

# User Guide



## A+ Amplification System™

**Lifeline**  
Amplification Systems

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### TABLE OF CONTENTS

- 2 Enjoy your A+Amplification System!
- 2 Equipment List, Warranty, Repair Work and Cleaning Information
- 3 Lifeline Transmitter
- 4 Lifeline Receiver
- 5 Lifeline Amplifier
- 6 Setting Up your A+ Amplification System
- 9 Troubleshooting Guide
- 12 For the Teacher: Important things to do and remember.

# Enjoy Your A+ Amplification System

The *A+ Amplification System* is one of the best sound amplification systems available today. No matter the application, the *A+ Amplification System* is a welcome addition to your classroom. At Lifeline, we know your school will see the benefits of this system from the first day you turn it on. Students will hear the clarity and volume of the teacher's voice. Their ability to concentrate will increase. This means on-task behavior will increase as well. And that translates into a better learning environment.

This manual has been designed to provide clear, step-by-step instructions for setting up the system for the first time, as well as for troubleshooting potential problems. Simply follow the directions and use the photographs and diagrams as a guide.

An equipment checklist is provided noting the pieces included in the *A+ Amplification System* and any additional equipment needed for set-up.

Each piece of equipment in the system is detailed in a separate section. This is done to familiarize both the set-up person and the teacher with the components. This manual also provides information to help users understand how the pieces fit together to complete the system.

At the end of the manual, there is a section entitled "Troubleshooting." This section is designed to help solve the most common system problems associated with set-up and usage.

## EQUIPMENT

- 1 Wireless transmitter and receiver
- 1 Lifeline amplifier
- 4 Lifeline speakers with mounting brackets
- 150 feet of speaker cable (provided in bulk for easy cutting to desired lengths)
- 1 three-foot Lifeline patch cable
- 32 heavy-duty mounting snaps (if mounting brackets are not used)
- 1 9-volt Nickel Metal Hydride rechargeable battery
- 1 9-volt battery charger
- 1 neckloop

## OTHER EQUIPMENT NECESSARY TO SET UP THE A+ AMPLIFICATION SYSTEM:

Two separate electrical outlets in each room (for two pieces of equipment)

A pair of wire strippers

## WARRANTY

All items in the *A+ Amplification System* (including parts, labor, accessories, batteries and cables) are under a **full one-year warranty**.

Lifeline Amplification Systems, Inc. will repair and/or replace, at our option, any unit that does not function properly within the warranty time period. Units under warranty needing repair work or replacement should be returned to Lifeline Amplification Systems freight prepaid. All units under warranty will be returned (freight prepaid) to the customer.

Product misuse, neglect or abuse is not covered under warranty terms.

## REPAIR/CLEANING

Most simple repair work can be done by the customer using Lifeline's exclusively designed, field-replaceable parts. Any additional problems can be solved by Lifeline's trained technicians via telephone. Call for more information on the repair of any part or component.

Lifeline Amplification Systems Inc. suggests that the Wireless System be cleaned a minimum of every two years. Please contact us for a price quote and shipping instructions.

If you have questions at any time about your A+ Amplification System, please call us toll-free at:

**1-800-236-4327**

# Transmitter

## 1. CHANNEL NUMBER

The *A+ Amplification System* is available in 25 VHF frequencies. The transmitter and receiver have enough frequencies to be used in every room in the building. (Call Lifeline for more information on frequency duplication and channel usage.)

## 2. ON/OFF AND STANDBY SWITCH

The switch on the teacher transmitter has three positions: “on,” “off” and “stand by.”

When “on,” the teacher’s voice is amplified and broadcasted throughout the room to the entire class. An initial “pop” sound may be heard when turned to the “on” position.

The teacher uses the standby mode when he or she wishes to speak to a single student or small group privately. As a general rule, use the standby switch when the system will be used within a 15 minute time period. If not in use for more than 15 minutes, the transmitter should be turned off to conserve battery life.

## 3. POWER INDICATOR LIGHT

The light on top of the transmitter will shine red when the transmitter is in the stand by mode. It will shine green to indicate that the system is on. If the light is not lit, then either the power is not on or the battery is low.

## 4. BELT CLIP

This handy clip can be used to fasten the transmitter to a belt, waistband or pocket.

## 5. BATTERY COMPARTMENT

The A+Amplification System transmitter uses one 9-volt Nickel Metal Hydride rechargeable battery. **DO NOT USE ANY OTHER RECHARGEABLE**



Transmitter

9-VOLT BATTERY in the *A+ Amplification System* transmitter, or it will not perform properly. Average battery life is **four to six hours**.

## 6. CHARGING JACK

This charging jack is used to charge the battery without having to take the battery out of the transmitter. A charging cable has been provided with your *A+ Amplification System*.

# Receiver

## 6. POWER SOURCE PLUG IN

The receiver uses a 12-volt DC power supply adapter, provided with the A+Amplification System. This must be plugged into a wall receptacle and into the receiver before use. A power indicator light on the receiver will be lit when plugged in.

## 7. OUTPUT JACK

Lifeline provides a cable to connect the wireless receiver to the Lifeline amplifier. Use the 3' cable provided to connect the two pieces.

## 8. ANTENNA

The antenna will receive the signals being sent from the Lifeline transmitter. The antenna does not need to be extended unless there are problems with reception.

## 9. VOLUME CONTROL

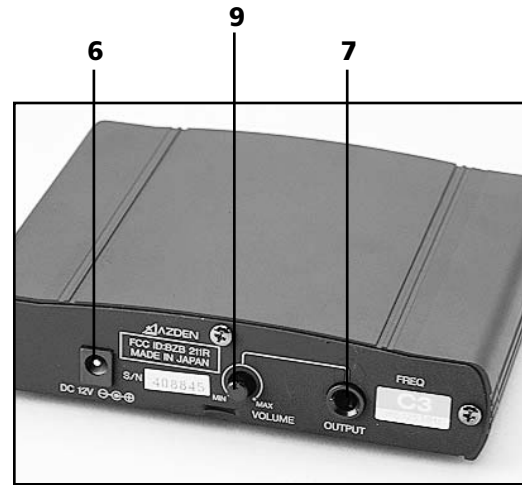
This switch, on the front of the receiver, controls the volume of the teacher's voice through the receiver. See the "Setting Up Your System" section at the back of this manual for more information on volume settings.

## 10. POWER INDICATOR LIGHT

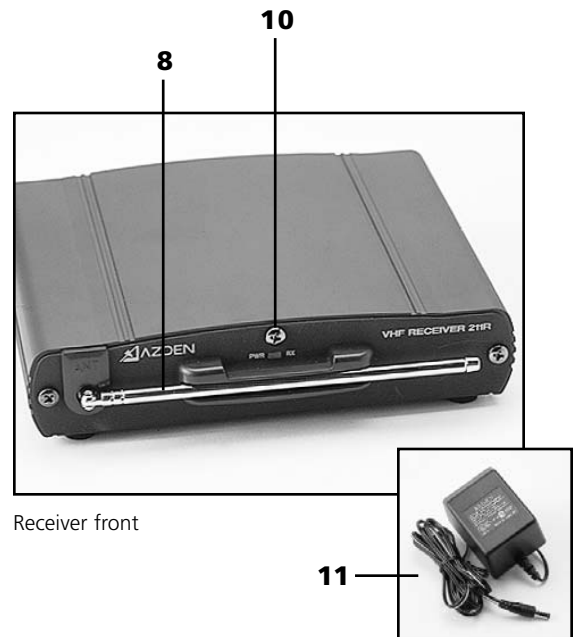
This light will be red when the receiver's 12-volt power supply is plugged in to an electrical outlet. After the transmitter is turned on, this receiver light will turn green.

## 11. 12-VOLT POWER SUPPLY

This power supply (provided) is plugged into the back of the receiver and into a electrical outlet.



Receiver back



Receiver front

# Amplifier

Front view



## FRONT VIEW

### 1. ON/OFF POWER INDICATOR

The red Lifeline amplifier power light will be on when the power switch is in the “on” position.

### 2. MIC IN, CHANNEL 1

This accepts the black, three-foot Lifeline cable (included) from a source such as a wireless receiver.

### 3. VOLUME FOR MIC IN, CHANNEL 1

This controls the volume for everything plugged into Mic In, Channel 1.

### 4. MIC IN, CHANNEL 2

This accepts the black, three-foot Lifeline cable (included) from a source such as a wireless receiver.

### 5. VOLUME FOR MIC 2

This controls the volume for everything plugged into Mic In, Channel 2.

**IMPORTANT: This is also the volume control for the phono/auxiliary input, located on the back of the amplifier. The phono/auxiliary input will not work if the Mic In, Channel 2 input jack has a unit plugged into it.**

### 6. TONE

This control changes the tone of all pieces that may be plugged into the amplifier.

Adjust the tone control knob to make the teacher’s amplified speech sound natural. The low numbered settings add more bass (low frequencies). The higher numbered settings add more treble (higher frequencies) to the amplified signal, i.e. speech, music, etc.

## REAR VIEW

### 7. PHONO/AUXILIARY INPUT

Standard RCA stereo patch cables connect a turntable, CD player, tape deck, TV monitor, etc., to the phono/auxiliary input.

When a turntable is in use, the switch must be set in the “Phono” position. For all other devices plugged into the phono/auxiliary input (CD players, TVs, tape decks, etc.), the switch must be set in the “Auxiliary” position. **NOTE:** The phono/auxiliary inputs will not function if Mic In, Channel 2 already has something plugged into it.

The volume control for items plugged into the phono/auxiliary input is the Mic In, Channel 2 volume control.

### 8. SPEAKER TERMINALS

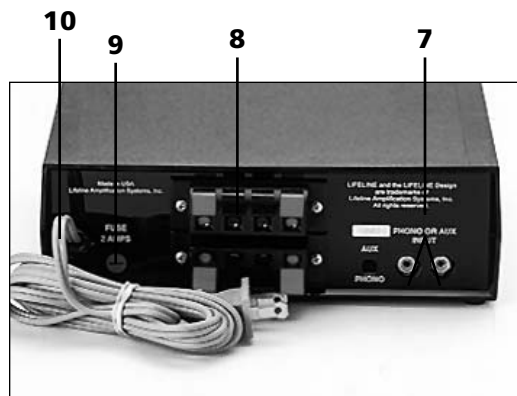
These ports are used to insert the speaker cables into the amplifier.

### 9. FUSE

The fuse is located within the cap of the fuse holder. If the fuse should fail, **IT MUST BE REPLACED WITH A FUSE OF THE SAME TYPE AND VALUE IN ORDER TO AVOID DAMAGE TO THE EQUIPMENT AND TO PREVENT VOIDING THE WARRANTY.** If the amplifier repeatedly blows fuses, contact your Lifeline distributor.

### 10. AC POWER CORD

The power cord must be connected to a 120-volt standard electrical outlet.



Rear view

# Setting Up Your System

1. Take an inventory of all the pieces supplied for the *A+ Amplification System*. This should include:

- 1 Lifeline amplifier
- 1 wireless transmitter and receiver
- 4 Lifeline speakers with mounting brackets
- 150 feet of speaker cable (provided in bulk for easy cutting to desired lengths)
- 1 Three-foot Lifeline patch cable
- 32 Heavy-duty mounting snaps (if mounting brackets are not used)
- 1 9-volt Nickel Metal Hydride rechargeable battery
- 1 9-volt battery charger
- 1 neckloop for the wireless microphone



2. Look carefully at the room where the system will be installed. Where will large group discussion take place? Because the *A+ Amplification System* is intended to amplify the teacher's voice for large group discussion, the speakers should be positioned for maximum benefit to students in that large group discussion area. Speakers should be placed at students' ear levels. For best results, divide the large group discussion area into four equal parts. Each of the four speakers should be placed in the room in order to serve 1/4th of that large group discussion area.

3. Place all four speakers in their optimal locations. Do not permanently attach them at this time.

4. The amplifier and receiver must be placed in a convenient location for daily use. Both the amplifier and receiver will need to be plugged into electricity.

5. Plug the amplifier and the wireless receiver's 12-volt power supply into outlets next to each other. The opposite end of the 12-volt power supply (the end not plugged into the outlet) must be plugged into the receiver. The receiver can sit on top or next to the amplifier.

6. The black three-foot Lifeline patch cable can now be used to connect the amplifier and the receiver. Plug the patch cable into the **Mic In, Channel 1 input on the amplifier**, and into the **Output jack on the back of the receiver**.

7. It's easy for you to connect the speakers to the Lifeline Amplifier. We offer two simple methods that can be used. The daisy-chaining method and the independent method. Both are diagrammed on page 7. Look at the wiring diagrams for both methods and determine which is best for your classroom. After the four speakers and the amplifier have been placed in convenient locations, the speaker cable can be strung and the speakers connected to the amplifier. **Read the Daisy Chaining and Independent Connecting directions and diagrams on the next page before cutting or stripping any wire.**

8. Take the 150' of supplied speaker cable and start with one speaker at a time. Run the cable from the amplifier to Speaker 1, carefully placing the cord where it can be concealed (along walls, under chalkboards or furniture, etc.). Allow one extra foot of cable (beyond original measurements) for the speaker. The excess can always be cut away later.

9. Using a pair of wire strippers, begin stripping about two inches (2") of the ends of the cut cables. The wires themselves look the same when the plastic coating is stripped away. For purposes of connecting, the wires will be differentiated by their plastic coatings. One wire is coated with plain coating, and the other wire has a blue stripe running through the coating.

10. After all ends have been stripped, connect the speakers to the amplifier, using either the **Daisy Chaining Method** or the **Independent Connecting Method**:

6

If you have questions at any time about your A+ Amplification System, please call us toll-free at:  
**1-800-236-4327**

# Setting Up Your System (CONT.)

## OPTION 1 DAISY-CHAINING

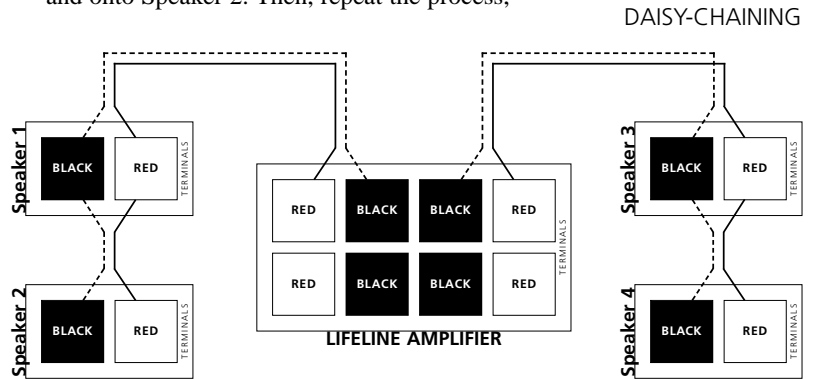
Take the stripped end of the speaker cable nearest the amplifier, and pull the wires apart about two inches. Place the **blue striped wire** into the back of the amplifier in the **black, spring-loaded terminal**. Push down firmly on the bottom half of this terminal to make an opening for the wire to enter. Place the **plain wire** into the **red, spring-loaded terminal** next to it, on the top row of terminals. **Both wires for Speaker 1 must be on the top row of the amplifier.**

Next, follow the cable from the amplifier (now wired in) to Speaker 1. Repeat the splitting process by pulling the wires apart two inches. Take the end of the speaker cable for Speaker 2 and split it. Twist the wires together (**blue stripes with blue stripes** and **plains with plains**). Place the twisted blue striped wires into the back of Speaker 1 in the black, spring-loaded speaker port. Place the plain wires into the back of Speaker 1 in the red, spring-loaded speaker port.

Repeat the splitting and twisting process,

*making sure the plain or striped pairs are always twisted together the same way and are plugged into the same (top) ports consistently.*

Connect or chain the amplifier to Speaker 1 and onto Speaker 2. Then, repeat the process,



starting at the amplifier, chaining Speaker 3 to Speaker 4. **With Option 1**, all plain and striped pairs must be inserted into the **top row** of spring-loaded ports on the **amplifier**.

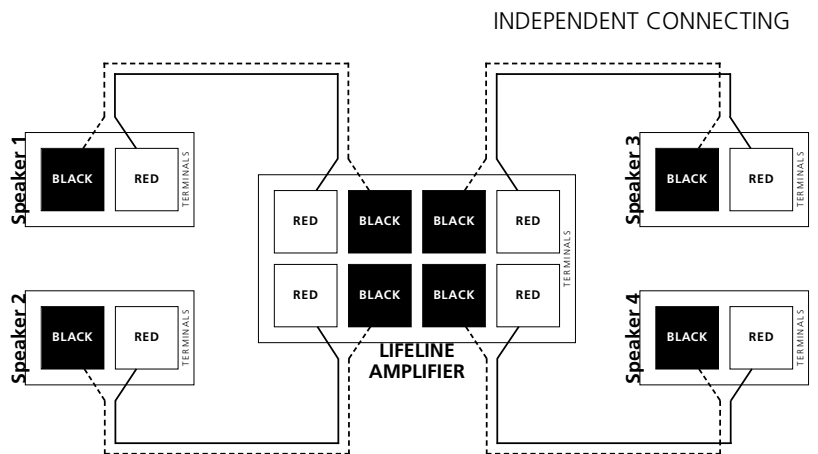
## OPTION 2 INDEPENDENT CONNECTING

Independently connecting the speakers to the black and red terminals on the back of the Lifeline Amplifier is a simple task as described above for the daisy-chaining method. Take the stripped end of the speaker cable nearest the amplifier, and pull the wires apart about two inches. Place the **blue striped wire** into the back of the amplifier in the **black, spring-loaded terminal**. Place the **plain wire** into the **red, spring-loaded terminal** next to it, on the top row of terminals.

Next, follow the cable for Speaker 1 from the amplifier (now wired in) to the speaker itself. Repeat the splitting process by pulling the wires apart two inches. Place the blue striped wire into the back of the speaker in the black, spring-loaded terminal. Place the plain wire into the red, spring-loaded terminal next to it.

Repeat this stripping process, inserting the cable for Speaker 2 into the amplifier and then to Speaker 2. Complete Speaker 3 and finally Speaker 4. Each speaker will be independently

connected to the amplifier. *Make sure that the wires are always inserted consistently into each of the black and red ports. If the blue striped wire from the speaker is placed into the black*



*terminal in the amplifier, the blue striped wires must be connected to the black terminals on the speakers.*

# Setting Up Your System (CONT.)

**11.** Install a new or freshly charged 9-volt Nickel Metal Hydride rechargeable battery into the transmitter. Be sure the + and - signs on the battery match those in the battery compartment. When you receive a new system, the battery is not fully charged. **Use only the rechargeable battery supplied by Lifeline.**



Neckloop

**12.** Place the transmitter in a jacket pocket or clip onto a belt or waistband. Using the mic clip, attach the microphone to the user's clothing. Or, the neckloop (provided) may be used by clipping the mic onto the neckloop rather than the clothing. The microphone should be placed **no more than six (6) inches from the chin**, near the Adam's Apple. If using the neckloop, adjust the microphone to the desired location and slide the wooden bead up and under the microphone clip to fasten the microphone in place on the neckloop.

**13. Adjust the controls** to the proper settings:  
 a.) **Receiver:** 3-5 o'clock  
 b.) **Amplifier:** tone 2-5

c.) **Mic In, Channel 1:** 2-5

*Final adjustments should be made with the user's voice, not with the person's voice that is setting up the system.*

**14.** Turn the **amplifier** on. The **red light** should be "on".

**15.** Turn the **transmitter** (in the pocket or clipped to a belt) power switch to "on". An audible "pop" may be heard through the speakers. **This is normal.**

As a rule of thumb, if the teacher is **not** going to use the system for more than **15 minutes**, turn the transmitter **off** to save battery power. If the teacher uses the system **within a 15-minute period**, he/she can turn the power switch to "stand by" when addressing individual students.

**16.** The user can now broadcast. The volume of the user's voice, throughout the room, should be the same as if he/she were speaking **one-on-one to a student from a distance of two feet**. Sit at a student's desk to check and adjust volume from their perspective. **Always set the volume with the user's voice.**

**17.** Once the set-up is complete and settings have been tested, the speakers can be permanently mounted to walls, shelves, tables or other suitable locations using the provided mounting brackets or mounting snaps. (See speaker bracket assembly diagram on page 8.)

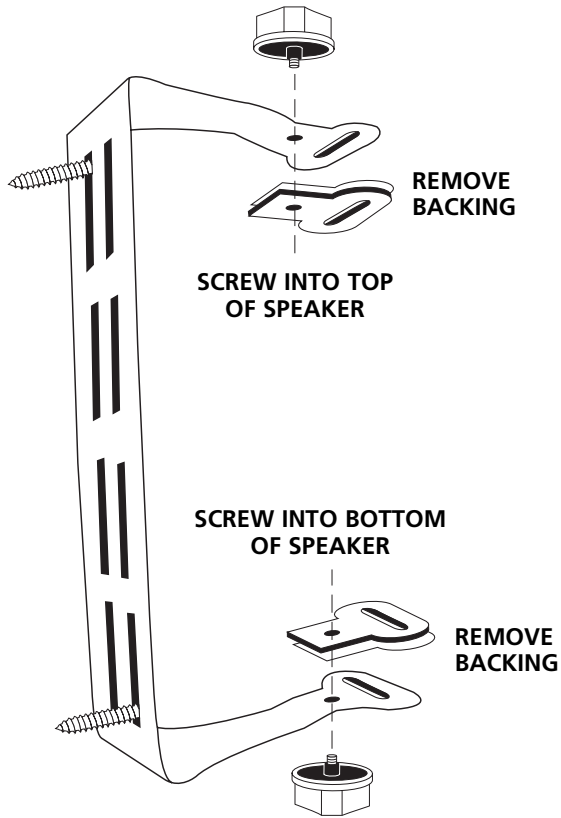
**18.** Once the proper settings of the components have been determined for the room, write them down, both for the teacher and the school audiologist. Check the settings each week to make sure they are still accurate for the needs of teacher and students.

**USE THE TROUBLESHOOTING GUIDE ON THE PAGE 8 FOR MORE TIPS ON SETTING UP EQUIPMENT AND LEVELS.**

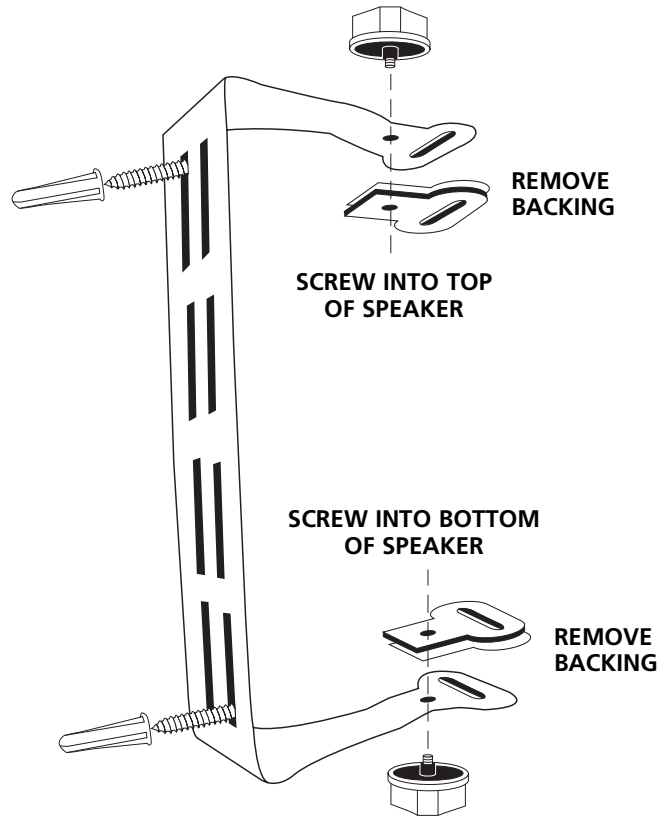
# Setting Up Your System (CONT.)

## BRACKET ASSEMBLY AND MOUNTING

Mounting screws and anchors are provided in the system.



**MOUNTING IN WOOD**



**MOUNTING IN CONCRETE  
(WITH CONCRETE ANCHORS)**

# Troubleshooting Guide

## IF YOUR SYSTEM ISN'T WORKING...

Check the <b>transmitter</b> .	Is the power indicator light, on top of the transmitter, green? If there is no green light on top of the transmitter, then the battery must be replaced. If the light is red, turn the transmitter switch from “stand by” to “on”. Average battery life is <b>four to six hours</b> .
Check the <b>power indicator light</b> on the <b>receiver</b> .	The <b>red light</b> indicates the <b>power is on</b> , but that the transmitter is on stand by or not on at all. If the light is green, this means the receiver is receiving a signal from the transmitter.
Check the <b>amplifier</b> .	<b>Is its light on</b> and shining brightly? If not, check to see if the amplifier is plugged into the electrical power supply.
Check the <b>black, three-foot patch cable</b> .	Is it <b>plugged</b> between the amplifier (Mic In—Channel 1) and the receiver? Be sure both ends are plugged in firmly.
Check the <b>settings</b> for each component.	Are settings correct and done according to the teacher’s voice? They should be: a.) <b>Receiver:</b> 3-5 o’clock b.) <b>Amplifier tone:</b> 2-5 c.) <b>Mic In, Channel 1:</b> 2-5
Are the <b>transmitter</b> and the <b>receiver</b> on the <b>same channel</b> ?	Channel numbers are labeled with a sticker on the outside of each transmitter and receiver.

## IF YOUR SYSTEM EXPERIENCES FEEDBACK...

10

Check the <b>tone</b> on the <b>amplifier</b> .	Lower the tone setting.
Check the <b>placement</b> of the <b>speakers</b> .	Speakers should be placed at the <b>ear level of the students</b> .
Check the <b>volume settings</b> .	a.) <b>Receiver:</b> 3-5 o’clock b.) <b>Amplifier tone:</b> 2-5 c.) <b>Mic In, Channel 1:</b> 2-5
Experiment with different settings until the feedback disappears.	

# Troubleshooting Guide (CONT.)

## IF YOUR SYSTEM PICKS UP SOMETHING OTHER THAN THE TEACHER'S VOICE...

Adjust the <b>antenna</b> on the <b>receiver</b> .	Lower the antenna. Most of the time, the antenna does not need to be raised at all.
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## IF YOUR SYSTEM IS FULL OF STATIC WHEN THE TRANSMITTER IS OFF...

See instructions for interference above.
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## IF YOUR SYSTEM IS FULL OF STATIC OR CUTS OUT...

Make sure the battery has been recently charged for at least six hours.	Replace the battery with a new or recharged battery. If this does not solve the problem, contact Lifeline.
Check the microphone cable.	Replace the microphone cable with a new microphone cable.

# For The Teacher

Important things to do and remember.

## STARTING YOUR DAY

1. Unplug the WH-1 charger cable from the transmitter.
2. Place the microphone properly on your body, either by placing the microphone clip on your clothing or by placing the mic clip on the neckloop and sliding the wooden bead to the appropriate location. The microphone should be no more than six (6) inches from your chin.
3. Plug the 12-volt power supply for the receiver into electricity.
4. Turn the amplifier on.
5. Turn the transmitter on.

## COMPLETING YOUR DAY

1. Turn the transmitter "off".
2. Unplug the receiver from the wall outlet/surge protector.
3. Turn the amplifier "off".
4. Plug the WH-1 charging cable into the transmitter.

**AVOID WRAPPING THE MICROPHONE CABLE AROUND THE TRANSMITTER WHEN PUTTING IT AWAY. This could break the microphone wire.**

**AVOID** placing speaker cables behind or next to an aquarium and **AVOID** placing computer monitors next to your receiver, if at all possible. These items can give off electrical interference that will cause a buzzing in your system.

## REMEMBER...

- Your *A+ Amplification System* uses one 9-volt Nickel Metal Hydride rechargeable battery. **AVOID using any other battery type** in your system, or it will not perform properly. Average battery life is **4-6 hours**.
- Batteries can be recharged over a weekend, but don't charge them any longer than two days.
- Your system is designed for use in large group discussion areas. Position speakers accordingly.
- Use your normal speaking voice, and let your system do the rest.
- Once you've determined the proper settings of the components for your room, write them down for your own information, and for the school audiologist. Check your settings each week to make sure they are still accurate for the needs of you and your students.
- If you have any questions about set-up or usage or have problems with your system, call Lifeline **TOLL FREE at 1-800-236-4327**.
- For a complete list of parts and accessories, consult the *A+ Amplification System* brochure.

If you have questions at any time about your A+ Amplification System, please call us toll-free at:  
**1-800-236-4327**

