

CELLO, LTD.

SERAFIN ACTIVE SPEAKERS

OWNER'S MANUAL

Serial Number _____

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INTRODUCTION...

Congratulations on choosing the Serafin Active Speakers. Your units have been individually hand crafted from the finest parts and materials. The Serafins utilize proprietary Cello circuitry that represents true state-of-the-art in audio electronics. They are designed to perform to specifications for decades of musical enjoyment. We want your Serafin Active Speakers to provide you with complete satisfaction. Please read this manual carefully and care for your Serafins so that they will retain their 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

The Serafin is a compact active two-way speaker design. It offers natural tonal balance, extended and smooth high frequency response, fast attack, deep bass and wide dynamic range in a compact cabinet. Active speakers, by design, have the benefit of a dedicated amplifier specifically designed for a particular driver and frequency range. Since these amplifiers do not have to drive a passive crossover and lengthy speaker cables there is minimal distortion and increased dynamic capability.

We designed the Serafin without compromise. These active bi-amplified speakers incorporate Cello designed and built, fully discrete, push-pull, bi-amplification circuitry that offers natural sound, lightning-fast response and exceptional reliability reminiscent of the legendary Cello Performance Amplifiers. Its internal bi-amplification uses two hand-made mono power amplifiers per speaker with all discrete circuitry to deliver 90 watts to each woofer and 60 watts to each tweeter. Fully discrete 18dB/octave, electronic crossover filters control woofer input below 38Hz and between woofer and tweeter at 2kHz.

Electronics of this caliber are coupled for the first time in an internal arrangement with drivers, components, cabinet construction, wiring and quality control similar to Cello's Grand Master Speakers. Custom made Litz wiring is used throughout. The 9" woofer with its 4" voice coil has been specially designed to match the Serafin's rigid and inert enclosure. The state-of-the-art Esotar tweeter is a 1" soft dome type developed for the professional audio application. The cabinet is bass reflex design with dual ducted ports for maximum efficiency and low frequency output in a small package with low distortion. The shape of the enclosure is distinctive and functional, minimizing cabinet diffraction and reflections.

The on-board amplification and crossover circuitry means that you only need to run A/C power and line-level source signal to the speakers to get Cello performance.

Application

The compact Serafin Active Speakers will fit into a wide range of residential and professional settings. They can be placed on a bookshelf or stands, in a cabinet, on wall brackets or built into a wall. The Serafin is used for recording studio near field monitors where Cello's famous clarity, tonality, dynamics, and transparency will truly let the engineer hear what he has recorded and enable the correct mastering decisions to be made. These same qualities make the Serafin the ideal product for Cello performance in smaller room, residential applications. A pair of Serafin speakers stacked vertically or horizontally have been used as a highly effective center channel and/or front speakers in home theater applications.

| Compatibility

The Serafin is virtually compatible with all high quality preamplifiers from other manufacturers. In fact, Cello engineers designed the Serafin specifically to be compatible with a wide variety of available equipment.

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.

Finish

Serafins are available in either Black Piano or veneers of Light Burlwood, Walnut and African Mahogany on standard order. Black, acoustically-transparent grills are provided.

INSTRUCTIONS

Unpacking

The packing boxes for the Serafin Active Speakers should arrive in good condition. Please look for damage to the carton and report any internal damage to your freight carrier or dealer immediately. Save packing and cartons for reuse in the event the units must be shipped in the future.

| **Maintenance**

The finish of the Serafin Active Speakers is a clear lacquer over wood or over piano black polyester paint.

Ammonia based glass cleaner and a soft cloth will work well to preserve the shine and remove finger prints. When cleaning, wipe in a circular motion and do not rub too forcefully.

Caution: Make sure not to use any and cleaners or polishes with abrasives since these may damage the finish.

Connection

All Serafin Speakers are internally wired connecting the amplifiers to the speakers.

Connect your preamplifier's left channel output to the left speaker input using a cable with a 3 pin Fischer connector and the right channel preamp output to the right speaker input with a 3 pin Fischer connector. The Serafin Active Speakers are interchangeable and either may be set up as the left or right channel.

A signal common float switch located on the rear panel allows input ground to be floated to prevent ground loops in cases where necessary.

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.

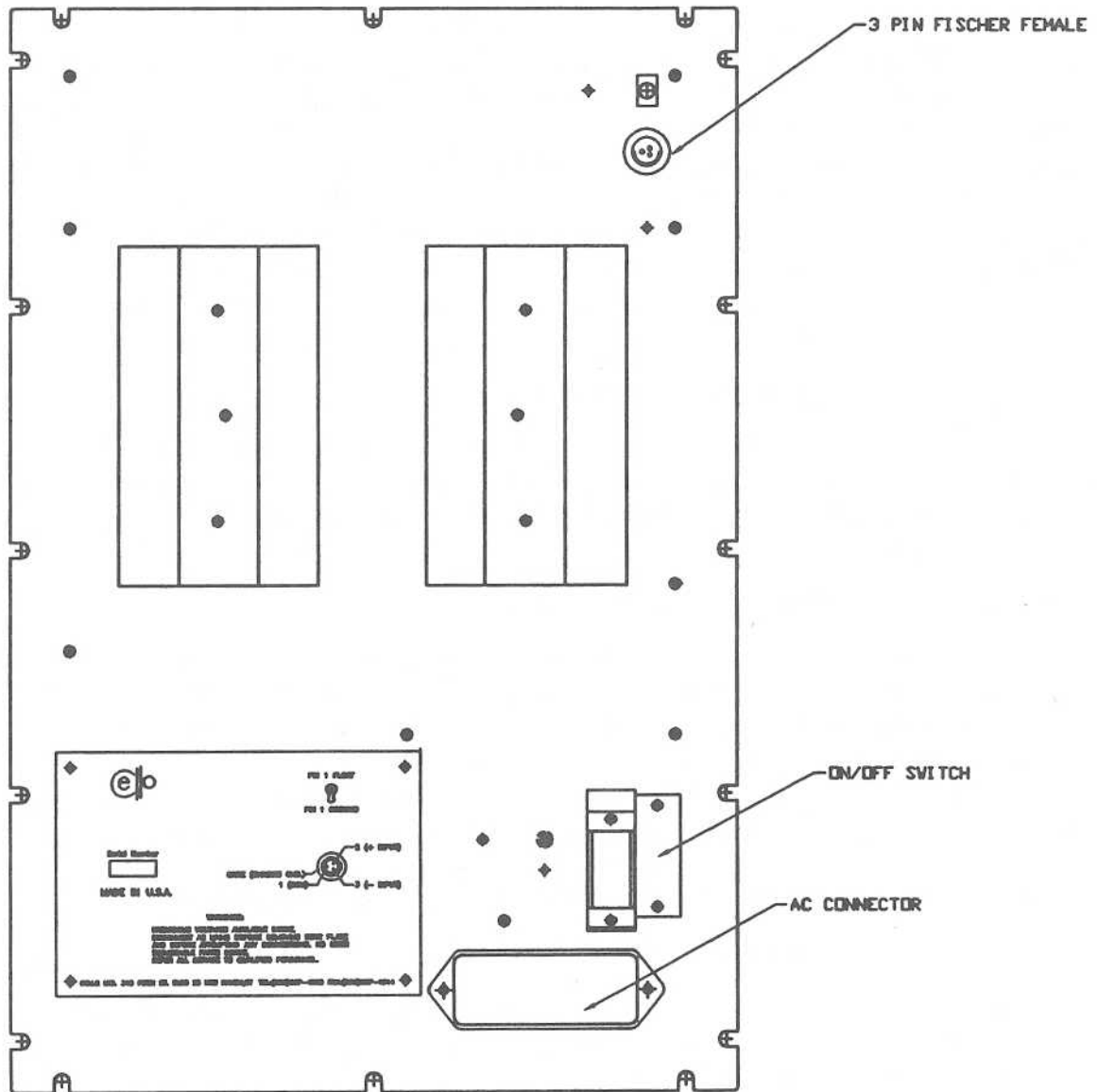
| Tampering/Abuse/Misuse:

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.

FIGURE A



SPECIFICATIONS

Serafin Active Speaker

HEIGHT 19"

WEIGHT..... 13

DEPTH15"

WEIGHT/EACH:.....65 LB S

DRIVERS:

TWEETER.....(1) 1" SOFT DOME

WOOFER..... (1) 9" WITH 4" VOICE COIL

CROSSOVER FREQUENCY 2KHz

SPL (MAXIMUM).....128dB AT ONE METER

AMPLIFICATION:

TWEETER..... 60W WITH <.1 % THD
FROM 2KHz TO 20KHz

WOOFER..... 90W WITH <.1 % THD
FROM 40Hz TO 2KHz

FILTERS:

- AN ACTIVE HIGH PASS 18dB/OCTAVE FILTER
AT WOOFER INPUT AND CUTOFF AT 38HZ;
- A 2KHz HIGH PASS 18dB/OCTAVE FILTER;
- A 2KHz LOW PASS 18dB/OCTAVE FILTER

CMRR..... >75dB 20Hz TO 1KHz
>60dB 1 KHz TO 20KHz

INPUT

IMPEDANCE.....1 MEGOHM, SHUNTED WITH 150pF

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