

Enhanced Cube Subwoofer

ECS-10



Outlaw[®]

Owner's Manual

Version 1.0

Please Read First



CAUTION: To reduce the risk of electric shock, do not remove the cover (or back). No user serviceable parts inside. Refer to qualified personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating maintenance (servicing) instructions in the literature accompanying the appliance.

Precautions

Verify The Line Voltage

Your new Enhanced Cube Subwoofer has been factory configured for 120 volt AC lines. Connecting an ECS to a line voltage other than that for which it is intended can create a safety and fire hazard, and may damage the subwoofer. If you have any questions about the voltage requirements for your specific model, or about the line voltage in your area, contact Outlaw Audio before plugging the unit into a wall outlet.

Verify AC Circuit Capacity

The high power output of your Outlaw ECS may require heavy power draw under full load conditions. To insure proper performance, and to avoid potential safety hazards, we recommend that it be connected to a 20 Amp capacity circuit. Connecting multiple subwoofers to the same circuit, or connecting it to a circuit used by other heavy power devices, such as air conditioners, may cause circuit breakers to trip.

NOTE: It is always a good idea to avoid using any audio or video equipment on the same AC circuit as equipment with motors, such as air conditioners or refrigerators. This will lessen the possibility of power variation and electrical start-up noise affecting your sound system.

Extension Cords and Power Strips

We do not recommend that extension cords be used with this product unless they are of sufficient gauge to pass the necessary current during full load conditions. Most inexpensive extension cords are not capable of such high-current loads.

Similarly, should you use a power strip, surge protector or any type of AC power line conditioning equipment, make certain that it is also able to handle the high current loads this product will produce.

Handle the AC Power Cord Gently

When disconnecting the power cord from an AC outlet, always pull the plug, never pull the cord. If you do not intend to use the amplifier for any considerable length of time, disconnect the plug from the AC outlet. If the power cord is replaced, make certain that it is of similar gauge. As with all electrical devices, do not run power cords under rugs or carpets or place heavy objects on them. Damaged power cords should be replaced immediately with cords meeting factory specifications.

Wiring

Cables that are run inside of walls should have the appropriate markings to indicate compliance with, and listing by the UL, CSA or other standards required by the UL, CSA, NEC or your local building. Questions about cables inside of walls should be referred to a qualified customer installer, or a licensed electrician or low-voltage contractor.

Do Not Open The Cabinet

There are no user serviceable components inside this product. Opening the cabinet may present a shock hazard, and any modification to the product will void your guarantee. If water or any metal object, such as a paper clip, coin or a staple, accidentally falls inside the unit, disconnect it from the AC power source immediately, and contact Outlaw Audio for further instructions.

FCC Information for User

CAUTION: ANY changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

IMPORTANT SAFETY NOTE

Before connecting a new component such as the ECS to your audio or home theater system it is always good practice to make certain that all components are turned off, and preferably unplugged from their AC power source. Many modern electronics products feature automatic turn-on circuits that may be activated during an installation, causing the potential for damage to electronic components and/or speakers. Such damage is not covered by product warranties and Outlaw Audio specifically disclaims responsibility for any such damage.

For Future Reference

Record your subwoofer's serial number and date of purchase here. It is found on the back panel.

Model Number _____

Serial Number _____

Date of Purchase _____

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Outlaw Audio Enhanced Cube Subwoofer ECS-10

Congratulations on the purchase of an Outlaw Audio ECS-10 Enhanced Cube Subwoofer. The ECS-10 provides deep, tight, bass extension that's powerful enough to meet the most demanding requirements of any movie or musical source. Thanks to a flexible crossover system that may be defeated for use with advanced bass management systems, the ECS-10 blends seamlessly with both small satellite speakers as well as large tower type speaker systems.

The ECS-10's high-power and long-throw woofer are housed in a cabinet that measures just over a cubic foot, ensuring that your new subwoofer can be tucked away out-of-sight in almost any listening environment.

Among the ECS-10's many features are:

- A long throw 10" driver for deep bass extension
- Oversized spider for increased linearity at high excursion
- A powerful 1,000 watt RMS (2000 watts dynamic) amplifier for precision driver control
- Signal Sense for automatic turn on/off (can be defeated)
- 0/180-degree phase control
- Stereo line level and speaker level inputs
- LFE input

Unpacking

The carton and packing materials used in shipping your new subwoofer were specially designed to cushion it from the shocks and vibrations of shipping. We strongly suggest that you save the carton and packing materials to use if you move, or if the unit ever needs to be shipped back to us for any reason.

To minimize the size of the carton in storage, you may wish to flatten it by carefully opening the top and bottom flaps and folding the carton flat. Packing materials that cannot be collapsed should be saved along with the carton in a plastic bag.

Before You Begin

Before proceeding with the integration of the ECS-10 into your system, please observe the following precautions and suggestions.

- Do not plug the power cord into the ECS-10 until all other connections are made.
- Always refer to the instructions that came with the receiver or processor for specific procedures, warnings and options.
- Make sure to insert all plugs and connectors securely. Improper connections can result in noise, poor performance, or damage to the equipment.
- Do not bundle the subwoofer cable or speaker wire with the power cord. This may adversely affect the sound quality and introduce unwanted hum into your system.

Subwoofers, Bass and Overall System Performance

The goal of an audio system is to recreate the source material as accurately as possible. The components needed to perform this task are an audio source, a receiver or processor/amplifier combination, and speakers.

In the era of digital, multi-channel sound, many listeners have chosen to use frequency-limited "satellite" speakers for the front, center and surround channels. By limiting their frequency range, these speakers may be made smaller, to more easily fit into a wide range of spaces. However, by eliminating the capability to reproduce bass frequencies, a separate speaker that is custom designed to deal with signals below 200Hz is required. That speaker, along with its companion, built-in amplifier is a powered subwoofer.

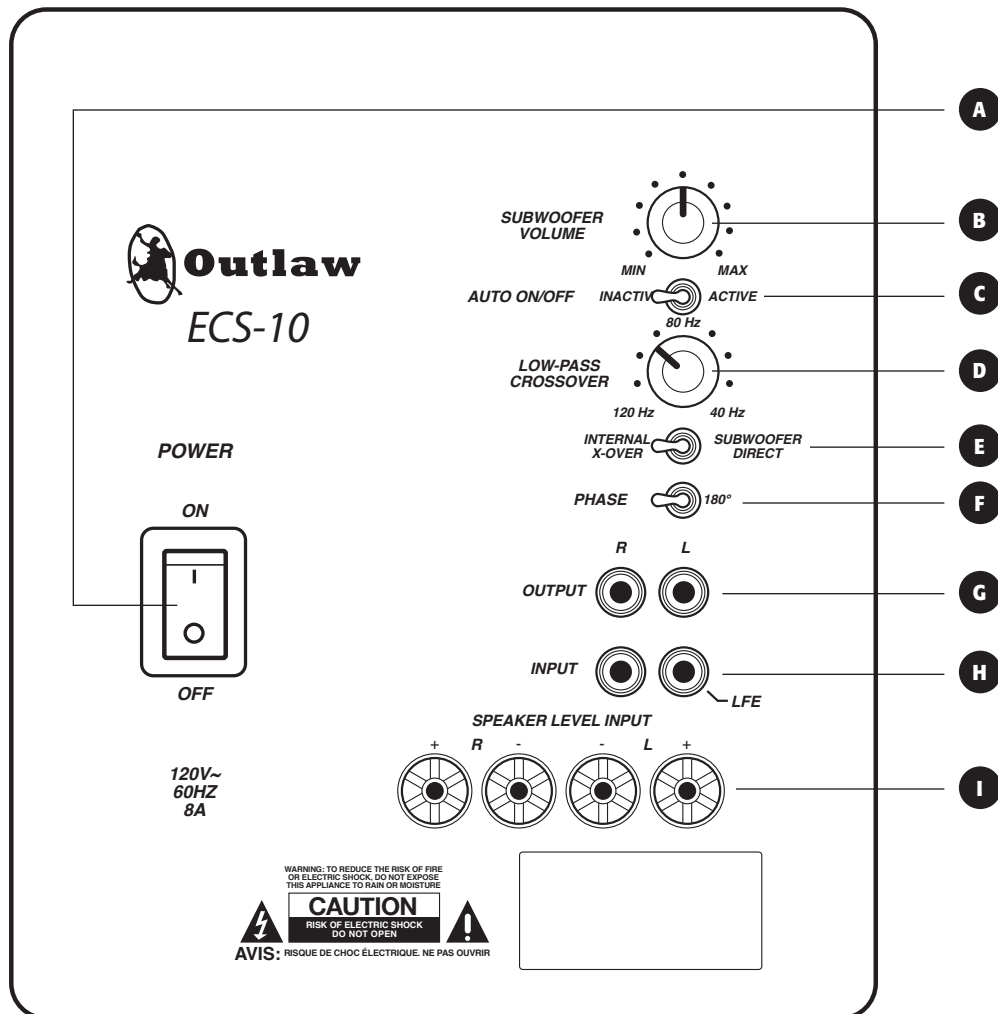
Even in two-channel systems with traditional bookshelf or tower speakers the

bottom two octaves of sound (20 Hz to 80 Hz) are frequently rolled off or not reproduced at all. Here, too, a specialized speaker/amplifier combination is required to deliver the full spectrum of sound from a system.

Finally, many multi-channel digital soundtracks contain a special audio channel devoted specifically to extreme low frequency extension. This signal is the ".1" in 5.1, 6.1 and 7.1 systems and is sometimes referred to as the LFE channel.

Regardless of which of these situations create the need, a subwoofer is absolutely essential for accurate audio reproduction of both movies and music. A properly designed subwoofer such as the Outlaw ECS-10 can provide a visceral impact that most speakers are not able to provide on their own. No matter what type of speakers comprise the rest of your system or what your favorite movie or music is the ECS-10 is up to the task of completing the sonic presentation by providing the impact that only a subwoofer can provide.

ECS-10 Rear Panel



The ECS-10's Controls and Connections

A MASTER POWER Switch

This switch is used to turn the ECS-10 on or off. When the unit will not be used for extended periods, we recommend that it be turned off to prevent accidental activation.

B SUBWOOFER VOLUME Control

This knob controls the output level of the ECS-10.

C AUTO ON/OFF Power Switch

This switch enables the ECS-10's signal sense mode so that the unit turns on automatically when an audio signal is present.

D LOW-PASS CROSSOVER Control

This control sets the frequency of the built in variable low pass crossover.

E X-OVER Switch

When an external crossover such as the Outlaw Audio ICBM is used, this switch will bypass the ECS-10's internal crossover.

F PHASE Switch

This control changes the phase of the ECS-10 with respect to the main speakers.

G LINE LEVEL OUT

Connect these bandwidth limited outputs to your power amplifier.

H LFE

Connect the subwoofer output or stereo preamp outputs of your receiver, processor or other source device or accessory to this jack(s).

I HIGH LEVEL INPUTS

When your receiver does not have line level outputs available for a subwoofer connection, connect the speaker outputs of the receiver here.

Setup Guide

Connecting To Your System

To get the maximum performance from your new ECS-10 it must be properly connected, positioned properly within the room and configured to match your speakers. To connect the ECS-10 you will need either a single audio interconnect cable (in the case of systems with a subwoofer output), a pair of audio interconnects (in the case of systems without a left/right pre-amp output) or additional speaker wire. We recommend the Outlaw Audio PCA SUB cable, but any high quality, shielded audio interconnect will work properly.

Connecting to a System with a Subwoofer Preamp Output

If a low-level subwoofer output is available, use this jack to connect your ECS subwoofer to your Preamp or Receiver. See Diagram 1 below.

To connect the ECS-10 to a subwoofer preamp output:

1. Turn off all system components and unplug the processor or receiver and the ECS-10 from their AC power source.
2. Locate the "Subwoofer/LFE Output" on the rear panel of your receiver or processor.

Any audio product that decodes Dolby Digital or DTS soundtracks will have this type of jack. Depending on the particular brand or model, this RCA jack may be labeled "Sub," "Subwoofer," or "LFE Out." If your receiver or processor does not have this type of output you will need to follow the "Connecting to a System with No Preamp Outputs" instructions that follow this section.

3. Connect one end of the subwoofer cable to the subwoofer or LFE output on the receiver or processor.
4. Locate the connection labeled LFE on the rear panel of the ECS-10 and connect the other end of the subwoofer cable to that jack.

Diagram 1: Connecting to a System with a Subwoofer Preamp Output

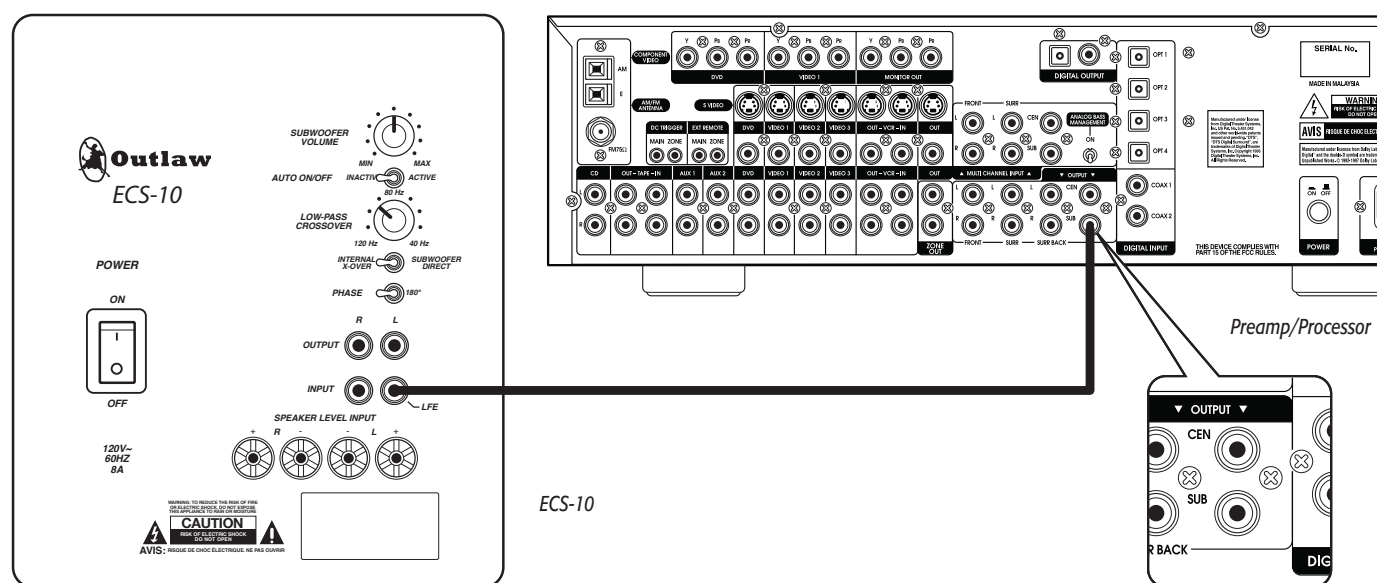
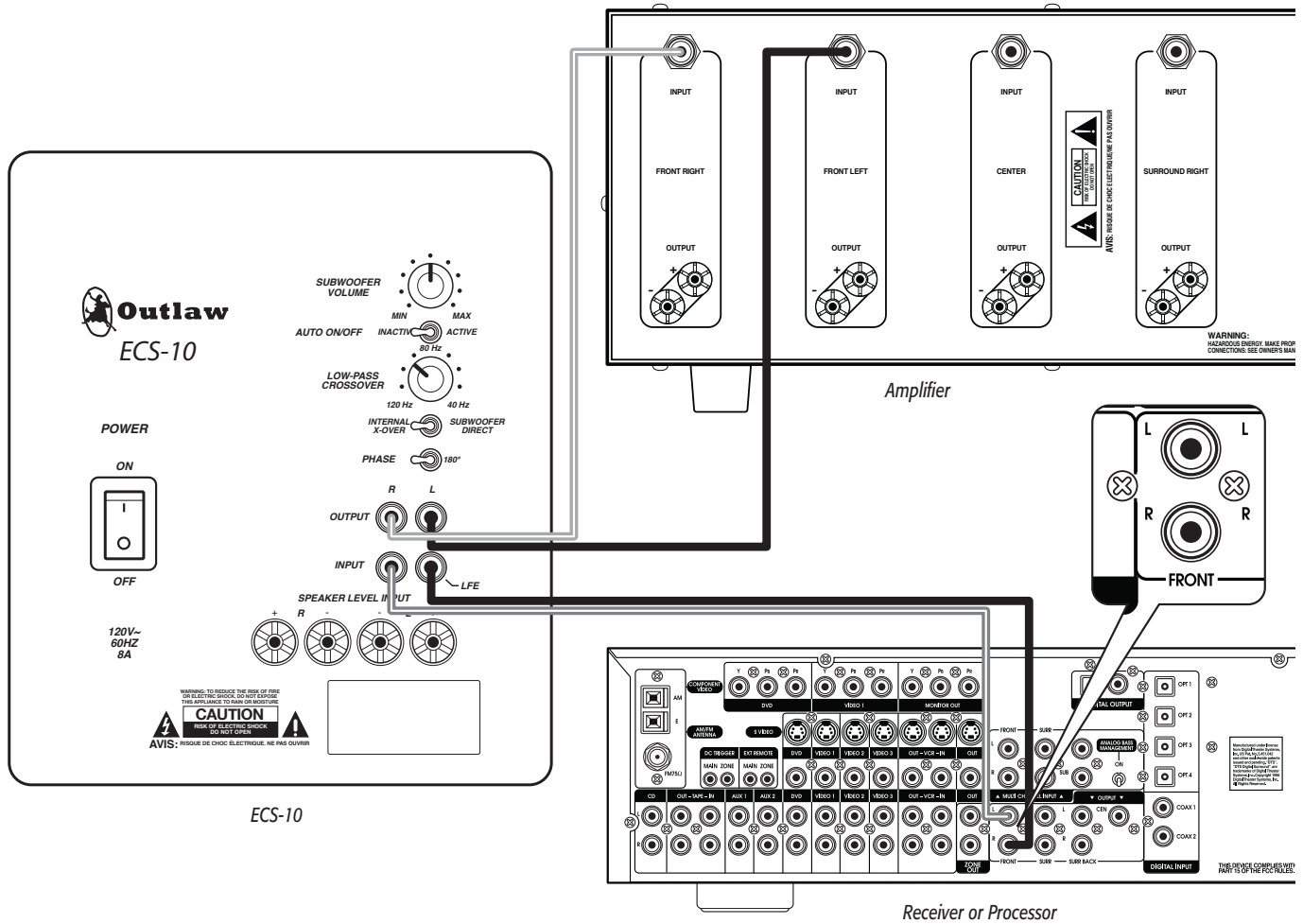


Diagram 2: Connecting to a System without a Subwoofer Preamp Output, but with Standard Left/Right Preamp Outputs



5. Plug the ECS-10's power cord into an un-switched AC outlet.

CAUTION: Due to the power requirements of the ECS-10, it must not be connected to the accessory outlets on a receiver or processor. If a power-strip or surge protector is used, make certain that it is rated to accommodate the ECS-10's power requirements.

6. Reconnect your processor or receiver to the AC power source.

7. Proceed to the "Setting the ECS-10's Controls" section to learn about the ECS-10's controls and how they operate.

Connecting to a System without a Subwoofer Preamp Output, but with Standard Left/Right Preamp Outputs

If your system does not have a dedicated subwoofer preamp output, but has left/right preamp outputs, you can use these jacks to connect your receiver or processor to the subwoofer amplifier. See Diagram 2 below.

To connect an ECS-10 Subwoofer using standard Left/Right preamp outputs:

1. Turn off all system components and unplug the processor or receiver and the ECS-10 from their AC power source.
2. Locate the "Left/Right preamp outputs" on the rear panel of your receiver or processor.

Some audio products that do not offer digital surround processing will have these types of jacks. If your receiver or processor does not have this type of output you will need to follow the "Connecting to a system with no pre-amp outputs" instructions that follow this section.

3. Connect one end of the audio interconnects to the left and right preamp outputs on the receiver or processor.
4. Locate the connections labeled "INPUT" on the rear panel of the ECS-10 and connect the other end of the interconnects to these jacks.

- If you are using a separate power amplifier, connect a second set of interconnects to the connections labeled "OUTPUT" on the ECS-10 power amp.

Note: The ECS-10's line level output is bandwidth limited to signals above 80Hz. This enables you to use the ECS-10 with small satellite speakers by limiting the amount of low frequency information they will be asked to reproduce. Subsequently, the reduced demand on your power amplifier and speakers will result in better sound across the board.

- Locate the corresponding amplifier channels on your dedicated power amplifier and connect the other end of the interconnects to these jacks.
- Plug the ECS-10's power cord into an un-switched AC outlet.

Due to the power requirements of the ECS-10, it must not be connected to the accessory outlets on a receiver or processor. If a power-strip or surge protector is used, make certain that it is rated to accommodate the ECS-10's power requirements.

- Reconnect your processor or receiver to the AC power source.
- Proceed to the "Setting The ECS-10's Controls" section to learn about the ECS-10's controls and how they operate.

Connecting to a System with no Preamp Outputs

If no low level subwoofer or standard left/right output is available, you will need to run speaker wires from your main amplifier or receiver to the subwoofer amplifier. See Diagram 3 below.

To connect the ECS-10 using high level inputs:

- Turn off all system components and unplug the receiver and/or amplifier and the ECS-10 from their AC power source.

- Locate the front left/right speaker output terminals on your receiver or amplifier.

In cases where there are both "A" and "B" terminals, the "A" terminals should be used. Disconnect any wire that is presently connected to these terminals.

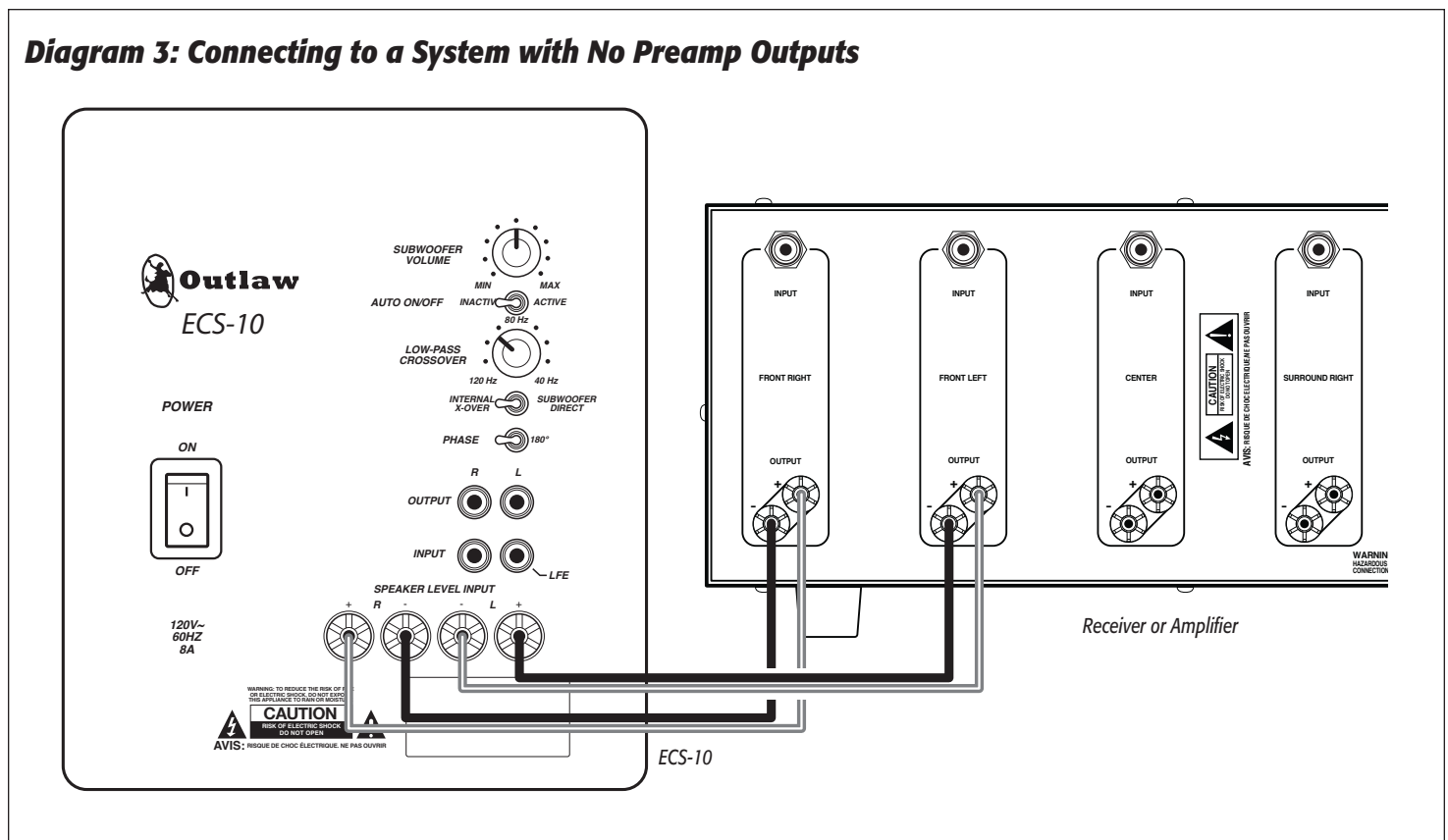
- Using the same type of speaker wire used for your other speaker connections; connect the left and right channel speaker outputs of your receiver or amplifier to the ECS-10's "Speaker Level Input".

NOTE: Be sure to connect the speaker wires to the appropriate input binding posts located on the back of the ECS-10, making certain that the polarity (-/+) on the receiver or amplifier matches the polarity on the binding posts of the subwoofer amplifier. In most cases this means connecting the red terminal on the receiver or amplifier to the red terminal on the ECS-10, but always check the markings on the rear panel to insure "+ to +" and "- to -" connections.

- Plug the ECS-10's power cord into an un-switched AC outlet.

CAUTION: Due to the power requirements of the ECS-10, it must not be connected to the accessory outlets on a receiver or processor. If a power-strip or surge protector is used, make certain that it is rated to accommodate the ECS-10's power requirements.

- Reconnect your receiver and/or amplifier to the AC power source.
- Proceed to the "Setting The ECS-10's Controls" section to learn about the ECS-10's controls and how they operate.



Subwoofer Placement

Placement of your subwoofer is a critical component in maximizing the performance of your ECS-10. Placement influences the subwoofer's "perceived" frequency response, sound pressure level (SPL), and overall accuracy. Since each listening room differs in virtually every aspect, the ideal location will also vary.

An easy way to find the right spot to place your new ECS-10 is to experiment with what we call the "Subwoofer Switch Trick". This process puts the subwoofer where you normally sit and then lets you play the role of the subwoofer.

Place the subwoofer as close to your favorite listening position as possible. If possible, place the unit in front of your couch or easy chair, right in the room's "sweet spot". Provided that there is no damage to your furniture, you may even place the subwoofer on the chair or couch, but remember that the ECS-10 is heavy, and the Outlaws are not responsible for any damage to your furniture or for arguments this might cause with other members of the household!

Activate the test tone from your processor or receiver's internal test tone generator, or use your favorite test disc so that pink noise plays through the subwoofer. While the test tone is playing, walk around your room to find the spots where you hear the best bass response. Sometimes this may be in the center of the room, while in other cases you may find the best spot in a corner or along a side wall.

Turn off the test tone and move the subwoofer to the location where you hear the best bass response. If that location is unacceptable or impractical, repeat the procedure to the spot that is the best compromise between bass performance and aesthetic considerations.

Notes On Subwoofer Placement

Try to avoid creating a listening position that falls directly between the front and back walls and this may cause a strong interference effect due to the collision between bass waves bouncing off the rear wall and new bass waves from the ECS-10. When this happens you might hear an unnatural "build up" in the low frequencies where the bass sounds "bloated", based on the specific dimensions of the room and the particular frequency being reproduced.

In other situations you might encounter a "null", which is caused by two low frequency waves canceling each other out. When this happens you will find that your favorite listening position is bass shy. In this type of placement situation bass response will suffer greatly regardless of how powerful the subwoofer is. The best way to solve this problem is to change the location of the seating position so that the distance to the front of the room is different than that to the back of the room.

Setting the ECS-10's Controls

Phase Switch

Depending on the absolute phase of your main speakers and amplifier, as well as the relative distance from the ECS-10 and main speakers to the listening position, the bass in the crossover region may be smoother if you reverse the phase of the ECS-10. Try both positions of the phase switch to determine which way sounds more bass-heavy. The bass-heavier position is the setting where the output of the ECS-10 and the main speakers are most in phase. Use program materials with bass in the crossover region such as music containing bass drums, double basses, bass guitar, etc. to determine the correct setting.

Variable Crossover

By adjusting the variable crossover on the ECS-10, you can perfectly match the ECS-10 to your main speakers. If your receiver or processor already has a built in crossover, disable the crossover on the ECS-10 by flipping the "LOW-PASS X-OVER" switch to the "SUBWOOFER DIRECT" position. Refer to the owner's manual for your receiver or processor to see how to disable any internal crossover capability it may have. If your receiver or processor does not have internal crossover control, follow these steps to set ECS-10's variable crossover:

Determine the +/- 3dB point of your main speakers. This frequency is usually found on the speaker's specifications sheet or may often be available on the speaker manufacturer's web site. Start with the crossover set approximately to this point. By experimenting with the crossover frequency and level control, you can fine-tune the ECS-10 so that there is a seamless link between the ECS-10 and the main speakers.

If the actual +/- 3dB point cannot be obtained from the speakers' specifications or the manufacturer's web site, you can use the following chart as a guideline:

40 Hz	Large tower speaker with one 12 or 15-in. woofer or two 10-in. woofers; Small tower speaker with one 10-inch woofer or two 8-inch woofers
60 Hz	Small tower or large bookshelf speaker with one 8-in. or two 6-in. woofers
80 Hz	Bookshelf speaker with one 6-in. or two 5-in. woofers
100 Hz	Bookshelf speaker with one 5-in. woofer or two 4-in. woofers
120 Hz	Satellite speaker with one 4-in. woofer or one or two 3.5-in. woofer(s)

Volume Level

Using the built-in test tones of your receiver/processor, match the levels of all of your speakers including the ECS-10 as described in your receiver or processor's owner's manual. A setting of 5 on the ECS-10's volume knob should provide enough gain to properly match the sub level to your speakers. We recommend using an SPL meter such as the Radio Shack (part number 33-2050). When using the test tones, measure from the listening chair and set the meter to the 75 dB level. In order to accurately measure levels between channels use "C" weighting and the "slow" setting.

Note: The Radio Shack meter is down about 12 dB at 16 Hz, 7 dB at 20 Hz, and 4 dB at 25 Hz. Add these numbers to the readout to compensate for these errors if necessary.

The Scattered Subwoofer System (Two ECS-10's)

Why Two Subwoofers?

In most circumstances two subwoofers will perform better than one. While you might assume this is for added SPL, the greatest benefit will actually be smoother bass response.

Room shape, the cubic volume of the room (width x depth x height), furniture, floor coverings and even wall and ceiling material all play a roll in bass performance. These factors create peaks and dips in the level of low frequencies at different points in the room. That said, two properly positioned subwoofers will distribute the bass throughout the room with greater accuracy than a single sub. For this reason, many professional acousticians and installers recommend more than one subwoofer. The final result is that you will create a much larger "sweet spot" where the bass is powerful, but more importantly, smooth and consistent. If near perfect bass response is your goal, consider using two ECS-10 Subwoofers.

What's Needed to Connect Two Subwoofers?

Most of today's digital receivers and preamp/processors provide a single subwoofer output. Connecting two subwoofers to these systems is as simple as adding a Y-adapter. A Y-adapter splits a single output into two separate outputs. Be sure to use a Y-adapter that is of equal or better quality than the subwoofer cables you intend to use. (We recommend the Outlaw Audio PCA Y-Adapter.)

To use the Y-adapter, insert the single male end of the cable to the subwoofer output of your receiver or processor. On the opposite end of the Y-adapter you will now have two separate subwoofer outputs, one for each sub.

Placement and Level Control

Placement and level control of two subwoofers is somewhat more complicated than using a single subwoofer. However, the end result of two properly placed and calibrated subwoofers is well worth the added effort.

The procedure for placement of the second subwoofer is identical to that of determining the placement of the first subwoofer (see the "Subwoofer Placement" section of this manual). However, the second sub should be placed in the seating area outside of the "sweet spot" where good bass response is also required. Walk around the room until you find the area where the bass sounds the best, just as described in the process for locating a single sub. This spot will almost always be different than the one that was best for the primary sub.

NOTE: When calibrating your second subwoofer, be sure to turn off the first sub. This will help you to determine ideal placement without being misled by the response of the first sub.

When calibrating the final levels of each subwoofer, you may want to reduce their output to compensate for the added 3 or 4 dB of gain created by using two subwoofers together.

If you sense a loss of bass output after properly locating and calibrating both units in a two-subwoofer system, the likely problem is that the two units are out of phase with each other. If this occurs try flipping the phase switch on the back of one or both of the subwoofers until the bass returns. For more information regarding the phase control function, please read the "Setting the ECS-10's Controls" section of this manual.

Care and Maintenance

Cleaning

When the ECS-10 Subwoofer cabinet becomes dirty, wipe it with a clean, soft, dry cloth. If necessary, first wipe the surface with a soft cloth slightly dampened with mild soapy water, then with a fresh cloth dampened with clean water. Wipe dry immediately with a dry cloth.

NEVER use benzene, thinner, alcohol or any other volatile cleaning agent. Do not use abrasive cleaners, as they may damage the finish of the metal parts. Avoid spraying insecticide, waxes, polishing agents, or any aerosol product near the unit.

When You Are Away

If you will not be using your home theater system for an extended period of time, it is always a good idea to turn the unit off using the Master Power Switch on the rear panel of the subwoofer. This will prevent the automatic turn on circuits from accidentally powering the system on during your absence.

Troubleshooting

Your ECS-10 Subwoofer is designed for trouble free operation. If you follow the instructions in this manual you should experience many years of high quality listening enjoyment. However, as with any sophisticated electronic device, there may be occasional problems upon initial installation, or during the life of the unit.

Troubleshooting Guide

The table below provides a brief list of minor problems that you may be able to correct yourself. If these solutions do not rectify a problem, or if the problem persists, contact us for assistance.

Humming or Buzzing Noise

Power down your system and remove the Interconnects between your components. Power your system back on. If the hum goes away when the interconnects are disconnected, the hum is coming from the rest of your equipment. Plug In the Interconnects one at a time for each component until you come across the specific component generating the hum.

No output from the subwoofer

(Blue LED does not light up)

Check that the power cord is plugged in securely at both ends and make sure that the power outlet the subwoofer is plugged into is functioning properly.

The subwoofer is not receiving a signal

Recheck the connections between the receiver/processor and the subwoofer. On the back of the subwoofer, make sure the power switch is set to "auto" or "on".

No output from the subwoofer

Connect the signal cable to another subwoofer or amplifier. If you get output, then the amplifier is faulty. Email or call technical support for authorization to send the amplifier back for service.

Outlaw Service Information

The Outlaw Audio ECS-10 Subwoofer does not contain any user serviceable parts. If you suspect a problem that may require service assistance, call us at 866-688-5292.

It is important that only a service agent authorized by Outlaw Audio carry out any repairs. Keep your sales slip or receipt in a safe place with this manual so that it will be available to verify the purchase date, should you experience a problem covered by our warranty.

The Outlaw Audio 30-Day Satisfaction Guarantee

This product is guaranteed to satisfy all your needs for a high performance subwoofer system. If for any reason, you are not completely satisfied with it, please contact us at 866-OUTLAWS (688-5297) within 30 days of receipt of the unit and you will receive a return authorization.

Please save all of your packing material in that the ECS-10 is heavy and can get damaged in shipping without proper protection. We recommend that you keep the packing (even after 30 days) so that if you ever move, the unit will be adequately protected.

If you decide to return the ECS-10, the only cost you will be responsible for is the shipping charge to return it to us. When your subwoofer arrives, we will inspect it to insure that it was shipped back to us in original condition. Upon satisfactory inspection, we will issue a full credit for your original purchase price.

ECS-10 Enhanced Cube Subwoofer Specifications

Woofer	10 inch front firing (8 inch piston diameter)
Magnet Structure	21.6 lbs
Voice Coil	3 inch Dual Layer
Magnetic Shielding	Yes
Amplifier	(Class D) 1000 watts RMS Power (2000 watts Dynamic)
High Pass Crossover	80 Hz
Low Pass Crossover	40 Hz – 120 Hz
Phase	0° or 180°
Frequency Response	23 – 120 Hz (±3 dB)
Inputs	Gold plated line-level and speaker-level
Outputs (Line-level)	80 Hz
Dimensions (H/W/D)	13.23 in. (inc. feet) x 12.375 in. x 13.875 in.
Shipping Weight	46 lbs.



Outlaw Audio LLC Limited Warranty

This warranty protects the owner of the Outlaw Audio LLC (hereby referred to as Outlaw Audio) ECS-10 Enhanced Cube Subwoofer (the PRODUCT) for three (3) years from the date of purchase.

This warranty covers all defects in material and workmanship with the following specific exceptions. These are:

- Damage caused by improper installation or adjustment
- Damage caused by accident, unreasonable use or neglect
- Damage from failure to follow instructions contained in this Owner's Manual
- Damage from the performance of repairs by someone not authorized by Outlaw Audio
- Any unit on which the serial number has been defaced, modified, or removed
- Damage occurring during shipment
- Units which have been altered or modified in design, appearance or construction

This warranty covers only the actual defects within the PRODUCT itself. IT DOES NOT cover costs of installation in (or removal from) a fixed installation, or normal set-up, claims based on any misrepresentation by the seller, or performance variations resulting from installation related circumstances such as signal quality, AC power or incompatibilities with speakers and/or other system components.

During the warranty period, Outlaw Audio will, at its option, either repair the defect, or replace the defective product, or the defective parts, or components thereof at no charge to the owner for parts and labor covered by this warranty. If necessary repairs are not covered by this warranty, or if a unit is examined which is not in need of repair, you will be charged for the repairs and/or the examination. If non-warranted repairs are needed, we will notify you of the estimated cost and ask for your authorization to perform said repairs.

You must pay shipping charges incurred in getting your Product to the factory. We will pay the return shipping charges if the repairs are covered by the warranty. Please save the original shipping cartons as the unit MUST be returned in the original carton and packing.

(Replacement cartons are available at a modest charge.)

If your product needs service, please call Outlaw Audio LLC at 866-OUTLAWS (688-5297) or 866-OUTLAWA (688-5292).

You will need to present the original bill of sale to establish the date of purchase. In the event that the proof of purchase cannot be established with the original receipt, the warranty period shall be determined by the earliest date of manufacture shown on the unit, provided that the serial number label has not been altered in any manner, or by our records relating to that serial number.

In the event that you wish to return your Outlaw ECS back to us, for any reason, please call to arrange for a Return Authorization Number. This will insure that your problem is discussed with a service technician who will determine if there is a quick solution to your problem.

Outlaw Audio shall not be liable for, in any way responsible for, any incidental or consequential damages of any kind. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion of incidental or consequential damages, therefore, the limitations and exclusions stated herein may not apply to you. This warranty gives you specific legal rights; and you may also have other rights which vary from state to state.

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Products are sold on the basis of specifications applicable at the time of sales. Outlaw Audio shall have no obligation to modify products once they have been sold.

This warranty is applicable only in the United States.

For applicability in other countries, please call Outlaw Audio.



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