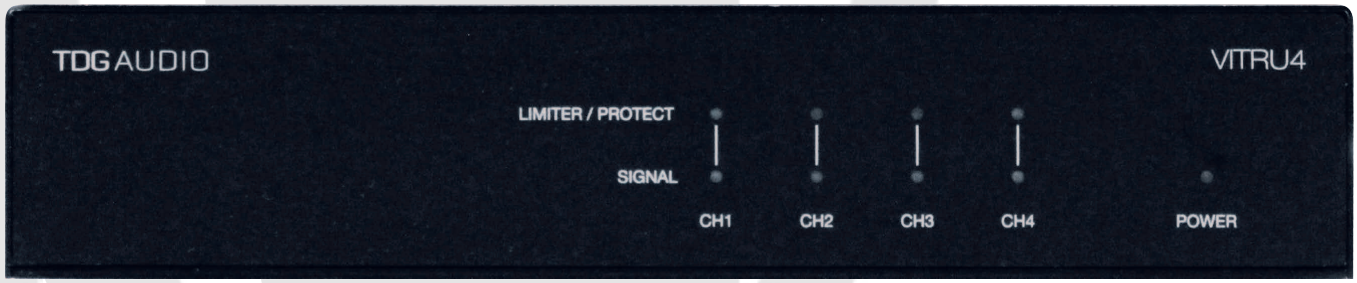
TDG AUDIO

Owner's Manual

VITRU4

4 Channel x 120 watt



SAFETY INSTRUCTIONS

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING:
TO REDUCE THE RISK OF ELETRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Explanation of Graphical Symbols

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons

The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions - The safety and operating instructions should be retained for future reference.

3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions- All operating and other instructions should be followed.

5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.

PORTABLE CART WARNING

7. Wall or Ceiling Mounting- The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

8. Ventilation- The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

9. Heat - The appliance should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.

APPLICABLE FOR USA, CANADA OR WHERE APPROVED FOR USAGE
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE PLUG TO WIDE SLOT, INSERT FULLY.
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU AU FOND.

10. Power Source - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11. Power-Cord Protection- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

12. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.

13. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

14. Object and Liquid Entry - Care should be taken so that objects do not fall into and liquids not spilled into the inside of the appliance.

15. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:

a. The power-supply cord or the plug has been damaged; or

b. Objects have fallen onto, or liquid has been spilled into the appliance; or

c. The appliance has been exposed to rain; or

d. The appliance does not appear to operate normally or exhibits a marked change in performance; or

e. The appliance has been dropped, or the cabinet damaged.

16. Servicing - The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.

17. Grounding or Polarization- The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.

18. Attachments - Only use attachments/accessories specified by the manufacturer

19. Electrical Storms - Unplug this apparatus during lightning storms.

When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.
- To avoid electric shocks, be sure to unplug the unit's power supply cord when connecting speakers.
- Be sure to follow the instructions below when rack-mounting the unit. Failure to do so may cause a fire or personal injury.
  - Install the equipment rack on a stable, hard floor. Fix it with anchor bolts or take other arrangements to prevent it from falling down.
  - When connecting the unit's power cord to an AC outlet, use the AC outlet with current capacity allowable to the unit.
  - No rack-mounting screws are supplied with the unit. Separately prepare the appropriate screws for the rack.
- Make sure that the ventilation slots as well as the fan is not blocked by any objects that may obstruct air flow to prevent that the unit overheats.

When the Unit is Installed

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely. internal temperature rise.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.

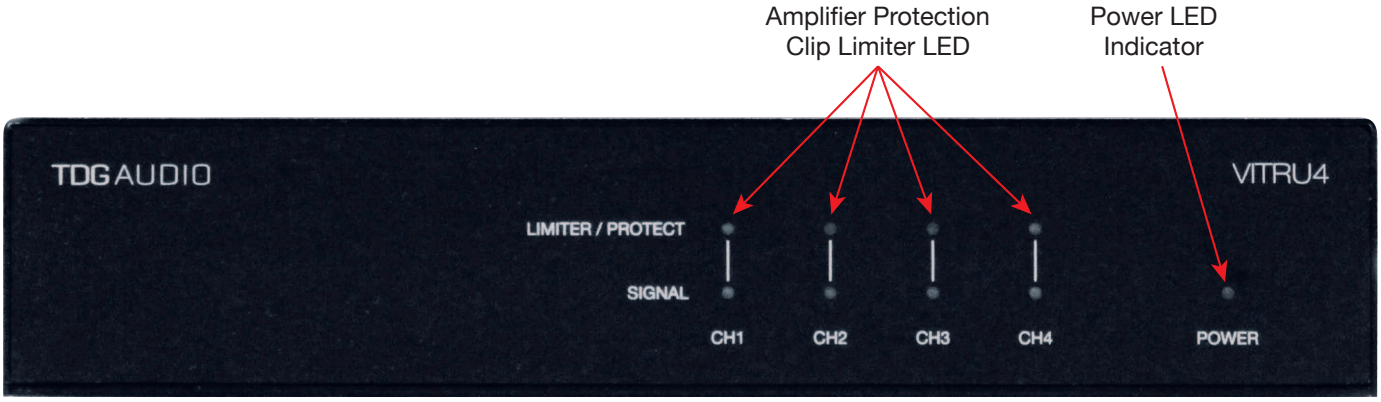
Maintenance and Repair

- **WARNING!** Advanced technology, e.g., the use of modern materials and powerful electronics, requires specially adapted maintenance and repair methods. To avoid a danger of subsequent damage to the apparatus, injuries to persons and/or the creation of additional safety hazards, all maintenance or repair work on the apparatus should be performed only by a TDG authorized service partner. TDG is not responsible for any injury, harm or related damages arising from any failure of the customer, owner or user of the apparatus to facilitate those repairs.

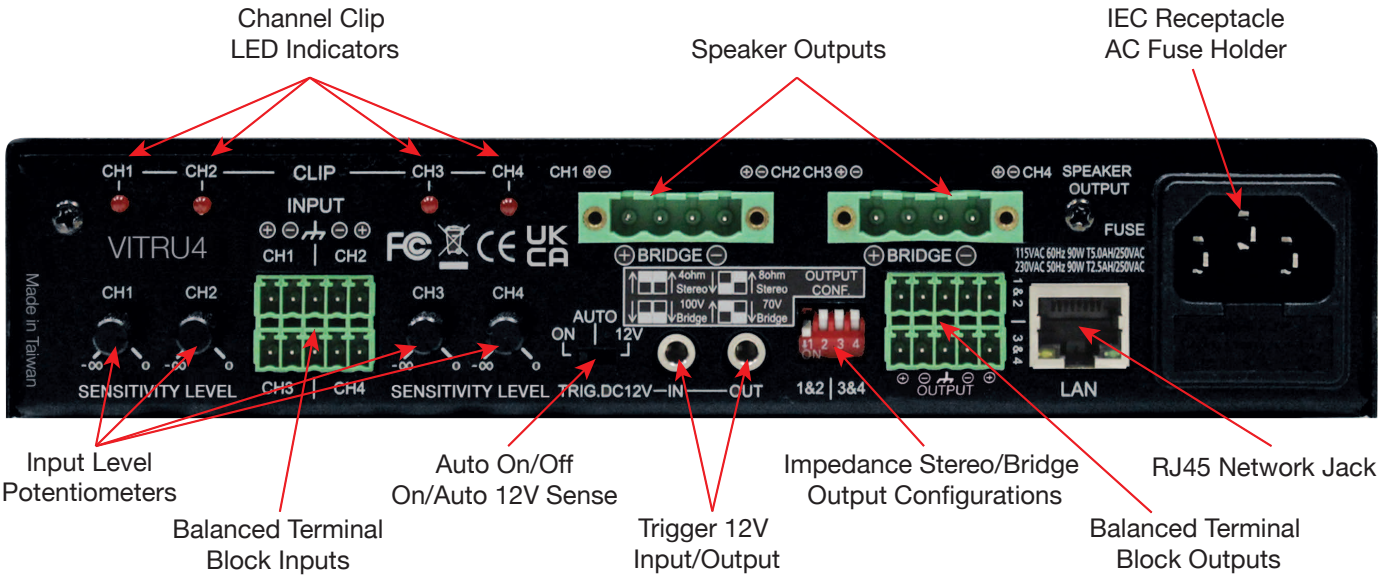
FEATURES

1. **Power Output:** 120 watts per channel into 4 ohms, 8 ohms or 70/100v.
2. **Versatility:** Suitable for 70/100V applications.
3. **Inputs:** 4 balanced inputs, with RCA adapters included for up to two stereo RCA inputs.
4. **Standby Options:** Default standby automatic mode, and 12V trigger for manual on/off control.
5. **Control Options:** Check TDG resource center for drivers that allow control by other systems.
6. **Network Connectivity:** Connects to the network via LAN for remote configuration.
7. **Configuration Interface:** Fine-tuning of loudspeakers (max. power limit, DSP filter, volume) and input-to-output channel assignment via a configuration interface.
8. **Rack Mountable:** Adapters included for installation in a 19" rack, with the option to install one or two amplifiers per 1U of rack space.
9. **Active Cooling:** Designed for quiet operation as it is actively cooled, eliminating disturbing noise.
10. **Digital Overload Protection:** Ensures operational safety by preventing overload issues.
11. **Preset Selection:** Allows you to select presets for loudspeakers to optimize sound in different rooms.
12. **Compact Dimensions:** Compact design for space-efficient installation.

FRONT PANEL



REAR PANEL



FUNCTIONS

PROTECT/LIMITED LED

Each channel (1, 2, 3, and 4) has a protection/clip limiter LED. Whenever this red indicator lights up, it implies that the internal protections have been triggered to protect the device against damage. Should this protection turn on, please check if the amplifier is being overdriven or if there is any short circuit in speaker cables.

Whenever this red indicator is blinking, it implies that the limiter is clipping. The limiter only responds to actual clipping, and automatically compensates for load and voltage variations. Clip limiting is generally recommended, especially to protect high frequency drivers. It illuminates red whenever the amplifier reaches the selected power limit.

SIGNAL LED

Each channel has a signal LED. It illuminates green when a signal is present and beyond a default input threshold level.

FACTORY RESET

Please turn to page **11**

IEC 3-PIN RECEPTACLE

The VITRU4 amplifier has an auto-switch 115/230VAC power supply that operates on mains from 100 - 240 V at 50Hz or 60 Hz. The IEC receptacle on the rear panel accepts the supplied IEC cord which terminates in a connector plug appropriate for the country of sale.

CAUTION: This unit is a Class 1 device. Do not defeat the safety connector or use a power cord without the safety ground pin.

AC FUSE & HOLDER

The main power supply fuse may be checked or replaced. Make sure that the power cord is unplugged from the AC mains first. Then use a flat-headed screwdriver to undo the fuse carrier from the fuse holder. Inspect the fuse and replace with the exact same type indicated on the unit. The use of any other type of fuse may lead to an unsafe condition. If the fuse blows again immediately, then unplug the power cord and contact the dealer for service. Do not open the unit, as there are no user-serviceable parts inside, and dangerous voltages exist.
CAUTION: Only replace with the same type fuse.

BALANCED TERMINAL BLOCK INPUT 1, 2, 3, and 4

The output is used to loop through the input signal (without altering it). This is practical, for example, if several amplifiers are needed in a large zone. The outputs are 10k Ω balanced or unbalanced.

a. Make sure your audio source devices are powered off.
b. The unit comes with two preinstalled RCA to euro style connectors, you can use these for any RCA sources, e.g. Sonos Connect

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INPUT LEVEL POTENTIOMETERS
Use these potentiometers to adjust the gain of input 1, 2, 3, and 4, respectively.

SPEAKER OUTPUT 1, 2, 3, and 4 OUTPUT
There are two sets of removable speaker wire terminals, one for two amplifier outs, either amplifier 1 and 2 or amplifier 3 and 4. The terminals accept speaker wires up to 14 AWG in size. Each terminal has four screw-down connections for speaker wire: One positive (+) and one negative (-) for each speaker. Unscrew the connection, insert the appropriate bare speaker wire, then tighten firmly.

WARNING: The negative (-) terminal is not Ground. Please do not short the negative (-) terminals.

WARNING!: When the AC power is on, there is a potential of having dangerous voltage at the output terminals on the back of the amplifier. Use caution not to touch these contacts. Turn off the AC Mains disconnect switch prior to making any connections.

NETWORK CONTROL
An RJ45 jack is supplied for connection to an Ethernet network for external control and monitoring, either by a direct wired connection or via an external WiFi access point. Any device with a modern web browser can be used. LEDs below the connector indicate valid network connection (LINK) and network activity (ACT). When several network devices are connected to a network, a switch with a built-in DHCP server should be used. The cs-500dsp4 is set to DHCP mode on delivery, which means that the network router assigns an IP address to the device. Please make sure that enough free IP addresses are available. With a suitable network search/scanner tool you can find the amplifiers that are connected to your network. If there is no DHCP service available, the IP address of the unit will be 192.168.14.1

After the amp is set up correctly and turned on, you can access the unit via a web browser. Make sure that both units are connected to the same local network.

Step 1:
Type in the IP address of the amp (use a scanner tool if you don‘t know it), if the ip address would be: 192.168.1.50, type in this address to your web browser: http://192.168.1.50

Step 2:
Use the following login data to access the amps control panel:
Username: “admin”
Password: “admin”

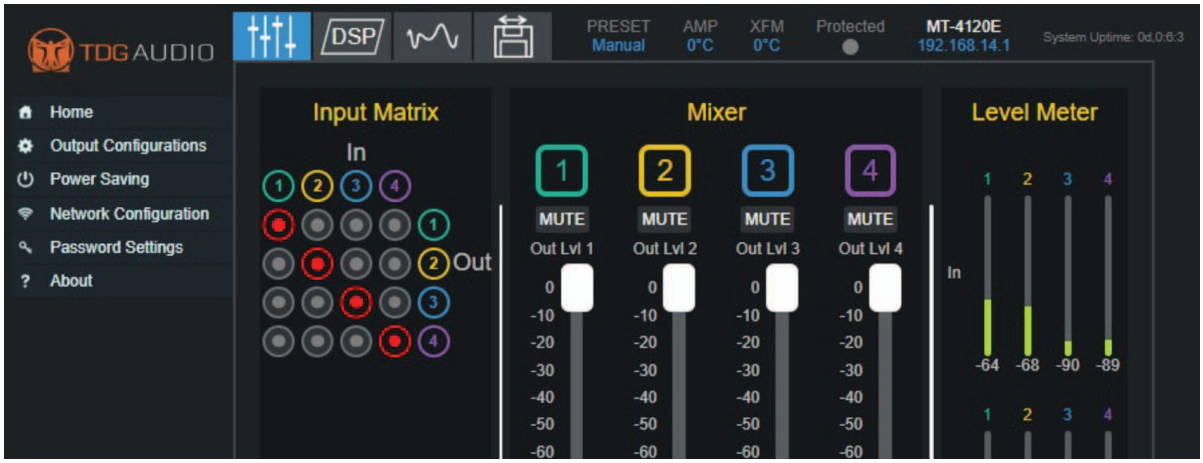
Step 3:
You should now be able access the TDG VITRU4 web GUI.

Web GUI Controls

START SECTION

The TDG VITRU 4 is easy and fast to configure due to the sleek and straightforward GUI design. On the start page you have the input matrix to route the input signal(s) to the desired output channel(s). In the mixer section, the output channel(s) volume can be adjusted or the amp channel muted. The level meter shows the input signal/source strength and the output signal strength, on the top bar the selected preset, the temperatures and the ip address as well as the system uptime and protection are displayed.

WARNING: If you only want to use the basic functions you may leave the settings as is or go to the "PRESET SECTION" to select the appropriate preset for the speaker. If the amp is not correctly configured, this may harm the speakers and/or lead to damage!



DSP SECTION

In this section, some basic DSP functions can be configured. First of all the HPF (highpass filter) can be individually selected for all channels with the desired frequency. Please make sure to turn it on by pressing on "HPF" (it will turn to yellowish). With the tone control, the treble and bass level can be adjusted. The limiter can be used to limit the max. power output.

- 0 dB = full power, e.g. ~ 120 watts
- 3 dB = half power, e.g. ~ 60 watts
- 6 dB = quarter power, e.g. ~ 30 watts
- 9 dB = eighth power, e.g. ~ 15 watts

EQ FILTER SECTION

If required, EQ filters can be used. Three filters are available per channel, the LPF and HPF are each 12 dB per octave. With a suitable measurement system, the frequency response should be measured at different points in the room. Afterwards, filters should only be set if a certain tendency is visible on all measurements. We recommend checking the changes with a known music song, for this purpose the filters can be switched on and off in real time.

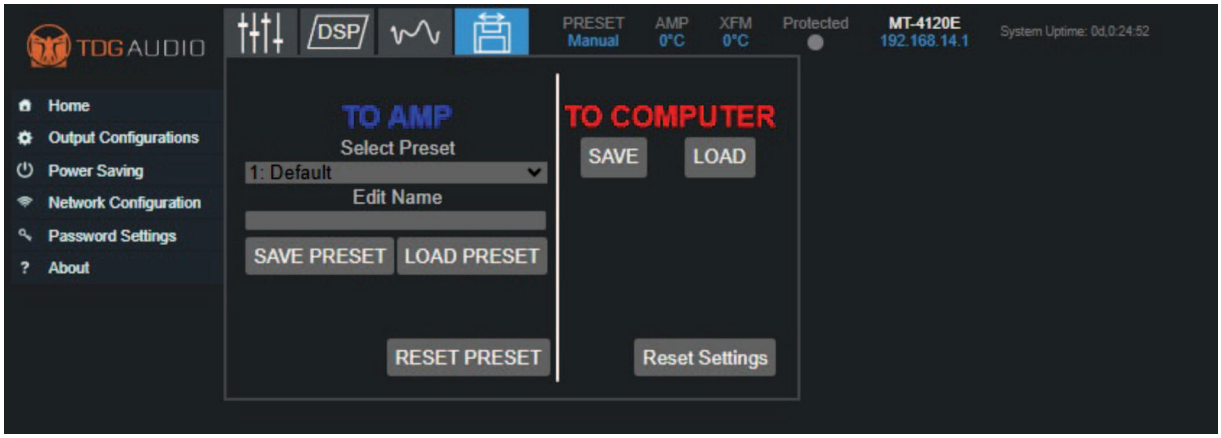
WARNING: Only for qualified users, wrongly set filters can make the speakers sound badly and might harm them!

PRESET SECTION

The presets can be loaded not only from the amplifier, but also from the data memory of the individual device.
An individual preset can be loaded for each amplifier output, so that different speakers or subwoofers can be driven by one amplifier.

If changes have been made to the settings of the amp, they can be saved here. We recommend that you also back up the data using the export function.

WARNING: Please double check your selection, since a wrong selection could damage the speaker.



OUTPUT CONFIGURATION SECTION

The speaker configuration is done on the rear side of the amplifier. For this purpose, the DIP switches have to be set to the desired configuration.

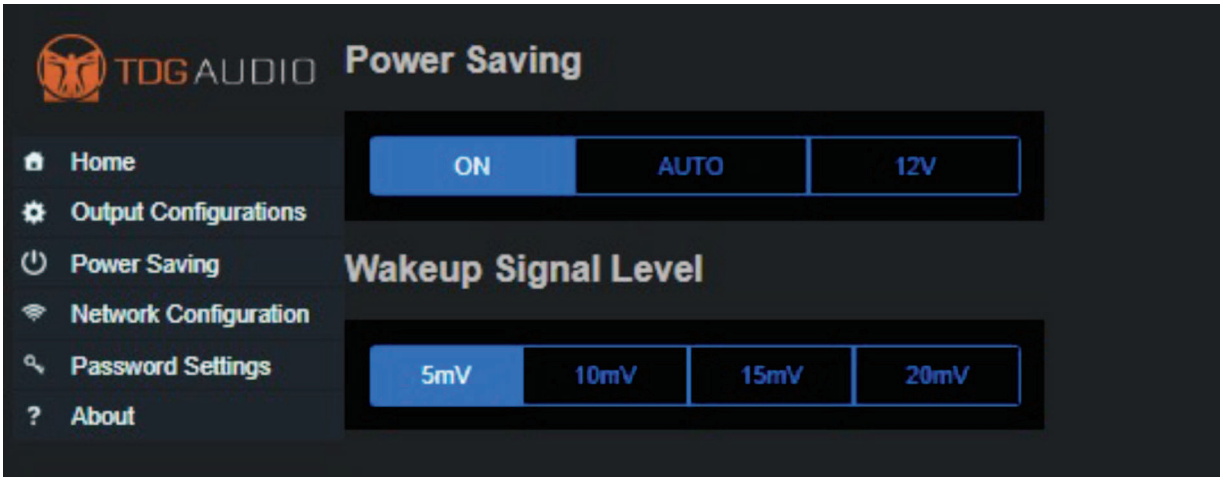
The following settings are available:
4x 120 watts into 4 ohms
4x 120 watts into 8 ohms
2x 240 watts into 8 ohms* (4 ohms at your own risk) 2x 240 watts at 70 volts
2x 240 watts at 100 volts

* To activate the bridge mode, the DIP switch must be set to "8 Ohm". Furthermore, the switch in the GUI menu item "Output Configuration" has to be changed from "8 Ohm Stereo" to "8 Ohm Bridged".

WARNING: Please check the displayed information, as an incorrect configuration could damage the amplifier or speaker.

POWER SAVING SECTION

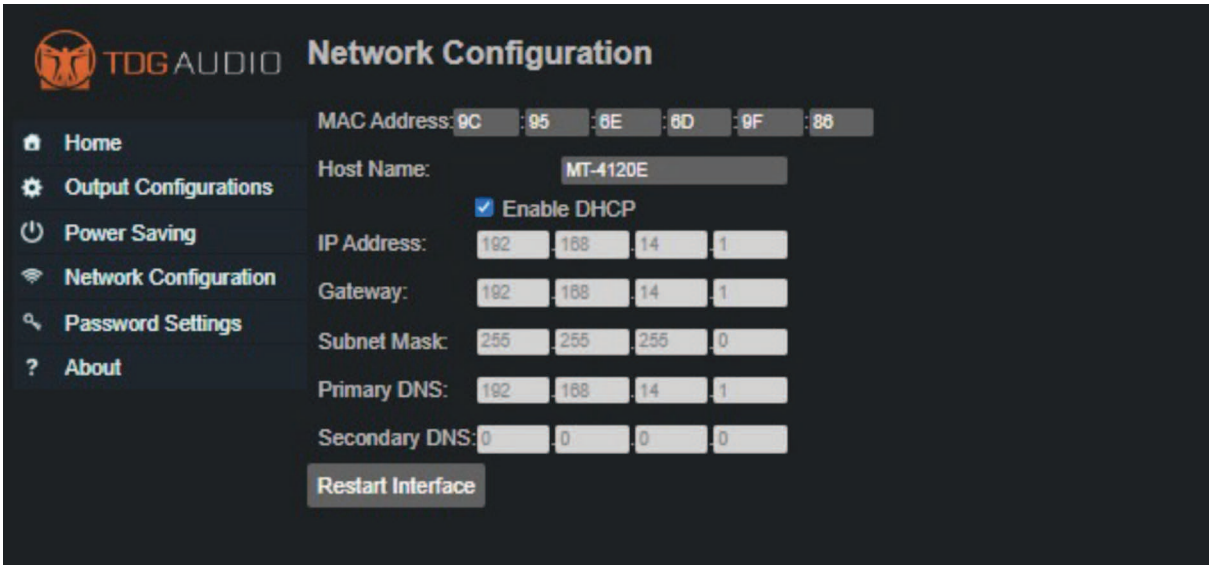
Again, the values set by DIP switches on the rear panel are only displayed. Please make sure that the configuration is correct so that the energy saving options can be utilized.
In "Auto" mode it is possible to adjust the sensitivity.



NETWORK CONFIGURATION

The set network values are displayed here and can also be changed.

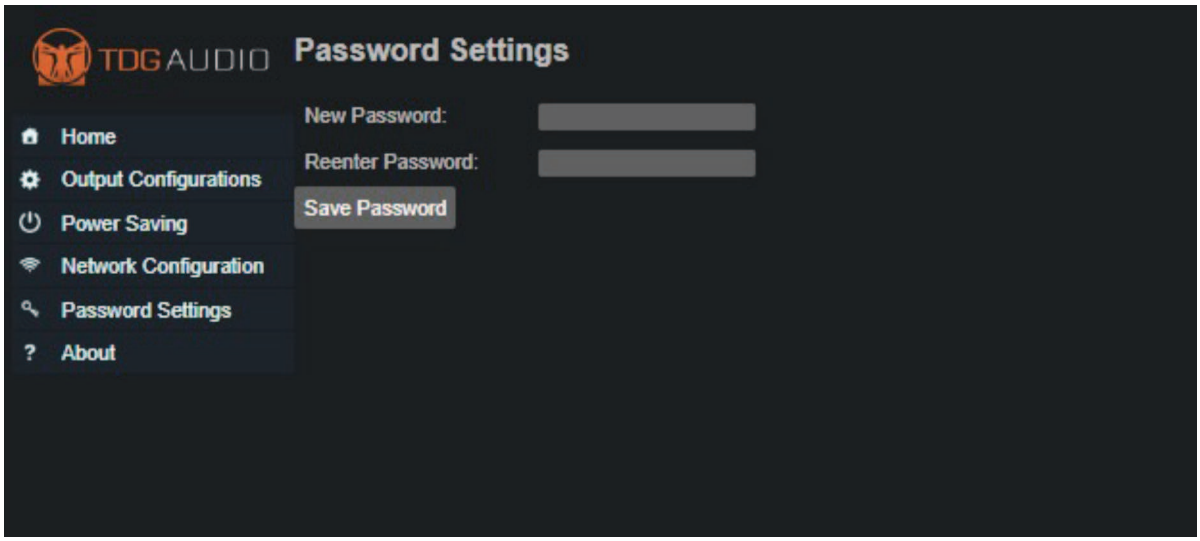
ATTENTION: Please make changes only by qualified users, since the amplifier may not be visible if it is configured incorrectly.



PASSWORD SECTION

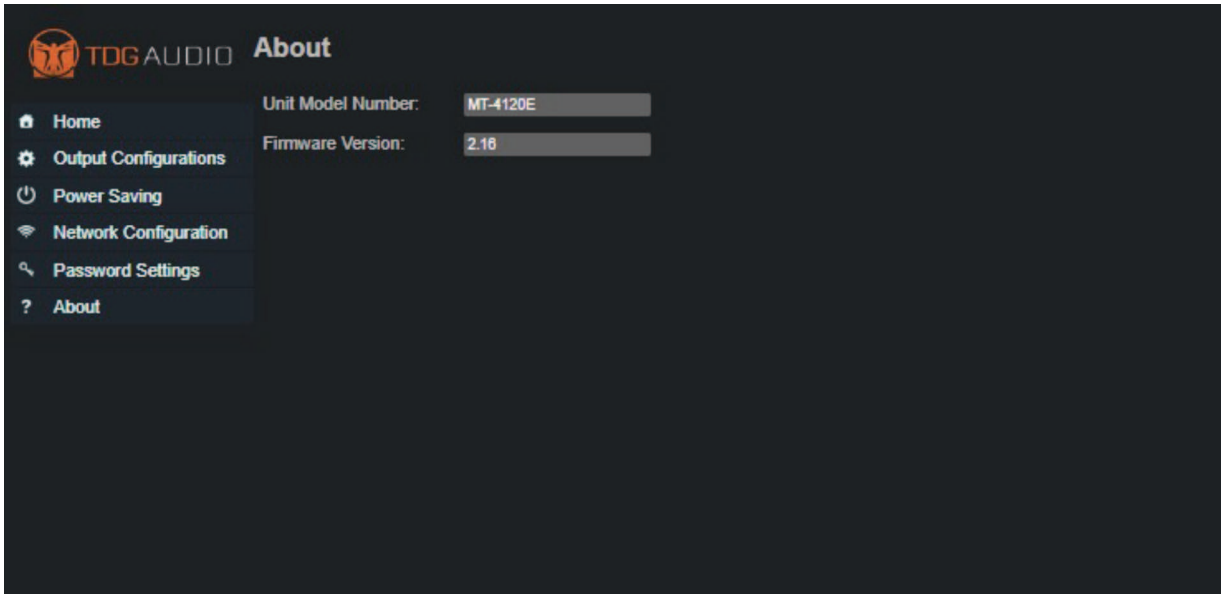
The device can be secured by a password in this section.

WARNING: We recommend to keep the password safe!



ABOUT SECTION

Here the device name and the software version can be checked.



FACTORY RESET

To perform a factory reset, follow these steps:

1. Remove the audio input adapter(s)
2. Power on the device
3. Use a safety pin to assert the hidden button on the rear panel for more than 5 seconds
4. The device will perform a factory reset and reboot afterward

VITRU4 DRIVERS:

https://www.tdgaudio.com/VITRU4-drivers

Box Content

- Amplifier, TDG VITRU4
- Removable terminal plug (4P), 2 pcs
- Removable terminal plug (5P), input adapter with RCA cable connected, 2 pcs
- US power cord
- Installation manual
- Adapter rack ear for 19″ rack mounting (1x amplifier 1U)
- Adapter rack ear for 19″ rack mounting (1x amplifier 1U)
- Adapter amp connector for 19″ rack mounting (1x amplifier 1U)

Save the carton and polystyrene inserts for future safe transport in case the amplifier is moved or requires shipping for repair.

LIMITED FIVE-YEAR WARRANTY

TDG Audio warrants to the original retail purchaser only that this TDG Audio product will be free from defects in materials and workmanship for a period of five years, provided the product was purchased from a TDG Audio Authorized Dealer. Defective products must be shipped, together with proof of purchase, prepaid insured to the TDG Audio Authorized Dealer from whom they were purchased, or to the TDG Audio factory at the address listed on this installation instruction manual. Freight collect shipments will be refused. It is preferable to ship this product in the original shipping container to lessen the chance of transit damage. In any case, the risk or loss or damage in transit is to be borne by the purchaser.

If upon examination at the Factory or TDG Audio Authorized Dealer it is determined that the unit was defective in materials or workmanship at any time during this warranty period, TDG Audio or the TDG Audio Authorized Dealer will, at its option, repair or replace this product at no additional charge, except as set forth below. If this model is no longer available and can not be repaired effectively, TDG Audio, at its sole option may replace the unit with a current model of equal or greater value. In some cases where a new model is substituted, a modification to the mounting surface may be required. If mounting surface modification is required, TDG Audio assumes no responsibility or liability for such modification.

All replaced parts and product become the property of TDG Audio. Products replaced or repaired under this warranty will be returned to the original retail purchaser, within a reasonable time, freight prepaid. This warranty does not include service or parts to repair damage caused by accident, disaster, misuse, abuse, negligence, inadequate packing or shipping procedures, commercial use, voltage inputs in excess of the rated maximum of the unit, or service, repair or modification of the product which has not been authorized or approved by TDG Audio. This warranty also excludes normal cosmetic deterioration caused by environmental conditions.

This warranty will be void if the serial number on the product has been removed, tampered with or defaced. This warranty is in lieu of all other expressed warranties. If the product is defective in materials or workmanship as warranted above, the purchaser's sole remedy shall be repair or replacement as provided above. In no event will TDG Audio be liable for any incidental or consequential damages arising out of the use or inability to use the product, even if TDG Audio or a TDG Audio Authorized Dealer has been advised of the possibility of such damages, or for any claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply. All implied warranties on the product are limited to the duration of this expressed warranty. Some states do not allow limitation on the length of an implied warranty. If the original retail purchaser resides in such a state, this limitation does not apply.

LIMITED
5 YEAR
WARRANTY

Recycling notice: If the time comes and this apparatus has fulfilled its destiny, do not throw it out into the trash. It has to be carefully recycled for the good of mankind, by a facility specially equipped for the safe recycling of electronic apparatus. Please contact your local or state recycling leaders for assistance in locating a suitable nearby recycling facility. Or, contact us and we might be able to repair it for you.

TDG AUDIO

Engineered in the USA | Made in Taiwan | 1 (866) TDG 6321 | www.TDGAUDIO.com

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