Taramp's HV 40000 CHIPEO

Taramps HV 40000 Chipeo High Voltage Amplifier User Manual

Model: HV 40000 CHIPEO | Brand: Taramp's

1. Introduction

The Taramps HV 40000 Chipeo High Voltage Amplifier is a high-performance monoblock amplifier designed for large automotive sound systems. It delivers significant power output, emphasizing performance for subwoofers to high midrange frequencies with high tone quality.

This amplifier features a maximum power of 40,000 Watts RMS at 0.5 Ohm, incorporating thermal protection and anti-short circuit mechanisms. It is powered by batteries connected in series to achieve the required high voltage.

Figure 1: Front view of the Taramps HV 40000 Chipeo High Voltage Amplifier.

2. Safety Information

- Always disconnect the vehicle's battery before making any electrical connections.
- Due to the high voltage operation, installation should only be performed by qualified professionals.

- Ensure proper grounding to prevent electrical hazards.
- Use appropriate circuit breakers and fuses as specified in the installation guidelines.
- Avoid exposing the amplifier to moisture or extreme temperatures.
- Do not attempt to open or repair the amplifier yourself. Refer to authorized service personnel.

3. Setup and Installation

3.1. Power Connections

The HV 40000 amplifier operates on a high voltage DC supply, typically requiring 18 batteries connected in series to achieve 227VDC. The minimum supply voltage is 140VDC, and the maximum is 275VDC. Proper battery configuration and heavy-gauge wiring are critical for stable operation and safety.

- Connect the main power battery to the car alternator and preamplifier using 4 AWG wiring.
- Install a 60A circuit breaker for the main power battery.
- Connect the series of 12.6 VDC batteries to the amplifier's power input. Each battery bank should have a 130A circuit breaker.
- Use 4 AWG wiring for the amplifier's power input (positive/negative).

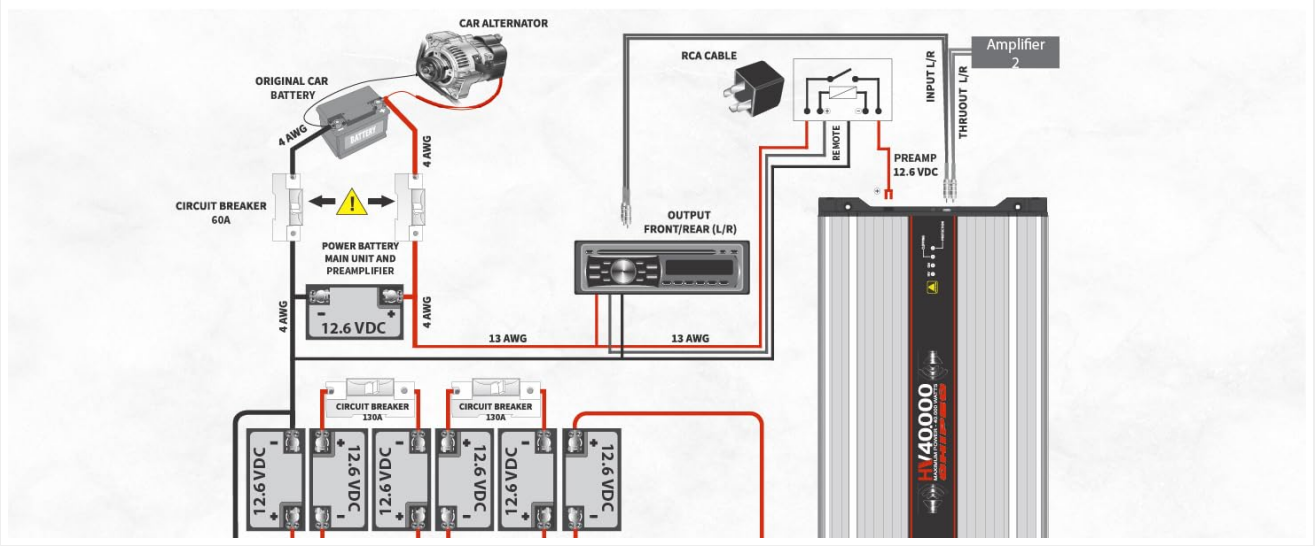

Figure 2: General wiring diagram for the HV 40000 amplifier, illustrating power, ground, and signal connections from the car battery, alternator, head unit, and external battery banks.

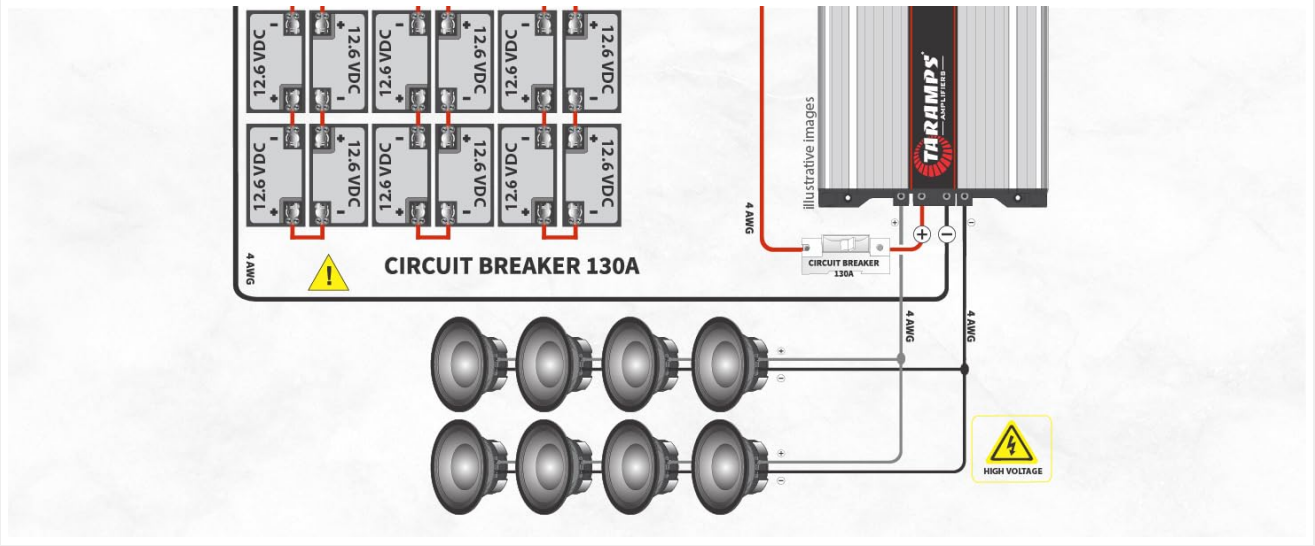

Figure 3: Detailed wiring diagram showing speaker connections and the series connection of 12.6 VDC batteries with 130A circuit breakers to the amplifier.

3.2. Audio Input Connections

Connect the RCA output from your head unit or preamplifier to the RCA input on the HV 40000 amplifier. The amplifier also features a THRU OUT RCA connection for passing the audio signal to another amplifier.

Figure 4: Rear view of the amplifier, highlighting the RCA input, THRU OUT, and level control.

3.3. Speaker Connections

Connect your speakers to the amplifier's speaker terminals. Ensure correct polarity (positive to positive, negative to negative). The HV 40000 is a monoblock amplifier, designed for a single channel output. It is rated for 0.5 Ohm impedance.

Important: We recommend using Oxygen Free Copper (OFC) cables for installation. Copper clad aluminum wire (CCAW) must not be used.

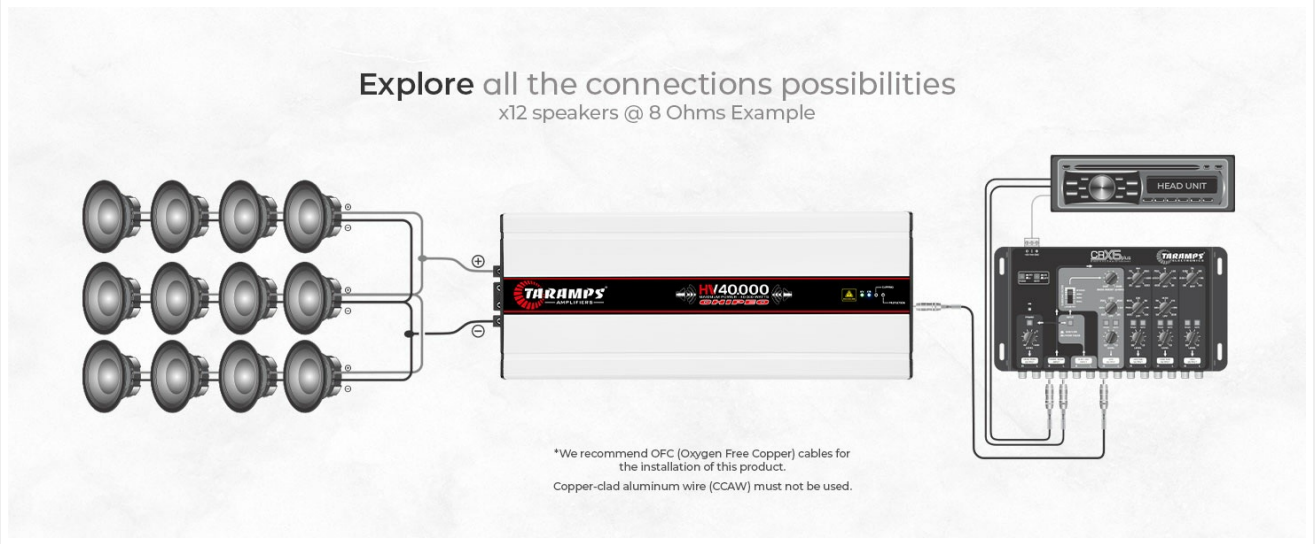

Figure 5: Example connection diagram for twelve 8-Ohm speakers to the HV 40000 amplifier.

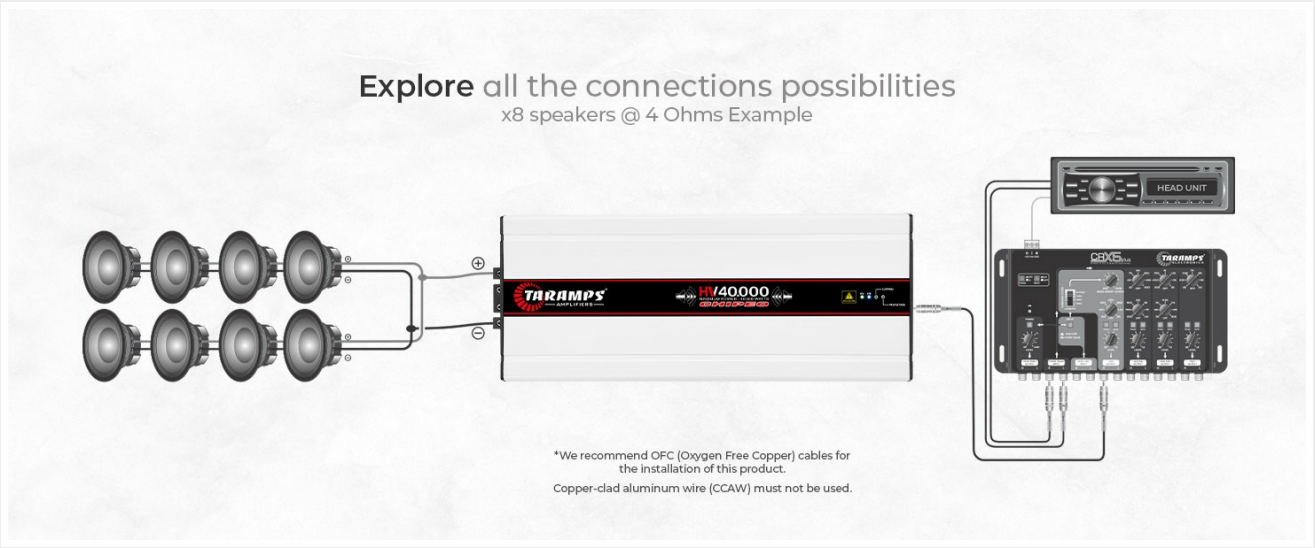

Figure 6: Example connection diagram for eight 4-Ohm speakers to the HV 40000 amplifier.

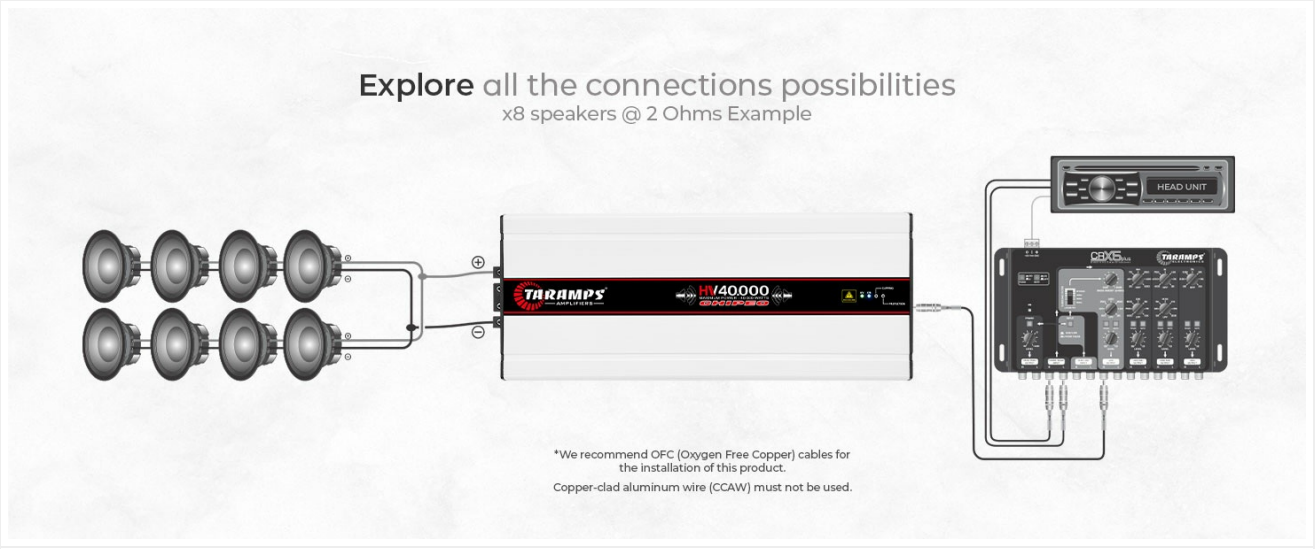

Figure 7: Example connection diagram for eight 2-Ohm speakers to the HV 40000 amplifier.

4. Operation

4.1. Powering On/Off

The amplifier will power on automatically when a remote signal is received from the head unit. Ensure all connections are secure before powering on the system.

4.2. Level Adjustment

The input sensitivity can be adjusted using the 'LEVEL' control knob on the amplifier. The input sensitivity is 330mV (level 100%) at 0.5 Ohm. Adjust this control to match the output level of your head unit, ensuring maximum clean signal without clipping.

4.3. Crossover Settings

The amplifier includes HPF (High Pass Filter) and LPF (Low Pass Filter) crossover controls. Adjust these settings to optimize the frequency range delivered to your speakers, preventing distortion and improving sound quality. Refer to your speaker specifications for recommended crossover points.

4.4. Indicator Lights

The amplifier features indicator lights for operational status and protection warnings:

- **ON:** Indicates the amplifier is powered on and operating normally.
- **CLIPPING:** Illuminates when the audio signal is distorting. Reduce the input level or gain to prevent damage to speakers and the amplifier.
- **PROTECTION:** Illuminates when the amplifier enters protection mode due to a fault (e.g., short circuit, overheating, incorrect voltage). Refer to the Troubleshooting section.
- **HIGH VOLTAGE:** Indicates a high voltage condition.

Figure 8: Side view of the amplifier, showing the control panel with indicator lights for Clipping, Protection, and High Voltage.

5. Maintenance

5.1. Cooling System

The HV 40000 amplifier is equipped with smart fans and designed for great heat dissipation. Ensure that the amplifier is installed in a location with adequate airflow and that the cooling vents are not obstructed. Regularly check for dust or debris accumulation on the fans and vents, and clean them carefully if necessary.

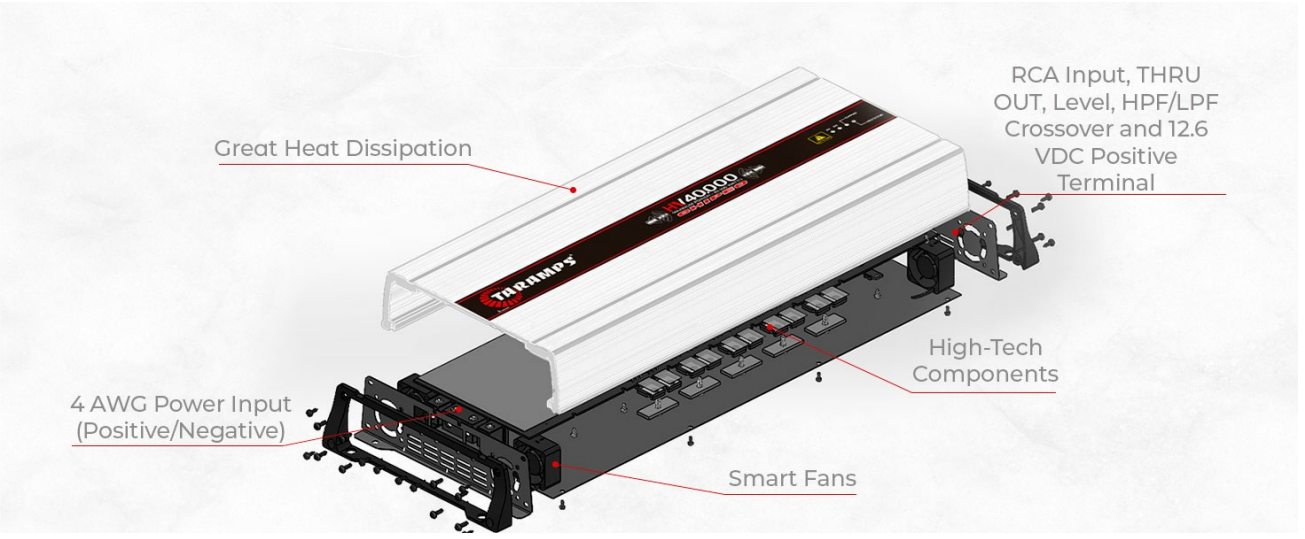

Figure 9: Exploded view illustrating the internal components, including the smart fans and heat dissipation design.

5.2. General Care

- Keep the amplifier clean and free from dust. Use a soft, dry cloth for cleaning.
- Avoid placing objects on top of the amplifier that could block ventilation.
- Periodically check all wiring connections to ensure they are secure and free from corrosion.

6. Troubleshooting

If the amplifier is not functioning correctly, refer to the following common issues and solutions:

Symptom	Possible Cause	Solution
Amplifier does not power on.	No power supply, faulty remote wire, blown fuse/circuit breaker.	Check all power connections, remote wire, and circuit breakers. Ensure sufficient battery voltage.
PROTECTION light is on.	Short-circuit at output, low impedance, high/low supply voltage, thermal overload.	Check speaker wiring for shorts. Verify speaker impedance. Check supply voltage. Ensure adequate ventilation. Allow amplifier to cool down.
CLIPPING light is on.	Input signal too high, gain set too high.	Reduce the head unit's volume or the amplifier's 'LEVEL' control until the light no longer illuminates during peak playback.
No sound output.	Incorrect RCA connections, faulty speakers, amplifier in protection mode.	Verify RCA cable connections. Test speakers. Check if PROTECTION light is on.

If problems persist after attempting these solutions, contact qualified service personnel or Taramp's customer support.

7. Specifications

Feature	Detail
Operation Class	Class D

Feature	Detail
Number of Channels	01 (Monoblock)
Maximum Power (@227VDC - 0.5 Ohm)	40,000W RMS
Input Sensitivity	330mV (Level 100%) @ 0.5 Ohm
Signal to Noise Ratio	>95dB
Frequency Response	10Hz - 15KHz (0.5dB)
Efficiency (ES)	92% @ 0.5 Ohm
Input Impedance	27K Ohms
Protection System	Short-circuit to output, short on output compared to GND, low impedance at output, high/low supply voltage, thermal protection.
Minimum Supply Voltage	140VDC
Maximum Supply Voltage	275VDC
Consumption at Rest	110mA
Maximum Music Consumption (@0.5 Ohm)	91.5A
Maximum Consumption in Sinusoidal Signal (@0.5 Ohm, 100Hz)	183A
Dimensions (H x W x D)	8.98-in x 2.52-in x 22.07-in
Weight	12.54lb
ASIN	B07Y5PMLV4
Item Model Number	HV 40000 CHIPEO

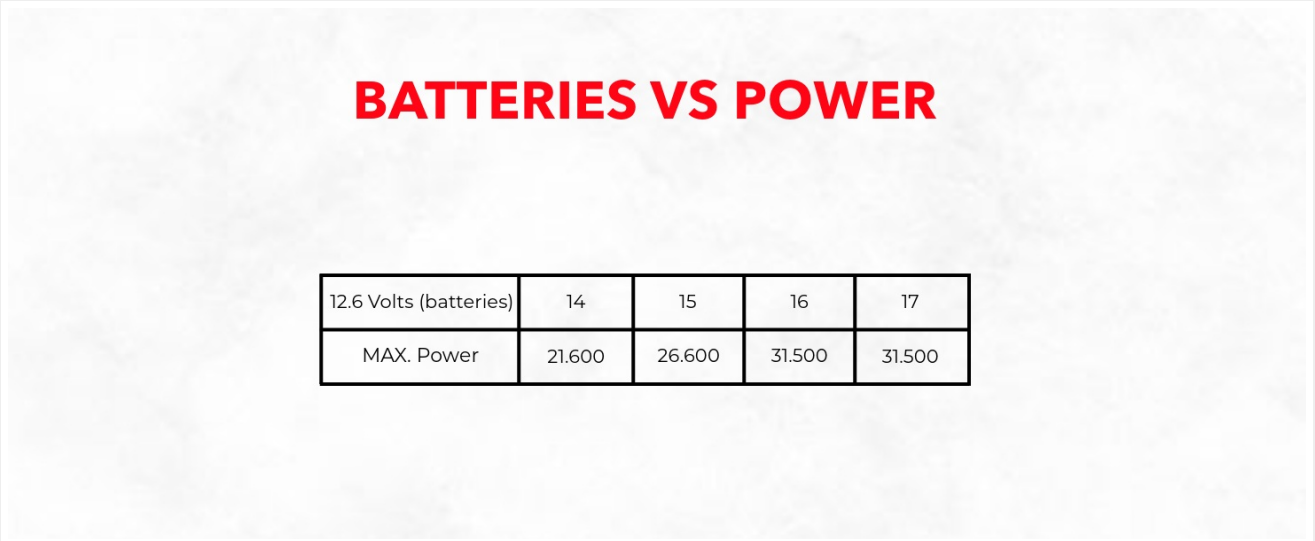

Figure 10: Table illustrating the relationship between the number of 12.6 Volt batteries and maximum power output.

8. Warranty and Support

8.1. Warranty Information

This product may be eligible for extended protection plans. Please refer to your purchase documentation or retailer for specific warranty terms and conditions.

- Example: A 3-Year Protection Plan may be available for purchase.

8.2. Customer Support

For technical assistance, service, or further inquiries, please contact Taramp's customer support. You can also refer to the official user manual available online for more detailed information.

Official User Manual (PDF): Download Here

Manufacturer: TARAMPS