Premium System Components

and Premium Portable Player/Headphone Amplifiers

Reference 501 series
Reference 301 series
Reference 101 series
Reference 01 series
Reference To-Go
Speaker systems
Turntable
Software and iOS/Android Apps
## Product Finder

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<td>LS-WH01</td>
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### Choose by Footprint

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<th>Dimensions</th>
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<td>11.4” (290mm) width</td>
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<td>16.5” (420mm) width</td>
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<td>Portable</td>
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<td>10, 11</td>
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</table>

### Reference for Icons

- **DSD 5.6MHz Digital Streaming**: Supports DSD 5.6MHz Digital Streaming.
- **PCM Digital Streaming**: Supports PCM Digital Streaming.
- **Dual DAC**: Supports Digital-to-Analog Conversion by Built-in D/A Converter(s), Dual DAC for Left and Right channels.
- **USB DAC**: Supports Digital Streaming via USB Port.
- **Bluetooth**: Supports High-quality Wireless Audio Streaming by Bluetooth®, aptX® Codec.

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**Ideal for Air-travel with iPad**

**Ideal for Air-travel**

**High-Res Player (TEAC HR Audio Player)**

**High-Res Player (TEAC HR Audio Player for iOS)**

**Compatible with Hi-Res Playback Applications.**

(Shown with Sampling Frequency and Bit length)
**Hi-Res quality**

192kHz/24-bit

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**CD quality**

44.1kHz/16-bit

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Hi-Res audio is ultra precise digital audio data close to the original analog waveform, by digitizing the sound more frequently and more precisely. The CEA (Consumer Electronics Association) and the Japan Audio Society define products with capability of processing 96kHz/24-bit on digital audio equipment, or reproducing 40kHz or higher frequency response on analog audio equipment such as amplifier and speakers, and grants to accompany the “Hi-Res” logo with the product.
Reference 301

Hi-Res audio and Bluetooth® playback in a single-box.

Need to stream Hi-Res digital audio from a computer, wirelessly send digital audio from a smartphone, or even digitally expand your TV sound system to a superior 2.1ch Home Theatre System? The AI-301DA does it all. Enjoy a new approach to audio...

Stereo Integrated Amplifier with USB DAC
AI-301DA

- Hi-Res Digital Audio Streaming from PC/Mac via USB Cable.
- Bluetooth®, aptX® Codec High-quality Wireless Audio Streaming.
- 40W + 40W Class-D Power Amplifier Engineered by ICEpower.
- CCLC Headphone Amplifier for High-quality Headphone Listening.
- Auto Power-on with Incoming Digital Audio Signal.
- Subwoofer Pre-out for Easy Expansion to 2.1ch Home Theatre System.
- Ideal for Upgrading TV Sound from TV, Sonos Connect or Apple TV.

Coxial 2-way Speaker System
LS-301

- Wide response, up to 40kHz, Ideal for Hi-Res Audio Playback.
- Air Direct Center Pole System to Drive Massive Sound Power.
- A Perfect Loudspeaker Partner for the Reference 301 series.
Since TEAC launched the first DSD Audio Recorder “TASCAM DS-D98” for professional audio market in 2001, we have been focusing potential of the DSD which is a high precision audio format, and has been launching numbers of DSD-capable products. Particularly, a Master Recorder “TASCAM DA-3000” which records/plays back DSD 5.6MHz audio format is used in recording studios world-wide, and receiving high reputations from artists and sound engineers. TEAC’s DSD-capable products are filled with matured technologies and know-hows from almost 15 years experiences, and even reproduce atmosphere of the recording studios or concert halls where the music was originally played.

Leading-edge technologies contained in a small enclosure bring you a new way of enjoying master-tape quality music from a computer. Used as standalone with headphones, or integrated with your existing hi-fi, the UD-301 upgrades your music experience.

- Hi-Res Digital Audio Streaming from PC/Mac via USB Cable.
- Asynchronous Transfer Mode, and 192kHz Up-conversion Option.
- Dual-monaural Circuit Design Eliminates Interference between Left and Right Channels.
- Dual-monaural CCLC Headphone Amplifier Circuit Design for Fine Headphone Listening.
- XLR Balanced Analog Audio Output for Connection with Professional-grade Equipment.
- Toroidal-core Power Transformer for Stable Internal Current Supply.
- Variable Headphone Output Level Suits to Use as a Headphone Amplifier.
- Switchable Output Mode, “Fixed”, “Variable” or “Off”, for Versatile System Configurations.*

* “Variable” mode lets the UD-301 behave as a Pre-amplifier unit, while “Off” mode cancels to deliver output signals from XLR/RCA terminals on rear panel, when Headphone Jack is used.
Experience unparalleled sound quality.
Modern state-of-the-art digital technology and proven audio know-how will take you to the next level of audio nirvana.

The Ultimate Dual-monaural and Full-balance System*

- PCM 384kHz/32-bit, DSD 5.6MHz Hi-Res Digital Audio Streaming via USB Cable.
- Dual-monaural Circuit Design Eliminates Interference between Left and Right Channels.
- 4 types of DSD Cut-off Frequency, and 3 types of FIR Filter Options for Fine Tuning.
- Dual Toroidal-core Power Transformers for both Left and Right Channels.
- 120 watts + 120 watts High-performance Class-D Amplifier Engineered by ABLETEC.
- Dimmable Needle-type Level Meters Visualize Pulse of the Music.
- CCLC Headphone Circuit for High-quality Headphone Listening.
- Superb Energy Balance over Entire Audible Frequency Range.
- Air Direct Center Pole System to Drive Massive Sound Power.
- High-quality Luxurious Cabinet with Gloss Finish, available in Red Cherry and Piano Black.

* "Dual-monaural" means entire data processing of the UD-501, and "Full-balance" means data processing at the pre-amplifier section of the AX-501, and connection between the UD-501 and the AX-501.
Reference 501

Enjoy Hi-Res Audio without a PC Connection.

Look... Hi-Res audio without a PC!

Experiencing the Hi-Res audio world, with a conventional way of audio listening. A pure and rich sense of sound depth is delivered from DSD file on a single disc.

Hi-Res CD Player
PD-501HR

- DSD 5.6MHz, PCM 192kHz/24-bit Hi-Res Digital Audio Streaming from Disc.
- VACS Mechanism Eliminates Vibration and Reading Errors.
- Edge-hold Slot-in Mechanism for Safer Disc Loading.
- Separated Power Transformers for Digital Section and Analog Section.

Stereo Integrated Amplifier with USB DAC
AI-501DA

- High-performance and High-quality Class-D Amplifier Engineered by ABLETEC.
- Toroidal-core Power Supply and Schott-key Barrier Diodes for Stable Current Supply.
- Dimmable Needle-type Level Meters Visualize Pulse of the Music.
- Digital Audio Inputs including USB Audio Input Allows Direct Digital Connection.

Coaxial 2-way Speaker System
S-300NEO

- Superb Energy Balance over Entire Audible Frequency Range.
- Air Direct Center Pole System to Drive Massive Sound Power.
- High-quality Luxurious Cabinet with Gloss Finish, available in Red Cherry and Piano Black.

Example of Configurations

- DSD Disc (CD or DVD)
- RCA Cables

- DSD Audio
- USB Input
Actual Damping Factor may vary due to impedance of headphone cable and plug.

Each pair of headphones has its Damping Factor, a resisting force against non-intentional movement of the diaphragm moving air forwards and backwards as sound. The value of the Damping Factor varies model by model, as diaphragms are made by different materials, in different shapes or different construction designs. Since headphones' diaphragms are activated by a very small current compared to conventional speakers, the damping factor increases, the sound is lean and crisp, and has a close relationship with headphones' impedance.

<table>
<thead>
<tr>
<th>Position</th>
<th>Headphone Impedance</th>
<th>Damping Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH</td>
<td>32 ohms</td>
<td>DF = 76</td>
</tr>
<tr>
<td>MID-HIGH</td>
<td>64 ohms</td>
<td>DF = 88</td>
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<tr>
<td>MID</td>
<td>120 ohms</td>
<td>DF = 97</td>
</tr>
<tr>
<td>MID-LOW</td>
<td>300 ohms</td>
<td>DF = 115</td>
</tr>
<tr>
<td>LOW</td>
<td>600 ohms</td>
<td>DF = 118</td>
</tr>
</tbody>
</table>

Actual Damping Factor may vary due to impedance of headphone cable and plug.

Maximize your headphone's potential by choosing the right damping factor setting.

Driving your headphone

USB DAC
UD-501
- PCM 384kHz/32-bit, DSD 5.6MHz Hi-Res Digital Audio Streaming via USB Cable.
- Dual-monaural Circuit Design Eliminates Interference between Left and Right Channels.
- 4 types of DSD Cut-off Frequency, and 3 types of FIR Filter Options for Fine Tuning.
- Dual Toroidal-core Power Transformers for both Left and Right Channels.

Headphone Amplifier
HA-501
- Maximizing your Headphones Performance by Choosing the Right Damping Factor Settings.
- Class-A Amplifier with 1400mW + 1400mW Output Power Drives even High-end Headphones.
- Full-analog, and Dual-monaural Circuit Design.
- Active DC Servo Technology Eliminates Unwanted Output Signal Caused by Voltage Difference inside the Transistors.
- XLR Balance Audio Input to Connect with High-end Audio or Professional Audio Equipment
- Wide-pitch Line-in RCA Connector Layout Allows to Accommodate Large-shell Pin Plug.

USB DAC
UD-501
- PCM 384kHz/32-bit, DSD 5.6MHz Hi-Res Digital Audio Streaming via USB Cable.
- Dual-monaural Circuit Design Eliminates Interference between Left and Right Channels.
- 4 types of DSD Cut-off Frequency, and 3 types of FIR Filter Options for Fine Tuning.
- Dual Toroidal-core Power Transformers for both Left and Right Channels.
Providing a Hi-Res Audio Experience for Everyone.

The TEAC HR Audio Player is a high-quality music playback application for Windows and Mac, with Hi-Res audio data processing capabilities including DSD 5.6MHz and PCM 384kHz/32-bit.

Used in conjunction with TEAC’s USB DAC, the TEAC HR Audio Player allows you to listen to Hi-Res audio without the sort of complication typical of many other music playback applications. Simply select the connected device, and drag-and-drop music files onto the window of the application.

Everything is optimized for Hi-Res audio playback. The simplified screen of the TEAC HR Audio Player reduces the load on the CPU (which processes millions of calculations a second when playing back Hi-Res audio data) while the RAM Buffer Playback mode pre-loads music audio data prior to playback, further reducing the load on the CPU.

It’s all about the sound...

Let’s get started Hi-Res Audio with your computer, as easy as ABC.

1. Download the App.

Press “PLAY” to start playback.

REPEAT and SHUFFLE play are also supported. For even better quality playback, just choose the “Expand to RAM” option from the Configure menu.

Once the “TEAC HR Audio Player” has been started, just drag-and-drop music files onto the lower part of the main window, after choosing the connected device from the Configure menu.

You’ll then have a list of playable music files, your *Playlist*.

Download the “TEAC HR Audio Player” from TEAC Website. (Free Download)

Supported OS: Windows XP (32-bit)*
Windows Vista
Windows 7
Windows 8
Windows 8.1
OS X Lion (10.7)
OS X Mountain Lion (10.8)
OS X Mavericks (10.9)
OS X Yosemite (10.10)

* Windows XP supports UD-501, UD-301 and the AI-301DA.
Portable amplifier/player with Hi-Res audio playback
– including DSD

- PCM 192kHz/24-bit and DSD128 (5.6MHz) Native Playback from PC, Tablet, and microSD Card.
- Direct Cable Connection via Lightning or 30-pin Cables. (Apple Camera Connection Kit not required)
- Free Hi-Res Audio Playback Software/Apps for Windows/Mac/iOS/Android Supplied from TEAC.
- USB Audio Input with Asynchronous Mode from Windows and Macintosh.
- Supports up to 128GB microSDXC Card.
- Automatic Multi-format Tag Sorting. (Track name, Album name, Artist name, Playlist, Favorite)
- Repeat, Shuffle, and Gapless Playback from microSD Card.
- 170mW + 170mW of High Power Output at 32-ohms Load.
- BF606 Blackfin® Processor by Analog Devices and BurrBrown PCM1795 D/A Converter.
- Dedicated 44.1kHz and 48kHz High-precision Crystal Master Clock Generators.
- 8 Output Level Settings with High/Low Gain Switch and 4-step Attenuator Settings.
- Digital Coaxial Output of DSD64 (2.8MHz) via DoP. (with planned firmware update)
- Slim and Robust All-aluminum Case.
- Organic EL-display with Brightness Control.
- Automatic Power-off Function.
- Built-in Li-ion Battery for 7-hours Operation with USB Quick-charge.
Wherever you are – land, sea or air – you can enjoy the same Hi-Res sound you get from a Reference Home Hi-Fi System.

**Hi-Res Audio Playback App for iOS/Android Devices**

- **TEAC HR Audio Player for iOS**
- **TEAC HR Audio Player for Android**

Free to download

- Hi-Res Audio Playback on your iOS and Android Devices.
- Playback tracks on the standard iOS Music Library.
- Up-sampling Features.
- Touch-screen-based Graphic Equalizer with Real-time Analyzer with Save/Load Function.
- Seamless Operation in iOS environment, such as Operation from iOS Control Center.
- Repeat and Shuffle Modes.
- On-line Help and FAQs.
- SNS Integration to share track information with your friends via e-mail, Facebook and Twitter.
Hold your breath. Drop the needle.

Enjoy analog as it’s meant to be heard
with an Analog Turntable with USB Digital Audio Output

- Authentic Belt-drive Turntable with DC Servo Motor.
- Static Balanced Straight Type Tone Arm.
- Anti-skating System Prevents Tracking Errors.
- USB Digital Output for Transferring Music from Vinyl to Mac or PC.
- Built-in Phono Equalizer Amplifier for MM Type Cartridge.
- 2-speed Turntable with 33-1/3 and 45 RPM for LP/EP Record Playback.
- Cabinet with Multi-coated Veneer and Beautiful Wood-grain. (TN-300-CH)
- MM Type Cartridge Included. (audio-technica AT95E equivalent)
- Corrosion Resistant Gold-plated Terminals.

Premium Turntable with Phono EQ Amplifier/USB Output
TN-300
Ready, Set, and Go! A Totally New Home Audio solution.

Sleek and easy to place CD hi-fi system turns your computer into the heart of a Hi-Res audio system.

CD Player
PD-H01
- Sleek and Stylish CD Player.
- Supports MP3/WMA File Playback.
- Edge-hold Slot-in Mechanism for Safer Disc Loading.

2-way Speaker System
LS-H70A
- 120mm OMFC Diaphragm Cone Woofer Produces Rich Bass Sound.
- 25mm Soft Dome Tweeter for Crisp and Crystal Clear High-range.

Sleek 2.1ch Hi-Fi System for Desktop or Bookshelf.

2.1ch Speaker System
LS-WH01
- HVT Unit for Extra Bass Sound and Less Vibration.
- Cabinet sealed with Rubber to Eliminate Air Leakage.
- Piano Black Satellite Speakers with Small Footprint.
- Auto Power Saving Mode.
### Specifications

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<td><strong>Model Name</strong></td>
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<td>AX-501DA</td>
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<tr>
<td><strong>Type of Product</strong></td>
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<td>Integrated Amplifier with USB DAC</td>
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<td><strong>Other</strong></td>
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**Key Features**

- **USB Streaming**
- **Digital Optical**
- **Analog**
- **Balanced Analog**
- **Bluetooth® (Wireless)**
- **USB Type A**
- **USB Type B**
- **Micro USB Type B**

**Hi-Res Audio**

- **S/PDIF Coaxial**
- **Line**
- **S/PDIF Optical**
- **Balanced Circuit Design**
- **Power Transformer**

**Inputs & Outputs**

- **USB Type A (DP)**
- **USB Type B**
- **Micro USB Type B**
- **S/PDIF Coaxial**
- **S/PDIF Optical**
- **Balanced Output**

**Frequency Response**

- **10Hz to 60kHz (+1dB/-5dB)**
- **10Hz to 60kHz (+0.1dB/-30dB)**
- **2Hz to 100kHz (-30dB)**
- **20Hz to 45kHz (-50dB)**
- **10Hz to 80kHz (-30dB)**

**Signal-to-Noise Ratio**

- **100dB (HR-Alpunt Short)**
- **95dB (HR-Alpunt Short)**
- **90dB (HR-Alpunt Short)**
- **90dB (HR-Alpunt Short)**
- **100dB (HR-Alpunt Short)**

**Dynamic Range**

- **68 watts**
- **55 watts**
- **38 watts**
- **28 watts**
- **34 watts**

**Power Consumption (in Battery Life)**

- **114 mW x 2**
- **85 mW x 2**
- **66.1 mW x 2**
- **58 mW x 2**
- **55 mW x 2**

**Included Accessories**

- **Power Cord (w/ Plug Adapter), Remote Control (RC-1313), AAA Batteries x 2**
- **Power Cord (w/ Plug Adapter), Remote Control (RC-1055), AAA Batteries x 2**
- **Power Cord, Remote Control (RC-1313), AAA Batteries x 2, Rubber Foot x 4**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual, Warranty Card**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual, Warranty Card**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual, Warranty Card**

**Dimensions**

- **215 x 61 x 258 mm**
- **215 x 61 x 258 mm**
- **215 x 61 x 258 mm**
- **215 x 61 x 258 mm**
- **215 x 61 x 258 mm**

**Power Cord (w/ Plug Adapter), USB Cable for PC, Warranty Card**

**Analog Inputs**

- **RCA Pin**
- **1/8” (3.5mm) Stereo Min**
- **1/8” (3.5mm) Stereo Jack**
- **1/8” (3.5mm) Mini Mic**
- **USB Type A**
- **USB Type B**
- **Micro USB Type B**

**Digital Inputs**

- **S/PDIF Coaxial**
- **S/PDIF Optical**
- **Balanced XLR 1/2**
- **Subwoofer RCA Pin**
- **S/PDIF Optics**
- **S/PDIF Toslink**

**Specifications**

- **Type of Amplifier**
- **Maximum Output Power (EIAS)**
- **Rated Output Power (EIAS)**
- **Supported Speaker Impedance**
- **Damping Factor Select**
- **Active DC Servo Technology**
- **Supported Headphone Impedance**
- **Connector**

**Analog Outputs**

- **RCA Pin**
- **1/8” (3.5mm) Stereo Min**
- **1/8” (3.5mm) Mini Mic**

**Digital Outputs**

- **USB Type A**
- **USB Type B**
- **Micro USB Type B**

**USB Streaming**

- **5.6448 MHz (192 kHz)**
- **2.8224 MHz (176.4 kHz)**

**Hi-Res Audio**

- **PCM**
- **FLAC**
- **CD Quality**

**Power Cord** (w/ Plug Adapter), **USB Cable for PC**

**Headphone Amplifier**

- **BurrBrown OPA1602 SoundPLUS®**
- **BurrBrown OPA1652**
- **44.1kHz / 48 kHz**
- **192 kHz**
- **176.4 kHz**
- **96 kHz**
- **88.2kHz**
- **4 to 8 ohms**

**Power Consumption**

- **4.4 lbs. / 2.0 kg**
- **2.6 lbs. / 1.2 kg**
- **3 lbs. / 1.6 kg**
- **9.1 lbs. / 4.1 kg**

**Signal-to-Noise Ratio**

- **113dB**
- **105dB or Higher**
- **116dB**
- **105dB**

**Frequency Response**

- **20Hz to 20kHz**
- **2Hz to 100kHz**
- **2Hz to 100kHz**
- **2Hz to 100kHz**

**Dimensions**

- **215 x 61 x 258 mm**
- **215 x 61 x 258 mm**
- **215 x 61 x 258 mm**
- **215 x 61 x 258 mm**

**Power Cord (w/ Plug Adapter), USB Cable for PC, Warranty Card**

**General Features**

- **USB DAC with USB Input**
- **Supports playback from TEAC HR Audio Player via USB Input**
- **S/PDIF Coaxial**
- **S/PDIF Optical**
- **Balanced Output**
- **Power Transformer**
- **RCA Pin**
- **1/8” (3.5mm) Stereo Min**
- **1/8” (3.5mm) Stereo Jack**
- **1/8” (3.5mm) Mini Mic**
- **USB Type A**
- **USB Type B**
- **Micro USB Type B**
- **S/PDIF Coaxial**
- **S/PDIF Optical**
- **Balanced XLR 1/2**
- **Subwoofer RCA Pin**
- **S/PDIF Optics**
- **S/PDIF Toslink**

**Frequency Response**

- **10Hz to 60kHz (+1dB/-5dB)**
- **10Hz to 60kHz (+0.1dB/-30dB)**
- **2Hz to 100kHz (-30dB)**
- **20Hz to 45kHz (-50dB)**
- **10Hz to 80kHz (-30dB)**

**Signal-to-Noise Ratio**

- **100dB (HR-Alpunt Short)**
- **95dB (HR-Alpunt Short)**
- **90dB (HR-Alpunt Short)**
- **90dB (HR-Alpunt Short)**
- **100dB (HR-Alpunt Short)**

**Dynamic Range**

- **68 watts**
- **55 watts**
- **38 watts**
- **28 watts**
- **34 watts**

**Power Consumption (in Battery Life)**

- **114 mW x 2**
- **85 mW x 2**
- **66.1 mW x 2**
- **58 mW x 2**
- **55 mW x 2**

**Included Accessories**

- **Power Cord (w/ Plug Adapter), Remote Control (RC-1313), AAA Batteries x 2**
- **Power Cord (w/ Plug Adapter), Remote Control (RC-1055), AAA Batteries x 2**
- **Power Cord, Remote Control (RC-1313), AAA Batteries x 2, Rubber Foot x 4**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual, Warranty Card**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual, Warranty Card**
- **Power Cord, Remote Control (RC-1268), AAA Batteries x 2, Owner’s Manual, Warranty Card**