



Final WR loudspeaker User Manual (Final Wide Radiation)



release 1.0 –US-

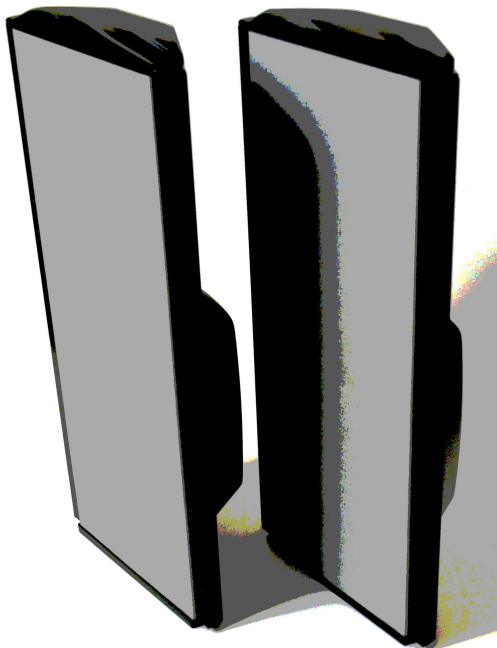
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1. Safety Instructions



WARNING:

Do not exposure to rain, moisture or high humidity.


Do not open - High voltage inside

Do not cover the speaker. (e.g. with curtains)

Use only a mains-adaptor approved for the country of use.

Refer servicing to a qualified Final Sound dealer.

Important Safety Instructions:

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilations openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet
- 10) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
- 11) Unplug this apparatus by disconnecting the FVSS201/p receiver from the mains or disconnecting the power adapter from the mains during thunderstorms or when unused for long periods of time.
- 12) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, for instance when the power-supply cord or plug is damaged, liquid has been spilled or objects are fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 13) Do not open the apparatus.
- 14) To reduce the risk of electric shock, do not remove the back panel of the loudspeaker. There are no user-serviceable parts inside. Refer servicing to a qualified Final Sound dealer.

Warning: High Voltage Inside. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Warning: The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Explanation of used symbols:



This flash symbol indicates that the outlet carrying this symbol is carrying a dangerous voltage.



The double insulation symbol indicates a double insulated product. In a double-insulated product, two systems of insulation are provided instead of grounding.



The exclamation mark indicates that special attention has to be given to the indicated remark.

2. Panel Safety

Listening to loudspeakers is an unique experience, well known by music friends dedicated to inner detail, neutrality, soundstage and reality. Music lovers don't select their panels because of sheer sound pressure level output or the ability to shake the rafters. They like the inner qualities of Final loudspeakers and what the panels can tell you about the music and the qualities of the recording. Although the loudspeakers can reach respectable sound pressure levels and will easily exceed levels used during normal listening practice, we do not recommend to use these panels for PA applications or to overwhelm the audience during parties. Final panels are protected against accidental overload, but every protection circuit in a loudspeaker is a deliberately chosen compromise. Protecting against every possible fault condition is, from a music reproduction point of view, a serious trade off.

3. Congratulations

Congratulations on your purchase of the Final Sound flat-panel FWR (Final Wide Radiation) loudspeaker system, that forms a special combination with the Final Sound FVSS201/p receiver and the S95 subwoofer.

You have invested in the finest instrument for audio reproduction available. The Final Sound product line consists of front- and rear flat-panel loudspeakers, center loudspeakers and subwoofers.

The product line is based on a unique modular system. Final Sound offers you the possibility to start buying a stereo system and easily extend this at any convenient time into a complete Final Sound Home Theatre system. You can do this just by adding a center loudspeaker and/or another set of Final Sound flat-panel loudspeakers.

The Final product line is designed to surpass the performance of other existing loudspeakers and contains some of the most elegant and sophisticated designs ever used for music reproduction.

Our flat-panel loudspeakers are capable of producing very pure and accurate sound. The Final Sound technology has evolved through many years of research and development.

The Final Sound subwoofers are designed to match perfectly with the characteristics of the Final Sound loudspeaker panels.

The Model FWR loudspeakers are designed for the use in a stereo setting and a virtual surround system.

The Model FWR flat-panel loudspeakers are floor-standing loudspeakers (using the optional floor stands) and also wall mountable (using the optional wall mount adapter kit).

WR is only available bundled with the Final Sound FVSS201/p receiver

The FWR panels are only to be sold bundled with the Final Sound FVSS201/p receiver and a Final Sound subwoofer. Recommended is the S95. The S95 subwoofer forms a natural match, although it's also possible to use one of the other Final Sound subwoofers (S110 or S220).

Virtual surround package consisting the FWR loudspeakers and the Final Sound FVSS201/p receiver

- Two Final Sound FWR flat-panel loudspeakers (left and right).
- A Final Sound FVSS201/p virtual surround receiver.
- A S95 subwoofer (optional S110 or S220).

Manual contents

This manual includes the instructions for the Final FWR loudspeaker and basic information about the Final subwoofer.

Please read and follow these instructions carefully before you connect your Final Sound system to the FVSS201/p. These instructions are very important and will prevent you from experiencing any delay or system damage, which might occur in a trial and error situation.

The Final Sound product line consists of separate products, which can function individually or perform as a complete system.

4. Final Sound FWR loudspeakers

How to unpack the Final Sound FWR virtual surround/stereo system

The Final Sound FWR virtual surround/stereo system consists of three separate packaging units. The Model WR flat-panel loudspeakers, the Final Sound FVSS201/p receiver and the Final Sound subwoofer.

The Model FWR stereo flat-panel box contains:

- Two Model FWR flat-panel loudspeakers (table top feet included)
- This manual

Not included:

- wall mounts (optional)
- floor stands (optional)

We recommend using the Final Sound S95 subwoofer. For large rooms it's also possible to apply one of the other available Final Sound subwoofer or to add an additional S95.

Each individual component is packed in its own carton. The easiest way to unpack is to open the upper side of the box (check the labels), take out the separate units and carefully remove the cartons and plastic bags. Take care to avoid putting pressure on the black loudspeaker's stator plates.

If your packaging is not complete, do not operate the system but contact your dealer.

We recommend you to save all packaging materials for possible later use.

If any unit appears to be damaged when unpacking, do not operate the damaged unit. Repack the unit in its original carton and notify your authorized Final Sound dealer immediately.

Assembling Model FWR

- The WR can be wall mounted or floor standing. Your Final Sound dealer can provide optional floor stands or the optional wall mount kit.

5. Assembling Model FWR to the wall

The FWR assembly instructions are identical to the Final Sound F100i's assembly instructions.

Assembling the Model FWR to the wall is straightforward. You need two wall bracket kits consisting off:

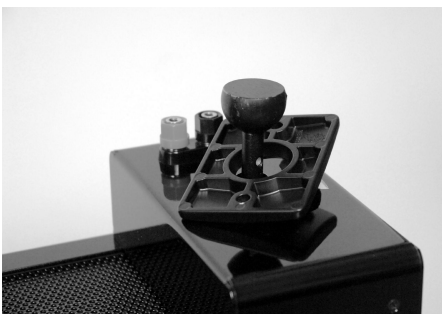
- 1 Allen key
- wall plate
- cover plate
- ball-bar
- 2 hexagon screws
- 4 screws and plugs



A. The electronics housing is at one side of the panel



B. Attach the wall plate to the wall



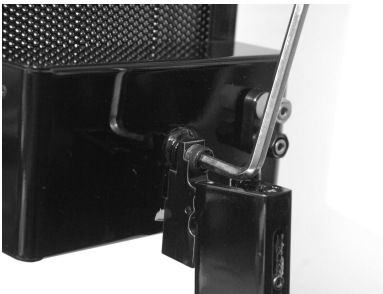
C. Insert the black ball-bar into the cover plate and screw the ball-bar firmly into the loudspeaker's electronics housing



D. Attach the panel to the bracket's wall plate, which was mounted earlier to the wall. You need the two hex bolts and the supplied Allen key for mounting the two parts together

6. Assembling the Final FWR to the floor stand

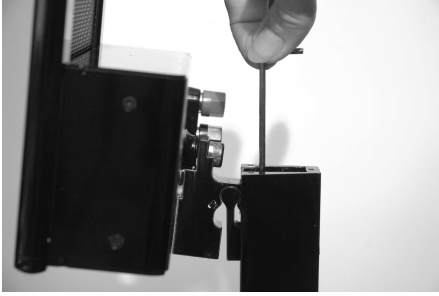
The FWR assembly instructions are identical to the Final Sound F100i's assembly instructions.



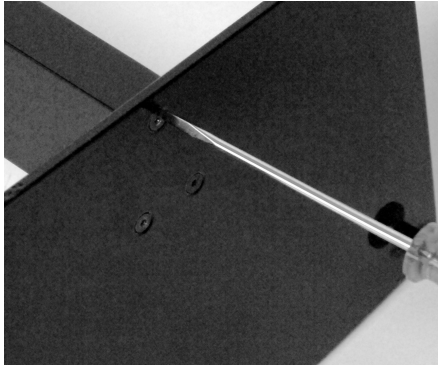
A. Mount the stand to the panel using the enclosed M8 hexagon bolt



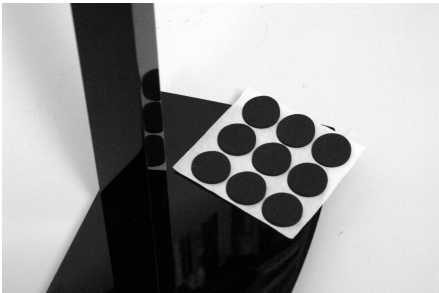
B. Tighten the bolt firmly using the enclosed Allen key



C. Adjust the loudspeaker's vertical dispersion angle and attach the top cover plate



D. Attach the footplate to the all metal tube, using the three enclosed screws



E. Glue 4 rubber pads to the footplate for your convenience

7. FWR placement and connection

What is the function of the Final Sound front loudspeaker panels?

The Final Sound flat-panel front loudspeakers are the main channels in a stereo setting or a virtual surround system. Both in a stereo configuration and a virtual surround configuration, the flat-panel loudspeakers function in close harmony with the Final Sound subwoofer.

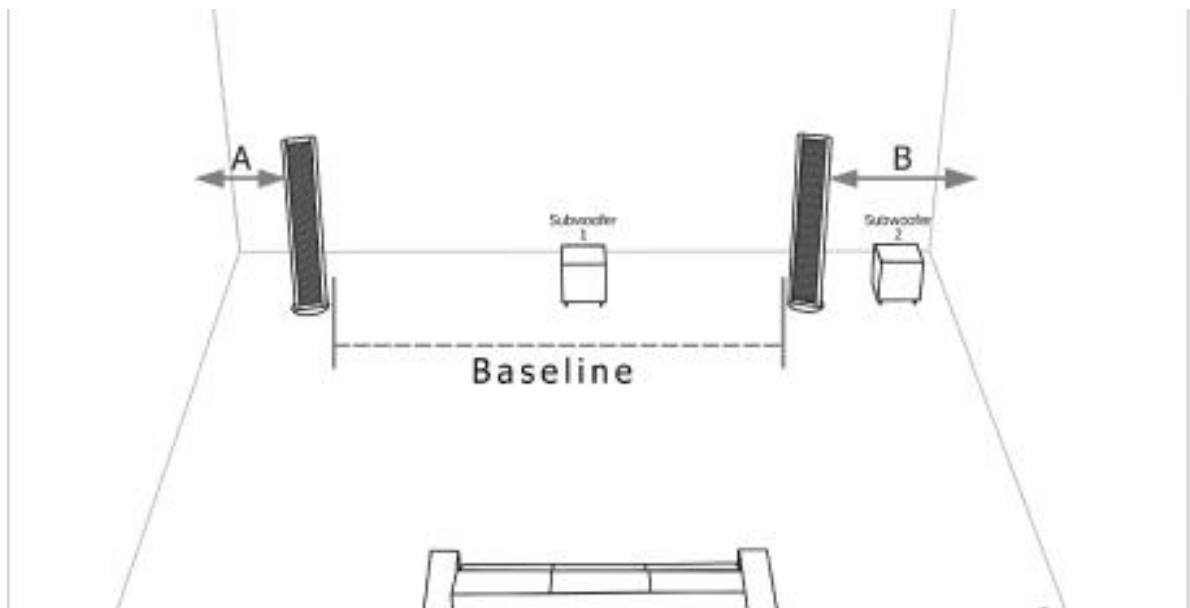
Where do I place the Final Sound loudspeaker panels?

The figure shows the best position for the loudspeaker panels.

Typical room layout

The figure represents a typical room set up for stereo and/or virtual surround. The figure shows:

- The subwoofer's preferred positions, depending on the panels you choose.
- The base line between the front loudspeakers.
- The stereo loudspeaker's position.
- A preferred unequal distance between the side walls and the panels (a and b).



Application 1: Final Sound stereo configuration:

The panels in a stereo setting (two front panels) are preferably located in a symmetrical way and away from the walls for optimum imaging. The panels need to point slightly towards the favorite listening position as you can see in the figure above. For the FWR you need a subwoofer.

Application 2: Final Sound virtual surround configuration:

For virtual surround, you only need two front panels, a subwoofer and the Final Sound FVSS201/p virtual surround receiver. The receiver's virtual surround mode, together with two loudspeakers, will

present a kind of five-channel emulation, which will give you a very broad stereo stage just as in a movie theatre. The FVSS201/p preferably operates with the S95 subwoofer.

How do I connect the Final Sound FWR loudspeaker panels safely?

Before connecting the loudspeaker panels, all sound system equipment should be disconnected from the mains. This will avoid the risk of damage to your system while connections are made or broken. If you experience any problems installing the flat-panel loudspeakers please contact your authorized Final Sound dealer.

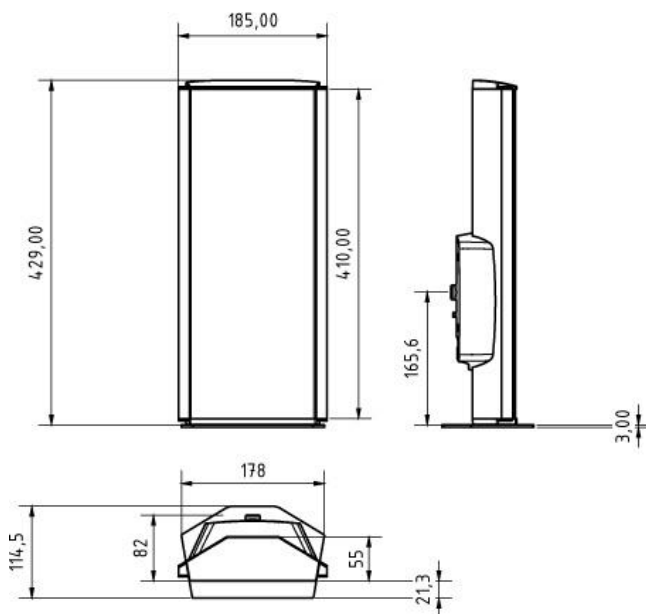
The flat-panel loudspeakers are equipped with loudspeaker terminals, which are suited for spades or common loudspeaker wires. The red loudspeaker terminal has to be connected to the FVSS201/p's red terminal (+) and the black terminal has to be connected to the FVSS201/p's black terminal (-).

How to clean and maintain the Final Sound FWR loudspeaker panels?

Always shut off all sound equipment before you start cleaning.

Dry cloth cleaning (FWR)

Dry cloth cleaning is a recommendation to wipe off dust. To prevent fire or shock hazard, clean only with a DRY cloth. Never use cleansers or chemicals or any liquids, which risk dripping into the loudspeaker panels. Using chemicals can harm the loudspeaker's finish.



8. Final Sound subwoofer

How do I unpack the Final Sound subwoofer safely?

This package includes:

- One AC-power cord
- One Final Sound subwoofer
- One user manual for the subwoofer

If your package is not complete, do not operate the system but contact your Final Sound Dealer.

The easiest way to unpack is the following. Put the box on a flat surface on the ground. Open one side by cutting the tape carefully without damaging the contents of the box. You find the subwoofer in a plastic foil, with shock absorbing buffers positioned around the corners. Now carefully take out the subwoofer, please avoid touching the woofer unit positioned at the downside of the cabinet. We recommend saving all packaging materials for possible later use. Avoid touching the drive units.

If any unit appears to be damaged when unpacking, do not operate the damaged unit. Repack the unit in its original carton and notify your authorized Final Sound dealer immediately.

For further details please look at the manual supplied with the subwoofer.

Assembling subwoofers

The Final subwoofers arrive 'complete' assembled out of the box.



What is the function of the Final Sound subwoofer?

Final Sound subwoofers (S95, S110/S220) are capable to reproduce music signals up to 200 Hz. These Final Sound subwoofers are designed to match perfectly with the characteristics of the Final Sound Model WR flat-panel loudspeakers and belong with its electronics and its perfect driver to the upper end of the subwoofer range. The Final Sound S95 is designed to form a combination with the Final Sound FVSS201/p virtual surround receiver and the WR panels. Please consult your

FVSS201/p's manual for connecting the S95 subwoofer. This manual also contains special instructions to connect and configure the S110 and S220 subwoofers to the FVSS201/p receiver

9. Specifications FWR

FWR specs

frequency range	120Hz-35kHz
sensitivity	88db
recommended amplifier	30-75 Watts RMS
dimensions panels (w x d x h) see page 11	178x114.5x410 mm (114.5 is including table top feet)
Panels depth	82 mm (includes electronics housing)
weight	2,2kg
colours	Black
Wall mount	optional
floor stand	optional
recommended sub	S95
recommended receiver	only bundled with FVSS201/p
HP filter	in receiver

10. Frequently asked questions

How much power do you need?

Although our loudspeakers will work fine with the majority of reasonably priced amplifiers from 50 W Watt/channel and up, we also know that our panels will benefit when driven by high powered quality amps. This knowledge is not limited to the use of electrostatic loudspeakers but is true for any loudspeaker in the market. Exceptions are the high sensitive loudspeakers, which you can drive with low powered triode and other tube amplifiers. But this belongs to the exclusive domain of audiophile knowledge and the ultimate dedication towards sound quality. To complete this chapter; room size and room acoustics have something to do with this equation as well. Bigger rooms need more power, smaller rooms less. Rooms with lots of absorption from drapes and furniture need more power; reflective rooms less.

Where should I place my subwoofer?

Coloration, due to resonance, is strongest at bass frequencies between 20 and 200 Hertz. It's much easier to obtain high absorption at higher frequencies. So, the placement of a subwoofer is critical. Theoretically, the smoothest low-frequency response is obtained when the subwoofer is as close as possible to the listener's ears. The received sound from the subwoofer is then dominated by the direct radiation rather than by room resonances. Practically, the subwoofer should be placed on the base line between the front panels. That's also advisable from a phase perspective and if the subwoofer outputs frequencies higher than 100Hz. You cannot locate frequencies below 100Hertz. If the output is above 100Hz, it's easy to locate the sound coming from the subwoofer. Then, it's common wisdom to keep the sub near the front panels and not along the wall or in the corner.

If you don't want to put the sub between the front panels and if the output is below 100Hz, the second best location is nearby the corner of the room, consistent with the acoustic theory that all the room

modes will be excited evenly from this location. But, useful lessons learned from the real world tells us that the best approach in coping with subwoofers is to use your ears and play around a little bit. For bigger rooms it is preferable to use two subwoofers in each corner, near the front panels.

Can I mix and match the Final panels and subwoofers?

Our lines of loudspeakers and subwoofers are modular, scalable and customizable. Basically, we do have a line for home theatres and a line for professionals and most discriminating audio consumers. The home theatre packages will bring you five panels in one box and additional subwoofers and optional floor stands. But, because we're modular and customisable, nothing stops you to design your own home theatre configuration, using any combination of Final panels you like. Stereo-systems and home theatres are also scalable. Depending on your room's sizes, you can build a system with small panels, but also head towards a theatre consisting of large F600i electrostatics. It's all up to you and your dealer might give you some good advice. The Final family of electrostatics is arguably the most flexible offering in the world.

Does a Final Sound FWR flat-panel loudspeaker get dirty?

Yes it does, just as every other object in your room, but it depends for a great deal on the place where the loudspeakers are situated. Next to the fireplace or the kitchen are places we do not recommend. Come to that, a little dust is not a problem (see cleaning instructions in this manual).

Will excessive smoke or dust cause any problems?

Exposure to excessive contaminants, such as smoke or dust, may potentially affect the performance of any loudspeaker and may cause discoloration of the cover. Dirt and dust may be removed by means of a soft brush attached to your vacuum cleaner. See the cleaning instructions in this manual.

Can Final Sound front and rear flat-panel loudspeakers to be treated as satellites?

Yes, they have to be installed as satellites on your audio/video receiver or multi channel amplifier. The correct settings are "SMALL satellites" for the Model WR flat-panel loudspeakers, which correlates with the frequency range of the loudspeaker output.

Should I unplug my Final Sound system during lightning?

Yes. Unplugging before the storm is even better. It's a good idea to disconnect all of your audio/video components during stormy weather.

What is to be done when puncturing, knocking over or come in contact with fluids and fire damages the Final Sound loudspeakers?

Unplug your Final Sound loudspeaker and contact your Final Sound dealer.

Why do I need a Final Sound subwoofer?

The Final Sound home theater is based on the 5+1 multi channel amplifiers, which require two front loudspeakers, two rear loudspeakers, one center loudspeaker and a subwoofer.

The subwoofer will produce the lowest frequencies when necessary and is designed to function in harmony with the other Final Sound loudspeakers.

Also, most of our loudspeaker panels need a subwoofer for reproducing the lowest frequencies.

Are Final loudspeakers suitable for Dolby Digital AC-3, DTS, etc.?

Yes. Final loudspeakers are very accurate to be used with any decoding system designed for the home theater.

What is the warranty?

Your Final Sound Home theatre system can be provided with limited 3-year warranty coverage on the flat-panel loudspeakers and 1-year warranty coverage on the subwoofer if the registry card in the manual is completed and returned to Final Sound. The limited warranty will not be honored when the product has been used or handled other than in accordance with the instructions in the user manual. See for more details the chapter Warranty Conditions in this manual.

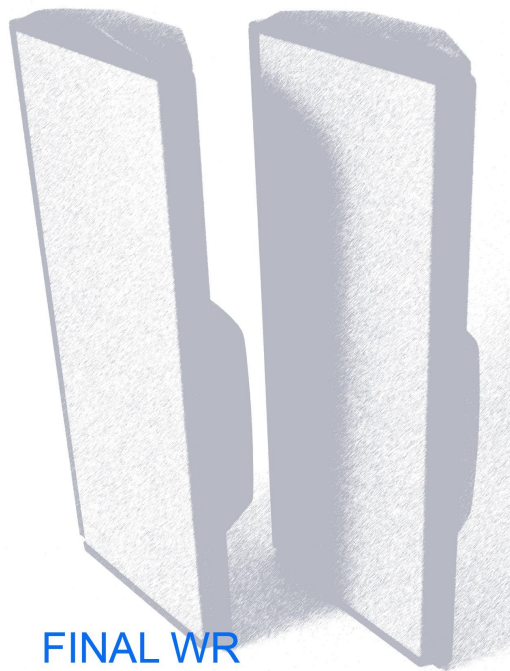
Is a Final loudspeaker protected against overloading?

Basically: yes, but if the overload condition is persistent, please reduce the volume of the amplifier. But, protecting a loudspeaker is always a trade off between simply cutting off musical information and

allowing dynamics to surpass reasonable sound levels. Before serious damage can be done, every loudspeaker will first give a clear warning signal by means of severe audible distortion. That's the moment to lower the volume. If the state of overloading (and severe audible distortion) will continue, serious damage to the panels can occur. Because of the protection circuit's 'trade off' behavior, we do not guarantee that this circuit will protect the loudspeaker against all possible kinds of mistreatment. Damage resulting from such mistreatment is not covered by our warranty conditions.

Where can I find more information about Final Sound?

For any questions about Final Sound or about installing your loudspeakers, contact your Final Sound dealer or visit our website at www.finalsound.com.



11. Warranty

Automatic Coverage

Thank you for purchasing this Final Sound product. We have made every effort to insure that it represents the highest level of performance, reliability and finish. A Limited One Year Warranty covers your Final Sound product. This one year coverage is automatic upon your acceptance of delivery and no registration is required.

Limited One Year Warranty

Final Sound warrants the product designated herein to be free of manufacturing defects in material and workmanship, subject to the conditions hereinafter set forth, for a period of three hundred sixty five (365) days from the date of purchase by the original purchaser.

Conditions

This warranty is subject to the following conditions and limitations: the warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, abused or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being repaired or tampered with by anyone other than Final Sound or an authorized Final Sound dealer. If returned, the product must be properly packaged and shipped to Final Sound or an authorized Final Sound dealer by the customer at his or her sole expense. A returned product must be accompanied by a written description of the defect and proof of the date of purchase. Final Sound reserves the right to modify the design of any product without obligation to purchaser of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.

Exclusions

Any implied warranties relating to the above product shall be limited to the duration of the above warranty. The warranty does not extend to any incidental or consequential costs or damages to the purchaser. Some countries do not allow limitations on how long an implied warranty lasts or exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from country to country. This warranty represents a limited warranty as defined above.

Remedy

In the event the product fails to meet the above Warranty and the above conditions have been met, the purchaser's sole remedy under this Limited Warranty shall be to return the product to Final Sound or an authorized Final Sound dealer where the defect will be rectified without charge for parts or labour.

Restriction

This Warranty is for the sole benefit of the original purchaser of the covered product, is restricted to the original purchaser, and shall not be transferred to a subsequent purchaser of the product.

12. Warranty Card

Limited Warranty Registration Card

In order to validate your warranty registration we kindly ask you to fill in the following data. For registration, this form has to be accompanied by a copy of your purchase receipt. The address to send to can be found on page 39. We thank you and wish you great enjoyment with your new Final Sound product.

Name: _____

Email: _____

Address: _____

City: _____ .State _____

Country: _____

Authorized Final Sound dealer: _____

Salesperson's Name: _____

Please fill in for warranty registration the serial numbers of all units you have bought.
(Numbers appear on labels at the back of the product)

1 Final Sound Center Loudspeaker: _____

1 set Final Sound Front Loudspeakers (Home Theatre or Stereo System, 2 panels): _____

1 set Final Sound Rear Loudspeakers (2 panels): _____

1 Final Sound Subwoofer: _____

1 Final Sound DVD Receiver _____

To improve our products and customer service, we would greatly appreciate your answers to the following questions.

Title or profession: _____ Age: _____

How did you find out about Final Sound? _____

Advertisement in _____

Relations/friends _____

Internet: _____

Other _____

What kind of amplifier do you use?

Brand: _____

Type: _____

If you have any comments on our products and services, please use the back of the form.
Thank you very much for taking time to complete in this form and sending it to:

Final Sound Eisenhowerweg 8D 5466 AC Veghel The Netherlands

For US customers ONLY:

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F: (781) 938-6415

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