



# Owner's Manual

## TA1501C Clark Synthesis Amplifier



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**NOTE:** READ THIS MANUAL BEFORE OPERATING THE AMPLIFIER. FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL MAY RESULT IN DAMAGE TO THE AMPLIFIER AND/OR THE SOUND EQUIPMENT BEING POWERED BY THE AMPLIFIER.

# COMPANY OVERVIEW

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Thank you for purchasing a Clark Synthesis Tactile Sound Amplifier! We are confident this product will be a welcome addition to your audio system.

For many years, Clark Synthesis has been providing Tactile Sound Transducers for use in home theaters, listening rooms, outdoor decks, military simulators, theme park attractions, game chairs, professional music, and swimming pools. With such a variety of products, it is likely that Clark Synthesis has the right type of transducer for your application.

Because Clark Synthesis transducers require amplification to operate properly, we offer the TA1501C amplifier. The TA1501C is designed for a wide variety of uses, including home theater, professional music, and outdoor living applications.

With a focus on providing complementary products that provide quality sound and professional-grade performance, Clark Synthesis is committed to designing products that will take your audio experience to the next level. We are glad you chose a Clark Synthesis TA1501C amplifier and we hope that you will enjoy many years of listening enjoyment using our products.

The Clark Synthesis products shown below can be powered with the TA1501C Amplifier.

**TST429 Platinum Transducer**



**TST329 Gold Transducer**



**AQ339 Aquasonic Underwater Speaker**



**TST239 Silver Transducer**



**AW339 All-Weather Transducer**



# WARRANTY

## United States Warranty and Return Policy

### TA1501C CLARK SYNTHESIS AMPLIFIER WARRANTY

Clark Synthesis, Inc. warrants the TA1501C Amplifier to be free from defects and workmanship under normal use for a period of two (2) years from date of original purchase.

Should warranty service be necessary, Clark Synthesis, Inc. will (at its discretion) repair or replace the defective merchandise with equivalent merchandise at no charge.

This warranty is valid for the original purchaser and is not extended to subsequent owners. Any applicable implied warranties are limited in duration to a period of the express warranty as provided herein beginning with the date of the original purchase at retail, and no warranties, whether expressed or implied, shall apply to this product thereafter. Some states do not allow limitations on implied warranties; therefore these exclusions may not apply to you. This warranty gives you specific legal rights; however, you may have other rights that vary from state to state.

### WHAT IS NOT COVERED

This warranty is valid only if the product is used for the purpose for which it was designed. It does not cover the following:

- Damage caused by excessive heat
- Damage through negligence, misuse, accident, or abuse
- Damage caused by incorrectly connecting the amplifier to an output device or an electrical source
- Freight damage
- Items repaired by an unauthorized repair facility
- Items purchased from unauthorized individuals or dealers
- Cost of shipping product to Clark Synthesis, Inc.
- Return shipping on non-defective items

### RETURN POLICY

New, unused items purchased from us may be returned within 7 days of the purchase date. Please note: Clark Synthesis will only accept returns for items that are received in their original packaging, in undamaged and re-sellable (new) condition. Manuals, accessories, warranty cards, and everything else that came with the unit must be included as well. If your return does not meet these conditions, you will be charged a 15% restocking fee or have the merchandise returned to you at your expense. Non-defective merchandise can also be returned for a 15% restocking fee. Shipping charges for all non-defective returns or exchanges are not refundable.

### WHAT TO DO IF YOU NEED WARRANTY OR SERVICE

If it becomes necessary for you to return defective merchandise, call Clark Synthesis Customer Service at (800) 898-1945 and you will be given a Return Authorization Number. Follow the instructions provided by our customer service staff, use suitable packing materials (preferably the original shipping boxes), and make sure to write your Return Authorization Number on the outside of your box when sending your return to us. Orders that are returned without an Return Authorization Number may be refused by our returns department! Remember to include a dated proof of purchase from an authorized dealer. Return freight must be prepaid by the customer: items received freight collect will be refused. If the returned product is found to contain a manufacturing defect not caused by the customer and a replacement product is sent to the customer, Clark Synthesis, Inc. will pay to ship the replacement product to a domestic location (within the USA) via ground shipping methods. Costs associated with a) shipping replacement products intended to replace defective merchandise not caused by a manufacturing defect, b) replacement products shipped outside the USA, or c) replacement products shipped via shipping methods other than ground shipping will be paid for by the customer.

Make sure the following is included in your package:

- Product to be returned (repacked in original shipping containers)
- Return Authorization Number printed on the outside of the box
- Copy of original invoice with Return Authorization Number printed on it

### Return to our Service Department:

RA#: \_\_\_\_\_  
Clark Synthesis, Inc.  
8020 Southpark Circle, Suite 600  
Littleton, Colorado 80120

### INTERNATIONAL WARRANTY

Contact your International Clark Synthesis dealer or distributor concerning specific procedures for your country's warranty policies.



# SAFETY INSTRUCTIONS

1. **READ THESE INSTRUCTIONS.**
2. **KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE.**
3. **HEED ALL WARNINGS.**
4. **FOLLOW ALL INSTRUCTIONS.**
5. **DO NOT USE THIS AMPLIFIER NEAR WATER.**
6. **CLEAN ONLY WITH A DRY CLOTH.**
7. **DO NOT BLOCK ANY VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.**
8. **DO NOT INSTALL NEAR HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES, OR OTHER EQUIPMENT.**
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. **PROTECT THE POWER CORD FROM BEING WALKED ON OR PINCHED, PARTICULARLY AT THE POINTS NEAREST THE OUTLET AND WHERE THE CORD ENTERS THE AMPLIFIER.**
11. **ONLY USE ATTACHMENTS OR ACCESSORIES SPECIFIED BY THE MANUFACTURER.**
12. **USE ONLY WITH A CART, STAND, TRIPOD, BRACKET, OR TABLE SPECIFIED BY THE MANUFACTURER OR SOLD WITH THE AMPLIFIER.** When a cart is used, use caution when moving the cart to avoid damaging the amplifier.
13. **UNPLUG THE AMPLIFIER DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.**
14. **REFER ALL SERVICING TO QUALIFIED PERSONNEL.** Servicing is required when the amplifier has been damaged in any way, such as the power supply cord has been damaged, liquid has been spilled/objects have fallen into the amplifier, the amplifier has been exposed to rain or moisture, the amplifier does not operate normally, or the amplifier has been dropped.
15. **WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS AMPLIFIER TO RAIN OR MOISTURE.**
16. **DO NOT EXPOSE TO DRIPPING OR SPLASHING. DO NOT PLACE OBJECTS FILLED WITH LIQUID, SUCH AS VASES, ON THIS AMPLIFIER.**
17. **TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE TOP OR BOTTOM COVERS. NO USER SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**
18. **TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE. THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.**
19. **THE EXCLAMATION POINT WITHIN THE EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE INSTRUCTIONS.**
20. **THE LIGHTNING BOLT TRIANGLE IS INTENDED TO ALERT THE USER TO THE RISK OF ELECTRIC SHOCK.**
21. **SPECIAL SAFETY CONSIDERATION FOR THE AQUASONIC SWIMMING POOL SPEAKER: WHEN USING THE TA1501C AMPLIFIER WITH THE CLARK SYNTHESIS AQUASONIC SWIMMING POOL SPEAKER, WE RECOMMEND THE FOLLOWING:**
  - The amplifier must be plugged into a GFI-protected outlet.
  - Use an isolation transformer. Contact Clark Synthesis for more information.



# PRODUCT INTRODUCTION

## OVERVIEW OF THE AMPLIFIER

The TA1501C amplifier is the first audio amplifier designed exclusively for use with Clark Synthesis transducers. This amplifier incorporates the latest digital technology and provides features not available on many amplifiers. Please read this manual in its entirety so you can get the maximum enjoyment from your Clark Synthesis product(s).

## USING THIS AMPLIFIER WITH A CLARK SYNTHESIS TRANSDUCER

The TA1501C amplifier works with all Clark Synthesis transducers. This manual outlines how to use this amplifier with our transducers.



**CAUTION:** This amplifier is designed to provide power to one (1) transducer.

Please note, the TA1501C can provide more continuous power than the transducer can handle. Why do we do this? Special effects audio signals often contain peaks that require extra power to be delivered to the transducer. This amplifier will supply those peaks without damaging the transducer, providing you, the user, with a true Tactile Sound experience.

## FEATURES

The Clark Synthesis TA1501C Amplifier has the following features:

- Class D design for powerful, clean sound
- All-metal cabinet
- Crisp, clean, and compact body design
- Built-in Crossover Control that enables control of the cutoff point from 40 Hz to 400 Hz
- Bypass control that disables the Crossover Control, allowing the amplifier to reproduce full-frequency audio
- Front LED that indicates the amplifier is connected to AC power
- Auto/On saves power by turning the amplifier stage on only when an audio signal is present
- Powered loop-through allows you to connect multiple amplifiers together to a single audio source
- Stereo inputs allow you to connect the amplifier to multiple sources. The audio is automatically combined inside the amplifier.
- IEC-601 Connector allows you to use a power cord other than the power cord supplied. This is especially helpful if you live in a country that requires a different AC plug.
- Amplifier automatically runs on AC power from 100 to 240 VAC, 50/60 Hz
- The audio input section works with high-level and low-level line signals. This feature permits the amplifier to work with studio-level and consumer-level audio signals
- 5-way binding posts for connecting the transducer wires

# UNPACKING YOUR AMPLIFIER

## PACKAGE CONTENTS

Please remove the amplifier and accessories from the carton. You should have the following:

- (1) TA1501C Amplifier
- (1) AC Power Cord
- (4) Amplifier Feet
- (1) Y Adapter Cable (Color may vary from the image shown here)
- (1) Operating Manual



## CONTACT INFORMATION IF PARTS ARE MISSING

If you are missing any items, please contact Clark Synthesis at 1-800-898-1945.

We recommend that you save the original carton to use if you ever have to ship the amplifier.



**WARNING:** Before you set up this amplifier, make sure you read and observe the Important Safety Instructions in this manual.

# PRODUCT OVERVIEW

Front Panel



Rear Panel



Ventilation



Threaded Foot Hole

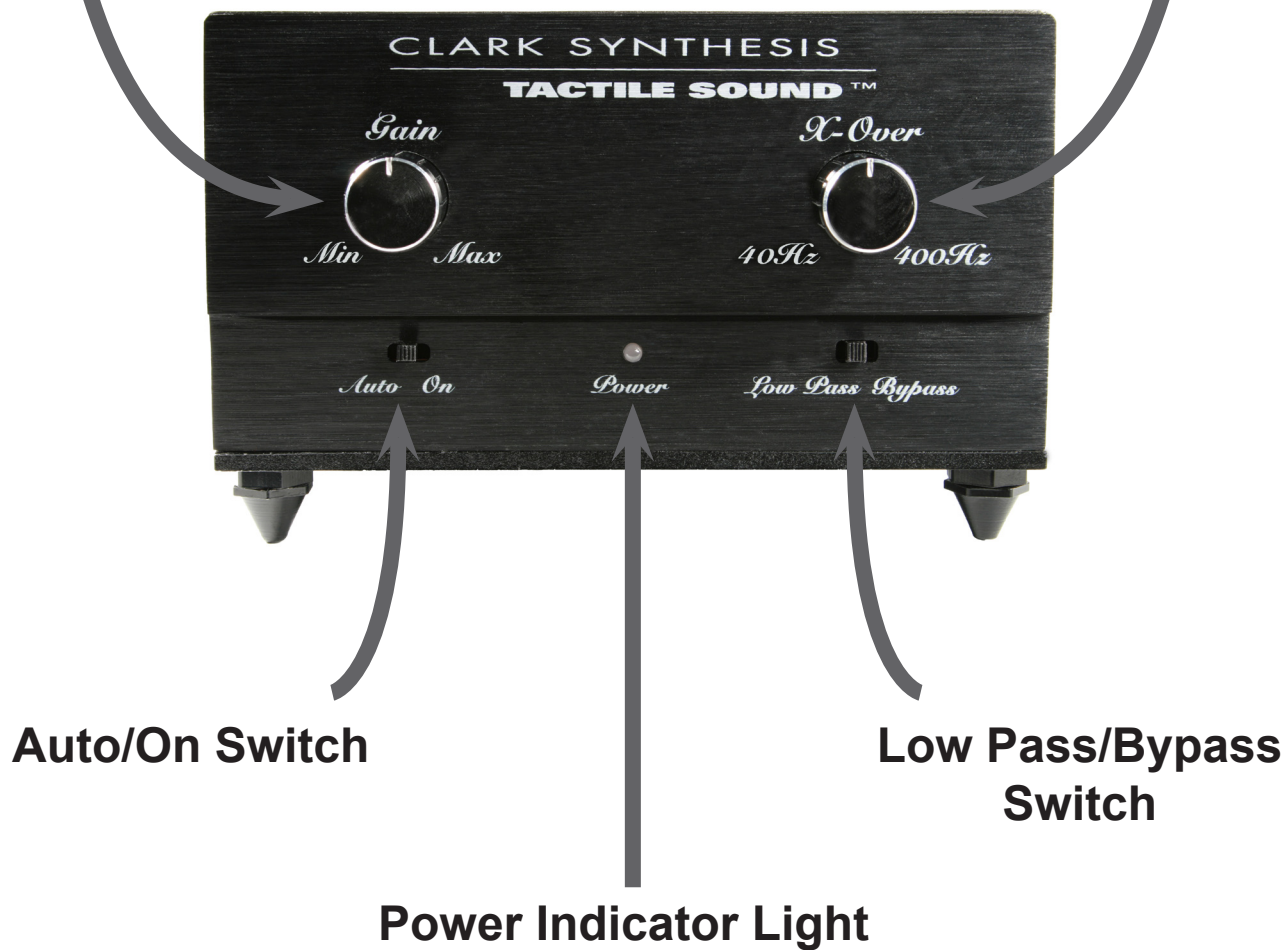


# PRODUCT OVERVIEW

## Front Panel Overview

Gain (Volume) Control

Crossover (X-Over) Control



Auto/On Switch

Low Pass/Bypass  
Switch

Power Indicator Light



# PRODUCT OVERVIEW

## Front Panel Overview



### GAIN (VOLUME) CONTROL

The Gain (Volume) Control on the face of the TA1501C amplifier controls the degree to which the input signal is amplified. The gain level, combined with the level of the input signal, determines the actual volume output.



### CROSSOVER (X-OVER) CONTROL

The Crossover Control on the face of the TA1501C amplifier controls the range of low-frequency (bass) sound sent to the output device, i.e. transducer, speaker, etc. This control is only functional when the Low Pass/Bypass Switch is in the "Low Pass" position. The range of low-frequency sound controlled by this dial is 40 Hz to 400 Hz.



### AUTO/ON SWITCH

The Auto/On Switch allows the user to place the amplifier into either Auto On/Standby mode or On.

When the switch is set to "Auto" and no input signal is received by the amplifier, the amplifier stage will power down and go into Standby mode. Upon sensing an input signal, the amplifier will power on automatically.

When the switch is set to "On," the amplifier will remain powered on, regardless of whether an input signal is present or not.



### LOW PASS/BYPASS SWITCH

The Low Pass/Bypass Switch enables and disables the Crossover function and control dial of the amplifier. When the switch is in the "Low Pass" position, the amplifier only passes low-frequency sounds. When the switch is in the "Bypass" position, the amplifier passes the full range of audio frequencies.



### POWER INDICATOR (LED)

The Power Indicator LED displays the power mode. If the LED is:

- RED- The amplifier is plugged into AC power and the power switch on the back of the amplifier is switched to "On." If the Auto/On switch is set to "Auto," a red LED indicates no audio input signal has been received by the amplifier.
- GREEN- The amplifier is plugged into AC power and the power switch on the back of the amplifier is switched to "On." If the Auto/On switch is set to "Auto," a green LED indicates an audio input signal is being received by the amplifier, or, if the Auto/On switch is set to "On," the amplifier is on.

# PRODUCT OVERVIEW

## Rear Panel Overview

AC Power Switch

High/Low Input Signal Switch

Audio Input/Output Connectors



AC Power Cord Connector  
(IEC-601)

Transducer  
Connector

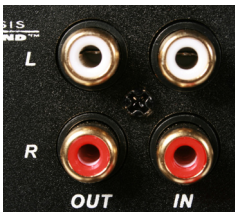
# PRODUCT OVERVIEW

## Rear Panel Overview



### AC POWER SWITCH

The AC Power Switch controls the AC power to the amplifier. The round circle on the switch represents “OFF” and the line represents “ON.” This switch works independently from the Auto/On Switch, which is discussed in the Front Panel Overview section.



### AUDIO INPUT/OUTPUT CONNECTORS

The Audio Input/Output Connectors accept standard RCA plugs. These connectors are split into Left and Right channels, as indicated by L and R on the panel. The Left and Right sides each have one Audio Out and one Audio IN.



### HIGH/LOW INPUT SIGNAL SWITCH

The High/Low Switch allows the user to select the voltage level of the audio input source. For example, if the input source is a standard home theater or stereo receiver, the switch should be set to “High.” If the input source is an MP3 player or portable CD player, the switch should be set to “Low.” For any other type of input source, begin by using the “High” setting. If you are not receiving enough output, try the “Low” setting.



### AC POWER CORD CONNECTOR (IEC-601)

The AC Power Cord Connector is an adaptable connector that allows users to connect IEC-601 compatible AC cords to the amplifier. This type of connector is especially beneficial for international compatibility. The connector also houses a fuse used to protect the unit from surges.



### TRANSDUCER CONNECTOR

The Transducer Connector is used to connect the transducer to the amplifier. This connector uses 5-way binding posts, which allow for a variety of ways to connect the transducer wire (see “Connecting the Transducer to the Amplifier” on page 18).

# SETTING UP YOUR AMPLIFIER

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# SETTING UP YOUR AMPLIFIER

## Quick Setup Instructions

The following instructions are a quick overview of the steps necessary to install your new amplifier. For more detailed instructions, please refer to the sections in the manual that are referenced below.

1. Remove the amplifier from its package (for package contents, see “Unpacking Your Amplifier” on page 6).
2. Insure you have set the amplifier to the following settings:
  - AC Power Switch is set to “Off”
  - Gain (Volume) Control is set to “Min”
  - High/Low Input Signal Switch is set to “High”

For more detail on these settings, including pictures, see “Initial Settings Prior to Making Connections” on page 14.

3. Install the amplifier feet if you are installing on a flat surface. Do not install the feet if you are installing in a Clamping Rackshelf (see “Placing/Mounting the Amplifier” and “Mounting the Amplifier(s) on a Clamping Rackshelf” on pages 14-15).
4. Connect the audio input source to the amplifier. Insure you are connecting to both the Left and Right Input Connectors (see “Connecting the Audio Source” on page 16).
5. Connect the transducer to the amplifier (see “Connecting the Transducer to the Amplifier” on page 18).
6. If you using multiple TA1501C amplifiers to run multiple transducers, connect the loop-through connections using RCA cables (see “Using the Powered Loop-Through to Run Multiple Transducers” on page 19).
7. Plug the AC Power Cord into an electrical outlet.
8. Once connected, turn your system on and balance the sound (see “Balancing the Transducer with the Subwoofer” on page 20).
9. Your system is now ready for use.

# SETTING UP YOUR AMPLIFIER

## Initial Settings Prior to Making Connections



**CAUTION:** Before connecting any wires or input/output lines, insure all equipment is off and no signals are being sent from the input device.

In order to reduce the chances of accidentally damaging the amplifier or transducer, please set the amplifier controls to the safety positions described and shown below:

- Set the AC Power Switch on the back of the amplifier to the “Off” position (see photo #1)
- Set the Gain (Volume) Control to “Min” (completely counter-clockwise, see photo #2)
- Set the Input Signal Switch on the back of the amplifier to the “High” position (see photo #3)



Photo #1



Photo #2

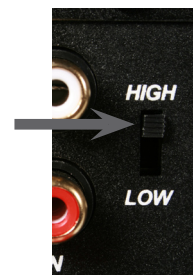


Photo #3

## Placing/Mounting the Amplifier



If you are placing the amplifier on a flat surface (not including mounting the amplifier on a Clamping Rackshelf), you must install the feet supplied with the amplifier. Installing these feet will help provide sufficient cooling to the bottom plate of the amplifier.

To install the feet, follow the steps listed below:

- Gently place the amplifier on a non-abrasive surface with the bottom of the amplifier facing up.
- Hand thread one of the feet into a receiving hole, insuring the threads do not crosstread.
- When properly threaded, tighten the foot by hand until it is snug.



**CAUTION:** Do not overtighten the feet. The bottom plate of the amplifier is made of soft metal and the threads can easily be stripped if the feet are improperly threaded or overtightened.



**CAUTION:** The bottom of the amplifier can get hot. Do not place anything directly under the amplifier that is flammable or can be damaged by heat. Failure to install the feet may result in damage to the amplifier and/or the surface upon which it is sitting (not including a Rackshelf).



**CAUTION:** Insure there are two (2) inches of clearance around the sides and top of the amplifier. **DO NOT** block the top or side air vents.

# SETTING UP YOUR AMPLIFIER

## Mounting the Amplifier(s) on a Clamping Rackshelf

Up to three (3) TA1501C Amplifiers may be installed in a 2U rack space using a Clamping Rackshelf.



When mounting in a Clamping Rackshelf, **DO NOT** install the feet provided with the amplifier. The bottom of the amplifier **MUST** be in full contact with the metal rackshelf.



**CAUTION:** Insure even spacing between the amplifiers and the side walls of the shelf. This will aid in providing adequate ventilation for the amplifier(s).



**CAUTION:** To prevent overheating, insure the entire rack has adequate ventilation.

# SETTING UP YOUR AMPLIFIER

## Connecting the Audio Source

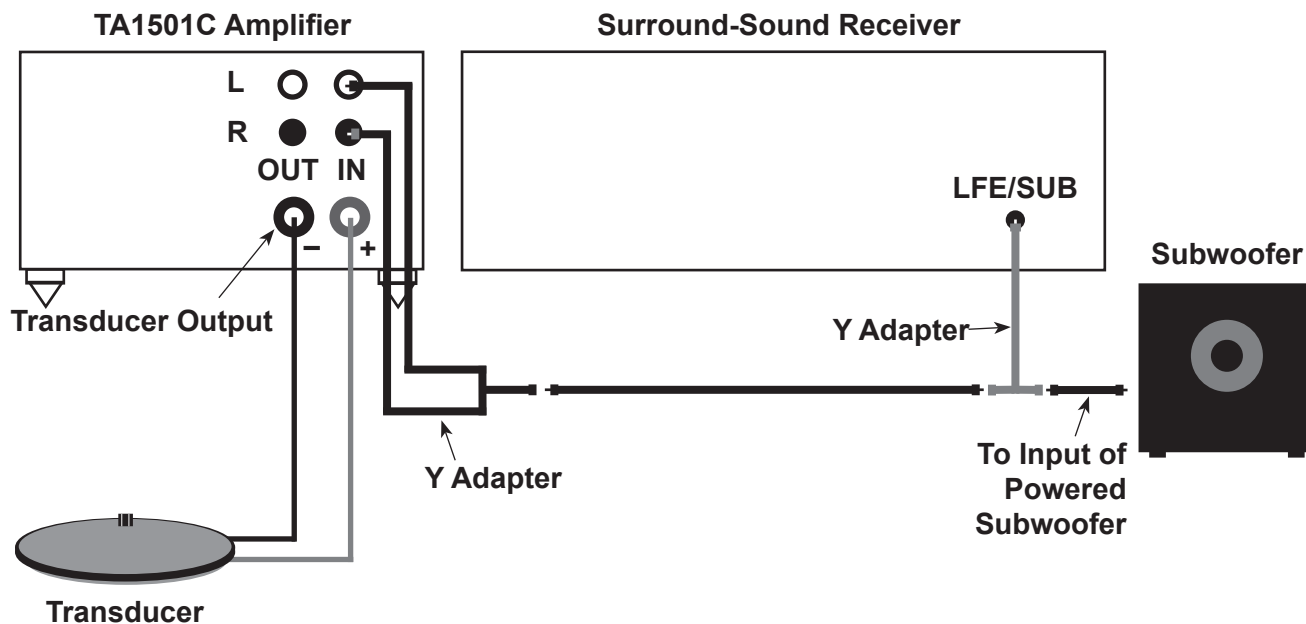
### HOME THEATER

There are several different ways to hook up your system in terms of which source material (signal) is delivered to the amplifier(s) and transducer(s). Since our inception, we have discovered that approximately half of our customers prefer using the LFE/SUB signal with their transducers. The other half prefer using the Right Front (RF) and Left Front (LF) signals. Additionally, there are a few people who like to use multiple signals concurrently. In the following instructions, we provide you with general diagrams for each of these hookup methods.

#### LFE/SUB Hookup

The LFE, SUB, or Subwoofer output is the signal that you send to the subwoofer.

If your receiver has only one LFE/SUB/Subwoofer output port, connect a “Y” adapter to that output. This will allow you to split the signal between the transducer and the subwoofer. To do this properly, connect your subwoofer to one side of the “Y” adapter. Connect the TA1501C amplifier to the other side of the “Y” adapter. To reduce the amount of noise produced when using this signal, use another “Y” adapter cable when connecting to the amplifier. This will allow you to connect the signal into both the Left and Right input connectors on the amplifier.



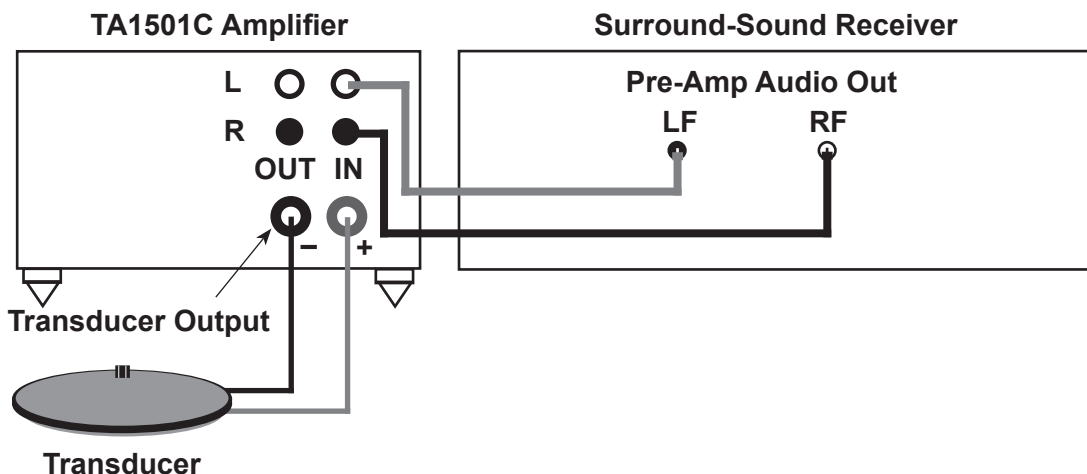


# SETTING UP YOUR AMPLIFIER

## Right Front (RF) and Left Front (LF) Hookup

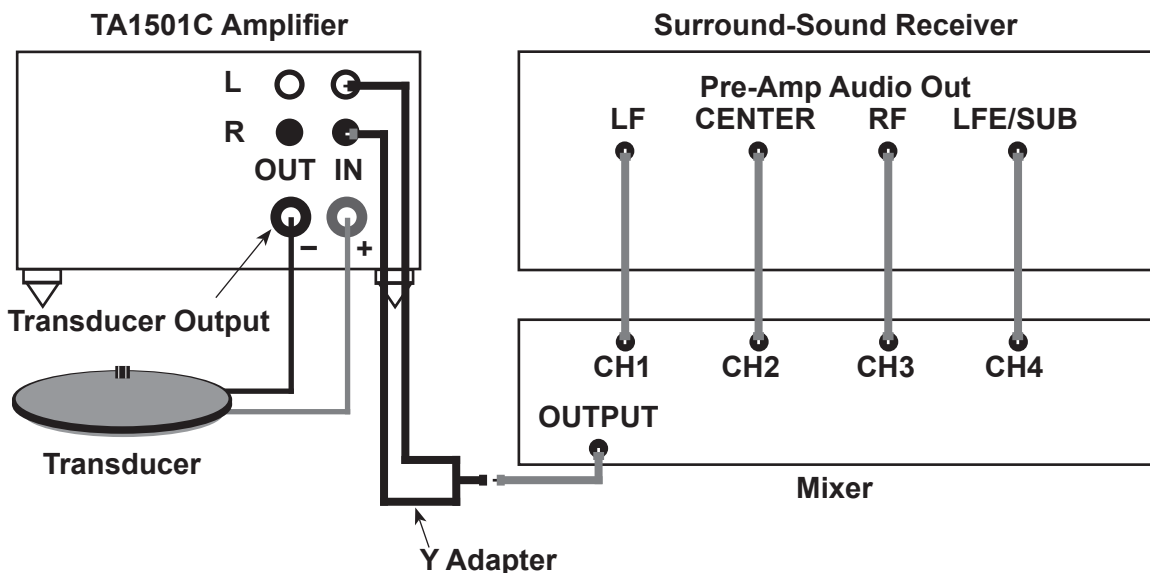
For this hookup, connect the RF and LF Pre-Amp Outputs to the TA1501C amplifier inputs.

**NOTE:** Not all receivers have Pre-Amp outputs for the Right Front and Left Front outputs. If you have a question about your receiver's outputs, please consult your owner's manual or contact your receiver's manufacturer.



## Multiple Signal Hookup

This configuration is a little more complicated. You will need a small mixer to make this work. Connect the signals you want to use to the mixer input. Then, connect the mixer output to the TA1501C amplifier input using a "Y" adapter.



# SETTING UP YOUR AMPLIFIER

## Connecting the Transducer to the Amplifier

If you are able to locate the amplifier within 3 feet of the transducer (3 ft. is the approximate length of the speaker wire attached to the transducer), connect the transducer wires directly to the amplifier. This can be done by unscrewing the wire binding posts, inserting the wire through the hole in the post (see photo #1 on this page), and then retightening the binding posts (see photo #2). To insure you have a secure connection, make sure the insulation on the wire does not get pinched when tightening the cap on the binding post.

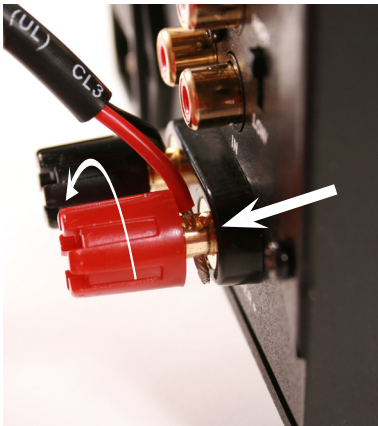


Photo #1



Photo #2

**NOTE:** The 5-Way binding posts can be connected to in several ways. You can insert banana plugs into the end of the posts, insert pin connectors or bare wire through the hole in the post (as shown in photo #1), wrap bare wire around the posts and tighten the post caps, or install lug terminals around the posts.

If you are unable to locate the amplifier within 3 feet of the transducer, you will need to splice the speaker wire coming out of the transducer with another comparable wire of the correct length. Once spliced, attach the ends of the added wire to the amplifier as discussed above.

**NOTE:** Our general wire size recommendations for additional wire are as follows:

- 0 to 25 feet, 16 AWG
- 25 to 50 feet, 14 AWG
- 50 to 75 feet, 12 AWG

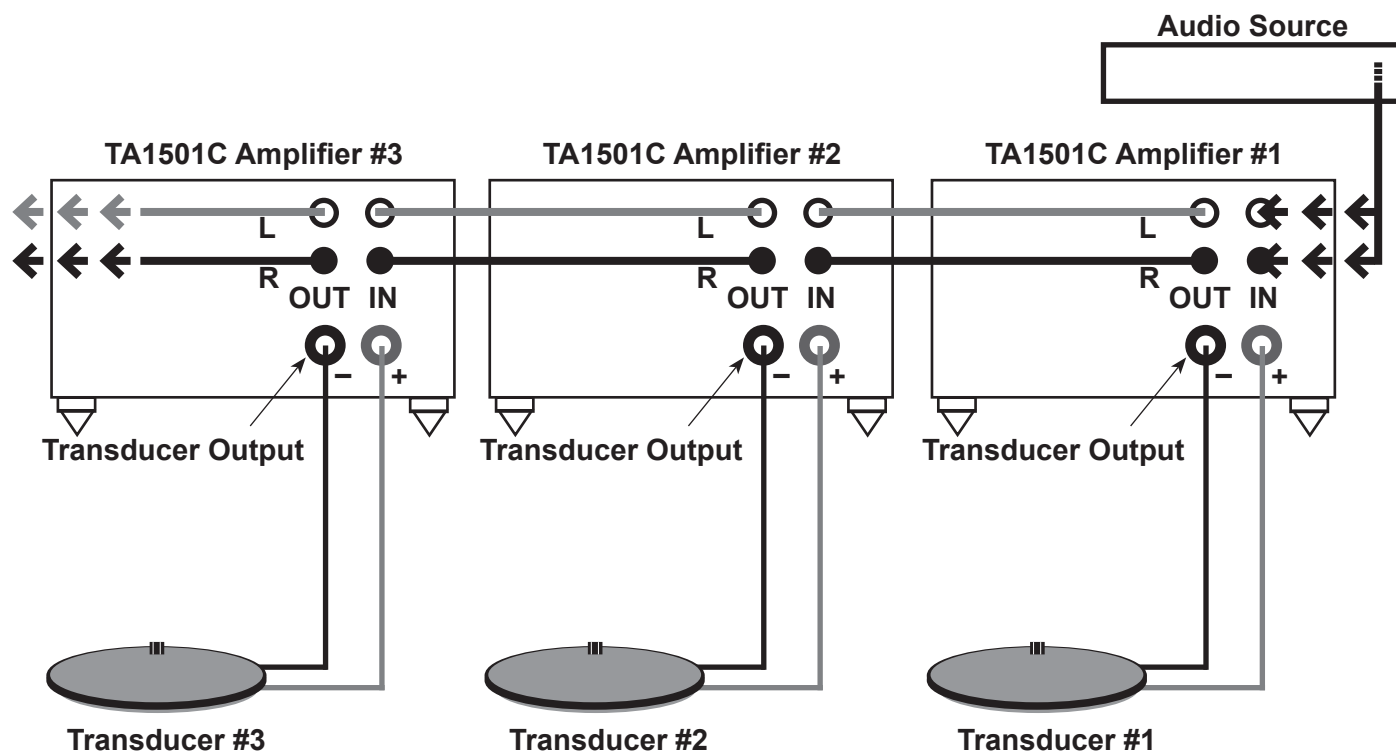
# SETTING UP YOUR AMPLIFIER

## Using the Powered Loop-Through to Run Multiple Transducers

The TA1501C has powered loop-through. This feature enables the user to take the signal from an audio source and pass it to a series of TA1501C amplifiers in order to drive multiple transducers.

The drawing for this type of hookup is shown below. Use a standard “Y” adapter to get the signal from the audio source (e.g., from the LFE/SUB output). If the input signal is coming from two ports (e.g., from the RF and LF outputs), the “Y” adapter is not needed. The wires from those connectors can be connected directly to the “Audio In” connectors of the TA1501C.

Subsequent wiring between the amplifiers can be done with single or paired wire connectors. The wiring for the transducers is the same as that for a single transducer hookup (see “Connecting the Transducer to the Amplifier” on the previous page).



# OPERATING YOUR AMPLIFIER

## Balancing the Transducer with the Subwoofer

Once you have properly set up your amplifier, it is important to take time to balance the transducer and subwoofer sound. The volume of the transducer is controlled by the receiver and will rise or fall in direct proportion to that of the primary speakers. This proportion is determined by both the volume setting on the receiver and the gain setting on the TA1501C amplifier.

**NOTE:** Some receivers have internal, automatic balancing systems. These systems rely on microphones that sense the sound levels within the room. Since tactile sound transducers are heard through your body, instead of through the air, automatic balancing systems may be ineffective when balancing the subwoofer volume. We suggest using the following procedure, rather than activating the automatic balancing system.

### STEPS:

1. Set the TA1501C Power Switch on the back of the amplifier to "OFF" (see photo #1 below).



Photo #1

2. If you are using a low-level signal, such as an MP3 player, set the High/Low Switch to "LOW." If you are connecting to a high-level signal, such as an A/V receiver, set the switch to "HIGH." (see photo #2).

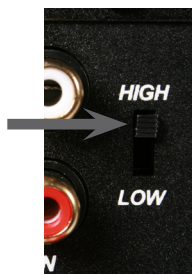


Photo #2

3. Turn the Gain Control counter-clockwise to the "MIN" position (see photo #3).



Photo #3

# OPERATING YOUR AMPLIFIER

- If you are using the LFE/SUB signal as your input for the transducer, insure the Low Pass/Bypass Switch is set to "Low Pass" (see photo #4) and the Crossover Control on the TA1501C is set to 400 Hz (photo #5). If you are using the RF/LF signal, set the switch to "Bypass."



Photo #4



Photo #5

- Select an action-based DVD and play your favorite action scene.
- While the scene is playing, set your home theater speakers to a level equivalent to the maximum level where you would listen to them.
- Stop the action scene from playing, leaving the volume setting at the level you just determined.
- Turn the subwoofer volume on the powered subwoofer(s) all the way down.
- Turn on the TA1501C AC Power Switch on the back of the amplifier.
- Set the TA1501C Auto/On Switch to "Auto" (see photo #6).



Photo #6

- Playing your favorite action scene again, turn up the Gain Control until you feel the action playing through the transducer.



**CAUTION:** If you hear distortion from the transducer, immediately reduce the Gain level.

**NOTE:** If the TA1501C amplifier is located some distance from the furniture, it may be helpful to have someone else adjust the volume.

- With the scene still playing, increase the subwoofer volume on the powered subwoofer(s) until the low frequency sound is balanced.
- Finally, if using the LFE/SUB signal as the input for the transducer and you have selected the "Low Pass" setting, adjust the TA1501C Crossover and Gain Controls until the experience is at its peak.

**NOTE:** Some people are uncomfortable hearing dialogue through their bodies. Use the Crossover Control to remove the dialogue from the audio signal by adjusting the Hz range reproduced by the amplifier. This is only possible if the amplifier is set to "Low Pass," which activates the Crossover Control.

# SPECIFICATIONS

## General

- Power Supply.....100 – 240 VAC, 50/60 Hz, Auto
- Standby Current (110 VAC / 220 VAC).....0.12 A / 0.11 A
- Max Current (110 VAC / 220 VAC).....2.4 A / 1.1 A
- Total Amplifier Efficiency.....70%
- Dimensions, without Feet (W x H x D).....5.125 in x 2.75 in x 8.875 in (130.2 mm x 69.9 mm x 225.4 mm)
- Dimensions, with Feet (W x H x D).....5.125 in x 3.25 in x 8.875 in (130.2 mm x 82.6 mm x 225.4 mm)
- Weight.....3.5 lbs. (1.588 kg)
- Fuse.....T3AL 250V

## Input Section

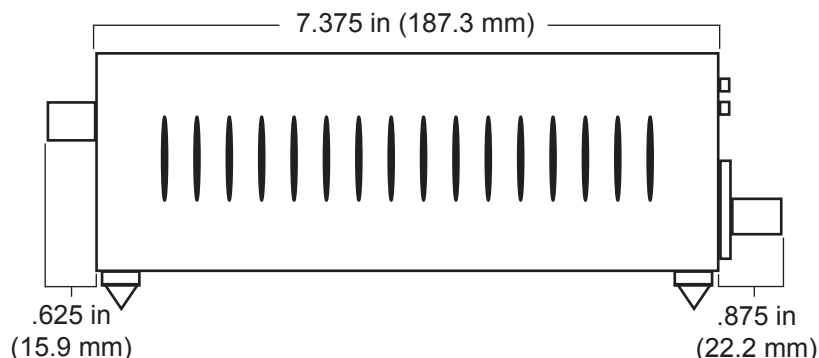
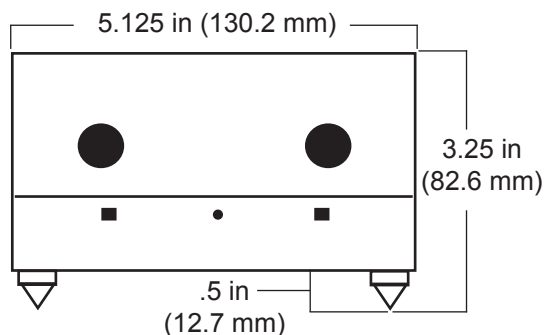
- Input Impedance.....16 k $\Omega$
- Input Sensitivity (1 W, Input switch set to Low).....30 mV
- Input Sensitivity (1 W, Input switch set to High).....100 mV
- Input Sensitivity (150 W, Input switch set to Low).....360 mV
- Input Sensitivity (150 W, Input switch set to High).....1 V
- Loop Through Amplification.....x 1
- Auto-On.....Switch Selectable

## Crossover Section

- Crossover Frequency Selection.....40 Hz – 400 Hz
- Crossover Frequency Selection (+ 0 dB, -3 dB).....35 Hz – 420 Hz

## Amplifier Section

- Output Power.....150 Watts RMS into 4 Ohms
- Total Harmonic Distortion (at 1 Watt into 4 $\Omega$ ).....0.15%
- Total Harmonic Distortion (at 150 Watts into 4 $\Omega$ ).....0.08%
- Frequency Response.....5 Hz to 36 kHz
- Frequency Response (+0 dB, -3 dB).....28 Hz to 36 kHz



# TROUBLESHOOTING

Symptom	Troubleshooting Question	Remedy
No Power	Is the power cord plugged into the wall?	Plug the power cord into the wall.
	Is the power cord plugged into the back of the amplifier?	Plug the power cord into the back of the amplifier.
	Is the power switch on the back of the amplifier switched on?	Switch on the power switch.
	Is the fuse blown?	Replace the fuse with a fuse of the same rating.
No Sound	Is the transducer connected?	Connect the transducer properly.
	Is the input source connected to the amplifier input?	Connect the input source.
	Is the source outputting a signal?	Connect the source to another amplifier to verify the source is working.
	Is the Gain (Volume) Control turned up?	Slowly turn up the Gain (Volume) Control.
	Is the input signal from the source too weak to turn on the amplifier?	Set the Auto/On Switch to "On." If sound is produced, set the switch back to "Auto" and either increase the source volume or set the input switch to "LOW." Depending on the source, it is possible you may have to do both.
	Did the transducer stop working?	Turn the Gain Control down, wait a few minutes, then try again.
Not Enough Sound	Is the Gain (Volume) Control adjusted properly?	Turn up the source volume and the Gain (Volume) Control or set the input switch to "LOW." You may need to do both.
Sound Comes and Goes	Is the input signal from the source too weak to turn on the amplifier?	See remedy for the same troubleshooting question in "No Sound Output" (above).
	Did the transducer stop working?	Turn the Gain Control down, wait a few minutes, then try again.
Output Contains High-frequency Material  <b>NOTE:</b> This assumes you DO NOT want high-frequency material.	Is the amplifier set to Low Pass only?	Set the Low Pass/Bypass Switch to "Low Pass."
	Is the Crossover set correctly? (If using the Low Pass setting)	Turn the Crossover Control counter-clockwise to eliminate high frequency material.
	Is the LFE/SUB signal connected to the amplifier input?	Connect the home theater receiver's LFE/SUB signal to the amplifier's input.
Output Does Not Contain High-frequency Material  <b>NOTE:</b> This assumes you DO want high-frequency material.	Is the amplifier set to Bypass mode?	Set the Low Pass/Bypass Switch to "Bypass."
	Is the Crossover set correctly? (If using the Low Pass setting)	Turn the Crossover Control clockwise to include more high-frequency material.
	Is a full-frequency signal connected to the amplifier input?	Connect the home theater receiver's RF and LF signals to the amplifier's input.

# GLOSSARY OF TERMS

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Term	Definition
2U Rack Space	With U (Unit), being a standard unit of measurement for audio/video racking systems, a 2U rack is a standard rack that occupies 2 units within the rack system. A 2U rack is 3.5 inches (88.9 mm) high.
Audio Input/Output Connectors	Audio connectors on the amplifier that receive or transmit the main signal.
Auto/On Switch	<p>The switch under the Gain Control that allows the user to place the amplifier into either Auto On/Standby mode or On.</p> <p>When the switch is set to "Auto" and no input signal is received by the amplifier, the amplifier will go into Standby mode. Upon sensing an input signal, the amplifier will power on automatically.</p> <p>When the switch is set to "On," the amplifier will remain powered on, regardless of whether an input signal is present or not.</p>
Automatic Balancing System	Included in some Home Theater Surround-Sound Receivers, this feature uses microphones to measure room sound levels in order to properly balance low, mid, and high level sound output from the receiver.
AWG	Abbreviation for American Wire Gauge. Commonly used to designate wire size. The smaller the AWG number, the larger the wire size.
Crossover (X-Over) Control	The control on the face of the TA1501C amplifier that controls the range of low-frequency (bass) sound sent to the output device, i.e. transducer, speaker, etc. This dial is only functional when the Low Pass/Bypass Switch under the control is set to "Low Pass." The range of low-frequency sound that is controlled by this dial is 40 Hz to 400 Hz.
Gain Control	The control on the face of the TA1501C amplifier that controls the degree to which the input signal is amplified. The gain level, combined with the level of the input signal, determines the actual volume output.
High/Low Input Signal Switch	A switch on the TA1501C that allows the user to use 1 V RMS or 316 mV RMS inputs. Examples include a home theater receiver ("High" Level) vs. an MP3 player ("Low" Level).
IEC-601 Connector	An adaptable AC connector that allows users to connect IEC-601 compatible AC cords to the amplifier. This type of connector is especially beneficial for international compatibility.



# GLOSSARY OF TERMS

Term	Definition
LFE/SUB Signal	A low-frequency signal that is often associated with subwoofer (bass) sound.
Loop-through	The ability to connect multiple amplifiers to a single audio source.
Low Pass/Bypass Switch	A switch on the TA1501C that enables and disables the Crossover function of the amplifier.
Multiple Signal Hookup	Using multiple audio input signals, e.g., RF, LF, Center, and LFE/SUB signals, as the source signal for the amplifier. This type of hookup requires a mixer.
Pre-Amp	A low-voltage, internal amplifier within audio receivers that prepares the signal to be sent to a powered amplifier.
Receiver	As used in this manual, a receiver is a general term for the audio source. An example would be a Home Theater Surround Sound Receiver.
RF/LF Signals	Right Front and Left Front signals.
Tactile Sound	A term used to describe the effect of hearing sound by making physical contact with a surface that has been activated with an audio transducer.
Transducer (Audio)	An audio device that reproduces sound by physically activating a resonant surface.
X-Over Control	(see definition under Crossover Control)
Y Adapter	An adapter cable that takes an audio input signal from a single connector and splits the signal so it can be sent to two connectors.

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