



MODEL 2.2HV
Series TO-3
(1998-MSRP: \$699.00)

**OWNER'S MANUAL AND
INSTALLATION GUIDE**

INTRODUCTION

Latest technology, high sound quality, powerful delivery and **LINEAR POWER™** reliability all describe **LINEAR POWER™** amplifiers. With new "HV" circuitry, their value increases. Versatile capabilities such as stereo, mono or mixed stereo/mono operation and 2 ohm capability make these amplifiers extremely desirable to build an entire system around or begin a system.

TECHNICAL DESCRIPTION

The "HV" series amplifiers are a series of amplifiers based around our dedication to high voltage designed products. These amplifiers have an inverted channel, and quiet turn on circuit has been added for improved sound performance. The amplifier design incorporates a new proprietary hybrid mosfet driven bipolar power supply for increased dynamic headroom and efficiency. The **TO-3** output stages of these amplifiers will deliver a significant increase in power into 2-ohm stereo loads. Amplifier reliability is accomplished by operating the output transistors at 50% of their maximum rating.

WIRING

Disconnect battery ground cable before making any power connections.

RED WIRE: +12 volts. Connect directly to battery positive terminal and should be fused within 18 inches from the battery and another fuse where the connection to the amplifier is made. Remember to use the proper size fuses. **WARNING: USING OVERSIZED FUSES IS DANGEROUS AND WILL DAMAGE YOUR AMPLIFIER!** See specifications for proper fuse size.

BLACK WIRE: Negative Ground. Connect to clean unpainted metal surface on car chassis.

RED/WHITE WIRE: Remote turn on lead requires 12 volts; connect to power antenna lead from radio. When this is not available, you may connect to a +12 volts wire that is on with the ignition on or in the accessory position.

RCA CONNECTIONS: Connect with quality-shielded patch cords from source, crossover, or any other sound processor.

SPEAKER CONNECTIONS: Connect speaker terminals to amplifier, facing the terminal, left to right, **Left (-), Left (+), Right (-), and Right (+)**. For mono operation use left positive (+) and right negative (-). These amplifiers are capable of 2-ohm operation in stereo or 4 ohm in mono.

OPERATING THE AMPLIFIER AT LESS THAN THESE RATINGS WILL CAUSE AMPLIFIER FAILURE AND VOID YOUR WARRANTY.

NOTE: The **2.2HV** has internal taps for 2-ohm operation. To access, remove bottom cover. They are located near the middle of the amplifier and are set to 4 ohms at the factory. To change to 2-ohm operation, pull the quick disconnects off the taps marked “4” and place them on the taps marked “2”. This will ensure safe operation into 2-ohm stereo loads, as well as, 4 ohm bridged loads.

GAIN ADJUSTMENT

Set the amp gain to minimum, turn the source up until it just starts to distort, then back down slightly. This is the point where the output of the source is cleanest. Now adjust the amplifier gain up until it just starts to distort and back down slightly. This will allow the source and amp to reach maximum usable output at the same time.

MOUNTING

1. The amplifier works best if it is kept as cool as possible. Mount in a position that allows air to flow freely through the fins. Be sure there is ample space above the amplifier to avoid trapping heated air rising from the amplifier. The amplifier should not be mounted upside down. Avoid mounting any amplifier in the dash or on the firewall to avoid noises being radiated directly onto the case.

2. The case of your amplifier is designed to act as a noise shield. To maintain this protection, be sure the metal case of the amp does not touch the metal of the car. Do not remove or damage the rubber grommets, which provide electrical insulation and vibration isolation.

GENERAL TROUBLESHOOTING

NO SOUND: Check all connections. Check fuses. With a meter be sure there is +12 Volts on the main power wire and the turn on wire, but not on the ground wire. Check by substitution or other method for proper operation of music source.

BLOWS FUSE: Check all connections to be sure all power wires and speaker wires do not touch ground or each other. Re-check polarity of main power wires.

SHUTS OFF: This amplifier is equipped with a thermal and short circuit protection. In the unlikely event of excessive temperature or improper speaker impedances, the amp will turn itself off. When the condition is corrected (temperature decreases or speaker short is fixed), the amp will turn itself back on. To avoid damage to the speakers, turn volume to a minimum while waiting for the amp to turn itself back on.

SERVICE OR REPAIR

To obtain modification, service or repair, please contact our **ONLY Authorized LINEAR POWER™ Product Service Center:**

T.I.P.S. INC.
3455 Lanell lane, Pearl, MS 39208
(601) 932-8477
E-mail: ray@tipsinc.net

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SPECIFICATIONS

2.2HV

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Rated Power Output (4 Ohms stereo)	12.5 x 2
RMS Power Output (4 ohm stereo/4 ohm brgd) @ 12.5 volts	135 x 2/400 x 1
RMS Power Output (4 ohm stereo/4 ohm brgd) @ 14.4 volts	185 x 2/600 x 1
Maximum Peak Power (mono)	2 HP*
THD @ full output 20 - 20Khz	.004%
Slew Rate <u>volt/microsecond</u>	22V/ms
Damping Factor @ 4 ohms	>100
Channel separation	>72dB
Maximum current	
4 ohms	35A
2 ohms	50A
Idle	1.2A
Fuse rating (AGU style)	40A
Dimensions:	3" x 9.5" x 12"

*HP=Horsepower a mechanical unit of power equal in the USA to 746 watts

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