

ENCORE 150
POWER AMPLIFIER
OWNER'S MANUAL

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GENERAL PRODUCT SAFETY

For your safety and the proper operation of this product, please read both this document and the owner's manual before continuing to unpack or install this product.

1) This product is designed for indoor commercial or residential use. Never use this product outdoors, in high humidity or in the presence of combustible materials.

This product should be placed on a strong stable surface that provides both lateral stability and proper load bearing strength. This is especially necessary for amplifier stacks and tall, heavy loudspeakers which may fall and cause injury.

3) This product requires proper grounding for safety. This is normally provided by a grounded outlet. Also observe power requirements in owner's manual.

The chassis of this product will be at ground potential whenever the product is plugged into a properly grounded AC mains outlet. If there is any doubt about the integrity of the AC mains outlets, have the outlets inspected and/or serviced by qualified personnel.

It is imperative to use this product only with other products that are properly designed for electrical safety.

Note: Chassis grounding does not apply to passive loudspeakers.

4) Keep this product out of the reach of children and pets and keep them away from the area during installation and setup.

5) Never drop objects or liquids into the vents of this unit. Do not operate this product if it is damaged by a fall or impact, or has exhibited any signs of malfunction such as repeatedly blowing fuses, sparks, smoke, repeated breaker trips or severe signal distortion. If any such events should occur, unplug the unit from the AC mains. Have the unit serviced by qualified service personnel before re-using.

6) Be careful to avoid physical injury when moving large and/or heavy products.

7) Remove all jewelry before installing product. This is especially true of loose fitting chains and bracelets. Beside possibly scratching the product, these may enter vents and/or terminals and cause electrical shock.

8) All electrical inter-connections (input signal, cable antenna, speaker, DC etc) should be made before connecting the product to AC mains power. The reverse is true when disconnecting the product.

9) Hazardous voltages may remain present inside some products for a considerable amount of time after turn-off or unplugging from AC mains power. This is particularly true of power amplifiers and their associated supplies. Observe all label warnings.

AC Power Cord Precautions:

Power cords should only be handled by their plugs. Do not handle power cords if hands or cords are wet. Do not place cords under rugs or where they may be stepped upon. Do not pinch cords in door jams, cabinet doors or under furniture. A damaged cord can cause fire or electrical shock. If your cord has been damaged, please contact your dealer to purchase a replacement.

Ventilation:

This product should be installed in such a place as to provide proper ventilation. Do not place unit on rugs, pillows or any surface that will block vents and prevent air circulation. Do not place unit in cabinet that may limit air circulation. Cabinets should allow for intake and exhaust of air for proper ventilation.

Heat:

This product should be placed away from heat sources such as direct sunlight, radiators, stoves, or other appliances that may radiate excessive heat.

Power Sources:

This product should only be connected to a voltage source equivalent to the voltage labeled on the rear of the unit.

Cleaning:

Always unplug the unit before cleaning. Never clean any product while it is plugged in to an AC source. Refer to owner's manual for proper maintenance of finishes, etc.

Hearing:

We strongly recommend that you avoid prolonged exposure to loud noise or music since permanent hearing damage may occur. Our products will provide you with years of listening enjoyment, if you used responsibly.

Following is a short list of some sound levels as a reference for your protection.

Decibel Level	Sound
30	Quiet library, soft whisper
40	Refrigerator, room away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposal, alarm clock at 2 feet

If exposed to for prolonged periods, the following sounds at their decibel levels can cause hearing damage.

90	Subway train, truck traffic, lawn mower
100	Garbage truck, chain saw
120	Rock concert near speaker, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the Deafness research foundation.

INTRODUCTION...

Congratulations on choosing the Encore 150 Amplifier.. Your unit has been individually handmade from the finest parts and materials. The Encore 150 utilizes proprietary Cello circuitry that represents true state-of-the-art in audio electronics. It is designed to perform to specifications for decades of musical enjoyment. We want your Encore 150 to provide you with complete satisfaction. Please read this manual carefully and care for your Encore 150 Amplifier so that it will retain its value, beauty and performance. If you have any questions, contact your authorized Cello Designer or call the factory. It is our wish to assist you in any way possible to facilitate your musical enjoyment.

Product Concept and Description

Our high power, reference level, Performance Amplifier was developed by cello to obtain the most natural sound and widest dynamic range from the finest speaker systems. The Encore 150 offers similar sonic qualities for music listeners who seek the ultimate in a medium-high power reference amplifier. The Encore 150 consists of two mono block amplifier units with dual choke input. It is the recommended mate for all 8 ohm and 4 ohm speaker systems. It has a tight, well extended and accurate bass as well as an open and detailed high end offering a clear, effortless, balanced sound coupled with high speed that are the hallmarks of Cello.

Compatibility

The Encore 150 is virtually compatible with all high quality preamplifiers and loudspeakers from other manufacturers. In fact, Cello engineers designed the Encore 150 specifically to be compatible with a wide variety of available equipment. The input impedance is one megOhms so that it does not load even the most sensitive tube preamp. Output impedance is low enough to ensure against interactions with speaker loads. Noise is low enough so that high efficiency speakers can be used without audible residual noise. Input sensitivity is reasonably high permitting the Encore 150 to be easily driven by any hi^{gh} quality preamplifier. For balanced line inputs the industry standard connector is the XLR type. Cello does not use XLR connectors because they do not meet Cello's standard for contact quality and reliability. Instead, Cello uses the 3 pin Fischer connector series for all balanced line applications. Cello Strings cables are available through all authorized dealers with 3 pin Fischer on one end and XLR or RCA on the other end for interfacing with non-Cello equipment. Use of Cello Strings cable is highly recommended because a number of balanced cables on the market do not actually provide the correct complement of conductors and shield in their construction.

INSTRUCTIONS

Unpacking

The Encore 150 consists of 2 units each packed in a separate carton. Check to be sure you have both cartons. The packing boxes for the Encore 150 Amplifier should arrive in good condition. Please inspect for damage to the carton, although this is most unlikely due to the strength of the carton construction. Open packing carefully and save all foam pieces and boxes for reuse in the event that the unit must be shipped in the future. Should the boxes become lost, please contact the factory for replacement cartons.

Each carton should contain:

- 1 Encore 150 Amplifier
- 1 heavy duty A.C. cable
- 1 5/64 Allen wrench
- 1 warranty card
- 1 owner's manual
- spare fuses

Installation

Be certain the amplifier is installed so that it has proper ventilation. Placing the unit in a small, close-fitting enclosure is not recommended. Room air temperature should not exceed 122 degrees F./50 degrees C.

Cable and Adapter Selection

The Encore 150 Amplifier has three-pin Fischer connectors for highest quality balanced line input capability. It is recommended that input connections be made using Cello Strings cable. Cello Strings are stocked in lengths of 1,1.5,2,3,5.8 and 10 meters. Terminations are available to suit the particular components of your system. Custom lengths are available on special order. If it is necessary to convert Fischer inputs to RCA, use the E3 adapters. The best way to convert to single ended operation is to use Cello Strings cable (which has three conductors and a shield) with Fischer male on one end and RCA connector on the other. This preserves the three-wire system from the amplifier to the source unit and provides better grounding and common-mode rejection. To interface with XLR systems, it is recommended that Cello Strings cable be used with Fischer male on one end and XLR female on the other end.

Custom Made Cables (Non-Cello)

Three-conductor shield cables should be used to keep audio(+), audio(-), audio ground and chassis earth separate. If single-ended adapters are made, pins one and three should be jumped and used as ground and pin two should be used as the audio(+).

Connecting audio ground and chassis ground may cause or solve grounding problems depending on the system as a whole.

Electrical Connections

- 1) Make sure the circuit breakers are "off".
- 2) Verify that AC mains voltages are set correctly.
- 3) Connect the preamplifier or other driving equipment.
- 4) Connect speaker output cables.
- 5) Be sure that the electrical service in the building/house is up to the task. The recommended ideal situation is a dedicated line to each set of amplifiers.
- 6) Install AC cable into IEC mains connector on rear of each power amplifier.
- 7) Connect AC cables to AC mains.

The Encore 150 Amplifier can be used as part of a complete Cello System, or in conjunction with other speakers, electronics and cables.

Operation

The Encore 150 Amplifier is capable of producing extremely high voltage and current levels. Be sure to observe standard precautions when operating. The following steps are recommended.

- 1) Be sure all electrical connections are correct. Triple check them.
- 2) Do not run AC mains or audio cables under rugs or sharp objects.
- 3) Turn peripheral source electronics on first. Avoid switching these on or off while amplifiers are in use.
- 4) Set volume controls on preamplifier to minimum.
- 5) Turn amplifier switches on.
- 6) Bring the volume control up slowly to the desired level. Use the amplifiers for musical enjoyment. Do not overdrive to create distortion. The Encore 150 Amplifiers are capable of damaging loudspeakers if the volume is up too high.

When you are through, switch the amplifiers off first before turning off the peripheral equipment. Leaving the amplifiers on will not harm them, but be advised that each unit draws approximately 100 watts at idle.

If physical damage has occurred to a unit, or it is exposed to water or other liquids, do not use the device until proper repairs and/or unit integrity tests have been effected by authorized personnel.

Bridging

The Encore 150 has a balanced output configuration. It is not bridgable.

Caution: DO NOT tie outputs to ground. Bridging the Encore 150 will cause damage and void warranties.

CELLO LIMITED WARRANTY

Parts

Cello warranties all mechanical parts for five years and electronic parts for life.

Labor

Labor is the responsibility of the distributor except for the following:

Any defective product during the first year shall be repaired by the distributor with labor paid by Cello according to factory rates for a given repair. At Cello's discretion, or if the distributor is unable to perform the repair, the unit may be returned to the factory for service using agreed-upon air freight. After repair, the unit will be returned by the same carrier or equivalent. During years 2-5, if the distributor is unable to perform the repair Cello will pay return air freight from the factory by agreed upon carrier provided the unit was shipped to the factory with air freight prepaid.

Cello will not pay freight if units are returned without a Return Authorization number (RA#). Cello will not pay freight if units are found to be in perfect working order.

Warranty of Repair Work Performed:

Any specific repairs or modifications effected by the factory or authorized service facility shall be guaranteed for 100% parts and labor for the remainder of the warranty period for the unit or one year (whichever is longer), except for electronic parts which carry a lifetime warranty.

Product Registration and Transferability:

Distributors shall fill out the form on the outside of the carton when the goods are delivered to the retailer. The form should be sent to Cello, Limited. Warranty cards inside the box shall be completed by the retailer and customer respectively and returned to Cello, Limited within thirty days from the date of the sale to the customer.

All products must be registered. When sold, new owners must be registered for the transfer of the warranty to be effected. All warranties are transferable to any succession of subsequent registered owners. Please contact you nearest authorized Cello supplier or the Customer Service Department at the factory for details of subsequent owner warranty registration.

I Tampering/Abuse/Misuse:

Any unauthorized modifications, repairs or tampering, and/or any indications of obvious owner abuse, negligence or improper usage, as determined by Cello Limited shall be grounds to void the warranty.

Service

If you believe your Cello equipment is not functioning properly, please call the Customer Service department at the factory. If you need to return your component, you will be given an R/A (return authorization) number. This number must appear on the outside of the shipping boxes. Returns without R/A numbers will not be accepted. Returns received in original Cello packaging will be returned in original packing. Returns received in non-Cello packing will be returned in new Cello packaging at the owner's expense. If you need replacement packing materials, please contact the Customer Service Department at the factory.

I Maintenance

The finish of the Encore 150 Amplifiers is of brushed and anodized aluminum. Ammonia-based glass cleaner or alcohol and a soft cloth work well to restore the shine and remove finger prints. Be sure that the unit is off and unplugged before cleaning. Avoid getting excess cleaning fluid inside the amplifier. Take care when cleaning rear panel. Excessively aggressive rubbing may remove the silkscreen lettering.

ELECTRICAL SPECIFICATIONS

Encore 150 Amplifier

Power Output

	Rated Watts (AVG.)
8 Ohms	150W
4 Ohms	300W

IMD SMPTE

60Hz & 7kHz

8 Ohms 150W output < 0.05%

THD

20Hz-20kHz

8 Ohms 150W output < 0.1%

4 Ohms 300W output < 0.2%

Frequency Response ± 0.2 (1b 20 Hz to 20 kHz)

Dynamic Headroom 3 dB

Signal to noise

Below 8 Ohms rated output

10Hz - 22kHz < -110 dB

Damping > 200

Input Impedance

Inverting and Non-Inverting 1 megOhms

Input Sensitivity

8 Ohms

150W 1.8V RMS

Non-Bridgeable

Dimensions (WxHxD) 19"x7.5"x23.5"

Includes: Print Plate, Handles and Feet

Shipping Weight 98 lbs/unit

196 lbs/set

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Cello, Ltd. is a subsidiary of Cello Music & Films Systems, Inc.