

# *Descant On-Wall Speaker*

## Owner's Manual

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***Audio Concepts, Inc.***

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Sound that Satisfies...

## **Audio Concepts, Inc.**

### **Our Guarantee and Warranty**

#### **Satisfaction Guaranteed:**

We're sure you're going to love your new Audio Concepts, Inc. (ACI) products! In the unlikely event that you are not satisfied, please contact us within **30 days** of receipt of your ACI products for a hassle-free return.

Simply follow these procedures:

1. **Return Authorization:** Call us at (608) 784-4570 or email [service@audioc.com](mailto:service@audioc.com), within 30 days of receipt of your ACI products for a return authorization number. Clearly mark the return authorization number on the outside of the box. Include a brief note stating your name, address and daytime telephone number, along with a short description why the products are being returned.
2. **Returning:** We request that you return the ACI products to us in their original packaging and include packaging materials, manuals, etc. Ship by the most economical means (preferably UPS) and insure the products for the invoice purchase price. The customer is responsible for return shipping. *Please note: ACI does not accept C.O.D. returns.*
3. **Credit:** Upon receipt and inspection, we will issue a refund for the invoice purchase price and invoiced UPS Ground service only. Please note this return policy is in effect only if the ACI products are in new condition, in their original packaging, without drilled holes, disassembled or any other modifications.

#### **Speaker Manufacture's Warranty:**

ACI's 5 Year Standard Warranty and 1 Year Total Assurance Guarantee

For **5 years** from receipt, Audio Concepts, Inc. will, at its option, repair or replace factory defective components. This warranty excludes products that have been abused, modified, or disassembled in any way. This warranty does not apply to products, which have been damaged in shipping. Audio Concepts, Inc. liability is limited only to the replacement of defective parts. No other liabilities or obligations are expressed or implied.

For the **1<sup>st</sup> year** of ownership, ACI also provides a unique Total Assurance Guarantee, (TAG). TAG from ACI not only covers everything included in our standard 5 year warranty, but we will also pay for shipping to ACI and back to your front door. TAG is limited to shipping destinations in the Continental U.S.

The ACI 5 Year Standard Warranty and 1 Year Total Assurance Guarantee are fully transferable from the original owner to a secondary owner provided that the original owner notifies ACI, by phone call or by filling out the on-line form: [www.audioc.com/order/warranty\\_transfer.htm](http://www.audioc.com/order/warranty_transfer.htm)  
No warranty will be transferred absent this notification.

Simply follow these procedures:

1. **Return Authorization:** Call us at (608) 784-4570 or email [service@audioc.com](mailto:service@audioc.com) for a return authorization number. If the warranty repair is during the first year of ownership, additional instructions will be given to you at that time. Boldly mark the return authorization number on the outside of the box. Include a brief note with your name, address and a daytime telephone number, along with a short description why the products are being returned.
2. **Returning:** Carefully repack defective ACI merchandise in their original packaging. Ship by the most economical means (preferably UPS) and insure the products for their full retail value. The customer is responsible for return shipping (unless the 1st year TAG applies). Please note: ACI can not accept COD or Freight Collect returns.
3. **Replacement:** Audio Concepts, Inc. will inspect and determine the cause of failure and will pay return shipping on the defective goods replaced or repaired.

Please ship any returns to the following address:

**Audio Concepts, Inc., 901 So. 4<sup>th</sup> Street, La Crosse, WI 54601 (608) 784-4570**

## **IMPORTANT NOTICE**

All new speakers require a minimum of 60 hours break-in-time before they sound the way they are supposed to. A speaker's performance improves significantly once broken in. It is critical that you have at least 60 hours on your speakers before you evaluate them. Don't worry if your speakers do not sound perfect the first time you play them. This is normal until they are broken in. If you are having difficulty getting enough hours on your speakers and your 30 day return privilege is getting near, call us. We will work with you. Please give us the courtesy of breaking the speakers in before you determine they don't sound right.

Many of our customers break their speakers in by:

- A) Leaving them on at moderate listening levels when they are not home.
- B) Leaving them on at moderate listening levels while they sleep.
- C) Running pink noise through them.

These methods are not convenient for everyone and we understand this. But please know that you are not giving yourself, your speakers or us a fair chance if you do not break them in before critical evaluation.

**THANK YOU!**

## **The Descant On-Wall Speakers**

Congratulations on your choice of the Descant On-Wall Speakers! These fine speakers will provide you with many years of listening pleasure.

The Descant On-Wall's versatility allows it to be used for numerous applications. Besides being excellent speakers for musical reproduction, the Descant On-Walls are suitable for the highest quality video applications. With their excellent dynamic range and accuracy, they perform well as mains, center or surround speakers in home theaters. Their magnetic shielding allows them to be placed next to a TV screen or computer. Add an amplifier to your computer system and use it as a monitor.

The weather resistant cabinet with U-shaped mounting bracket and waterproof drivers allow the Descant On-Walls to be mounted outdoors. Consider using them by the pool, patio or any other area you use for outdoor entertaining. The Descant On-wall is also suitable for commercial outdoor applications, in theme parks, gardens, etc.

The use of high quality, powered subwoofer(s) such as the Force or Titan is also recommended in your system. (Low quality, powered subwoofers may add some bass *quantity*, but the *quality* will be lacking.)

Whichever way you decide to use the Descant On-Walls, you will enjoy the life like sound reproduction!

Please take the time to read this manual. We've tried to provide you with the information you'll need to gain the most enjoyment from your speakers.

### **Specifications**

**Nominal Impedance:** 8 ohms

**Frequency Response:** 70-20kHz  $\pm$ 3db

**Sensitivity:** 88db 1 watt/1 meter

**Rec. RMS Power:** 20 – 80 watts per channel

**Tweeter:** 3/4" Titanium dome

**Bass-midrange:** 5 1/4" Polymer sealed paper cone

**Magnetic Shielding:** May be placed directly under, over or adjacent to television screens.

**Dimensions:** 10 " tall, 7.25" wide (front), 2.75 " wide (back), 6.5" deep

**Features:** Heavy, black or white ABS construction that can be painted to match any décor.

Indoor/Outdoor use. Weather resistant cabinet & waterproof drivers. Stand alone or wall/ceiling mount (mounting bracket included). Vertical or Horizontal Mounting.

**Grill:** Attractive, sculptured metal mesh.

**Accessories:** Optional Atlantis or Sanus stands for 24" tall vertical placement. ACI Force or Titan subwoofer.

## **Installation**

Carefully remove the two speakers from their shipping carton, and remove the plastic covers. Save the shipping cartons and packing.

Make sure you hook up the speakers in the correct polarity. The red (positive) terminal on your amp should hook up to the red binding posts, and the black terminal should be connected to the black binding posts. Keep this the same for both speakers in a stereo pair. A way to check the correct polarity is to play music with a lot of bass. The correct hookup will yield the greatest amount of bass.

The Descant On-Walls may be used as a monitor speaker, either standing upright or on its side. The fully shielded speaker allows for placement next to your TV or computer monitor. Vertical placement is recommended if you have room for it. Horizontal placement is most useful when placing the speaker under or on top of a TV.

Best sound for main or center channel speakers is usually obtained with the height of the tweeters close to ear level. For best surround channel speakers it is often advantageous to mount the speaker above ear level. A more diffuse sound can be obtained by aiming the surround speakers to bounce their sound off the ceiling or rear wall. Experiment for the desired effect.

The Descant On-Wall comes with a mounting bracket to allow wall or ceiling mounting. The bracket can be rotating to direct the speaker to the correct listening location. You may mount the speaker vertically or horizontally. The Descant On-Walls may also be stand mounted.

## **Speaker Break-in \*\*\*\*Important!!!**

Allow at least 60 to 80 hours of playing time before your new speakers will sound their best. The adhesives and materials used in manufacturing must stretch and flex properly before a speaker will sound its best. After break-in the bass will be tighter and go lower.

*For quicker break-in:*

*-Play the Descant On-Walls at medium-high volume while away from home. Use music with a lot of low bass content. A CD player on repeat works fine.*

## **Other System Considerations**

If the rest of your system does not work properly or is not correctly connected you will not get the best performance from your system. To eliminate problems we recommend the following:

- I. Use the finest associated components you can afford. Turntable, cartridges, pre-amps, amplifiers, (receivers) and cables all have profound impact on the sound of your system. Accurate speakers let more detail through. You will hear more of the beauty in the music, but flaws in your system and/or source material may be more obvious.
- II. Know your source material. People often blame their audio gear for poor recordings. A great number of popular recordings are of inferior sound quality. Unfortunately this applies to records, tapes and CDs. There are more good quality recordings available now than just a few years ago, but poor recordings with rolled off low bass, harsh and constricted mids and highs and little

stereo monitor speakers that are grossly inaccurate. Consider that some producers still mix recordings to sound best on cheap table and car radios! This doesn't mean you can't enjoy these recordings, but you should try a few of the best audiophile recordings just to see how terrific your system can be when fed a good signal.

- III. Work at getting the best placement of your speakers in their environment. It is not unusual to be able to get a 25 to 50 percent improvement in sound by careful placement of speakers and furniture. It may not be practical to go all out, but the more you can "tune" your room, the better your system will sound. Refer to the section on placement and room treatment

### ***System damage and how to avoid it***

Audio Concepts, Inc. speaker systems are designed for the purpose of accurate reproduction of music in the home. We do our best to make our speakers rugged and reliable. The Descant On-wall is an exceptionally reliable speaker designed to handle reasonably high playback levels with ease. However, ANY speaker or system may be damaged under certain conditions. So please read over the following causes of speaker failure:

- Excessive power, particularly at certain frequencies or for prolonged periods of time
- Excessive distortion caused by under-powered amplifiers
- Defective amplification
- Excessive subsonic energy

The Descant On-Walls have been tested at high volume levels with a variety of amplifiers both tube and solid state. With many years of testing, we know it is virtually impossible to damage a component without the system first giving audible warning in the form of distortion. We also know that true factory defects are extremely rare, less than one in 10,000 drivers. Here are some considerations to keep in mind to avoid damaging your drivers:

Even though the Descant On-Walls are rated for high power, it is possible to damage them with a low power amplifier. When an amplifier runs out of power, it "clips". This clipping produces large amounts of distortion that sends excessive energy particularly to the midrange and tweeter. This clipping distortion accounts for more than 75% of all tweeter failures. How do you know if the amplifier is clipping? Volume knob placement does NOT indicate much. Some equalization with excessive bass boost and treble boost can drive the amplifier and then the speaker into distortion at fairly low levels. Some of today's recordings contain extremely powerful low bass. This low bass can easily drive woofers into over-exursion or cause the amplifier to run out of power and clip, causing tweeter or midrange damage.

You can protect your system by following a couple of very simple guidelines:

- A) If it sounds at all distorted, turn it down. Distortion is a warning sign that should not be ignored.
- B) Be careful not to over boost frequencies with tone controls or equalizers. IF you must boost certain frequencies, keep the boost level low and monitor the system carefully.
- C) Beware the party damage epidemic. Speakers are more often damaged during parties. All those bodies soak up sound, requiring more output to sound as loud, bass and treble controls are sometimes cranked up and nobody is listening for distortion.
- D) Watch out for energy put out by the amplifier in the range below 20Hz which is not music. Examples include record warps, DC current and subsonic noise in the recording. These signals can take up a lot of amplifier power which means the amplifier runs out of steam very early. These signals can also overload a speaker even though you can't hear them. If you have ever watched a cone "flap" you know just what we mean.

- E) Keep an eye out for excessive cone movement that is not producing music. Find the source of the problem and eliminate it; play at low levels, or use a subsonic filter (usually in your pre-amp) which will filter out energy below 20Hz.

In over twenty-five years of daily evaluation of all types of speakers on everything from ten to one thousand watts with all kinds of music, we have never damaged a driver without hearing audible distortion. If it sounds bad, turn it down, and you will never damage a speaker.

### **Speaker Placement**

The proper placement of speakers in your room will easily improve the sound. Because everyone's rooms and tastes are different, it is impossible to specify a "correct" placement in this manual. Reading the following information may help you determine the best placement in your room.

It helps to visualize sound waves as behaving very much like water waves. The sound we hear is made up of two types of waves. Direct sound waves come right from the speaker and are not changed in any way. Reflected waves come to us after bouncing (diffracting) off the walls, ceiling, floor, furniture or the speaker enclosure itself. If you want to see how much these reflected waves effect the sound, move your speakers outside and hear the difference.

Sound waves come in different lengths; the lower the note, the longer the wave. Extreme low frequencies such as the lowest organ pedal notes are more than 60 feet long! A problem with bass notes is the phenomenon we call standing waves. In effect the waves more or less "pile up". This creates big peaks and dips in the bass response. If you put a certain frequency through the speakers, you can usually walk around the room and find places where it is very loud, and places where you perceive virtually nothing.

The construction of your listening room also has a major effect on bass reproduction. Sheet rock and a wood frame construction "leak" low bass notes much more than block or concrete construction. In many homes the bass actually sounds more powerful outside the listening room! Rooms with solid construction "hold" the bass in, providing deeper and more powerful bass response in the room.

Just as the room affects the bass response, so it affects the mid-treble sound of the system. In the mid-treble range, the sound waves are shorter and have peaks and dips. Most of the effects (peaks and dips) occur from enclosure edges, furniture, walls, or the floor. The Descant On-Wall exhibits the deepest image when placed away from walls and furniture. The shorter wavelengths of the mids and highs are more easily absorbed than the longer wavelengths of low frequencies. This is why a bare room sounds so harsh compared to a room with a lot of stuffed furniture, carpets, drapes, etc.

An *ideal* setup for sound would be achieved if you could:

- Choose a room with width, height, and length dimensions that are not multiples of each other. (A cube would be the worst!) Good numbers might be something like, height = 8 feet, width = 15 feet, and length = 26 feet.
- Choose a room that has an irregular shape, non-parallel walls cut down on standing waves.
- Place the speakers so that the woofer cones are at irregular distances to the floor, walls and ceiling. This can be difficult. Use a tape to measure the distance from the center of the woofer to the room boundaries. Move the woofers around until you have cut down on the number of related distances. (You don't want distances like 12" and 24", but more like 12" and 22").
- For main stereo speakers use the "rule of thirds" as a good starting point for optimum placement. – Move the fronts of the speakers 1/3 out into the room. –Move each speaker in 1/3 of the width of the room. –Have your listening position 1/3 out from the rear wall.

- Use the distance from the woofer to the boundaries to increase or decrease bass output. Placing the speaker in the corner or close to walls will give more bass output than putting the speaker out into the room. You can use this to get the best balance between bass output and upper range output.
- Use absorbent materials to help smooth upper-range response and improve transient response and clarity. Why? Let's take the sound of a bell for example. First, you will hear the direct sound from the speaker. But some of the sound bounces from wall-to-wall, ceiling-to-floor, off furniture, etc. before it reaches your ears milliseconds later. Because the time difference is short, you don't hear an echo, but the sound of the bell is stretched out from something like a "ding" to a "ddiinnggg."
- Place speakers as far as possible from furniture and other objects that would block the sound.
- Use padded furniture and drapery when possible to cut down on reflections. Furniture has the added bonus of helping to break up standing wave patterns in the bass.
- Use a symmetrical placement of the speakers in the room. Of course the distance between the speakers is also important. In general, the further back your listening position, the farther apart your speakers should be.
- Used as main speakers in most rooms, you will want the Descant On-Walls between six and nine feet apart. Experiment! Too much distance will smear the image and it will seem like there is a hole in the middle. Too small a distance will compress the image. Experiment with facing the speakers straight into the room or toed in *slightly* toward the listener.

Remember, it is what sounds best to *you* that counts. Position the speakers to give you the sound *you* want in your room.

### **Troubleshooting**

Occasionally we get a call from someone who feels there is a problem with his or her ACI speaker. At least a couple of times a year we will get a call or E-Mail that goes something like this: "Speaker not working properly, can't get enough sound even with the volume turned way up." The problem may be different, but with this little information to go on it is almost impossible to trouble shoot the problem "long distance".

**The following checklist may help:**

- 1) Are all system hookups properly connected, no partial shorted wires, or reversed connections, etc?
- 2) Did you try the rest of your system with other speakers to determine if the problem exists with the speakers?
- 3) Please be realistic in your expectations. Our speakers offer excellent value, but we can't beat the laws of physics. For instance, a medium sized speaker such as the Sapphire sounds excellent but will not play as loudly as a very large speaker.

IF for any reason you aren't satisfied with the sound you're getting from your speakers we want to know about it. **Make sure the speakers have had adequate break-in time.** Before you call or write, please try to narrow down the problem and eliminate other factors. We will need to know:

- ◇ The size of your room
- ◇ Where you have the speakers placed
- ◇ What other equipment is in your system
- ◇ Have you tried other speakers (which ones, and did they eliminate the problem)
- ◇ Any other specific symptoms or information you can provide

Our Customers are #1 with us, and we want you to be completely happy with your ACI speakers!

## ***The Company***

Audio Concepts, Inc. (ACI), has been satisfying discerning music lovers since 1977. Our goal has and always will be to provide exceptional product and service to music enthusiasts around the world. Audio Concepts speakers are an expression of dedication to our customers and their desire for accurate musical reproduction. We believe you must audition speakers in your own home and in your own system. Please see the warranty statement for details.

After listening, please fill out and return the warranty registration. This warranty registration is important. It allows us to reach you in the event of future upgrades. The comments you make on the warranty help us to continually improve our products and customer service. Thank You!

Specifications and design are subject to change without notice due to our continuous research and development program.

Handcrafted with pride in the U.S.A.

### ***Audio Concepts, Inc.***

901 South 4<sup>th</sup> Street La Crosse, WI 54601

Phone: (608) 784-4570 Fax: (608) 784-6367

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## Warranty Registration, Please Return

**ACI div. Audio Concepts, Inc.**

901 S. 4th Street, La Crosse, WI 54601

[service@audioc.com](mailto:service@audioc.com) (608) 784-4570

Congratulations on becoming an ACI speaker owner. Completing this registration enables us to contact you regarding future upgrades. Your information helps us provide the best possible products and service. If you need additional room, please continue on the back. You may also register your product electronically at our web site.

<http://www.audioc.com>

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Main reasons you purchased from ACI: \_\_\_\_\_

Where did you first hear about ACI: \_\_\_\_\_

System(s) purchased: \_\_\_\_\_

Date received: \_\_\_\_\_ Invoice Number: \_\_\_\_\_

Condition received in: \_\_\_\_\_

Comments or suggestions regarding our staff or service: \_\_\_\_\_

Other audio equipment used: \_\_\_\_\_

Do you have a home-theater system? \_\_\_\_\_

Do you plan to purchase other speakers within the next two years? \_\_\_\_\_ If so, what types of speakers are you interested in purchasing, (Tower speakers, satellite speakers, subwoofers, wall speakers, outdoor speakers, home-theater speakers, etc.)

\_\_\_\_\_

*All speakers require at least 60-80 hours of playing time to sound their best. After your speakers have had time to break-in and you've done some serious listening please tell us:*

Features you like most about your ACI speakers: \_\_\_\_\_

\_\_\_\_\_

Areas of performance or appearance you'd like to change: \_\_\_\_\_

\_\_\_\_\_

Other comments or suggestions: \_\_\_\_\_

Will you recommend us to others? \_\_\_\_\_ (Over 1/2 of our customers were recommended to us by testimonials on computer data bases or referrals from someone they know. We put the money we save on advertising into the highest quality products at the lowest possible cost to you.) We would appreciate being able to use your comments in future advertising. Please sign here to allow us that privilege.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

*Thank you for taking the time to complete and return this registration!*