
Features and Functions of Transport Section

- **High-rigidity, high-precision SA-CD/CD drive**
 - ① Highly rigid and precise construction with sturdy, heavyweight chassis to absorb external vibrations
 - ② "Traverse Mechanism" with floating design
 - ③ Massive aluminum alloy bridge
 - ④ Low center of gravity to further reduce vibrations
 - ⑤ High-quality disc tray extruded from an aluminum block, plus super-quiet smooth disc loading mechanism
- SA-CD/CD transport outputs ultra pure digital signal
- Single-lens/twin pickup high-speed access mechanism
- Support for text data display
- Accuphase's proprietary digital audio interface HS-Link (carries both SA-CD and CD signal)



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

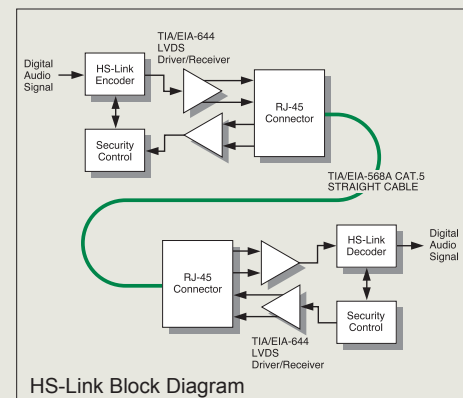
Viscous dampers



DP-700 Block Diagram

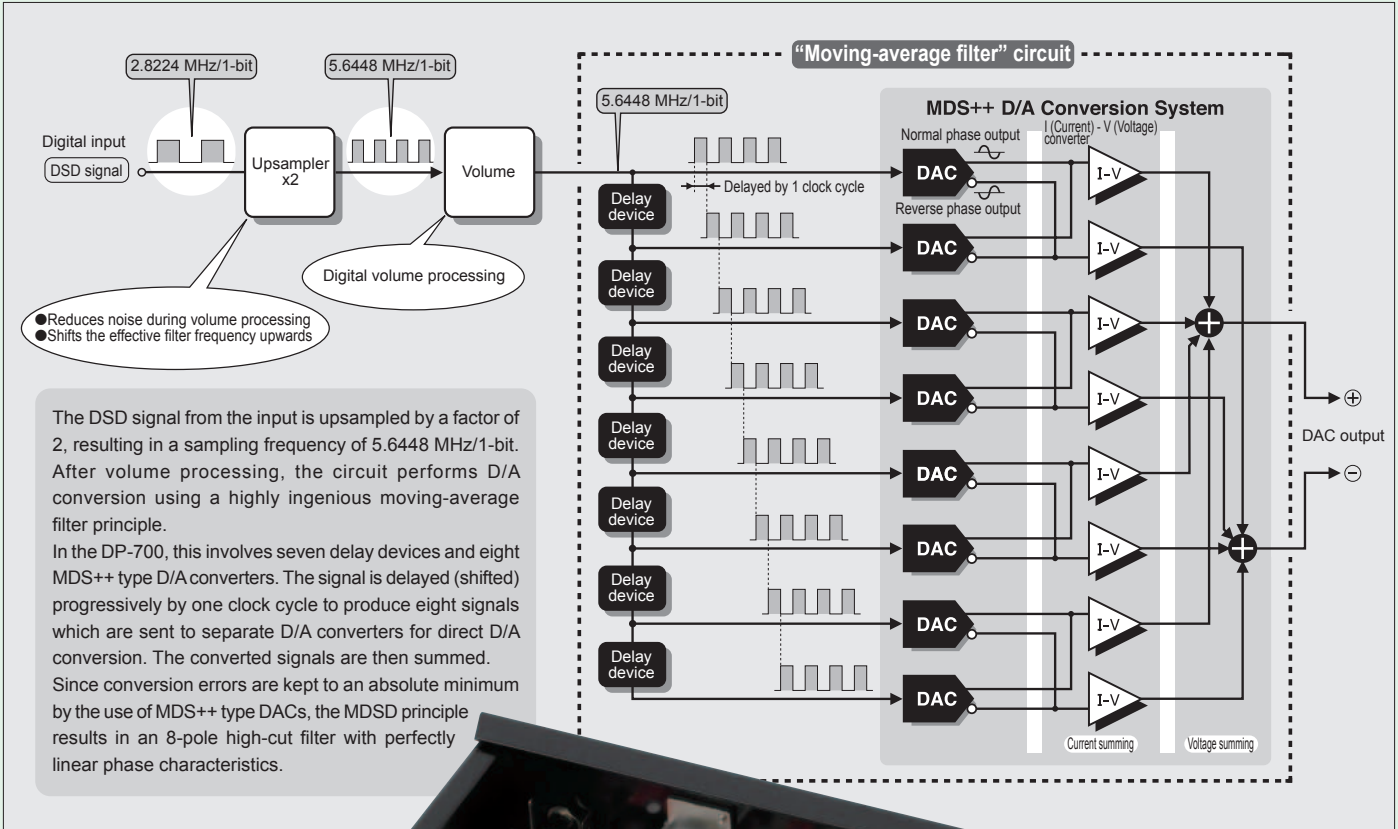
Accuphase Exclusive Digital Interface HS-Link : High Speed Link

HS-Link is an ultra high-quality digital audio interface developed by Accuphase using the latest digital signal transmission technology. It supports send/receive verification for copyright protection. The LVDS (Low Voltage Differential Signaling) principle allows a single dedicated HS-Link cable to transmit all audio data with utmost fidelity, including 2.8224 MHz/1-bit and 192 kHz/24-bit signals.



HS-Link Block Diagram

Innovative digital signal processing : MDS (Multiple Double Speed DSD)



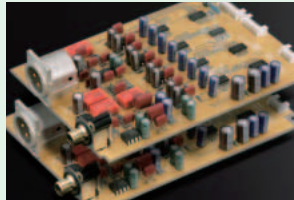
■ Supplied remote commander RC-100

Gives access to various functions including direct play, repeat, program play, input switching, and level control.

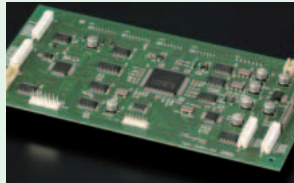


Features and Functions of Digital Processor Section

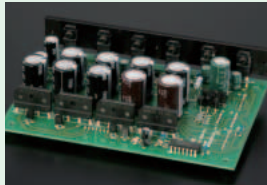
- MDSD (Multiple Double Speed DSD) implements innovative digital signal processing.
- MDS++ D/A converter with eight DACs driven in parallel
- Ultra Jitter-Free Plus PLL circuit
- "Direct Balanced Filter" provides totally separate analog low-pass filtering for balanced and unbalanced signal paths.
- Digital level control allows adjustment down to -80 dB.
- D/A converter printed circuit boards made from Teflon (glass fluorocarbon resin) with low dielectric constant and low loss. * Teflon is a registered trademark of DuPont USA.
- Power-on play feature allows automatic playback.
- HS-Link, coaxial, and optical transport output connectors and digital input connectors. Insertion of DG-38/DG-48 for sound field compensation in digital domain also possible.
- Balanced and unbalanced analog outputs (1 each)
- "Advanced High Carbon" cast iron insulators with excellent absorption characteristics control vibrations to ensure high sound quality.
- Massive wood cabinet with persimmons finish.



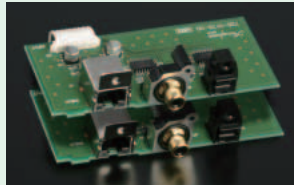
MDSD assembly



Digital signal processing assembly



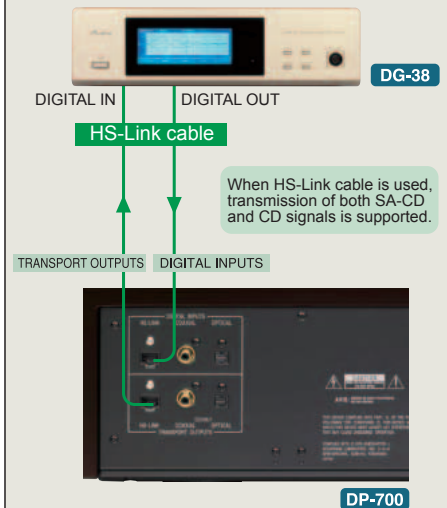
Power supply assembly



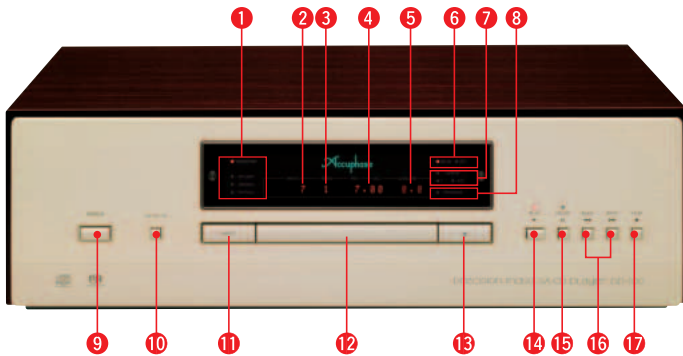
Transport output/digital input assembly

DG-38/DG-48 connection example

The DG-38/DG-48 can be connected between the transport outputs and digital inputs of the DP-700 (using either the HS-Link, coaxial, or optical connector). This allows sound field compensation of the signal from the CD transport in the digital domain.



Front Panel



Rear Panel



- | | |
|---|--|
| <ul style="list-style-type: none"> 1 Input indicators : TRANSPORT/HS-LINK/COAXIAL/OPTICAL 2 Track number indicator 3 Index indicator 4 Time indicator 5 Output level indicator 6 SA-CD/CD indicator 7 Repeat indicator 8 Program indicator 9 Power switch 10 SA-CD/CD selector button 11 Input selector button 12 Disc tray | <ul style="list-style-type: none"> 13 Disc tray open/close button 14 Play button 15 Pause button 16 Track search buttons: BACK/NEXT 17 Stop button 18 Digital inputs (HS-Link, coaxial, digital) 19 Transport outputs (HS-Link, coaxial, digital) 20 Analog outputs <ul style="list-style-type: none"> ⓪ Balanced output connectors (analog) Ⓛ Ground Ⓜ Inverted (-) Ⓨ Non-inverted (+) Ⓩ Unbalanced output connectors 21 AC power connector* |
|---|--|

Guaranteed Specifications

* Guaranteed specifications are measured according to the JEITA standard CP-2402A.
* Measurement disc: PHILIPS 3122-783-00632

Transport section

- **Compatible disc formats** 2-channel Super Audio CD
CD
- **Data read principle** Non-contact optical pickup
- **Laser diode wavelength** SA-CD: 650 nm
CD: 780 nm
- **Transport section outputs**

HS-Link	Connector type: RJ-45	Suitable cable: Dedicated HS-Link cable
COAXIAL	Format: IEC 60958 compliant	
OPTICAL	Format: JEITA CP-1212 compliant	

Digital processor section

- **Digital inputs**

HS-Link	Connector type: RJ-45	Suitable cable: Dedicated HS-Link cable
COAXIAL	Format: IEC 60958 compliant	
OPTICAL	Format: JEITA CP-1212 compliant	
- **Sampling frequency** 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
(16 to 24 bits, 2-channel PCM)
[Only via HS-Link]
176.4 kHz, 192 kHz (24 bits, 2-channel PCM)
2.8224 MHz (1 bit, 2-channel DSD)
- **D/A converter** MDSD principle (DSD signal)
MDS++ principle (PCM signal)
- **Frequency response** 0.5 - 50,000 Hz +0, -3.0 dB
- **Total harmonic distortion + noise** 0.0008% (20 to 20,000 Hz)
- **Signal-to-noise ratio** 114 dB
- **Dynamic range** 110 dB (24-bit input, low-pass filter off)
- **Channel separation** 108 dB (20 to 20,000 Hz)
- **Output voltage and impedance** BALANCED: 2.5 V 50 ohms, balanced XLR type
UNBALANCED: 2.5 V 50 ohms, RCA phono jack
- **Output level control** 0.0 dB to -80.0 dB (digital)

General

- **Power requirements** AC 120 V/230 V 50/60 Hz
(Voltage as indicated on rear panel)
- **Power consumption** 35 W
- **Max. dimensions** Width 477 mm (18-3/4")
Height 156 mm (6-1/8")
Depth 394 mm (15-1/2")
- **Mass** 27.0 kg (59.5 lbs) net
33.0 kg (72.8 lbs) in shipping carton

Remarks

- ★ This product is available in versions for 120/230 V AC. Make sure that the voltage shown on the rear panel matches the AC line voltage in your area.
- ★ The shape of the AC inlet and plug of the supplied power cord depends on the voltage rating and destination country.

- **Supplied accessories:**
 - AC power cord
 - Audio cable with plugs (1 meter)
 - Remote Commander RC-100
 - Cleaning cloth

Accuphase

ACCUPHASE LABORATORY, INC.