

Reference 101 Series  
**HR-X101**  
 Micro Component System



New Generation CD Micro Component System for Hi-Res Era.

■ **Main functions**

- CD Receiver employs PC Streaming, CD Player, FM Tuner, and Bluetooth Connection
- Supports up to 24-bit/192kHz Hi-Res Streaming from PC/Mac via USB Cable
- Up-conversion to 24-bit/192kHz from any source including CD, USB and Bluetooth®.
- Built-in FM tuner supports RDS (RDS for UK/Europe model only)
- Small Footprint and Stunning Sound Performance by Class-D Amplifier
- Ultra-compact Loudspeakers support high frequency range up to 40kHz

Brand	TEAC	
Series	Reference 101	
Model Name	HR-X101-SC	HR-X101-BC
Color	Silver	Black
Main Unit Dimensions Weight	182 x 93 x 221mm / 7.2" x 3.7" x 8.7" (W x H x D) 2.2kg / 4.9 lbs.	
Speaker Dimensions Weight	116 x 182 x 197mm / 4.6" x 7.2" x 7.7" (W x H x D) 2.0kg / 4.4 lbs. per piece	
Package Dimensions GW	338 x 448 x 256mm / 13.3" x 17.6" x 12.10.1" (W x H x D) 6.8kg / 15.0 lbs.	

HR-X101 is a combination product of the CR-H101 (center unit) and the LS-101HR (speaker).

## ■ Overview

The HR-X101 is a Hi-Res micro component system with a new concept, fusing CD receiver components with TEAC desktop audio technologies that we have advanced over years.

The receiver has a USB DAC function that supports Hi-Res audio playback and can handle a variety of sources, including CDs, Bluetooth® and USB. The body of the unit is crafted elegantly with cut aluminum panels, which are about 3mm thick on the top and sides and 5mm thick on the front. This increases both strength and resistance to external noise. The cabinet, which is small enough to be held on the palms of two hands, has a cooling grille and side bars like a high-end power amplifier.

The design makes people feel its dignity and precision when they see it. In addition, the volume and source selection knobs on the front are also made with cut aluminum, which creates the sense of coolness and precision unique to thick metal. They will provide feelings of satisfaction to the owner every time they are used. The DAC, which is a core component for digital audio equipment, uses a Burr Brown PCM1795 that boasts a high dynamic range with low distortion and has a record of use in high-end digital-analog converters. This enables playback from various sources without compromising the passion the artists put into their music.

The speaker enclosures use red cherry wood panels and a piano finish to exude an aura of elegance. The contrast between the metal body and the receiver contributes to the unique presence of the system in the space where it is placed. The two-way speaker units incorporate PEI balanced dome tweeters that reproduce high-resolution audio sources with outstanding high-frequency characteristics and clarity. The rubber edges have maximized flexibility and a widened movement range. The cone woofers also achieve an outstanding f<sub>0</sub> (lowest resonance frequency). The rich and natural low frequencies reproduced are surprising for their size.

The HR-X101 system packs the same high-quality audio technologies used in audiophile equipment into a compact form that allows you to make daily music listening experiences even richer.

## ■ Supports a variety of sources

### ● Hi-Res audio streaming from PC/Mac, up to 192kHz/24-bit

The back of the unit has a USB-B port. High-resolution audio source playback up to 192kHz/24-bit is possible when connected to a computer, tablet, smartphone or similar device.

Notes about connections

Windows computers require a driver, Mac OS computers do not require a driver, iOS devices require a 30-pin/Lightning to USB Adapter (female), and Android devices require an OTG cable. (Information not available in catalogs or on the web: By connecting a special cable to a Sony Xperia™ smartphone (USB host cable) or Android Walkman® (WMC-NWH10), these devices can also be used for high resolution audio source playback.)

### ● Slot-in slim drive and Built-in FM tuner

A slot-in slim drive is used to help realize the compact format. CD playback (including MP3 and WMA files on CD-R/RW discs) and automatic playback are supported. PLL Synthesized FM tuner supports 20 station presets for quick access to your favorite station.

### ● High-quality audio Bluetooth receiver compatible with aptX® and AAC

In addition to the popular SBC codec, aptX® and AAC codecs are supported for high-quality audio. Enjoy wireless streaming of high-quality audio playback from compatible smartphones and tablets.

## ■ Technologies for high-quality audio

### ● Compact, high-efficiency Class-D amplifier

The Class-D TPA3118 amplifier made by Texas Instruments enables both the compact size and the power to playback high-resolution audio sources without data loss. While compact, we have realized a high 26W+26W output and clear audio quality.

- **High-precision digital-analog conversion chip**

We incorporated a high-performance PCM1795 D/A Burr Brown converter chip made by Texas Instruments. This chip has previously been used in our high-end UD-501 and UD-301. Boasting a high S/N ratio and an excellent distortion rate allows it to faithfully process high-resolution audio sources, which have data quantities that greatly exceed those of CDs, and bring out the wonderful nuances of the music.



- **Up-conversion of CDs, USB and even Bluetooth sources to Hi-Res equivalents**

The built-in up-conversion function can oversample (2x) signals with sampling frequencies less than 96 kHz. This allows you to enjoy CDs, Bluetooth and even USB with higher-quality audio.



- **USB interface that supports asynchronous transmission**

The USB interface supports 192kHz/24-bit asynchronous transmission, which offers excellent suppression of jitter (time deviation that occurs when transmitting digital signals). This allows it to transmit enormous amounts of high-resolution audio source data accurately to the DAC.

- **Dual clock realizes accurate D/A conversion**

Separate dedicated crystal oscillators are used for 44.1kHz and 48kHz multiples of the clock, which is crucial to jitter reduction. When playing back high-resolution audio sources, the original sound is reproduced faithfully by suppressing the impact of jitter using this high-precision built-in clock.

- **HR loudness circuit reproduces heavy low-frequency sounds with power**

Using DSP processing, the HR loudness circuit provides speaker output that is optimal for the LS-101HR speakers included in this system. You can enjoy powerful low frequencies and clear high frequencies even during playback at low and medium volume levels. This HR loudness circuit is not limited just to digital sources, which it can handle with resolutions up to 192kHz/24-bit. This DSP processing can be applied to any input source so that its effect can be enjoyed. Radio and other external analog input signals are converted to 96kHz/24-bit digital signals once by the high-precision A/D converter and then processed by the HR circuit.

- **TEAC HR Audio Player is an easy-to-use high-resolution playback application**

TEAC HR AUDIO PLAYER is a free playback application available for Windows and Mac OS that allows you to enjoy the playback of high-resolution files with ease. With support for WAV, FLAC, MP3, AIFF and ALAC formats, it also has an Expand to RAM function that enables high-quality playback without burdening the CPU. This allows you to enjoy high-resolution sources with even higher audio quality.

## ■ Design

- **Solid aluminum body and design that stands out**

With a width of about 182 mm and a height of about 93 mm, the extremely compact body has a full-metal enclosure using aluminum that is about 3 mm on the top, front, left and right sides. The top panel has a grille reminiscent of those found on high-end power amplifiers, and the solid body has excellent vibration resistance, minimizing the impact of vibrations on audio quality.



- **Cut aluminum knobs**

Cut aluminum knobs that feature ridges like those found on professional audio equipment are used for the large volume and source selection knobs on the front. The cool feel characteristic of metal provides a sense of satisfaction every time they are touched.



- **Clock functions**

The remote control Clock button can be pressed to show the current time. In addition, the timer function can be used to turn the CD player or FM tuner ON/OFF at set times.

## ■ Speakers

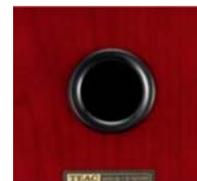
### ● Micro speakers designed for high-resolution playback

The compact enclosure, which is about 116 mm high and 182 mm wide, contains a 70mm cone woofer and a 20mm balanced dome tweeter. These are compact speakers designed for high resolution and capable of reproducing high frequencies up to 40 kHz.



### ● Stylish enclosure designed with attention to detail

For the enclosure, natural wood panels with a cherry wood look have been applied to a high-density MDF base and given a lustrous piano finish to create a beautiful cabinet. Resistant to the effects of changes caused by time and climate, you will be able to enjoy listening to music with these speakers for a long time. In order to achieve more faithful playback and not lose the energy of the music, we have thoroughly sealed them to achieve airtightness. An R shape has been used for the bass reflex ports to prevent the occurrence of unwanted air noise.



### ● Newly-adopted 20mm PEI balanced dome tweeter

A PEI (polyetherimide) balanced dome tweeter that achieves clear high-frequency performance has been adopted. It supports the playback of frequencies above 40 kHz, which are responsible for the "air" that is essential in high-resolution playback. This allows the speaker to reproduce high-resolution audio sources without losing their fine nuances. The diffuser incorporated into the front of the tweeter achieves a wide orientation and allows a natural sound field to be enjoyed even during near-field listening.



### ● 70mm woofer enables low-frequency playback with ease

A paper cone that enables natural playback of medium and low frequencies is used in the woofer. In addition, the rubber material used for the edges has been made as flexible as possible and resonant frequencies have been minimized to produce sound that approaches the power of speakers that are a size larger. In the woofer unit, a strong 70mm diameter magnet has been employed, and its ability to play back low frequencies with the capacity for even high output levels has been enhanced.



### ● Gold-plated speaker terminals compatible with banana plugs

Screw-type speaker terminals that are compatible with banana plugs have been used to enable secure connections with speaker cables. In addition, the terminals have been gold-plated to prevent oxidation



## ■ Features at-a-glance

- Hi-Res Audio Streaming from PC/Mac via USB Cable
- Slot-in CD Drive supports MP3 and WMA (CD-DA, CD-R/RW)
- Built-in FM Tuner supports RDS (UK/Europe model only)
- Bluetooth® Wireless Connection with aptX® High-quality Playback from Smartphone/Tablet
- Up-convert to 192kHz from any source except FM radio
- HR Loudness Circuit for Stunning Bass Sound
- 26 Watts + 26 Watts Output Power by Energy-efficient Class-D Amplifier
- Small Footprint and All-aluminum Enclosure
- Ultra-compact Bookshelf Speakers with Gloss Cherry Wood Finish supports up to 40kHz
- Free Hi-Res Playback Software for Windows/Mac are Available

## ■ Specifications

### USB section

Connector	USB B-type x 1
Supported Sampling Frequency	44.1k / 48k / 88.2k / 96k / 176.4k / 192kHz
Supported Bit Length	16/24-bit

### CD Player section

Supported Playback Disc	CD-DA, CD-ROM/R/RW ISO9660 LEVEL 1/2/JOLIET, 8cm CD not supported
Supported File Format	PCM (CD-DA), MP3, WMA
PCM (CD-DA)	16-bit, 44.1kHz
MP3	32k to 320kbps and VBR, 16k / 220.5k / 24k / 32k / 44.1k / 48kHz, MPEG-1/2 Audio Layer-3
WMA	32k to 320kbps and VBR, 8k / 11.025k / 16k / 22.05k / 32k / 44.1k / 48kHz, WMA Ver.9 (DRM not supported)
Maximum number of files	250 (including folders)
Maximum number of folders	99

### Bluetooth® section

Version	3.0
Output Class	Class 2
Supported Profile	A2DP
Supported Codec	SBC, AAC, aptX®

### Tuner section

Band	FM
Frequency Range (FM)	76.0 to 108.0MHz
Number of Presets	20 Stations

### Amplifier section

Output Power	
Maximum	26 Watts + 26 Watts (1kHz, 4 ohms, 10%, JEITA)
Rated	20 Watts + 20 Watts (1kHz, 4 ohms, 1%, JEITA)
Total Harmonic Distortion	0.02% (1kHz, 4 ohms, 1W)
Signal-to-Noise Ratio (LINE)	90dB (IHF-A/LPF 20kHz, 1kHz 2V Input)
Frequency Response	20 to 45,000 Hz (-5dB)

### Inputs and Outputs

Digital Inputs	
USB Audio	USB B-type x 1
Optical	TOS-link x 1
Bluetooth	x 1
Analog Input	
LINE	RCA Pin x 1 pair
Analog Outputs	
Speakers	Screw-type x 1 set
Subwoofer Pre-out	RCA Pin x 1
Headphones	1/8" (3.5mm) Stereo Mini x 1 80m Watts + 80m Watts (32 ohms loaded, 1kHz), 0.08% T.H.D

### Speakers

Type	2-way 2-speakers, Rear Bass-reflex
Units	
Tweeter	20mm Balance Dome
Woofer	70mm Cone
Handling Power	
Rated	25 W
Maximum	35 W
Impedance	4 ohms
Sensitivity	86dB/W/0.5m
Frequency Response	65 to 40,000 Hz
Crossover Response	3,000 Hz

Cabinet Capacity 2.4 Liter

## General

Operating Power	
UK/Europe model	AC 220–240V, 50Hz
US/Canada model	AC 120V, 60Hz
Power Consumption	21 W
Overall Dimensions (W x H x D)	
Main Unit	7.2" x 3.7" x 8.7" / 182 x 93 x 221 mm (incl. protrusions)
Speaker	4.6" x 7.2" x 7.6" / 116 x 182 x 197 mm (excl. protrusions)
Weight	
Main Unit	4.9 lbs. / 2.2 kg
Speaker	4.4 lbs. / 2.0 kg per piece
Operating temperature	+5° C to +35° C
Operating humidity	5% to 85% (no condensation)
Storage temperature	-20° C to +55° C
Included Accessories	Remote Control (RC-1324) x 1 AAA Batteries x 2 FM Antenna x 1 Power Cord x 1 Speaker Cable (6.5ft. / 2.0m) x 2 Silicone Feet x 8 Owner's manual for Main Unit x 1 (incl. Warranty Card) Owner's manual for Speakers x 1 (incl. Warranty Card)

Specifications and appearance are subject to change without notice.  
Weight and dimensions are approximate.

## ■ Rear Panel

