Trends
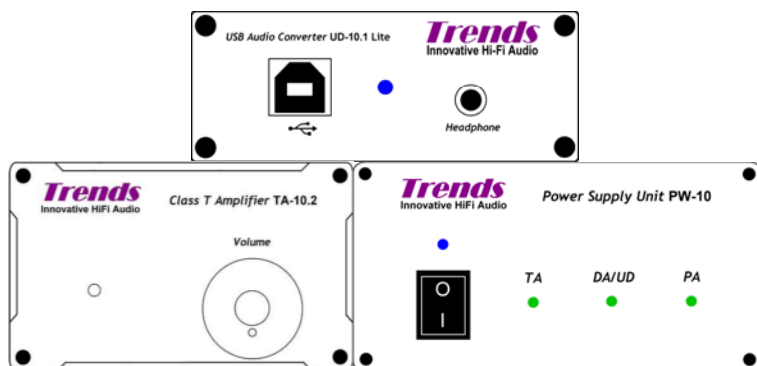Innovative HiFi Audio

Trends Combo 12

Desktop Hi-Fi System

Version 1.0

USER GUIDE

CE FC RoHS

Trends
Innovative HiFi Audio

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1. Safety Instructions

Please take note the following instructions before installing your Trends Combo 12 Hi-Fi System, they will enable you to get the best performance and prolong the life of the product.

1.) **Ensure that Trends PW-10 PSU's I/O switch is off when it does not operate**. It is recommended that you return your Trends PW-10 PSU to us or a qualified dealer for any service or repair. Incorrect assembly may result in electric shock or fire.

2.) To reduce the risk of electric shock, unplug the power supply from the outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

3.) Never use an extension cord unless absolutely necessary. **If an extension cord must be used make sure that the pins on the plug are the same number, size and shape as those of the original power supply plug**.

4.) Place the unit in an area that will allow air to flow freely around the unit. DO NOT block or obstruct vent openings on the side/bottom of the unit.

5.) Your power supply should be grounded to reduce the risk of electric shock.

6.) The cord must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances. Never alter the AC cord of plug provided. If the cord will not fit the outlet, have a proper outlet installed by qualified electrician. Improper connection can result in risk of electric shock.

7.) This unit must not be exposed to dripping or splashing water or other liquids. No objects filled with liquid, such as vases, shall be placed on the unit. In the event, switch off immediately, disconnect from the main supply and contact your dealer or us for advice.

8.) Do not route the power cable so that it can be walked upon or damaged by other items near it.

9.) Electronic audio components have a running in period of around a week (if used several hours per day). This will allow the new components to settle down; the sonic properties will improve over this time.

10.) If you do not intend to use this unit for a long period of time, unplug it from main socket.

11.) To clean the unit, wipe its case with a moist, lint-free cloth. Do not use any cleaning fluids containing alcohol, ammonia or abrasives. Do not spray an aerosol at or near any component of Trends Combo 12.

12.) These units are not user serviceable, never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem. A serious electric shock could result if this precautionary measure is ignored. In the event of a problem or failure, please contact your dealer or us.

2. Introduction

Thank you for purchasing Trends Combo 12 Hi-Fi System.

This package provides a set of advanced Desktop Hi-Fi System. By conjoining Trends UD-10.1 Lite USB Audio Converter, Trends TA-10.2 SE Class-T Stereo Audio Amplifier, Trends PW-10 PSU, and any DAC, Trends Audio perfectly integrates your PC/Mac and Smartphone into your audio system with better sound quality, larger storage capacity and a more user-friendly interface than most standard CD players.

Trends PW-10 PSU concurrently support THREE audio appliances: (TA-10, PA-10, UD-10 or DA-10), making Trends Combo 12 perfect for integrating your Desktop PC, iPhone/iPod/iPad or Smartphone into your audio system and achieves the sound quality of high-end Hi-Fi but in a very affordable price.

3. Packing List

- Trends UD-10.1 Lite USB Audio Converter (body) x 1 pcs
- Trends TA-10.2 SE Class-T Stereo Audio Amplifier (body) x 1 pcs
- Trends PW-10 Power Supply Unit x 1 pcs
- Trends CQ-125 3.5mm RCA Audiophile Cable x 1 pcs

4. Features

- One Transformer-based linear mode power supply concurrently supports THREE audio appliances: (UD-10.1 Lite, PA-10 & TA-10.2P or TA-10.2 SE).
- Compact design (mini-size & light weight), easy portable and setup for Hi-Fi room, living room, sleeping room or even right beside your laptop computer.
- High-end Burr Brown PCM2704 IC for USB audio conversion.
- Separated digital/analog ground. The digital GND (network) and the analog GND (solid) is totally separated except connected via a ferrite bread in a single point. It effectively reduces interference between digital signals and analog signals.
- Applied RS422 driving IC to concurrently drive 2 groups of digital outputs. Audiophiles can compare the differences between these digital outputs instantly or play for the Bi-DACs.
- Proprietary impedance matching circuits for Coaxial(75ohm) digital outputs.
- Applied the specially designed pulse transformers for Coaxial outputs to further isolated interference from UD-10.1 Lite to the external DAC. The most pure, accurate, standard digital signal is then regenerated with minimum interference and jitter.

- Plug-and-play without driver installation for most PC/Mac operating systems, e.g. Windows 7, Windows 2000, Windows XP and Mac OS X or above.
- Audiophile grade transformer is tailor-made for Trends Combo Hi-Fi System.
- Specific circuit design and components of Trends PW-10 PSU applied for different power usage characteristics, which perfect match the different applications in high-frequency, high-current, digital and/or analog circuits for Trends Combo Hi-Fi System.
- High quality EMI noise filter in Trends PW-10 PSU is added to filter out those high frequency noise inducted from the global electricity network from Trends Combo Hi-Fi System.
- Built-in over-current protection and over-temperature protection design in the power amplifier.
- Unique air-core inductor in power amplifier used (instead of magnetic-core) for better sound.
- Innovative circuit design of low voltage hybrid (tube/transistor) & pure class-A circuit pre-amplifier to provide the best sound performance and easy/safe DIYer accessibility.
- Provide TWO sets of switchable audio inputs in the pre-amplifier. Besides the normal CD input, the PC/iPod input with higher gain is provided for small output PC/Mac/iPod/iPad.
- Besides the normal audio output in the back panel, ONE headphone output in the front of the pre-amplifier to drive even high-impedance audiophile-grade headphones.
- TWO precise screw-driving potentiometers for professional audiophiles to adjust the tube's bias voltage to guarantee the best working point for different tubes.
- The stylish aluminium case provides outstanding shielding & grounding capability to keeps the background silent and maximizes the S/N ratio.
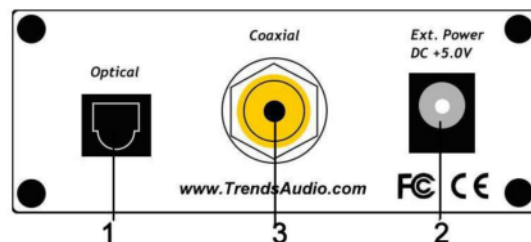
5.   Overview

5.1 Trends UD-10.1 Lite USB Audio Converter

Front View
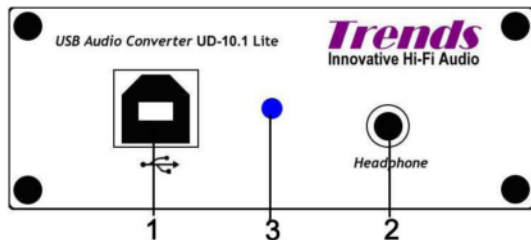
1. USB Socket
2. Headphone Socket
3. Power Indicator

Back View

1. Optical
2. Power Socket
3. Coaxial RCA

5.2 Trends TA-10.2 SE Class-T Power Amplifier

Front View
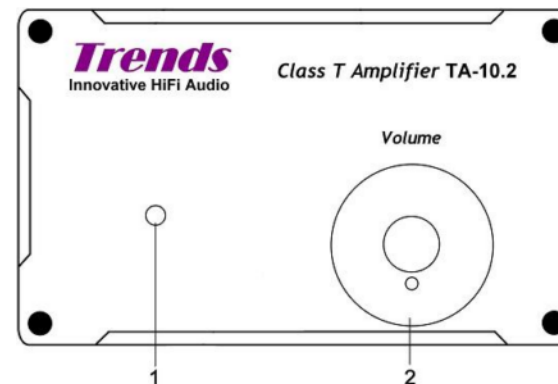
1. Power Indicator
2. Volume Controller – Turn clockwise to lower down volume and vice versa

Back View
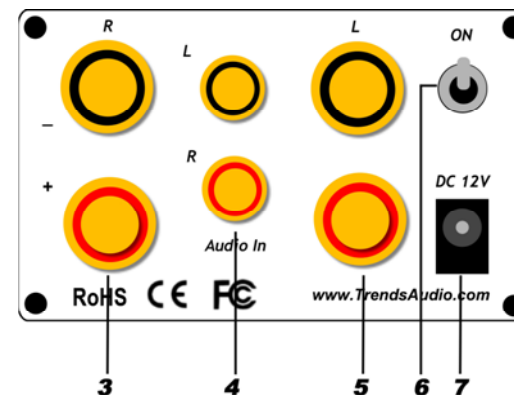
3. RIGHT Speaker Output – The negative (-ve) and positive (+ve) speaker terminals of the RIGHT channel
4. Audio Input – The audio signal input (LEFT/RIGHT) connects from audio source (e.g. CD player) to the amplifier by the RCA audio cable
5. LEFT Speaker Output – The negative (-ve) and positive (+ve) speaker terminals of the LEFT channel
6. Power ON/OFF switch – pull up to power on and pull down to off
7. Power Supply Socket – Plug Trends PW-10 PSU to this socket to supply power

5.3 Trends PW-10 PSU

Front View
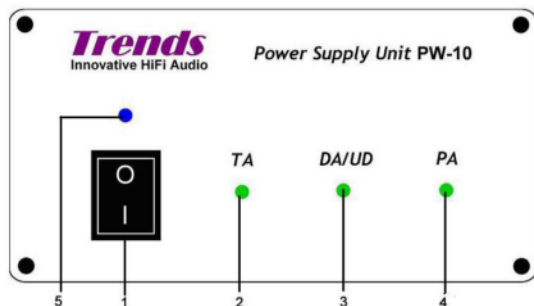
1. Power ON/OFF Switch
2. Power Indicator of the Amplifier Unit
3. Power Indicator of the Digital/Analogue Converter Unit
4. Power Indicator of the Pre-Amp Unit
5. Main Power Indicator

Back View
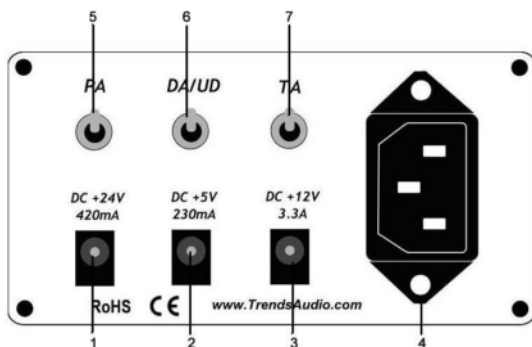
1. Power Supply Socket for the Pre-Amp Unit
2. Power Supply Socket for the DA/UD Unit
3. Power Supply Socket for the Amplifier Unit
4. Main Power Supply Socket
5. Power ON/OFF Switch - pull up to power on the Pre-Amp Unit, pull down to off
6. Power ON/OFF Switch - pull up to power on the DA/UD Unit, pull down to off
7. Power ON/OFF Switch - pull up to power on the Amplifier Unit, pull down to off

5.4 Complete Trends Combo 12
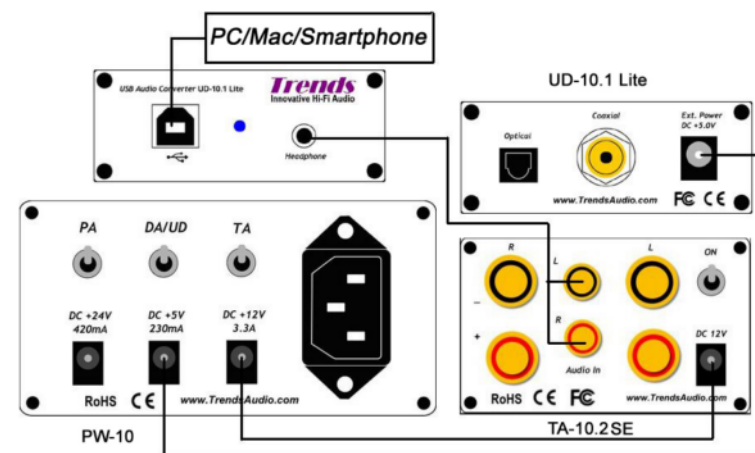
6.   Connection and Operation

WARNING! Before plugging the unit to the AC outlet, please check that your local supply voltage is **110V AC** or **220V AC** (**specific model should be selected, not compatible**)

- Turn off the I/O switch of Trends PW-10 PSU, unplug it from the AC outlet.
- Ensure that the connections are secure and tight.
- Plug the Trends PW-10 PSU into the AC outlet, and press the I/O switch of the Trends PW-10 PSU to "I", then "Blue" indicator in the switch illuminates.
- If the indicator fails to light, recheck the connection and AC outlet.
- Turn on DA/UD and observe that the "Green" indicator, and then switch on Trends UD-10.1 Lite USB Audio Converter.
- Turn on TA and observe that the "Green" indicator, and then switch on Trends TA-10.2 SE Class-T Stereo Audio Amplifier.

<u>**OPERATE IN A WELL VENTILATED OPEN AND COOL AREA. DO NOT BLOCK THE OPENINGS AT THE FAN DISCHARGE ON THE BOTTOM AND THE SUCTION OPENINGS ON THE SIDES.**</u>

7.   Technical Notes (for professional user only)

7.1 Configure as power amplifier (by-pass the volume control)

You can simply configure the amplifier as an integrated amp (with volume control function) or as a pure power amp (no volume control function) by resetting the jumpers in J2 as follows:

O—O   O—O

O—O   O—O   (integrated amp)

O   O—O   O

O   O—O   O   (power amp)
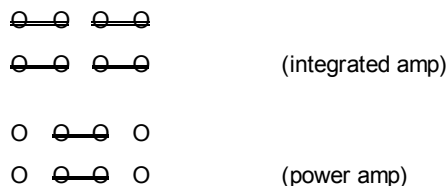
7.2 Offset the DC bias voltage of the speaker terminals

There are two blue adjustable potentiometers (Rt) inside Trends TA-10.2 SE for offsetting the DC bias voltage between the positive (+ve) and negative (-ve) terminals of each channel. Offset this DC bias voltage can enhance the purity of the sound and minimize the "pop" sound when power on and off. The DC bias has been pre-set in factory. But after run-in for a period, it would be slightly changed that the fine-tuning is needed.

Before you tune these, you need a screwdriver (take off the case), a small screwdriver (turn the screw of the potentiometer) and a (digital) multi-meter to detect the DC bias voltage.

1. Use screwdriver to take out the two top level screws in the front panel & another two screws in the back panel. Then, open the upper case.
2. Power ON the amplifier.
3. Use the multi-meter to detect the DC voltage (200mV) between +ve & -ve terminals of the RIGHT channel.
4. Turn the screw on the top of the LEFT (near the front panel) potentiometer by a small screwdriver clockwise or anticlockwise until the voltage as close as to ±0mV.
5. Then, repeat step 3 and 4 for the LEFT channel by turning the screw on the top of the RIGHT (near the back panel) potentiometer.
6. Power OFF the amplifier
7. Cover back the upper case and tighten the screws.

8. Specification

8.1 Trends UD-10.1 Lite USB Audio Converter

USB DAC IC	Burr Brown PCM2704 USB DAC (digital to analog converter)
USB Input	USB Type B female connector x 1
Clock	4 pin high accuracy crystal clock: ±25 ppm
Power Regulation	Regulated power for both analog & digital paths
Digital Outputs	Optical connector: TOSLINK Coaxial(RCA)connector:75 ohms Audio format: linear PCM, 16 bits per sample Sample rates: 32, 44.1, 48 kHz
Analog Output	Headphone 3.5mm jack (Volume Controlled by PC/Mac/Smartphone)
Signal-to-noise ratio	98dB
Dynamic Range	98dB
THD+N	0.006% (RL > 10 k, Self-Powered)
Audio Formats	Lossless Formats: APE, FLAC, WMA Lossless, Apple lossless or other Uncompressed formats: WAV, AIFF, PCM or other Compressed formats: MP3,AAC,Ogg Vorbis,MP2,MusePack,WMA or other
System Requirements	All systems: 256MB RAM with 30MB hard disk space Windows OS: Windows NT/2000/XP/Vista or later Macintosh: Mac OS X 10.3 or later Linux, PC LinuxOS 2007, Fedora core 7, Ubuntu 7.04 or other
Power Supply	USB Bus Power or External power(Optional): DC 4.35V – 5.25V(max) (e.g. AA size rechargeable battery 1.2V x4=5V. NOTE: Don't use normal batteries with 1.5V x4=6V, it would be too high for safety and good sound performance)
Other Switch & Knob	LED Power Indicator (Blue) x 1
Dimensions (W) x (H) x (D)	76mm x 29mm x 114mm [case only] 76mm x 29mm x 128mm [incl. sockets & knob]
Weight	250g
Case	Stylish aluminum
Accessories	1.5m type A to type B cable x 1 Mini Jack to 2 Phono Sockets Adapter x 1

8.2 Trends CQ-125 3.5mm RCA Audiophile Cable (0.47m)

Braiding Shield	Oxygen-Free Copper OFC
Snack-Skin Sleeve	Yes
Ferrite Ring Noise Filter	Yes
Plug	1 x 3.5mm Headphone Plug ~ 2 x RCA
Plug Material	24K Gold-Plated Pure Copper
Overall Diameter	6mm
Conductor	Oxygen-Free Copper OFC
Color	Black

8.3 Trends PW-10 PSU

AC Power Input:	**110V** /50~60 Hz or **220V** / 50~60Hz (specific model should be selected, not compatible)
DC Power Output:	TA: +12V/3.3A DA/UD: +5V/230mA PA: +24V/420mA
AC Input Socket: IEC socket	IEC socket
DC Output Socket:	DC 2.1 socket
LED Indicator:	Main Power (Blue) TA (Green) DA/UD (Green) PA (Green)
Power Switch:	Main Power (Front) TA (Back) DA/UD (Back) PA (Back)
Dimensions (DxWxH)	205mm x 105mm x 55mm

8.4 Trends TA-10.2 SE Class-T Stereo Audio Amplifier

T-Amp IC	Tripath TA2024
Output Power	2x15W @4ohm 2x10W @8ohm
Signal-to-Noise Ratio (SNR)	98dB
Dynamic Range	98dB
IHF IM Distortion	0.10% @ 1W, 4ohm
THD+Noise	Audiophile Quality 0.03% @ 9W 4ohm 0.1% @ 11W 4ohm 0.1% @ 6W 8ohm High Power 10% @ 15W 4ohm 10% @ 10W 8ohm
Power Efficiency	81% @ 15W 4ohm 90% @ 10W 8ohm
Input	Audio IN RCA (Left/Right) x 1 Power Socket (5.5mm/2.1mm) x 1
Output	Speaker OUT (Left) x 1 pair (+/-) Speaker OUT (Right) x 1 pair (+/-)
Other Switch & Knob	Power ON/OFF switch x 1 Power Indicator (Blue LED) x1 Volume Knob x 1
Power Supply	DC 12V-13.2V (max.)
Dimensions(WxHxD)	46mm x 76mm x 114mm [case] / 150mm [incl. sockets & knob]
Weight	500g

*The warranty provides parts and labor for all components, except tubes.

**To continuously improve our product, we reserve the rights to change some specifications without further notice.

9.   Troubleshooting

If your Trends Combo 12 is out of order, it may not be very serious. Before you call your local distributor or us to repair, you are suggested to check the following:

Symptoms	Possible Reasons	Handling Methods
cannot power ON indicator not bright	power cords not properly connected	properly connect the power cords
	power switch is OFF	switch ON the power
no sound at all	the volume level is too low	turn volume level higher
	the audio cable not properly connected	properly connect the audio cable
	the audio source (e.g. CD player) not started playing	start playing the audio source
	wrong input is selected	check input selection
	the speaker cables not properly connected	properly connect the speaker cables
sound out(s) out	loose connection	check input and output connections. When all has been double-checked reduce volume and switch unit back on
The output voltage is 0 V or very low	the Input voltage is very low	Check that the input voltage is 120V or 220 V, (specific model should be selected, not compatible)
	The unit is in current limit condition due to overload caused by large reactive loading r by the output being short circuited	Check the output terminals are not shorted. Remove the load. If the output voltage gets restored, the load is shorted or is offering large reactive impedance
AC side fuse blows as soon as power is turned on.	Unit is defective	Call technical support or by email support@trendsaudio.com.

10. Accessories

- 3 Pins Power Cord x 1 pcs (IEC plug and another plug with different country standards)
- User Guide x1
- Warranty Card x1

11. Regulatory Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1)   this device may not cause harmful interference, and
(2)   this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-    Reorient or relocate the receiving antenna.
-    Increase the separation between the equipment and receiver.
-    Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-    Consult the dealer or an experienced radio/TV technician for help.

12. Contact Us

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