Premium System Components

Reference 503 series
Reference 501 series
Reference 301 series
Reference 101 series
Reference To-Go

Turntable
Speaker systems
Application software
From State-of-the-Art Hi-Res Audio to Traditional Analog Audio.

Our wide range of premium audio products are compact, and stylish enough to fit into any style.

Reference 503 Two flagship models packed with TEAC's highly developed technologies.

In addition to DSD 11.2Mhz native playback and PCM 384kHz/32 bit playback, DSD Up-convert allows you to enjoy DSD quality audio with your existing CD library.

Each model utilizes discrete dual-monaural technology, on both the D/A converter and analog pre-amp circuitry, which has been developed through decades of experience in the high-end and professional audio industries.

Choose between two listening styles: refined, high quality audio directly from your computer's headphone output with the USB DAC headphone amp, UD-503, or versatile, uncompromising audio on a USB network player, the NT-503.

**Common Features on the UD-503 and NT-503**

- High-end DAC Chip “VIRTA XA4492” from Xilinx Xilinx Electronics Employed for Left and Right Channel.
- Dual High Capacity Tuned-core Power Transformers for both Left and Right Channel for Isolated Current Supply.
- Isolated Circuit Design Completely Separates the Digital and Analog Sections Electrically.
- Four “TEAC HCLD” Buffer Amplifiers are Employed on the Line Amplifier Section for Enhanced Current Output.
- Up-convertion to up to 12.2MHz DSD / 384kHz PCM, by FPGA (Fluency-function Programmable K-Architecture).
- Two types of DSD filters and Four types of PCM Digital Filters.
- 10MHz External Clock Input Supported.
- Dual High precision Internal Clocks for 44kHz System and 48kHz System.
- XLR Balanced Analog Output, and RCA Unbalanced Analog Output.
- Switchable Polarity on XLR Output Jack (2-HOT, 3-HOT).
- “TEAC QVCC” High precision Volume Control Circuit for 256 Steps in 0.5dB Step.
- USB Audio, Coaxial Digital, and Optical Digital Inputs on Back Panel.
- Convenient Front Digital Input Jack for Coaxial/Optical (Convertible).
- Low Power Consumption, and Auto Power Saving.
- Full Metal Body for Vibration Elimination and Elegant Style, with 44-sized Foot-print.
- Free Application Software for Mac/Windows, Provided for High-Res Audio Playback.

**Reference 503**

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- Free Application Software for Mac/Windows, Provided for High-Res Audio Playback.
Reference 501

The Ultimate Dual-monoaural and Full-balance System*

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.

- **USB Audio DAC**
  - PCM 384kHz/32-bit, DSD 5.6MHz Hi-Res Digital Audio Streaming via USB Cable.
  - Dual-monoaural 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.

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

- **Coaxial 2-way Speaker System**
  - 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-monoaural" 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.

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

- **Coaxial 2-way Speaker System**
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  - Air Direct Center Pole System to Drive Massive Sound Power.
  - High-quality Luxurious Cabinet with Gloss Finish, available in Red Cherry and Piano Black.
Reference 501

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

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<tr>
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<tr>
<td>LOW</td>
<td>600 ohms</td>
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</table>

Driving your headphone

Reference 501

Hold your breath. Drop the needle.

The audio system you always wanted as a kid can be yours with the latest technology. With a Hi-Res CD Player, the conventional combination of amplifier and turntable turns into an advanced hi-fi system.

The unchanging pleasure of music has been re-envisioned with the latest modern technology.

Turntable

- 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.
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...

- Hi-Res Digital Audio Streaming from PC/Mac via USB Cable
- Bluetooth®, aptX Codec High-quality Wireless Audio Streaming
- Remote + 4Ω 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

Stereo Integrated Amplifier with USB DAC

AI-301DA

- Quick-loading Slot-in CD Player Supports MP3 and WMA Playback
- Built-in FM Tuner with 20 Preset Station Memory
- Front USB Port for WAV, AAC, MP3 and WMA Playback
- Coaxial and Optical Digital Outputs Deliver CD, FM and USB Sources

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.

CD Player/FM Tuner

PD-301

- Wide response, up to 40kHz, Ideal for Hi-Res Audio Playback
- Air Direct Center Pole System to Drive Massive Sound Power
- Rear Bass-reflex Port for Rich Bass Sound
- A Perfect Loudspeaker Partner for the Reference 301 series

Delivering high-performance audio from a desktop component.

USB Audio DAC

UD-301

- 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
- Transistorized 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 function as an amplifier, while “Off” mode cancels to deliver output signals from XLR/Phono terminals on rear panel, when Headphone Jack is used.

Coaxial 2-way Speaker System

LS-301

Since TEAC launched the first DSD Audio Recorder “TASCAM DA-3000” for professional audio market in 2001, we have been focusing potential of the DSD which is a hi precision audio format, and has been launching numbers of DSD-capable products. Particularly, a Master Recorder “TASCAM DA-3000” which records/playback DSD 5.6MHz audio format is used in recording studios world-wide, and receiving high reputations from artists and recording engineers.

TEAC and DSD

DSD Direct Stream Digital

Since TEAC launched the first DSD Audio Recorder “TASCAM DA-3000” 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/playback DSD 5.6MHz audio format is used in recording studios world-wide, and receiving high reputations from artists and recording engineers.

TEAC’s DSD-capable products are filled with matured technologies and know-hows from almost 15 years experiences, and more reproducing the atmosphere of the recording studios or concert halls where the music was originally played.
Defining the Micro Component for the next generation.

Hi-Res audio is ultra precise digital audio data close to the original analog waveform, by digitizing the sound more frequently and more precisely. Therefore, as number of samples and steps increase, the digital sound becomes closer to the original analog sound.

The CEA (Consumer Electronics Association) and the Japan Audio Society define products with Hi-Res quality, supporting 192kHz/24-bit Hi-Res audio input, and Wireless Streaming, as well. **Steps (bit)** accompany the “Hi-Res” logo with the product.

This TEAC HR Audio Player is a high-quality music playback application for Windows and Mac, with Hi-Res audio data processing capabilities including DSD 11.2MHz 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 connect 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) and 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.

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**What is Hi-Res?**

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 48kHz or higher frequency response on analog audio equipment such as amplifier and speakers, and grants to accompany the “Hi-Res” logo with the product.

---

**Hi-Res quality**

192kHz/24-bit

**CD quality**

44.1kHz/16-bit

With the PCM (Pulse Code Modulation) format which is a major method of digitizing analog audio signal, sequential sound memory is sampled in a reduced time, a few seconds, and each sample is quantized to more than 10 million steps.

Therefore, as number of samples and steps increases, the digital sound becomes closer to the original analog sound.

---

**Steps (bit)**

accompany the “Hi-Res” logo with the product.

- Frequency response on analog audio equipment such as amplifier and speakers, and grants to capability of processing 96kHz/24-bit on digital audio equipment, or reproducing 40kHz or higher frequency response.
- The CEA (Consumer Electronics Association) and the Japan Audio Society define products with Hi-Res quality.

**Hi-Res processing is supported on Amplifier section.**

- Ideal for Upgrading TV Sound from TV, Sonos Connect or Apple TV.
- Subwoofer Pre-out for Easy Expansion to 2.1ch Home Theatre System.
- Auto Power-on with Incoming Digital Audio Signal.
- Ultra Compact Bass-reflex Speakers fit Small Desktop Space.
- HR Loudness Circuit for Stunning Sound Performance.
- 26W + 26W Class-D Power Amplifier with Cooling Fan-less Design.
- Bluetooth®
- Hi-Res Digital Audio Streaming from PC/Mac via USB Cable, with up-conversion.
- aptX®
- Codec High-quality Wireless Audio Streaming.
- DSD File Playback on Mac (DoP mode)*
- Up to DSD 11.2MHz, PCM/FLAC 384kHz/32-bit, and up to 320kbps MP3 Files Playback*1
- ASIO 2.1 and DoP Modes for DSD 3MHz/2MHz Playback*2
- DSD File Playback on Mac (DoP mode)*2
- RAM Buffer Playback
- Repeat and Shuffle Playback Modes
- Drop and-Drop Operation for Creating Playlist
- Save and Load Playlists
- Simplified Screen for reducing CPU load, and enhancing sound quality

**Supported OS:**

- Windows XP (32-bit)*
- Macintosh: OS X Lion (10.7), OS X Mountain Lion (10.8), OS X Mavericks (10.9), OS X Yosemite (10.10), OS X El Capitan (10.11)

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**What is Hi-Res?**

192kHz/24-bit Hi-Res audio input, and Wireless Streaming, as well. Stunning Audio Performance for the next generation.

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**Steps (bit)**

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- Frequency response on analog audio equipment such as amplifier and speakers, and grants to capability of processing 96kHz/24-bit on digital audio equipment, or reproducing 40kHz or higher frequency response.
- The CEA (Consumer Electronics Association) and the Japan Audio Society define products with Hi-Res quality.

**Hi-Res processing is supported on Amplifier section.**

- Ideal for Upgrading TV Sound from TV, Sonos Connect or Apple TV.
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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, and Organic EL-display with Brightness Control.

Built-in Li-ion Battery for 7-hours Operation with USB Quick-charge and Auto Power-off.

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.

Portable amplifier/player with Hi-Res audio playback — including DSD

DSD Direct Stream Digital

Portable Headphone Amplifier with USB DAC

HA-P90SD

Portable Headphone Amplifier with USB DAC

HA-P50SE

Hi-Res Audio Playback App for iOS/Android Devices

TEAC HR Audio Player for iOS

TEAC HR Audio Player for Android

From iPhone or Android, Hi-Res Audio is in your hand.

This iOS/Android App turns your iPhone, iPad, iPod touch and Android devices into a Hi-Res Audio Player, and delivers digital audio streaming to the HA-P90SD, the HA-P50SE and the HA-P50. Also supports playing back Music Library on your iPhone, iPad and iPod touch.

Introducing a New Special Edition player, redesigned both inside and out, with the latest technology.

Wherever you are — land, sea or air — you can enjoy the same Hi-Res sound you get from a Reference Home Hi-Fi System.

Ideal for Air-travel with iPad
<table>
<thead>
<tr>
<th>Specifications</th>
<th>Integrated Amplifier</th>
<th>Headphone Amplifier</th>
<th>Audio</th>
<th>Analog</th>
<th>Digital</th>
<th>USB DAC</th>
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<tbody>
<tr>
<td><strong>Type of Product</strong></td>
<td>Integrated Amplifier</td>
<td>Headphone Amplifier</td>
<td>Audio</td>
<td>Analog</td>
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<td><strong>Headphone Amplifier</strong></td>
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**Included Accessories**
- Remote Control (RC-1320), AAA Batteries x 2,
- Manual (including Warranty Card), Rubber Bands x 2,
- Foot Cushion x 3.
## Specifications

### Product Category: Speake rs

- **Model Name**: S-300NEO, LS-101, HR-5101(5.1-ch), LS-H70A
- **Type of Product**: Coaxial 2-way Speakers

### Type of Speaker

- **Type**: Coaxial 2-way, 1-speaker
- **Frequency Response**: 65Hz to 40kHz
- **Output Level**: 67dB or higher

### Woofer

- **Type**: 6” (150mm) Soft Dome
- **Impedance**: 6 ohms
- **Frequency Response**: 55Hz to 25kHz

### Weight

- **Max. Input Power**: 100 watts
- **Rated Input Power**: 50 watts
- **Sensitivity**: 86 dB/W/m

### Included Accessories

- **Speaker Cables (6ft. / 1.8m) x 2**, **Foot Bases x 4**, **Cleaning Cloth**, **Owner’s Manual (inc. Warranty Card)**

### Tuntable

- **Model Name**: TN-500
- **Type of Product**: Analog Tuntable
- **Motor**: DC Motor
- **Variation of Speed**: 33 1/3 rpm, 45 rpm
- **Signal-to-Noise Ratio**: A-weighted, 20kHz LPF
- **Wow and Flutter**: 0.2%

### Included Accessories

- **Rubber Mat**, **(RCA Record Adapter)**, **Counter Weight**, **Head Shell**, **Cartridge (OMM type, audio-technica AT95E equivalent)**, **Flat Bar, Dust Cover**, **Rubber Feet for Dust Cover x 2**, **Hinges x 2**, **RCA Audio Cable**, **AC Adapter**
- **Spike Screws x 6**, **Washers x 6**, **Foot Bases x 4**, **Owner’s Manual**

### Reference for Icons

- Supports DSD Digital Streaming. (Shown with Sampling Frequency and Bit length)
- Supports PCM Digital Streaming. (Shown with Sampling Frequency and Bit length)
- Supports D/A Conversion by Built-in D/A Converter(s).
- Dual DAC for Left and Right channels.
- Supports Digital-to-Digital Conversion by Built-in D/A Converter(s).
- Supports Digital-to-Analog Conversion by Built-in D/A Converter(s).
- Supports Digital Streaming via USB Port.

### Note

- *Excluding protrusions. *2 Including screws, nuts, and wires. *3 USB BUS power supply is required from PC. (5V 500mW) *4 Visit TEAC website for the latest information.

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### Specifications

<table>
<thead>
<tr>
<th>Product Category</th>
<th>Tuneable Turntable</th>
<th>Analog Tuntable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Turntable</td>
<td>Belt Drive</td>
<td>Static-balanced, Straight</td>
</tr>
<tr>
<td>Motor</td>
<td>DC Motor</td>
<td>Type of Cartridge MM type</td>
</tr>
<tr>
<td>Revolution Speed</td>
<td>31 1/2 rpm, 45 rpm</td>
<td>Frequency Response 20mHz to 20kHz</td>
</tr>
<tr>
<td>Variation of Speed</td>
<td>±2%</td>
<td>0 to 5 grams</td>
</tr>
<tr>
<td>Woo and Flutter</td>
<td>0.2%</td>
<td>Head Shell Weight 10 grams (2³)</td>
</tr>
<tr>
<td>Signal-to-Noise Ratio</td>
<td>47 dB (higher than 45dB, 2kHz LPF)</td>
<td></td>
</tr>
</tbody>
</table>

### Connected

- **USB Type B (3) Power Consumption**: 1.5 watts (less than 0.5 watts at standby) |
- **Dimensions (W x H x D)**: 183 x 138 x 46 mm (without cables) |
- **Weight**: 5.9 lbs (2.6 kg) |

### Included Accessories

- **RCA Pin (Gold-plated)**, **USB Type B (3)**, **Dimensions (W x H x D)**: 183 x 138 x 46 mm |

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### Reference for Icons

- **DSD**: Digital Studio Sound
- **PCM**: Pulse Code Modulation
- **USB DAC**: USB Digital Audio Converter
- **Bluetooth®**: High-quality wireless audio streaming
- **aptX®**: High-quality wireless audio streaming codec

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**WARNING**

Listening headphones at a high volume for a long time may cause temporary or permanent hearing loss.