



Your  
Enjoyment  
Guide  
for  
Rocket Series  
Speakers

*Exclusively yours from*

**A123**

# ONIX **ROCKET**

## A Suggestion

Your Rocket Series speakers are carefully hand-packaged utilizing molded foam inserts and soft cloth bags to protect their fine furniture-grade finish. The reusable cloth bags will provide continued protection from ultraviolet light and dust when your system is not in use.

We also recommend you save the foam inserts and shipping cartons to protect your speakers if need to move or ship them to a new location.

Thank you. And congratulations!

Our thanks for buying Rocket Series speakers from AV123.com. We sincerely appreciate your confidence in us and our products.

Although we know these speakers represent extraordinary value, we also know that the real test is how you feel about your speakers several months from now. That's why AV123.com will continue to work hard to earn your respect with technical advice and customer service that is second to none in our industry.

You can visit the AV123 website ([www.av123.com](http://www.av123.com)) at any time for up-to-date product information and answers to FAQs (frequently asked questions).

But if you need that personal touch, please don't hesitate to call us toll-free at (877) 543-7500, extension 305. You'll find our Technical Services Department eager to help.

We ask you to read this Owner's Manual first. It contains many tips on getting your new speakers set up, connected, and sounding as good as they should. We hope you find it clear, concise, and helpful.

Again, thank you.

# **AV123**

# Your Enjoyment Guide for Rocket Series Speakers

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Out Of The Box

Precious cargo desires proper packaging. There is no way for you to fully appreciate the engineering efforts put into each Rocket Series speaker if a similar level of effort is not put into insuring that your speakers arrive 100% factory perfect. The double boxing, molded foam inserts, cloth bags, and white gloves illustrate our level of care. It is recommended that you save these materials for future use. The soft cloth bags can be used to protect the fine finish of your Rockets when they are not in use.

A note of caution while unpacking and using your loudspeakers – protect your tweeters. The high quality tweeters used in Rocket Series loudspeakers dent easily and are not covered by warranty against that kind of damage. Resist the temptation to touch the tweeters and protect them from getting bumped.

Where Should You Put Them?

We realize that the real world (family opinions, room traffic patterns, etc.) will have more impact on where you place your Rocket Series speakers than any academic discussion of a room’s acoustical properties.

That being said, following are some guidelines you might find useful as you scout out possible locations. First is a discussion for mounting options bookshelf and other “non-floorstanding” types. Then you’ll find some information on floorstanding models.

Four Feet and Not a Leg to Stand On

■ For Rocket Series *bookshelf/center channel/surround speakers*:

**1. Shelf mounting:** Logically, this may be your first consideration. That’s fine if the shelf is sturdy enough and deep enough to hold your speakers securely. Remember, a shelf that is up against a wall should be at least 2” deeper than the speaker itself to allow for cable connections. So, if your Rocket Series speaker is 14” deep (as is the RS250), you’ll need a shelf at least 16” deep to hold it safely.

Note that most Rocket Series speakers are bass reflex enclosures with a port on the rear panel. Because the port is very important for proper bass reproduction, please do not block it. In fact, if you’re shelf-mounting your speakers and can leave 6” to 8” of open space behind the rear panel, so much the better. (Note: these instructions are for *open* shelves. Mounting your speakers on “enclosed shelves” as would be found in an entertainment center or built-in cabinets can affect bass response substantially.)

For shelf mounting you can use the rubber feet provided (see Fig. 3), or a moldable, reusable adhesive such as BluTack® or other “earthquake wax.”

If you elect to use the rubber feet, simply peel them from the protective sheet and adhere them close to the corners of the speaker bottom over the metal insert where mounting bolts would otherwise screw in. For speakers without the metal inserts, place a rubber foot about 3/4-inch from each corner.

Be sure the shelf itself is firmly in place and there are no loose items on the shelf to rattle or buzz while the speaker is playing. Again, BluTack or similar is great for securing these things.

**2. Stand mounting:** If you’re placing your Rocket Series *bookshelf* speakers on stands, you have several options:

- a. You can use the rubber feet on a speaker stand (see Fig. 3), but this may be risky if there is a chance the speaker or stand may be bumped and the speaker knocked off.
- b. You can anchor the speakers to the stands with bolts. Rocket Series bookshelf speakers have threaded inserts on the bottom of the enclosure to accept metric M8-1.25 standard mounting bolts.
- c. You can use a material like BluTack to keep your speakers firmly (but not permanently) attached to the stands. If you can’t find BluTack, just ask your neighborhood hardware store for the generic equivalent or some “earthquake wax.”

No matter how you mount your speakers to the stands, make sure you follow the instructions supplied with the stands and try to keep stand-mounted speakers out of the major traffic paths in your room just as you would with floorstanding speakers.

Here’s a quick look-up table so you can see your options all at once:

Type of Speaker	Threaded Inserts *	Spiked Feet	Rubber Feet
Floor Standing	Yes	Yes	Yes
Bookshelf	Yes	No	Yes
Center Channel	No	No	Yes
Surround	No	No	Yes

\*threaded inserts can be used for spiked feet or metric M8-1.25 mounting bolts

**3. Wall mounting:** Although proper wall mounting usually requires more effort than shelf or stand mounting, it is often the most practical since it positions the speaker safely out of room traffic patterns. The RSS-300 Dipole Surround Speaker is equipped with a “keyhole” mounting plate and recessed cable connectors on the rear panel so it can hang flush against a wall, as is recommended for this type of surround speaker. Other speakers require you to purchase mounting brackets.

We like Vogel® BEK-100 ([www.vogelsusa.com](http://www.vogelsusa.com)) and OmniMount® ([www.omnimount.com](http://www.omnimount.com)) mounting brackets, although there are others that will work well. When you shop for brackets you'll find different models which allow you to mount to a wall, ceiling, or cabinet top, allowing for a great deal of flexibility.

A word of caution: Make sure that the brackets you select are strong enough to hold your speakers securely. Pay attention to the bracket manufacturer's recommended weight limit. In fact, we recommend adding a little "fudge factor" for safety's sake. If your speaker weighs 25 pounds, for example, look for a bracket rated for 30 pounds or more.

Follow the bracket manufacturer's instructions carefully as you attach it to the wall. Make sure it is *firmly and securely* mounted. You **MUST** anchor brackets to the wall studs themselves – and not just to the wallboard – to insure safety. Extra effort here is well worth it. An inadvertent fall will damage your speaker as well as anything under it! If you're in doubt about how best to do this, please call a qualified carpenter or contractor to help.

*Note: If you're considering brackets, **we can help!** Just call your AV123.com representative and let him or her know what you need.*

## Standing on Their Own

### ■ For Rocket Series **floor-standing** speakers:

If you've chosen *floor-standing* Rocket Series speakers, we recommend using the spiked feet included with your speakers. (See Figs. 1 & 2)

Simply unpack the spiked feet and screw them into the threaded inserts on the bottom of the speaker enclosure. Do not over-tighten. If your floor is somewhat irregular, the feet can help compensate. After you've screwed all four feet and placed your speaker where you want it, gently rock the speaker back and forth to determine which foot needs to be extended. Unscrew that foot just enough to stop the rocking motion. We have provided machined disks with a relieved center to use on hardwood floors or other substrates where the point of the spike might mar the finish.



*Fig. 1 – If using spike feet, screw them in loosely all the way.*



*Fig. 2 – Use the disks under the spike feet to protect surfaces from getting marred*



*Fig. 3 – The rubber feet can be used instead of the spike feet*

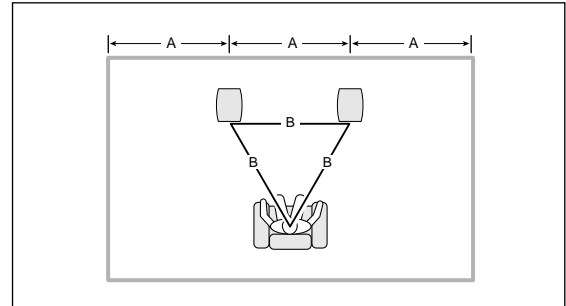
Optionally, you can use the rounded, hemispherically-shaped rubber feet (see Fig. 3) packed with your speakers. These feet are ideal to use instead of the spikes on a hard surface. If you elect to use the rubber feet, simply peel them from the protective sheet and adhere them close to the corners of the speaker bottom over the metal insert where the spikes would otherwise screw in.

**One note of caution:** Kids and pets can be pretty exuberant at times. If you're using floor-standing speakers, make sure they're placed well out of your home's major traffic patterns.

## Placing Your Main Speakers Properly

Try to put the main speakers (Left and Right if you're a two channel devotee, or Left, Center, and Right if you're a home theater enthusiast) along the same wall of your listening/viewing room. If you can place your speakers along the *long wall*, so much the better. Although we've seen successful installations that didn't follow this guideline, they're generally more problematic.

Use the "Rule of Thirds" whenever possible as a starting guide. This suggests that the best placement for your Left speaker is approximately 1/3 of the way along the wall behind your speakers. Similarly, the best place for the Right speaker is usually 2/3 of the way across the same wall.

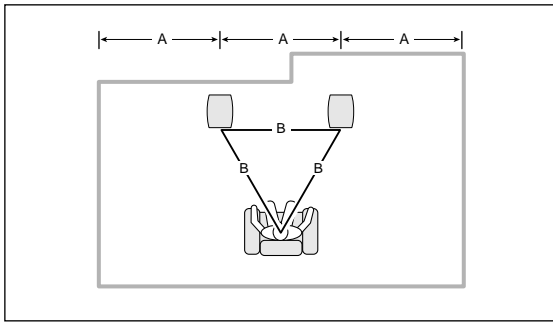


If at all possible, move the speakers out from the back wall. Although all rooms are different, we recommend a minimum wall-to-rear-of-speaker distance of 6 inches. Whatever distance you finally select, use a tape measure to make sure that each speaker is placed at the same distance from the back wall.

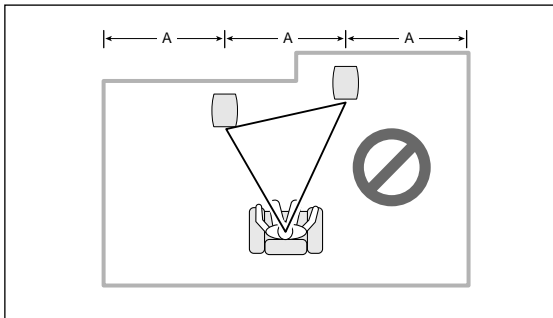
With that same tape measure, make sure the speaker-to-listening/viewing position is the same for each speaker, too.

If there's a conflict here (as would happen with an irregular wall behind the speakers), we suggest that you equalize the distance between front of the speakers and your favorite listening/viewing position. If that places one speaker closer to the wall behind it than the other, don't be too concerned.

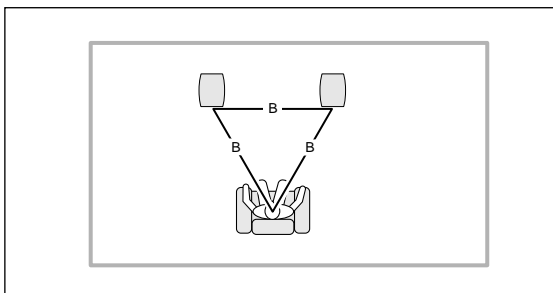
This...



...is generally preferable to this...



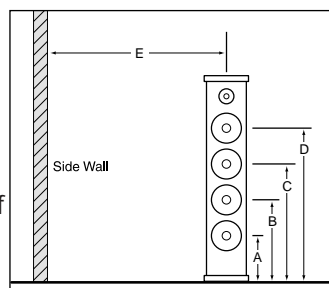
Remember that the "Rule of Thirds" is a basic guideline only. Some acousticians recommend placing the main (Left and Right) speakers so that they form an equilateral triangle with the prime listening/viewing position.



This is as close to ideal. Notice different distances between speakers and left and right sidewalls. It's worth trying for this ideal, but don't get overly concerned if your room doesn't allow this precision.

Side walls have a major impact on the sound you hear. Ideally, you should not place your main speakers close to them. Remember that the "Rule of Thirds" gives you a good starting position, but you should feel free to experiment. Ideally, try **not** to place your main speakers so they're *exactly* the same distance from the closest side walls. A bit of asymmetry here is actually preferable.

If at all possible, place your speakers so that the distance from the closest side wall to the Left speaker's centerline is different than the distance from the floor to the center of any woofer cone. Again, asymmetrical placement is best. The reason is that



Unequal distances are preferable.

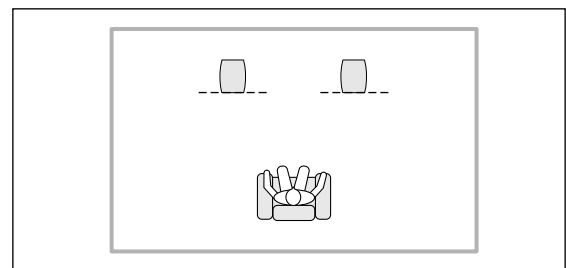
*symmetrical* placement generally results in larger *standing waves* in the room that reinforce certain frequencies and diminish others. This, obviously, is not a good idea.

Follow the same guideline with the Right speaker.

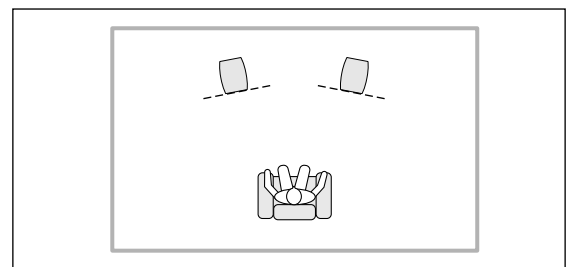
When you take the time to place your speakers properly, you'll realize better "imaging" (the apparent lateral placement of individual instruments or voices), and more depth or "layering". You'll hear those advantages because you'll be avoiding the aural confusion caused by so-called "first reflections" that complicate our perceptions when speakers are too close to a wall's large, flat, reflecting surface.

## Should You Toe-In Your Speakers?

Some people like to "toe-in" their main speakers to get better performance. This simply means aiming both Left and Right speakers so that they point towards the prime listening/viewing position rather than straight ahead.



This is how many people aim their speakers.



"Toe-in" can improve imaging and add a sense of spaciousness to the sound.

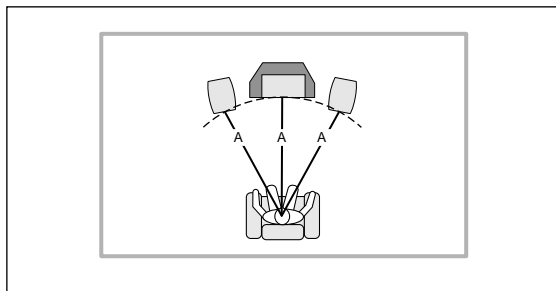
In addition to imaging improvements, toe-in can also change your speaker's tonal balance (or timbre). For that reason, you may want to play with toe-in to get the most out of your speakers, to better match your room's acoustic properties, the sound quality of a center channel speaker, or to simply indulge your own listening preferences. Enjoy experimenting!

## Placing A Center Channel Speaker

Planning a home theater system? Then place your center channel speaker between your Left and Right speakers as close to your TV screen as possible. Try to keep the tweeters of all three speakers (Left, Center, and Right) as close to the same height from the floor as possible. If the tweeters are at – or very close to – on-axis with

your ear level when you're seated, you're doing very well indeed! (This may pose a challenge if you're placing a single Center Channel speaker either above or below the screen. Try aiming the Center Channel slightly down or up to compensate.)

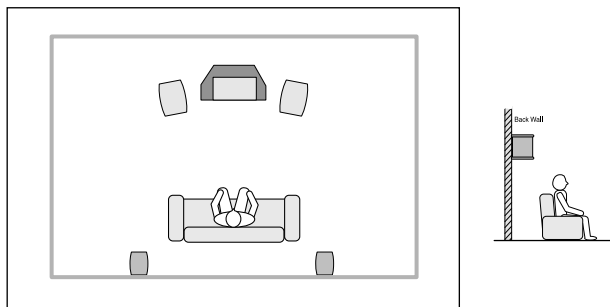
It's a good idea to place the Center Channel speaker at exactly the same distance from your listening/viewing position as the main Left and Right speakers. That will make sure the sound from all three front speakers arrives at your ears at the same time. This will help to create the most convincing image. (Yes, some surround receivers and processors have circuitry that can compensate electronically for different distances but we feel it's better to do things acoustically rather than electronically if possible.)



## Placing Surround Speakers

**Surround speaker** placement is a bit more challenging. First, decide on using either *directional* (monopole, such as RS150 or RS250 Bookshelf speakers) or *dipolar* speakers (such as the RSS300 Adaptive Dipole), that create a much more spacious but less specific image.

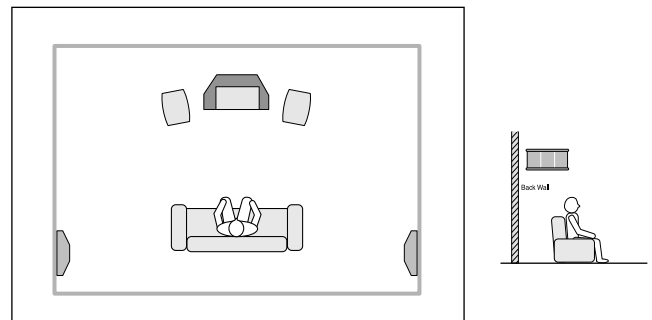
If you're using **directional speakers** (a pair of Rocket Series bookshelf models, for example), we think you might be happier if you place them on the back wall of your listening/viewing room. For surround applications, we suggest placing these speakers closer to the side walls than the "Rule of Thirds" might otherwise indicate. Regardless of exactly where on the back wall you put them, make sure they are placed above ear level.



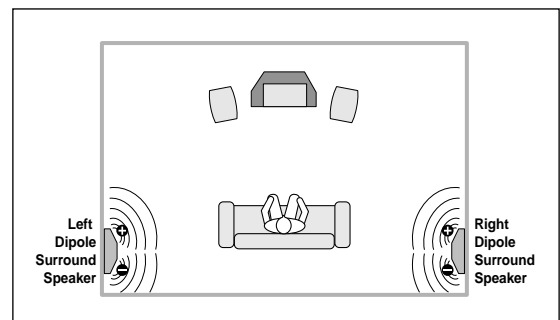
## A Recommendation

Although the advice in this section will certainly help you enjoy the best possible sound from your Rocket Series speakers, you might want an even fuller exploration of how rooms and speakers interact. If you do, we suggest beginning with F. Alton Everest's *The Master Handbook of Acoustics* (McGraw-Hill). Currently in its fourth edition, this is THE source for anyone who wants to understand more about this fascinating topic.

If you opt for **dipoles** (as many movie aficionados do), place them on the side-walls slightly behind of your listening/viewing position so that they radiate sound towards the front and rear of the room but not directly at you. Make sure they're 24"–36" above ear level.



Note that almost all dipole speakers intended for surround use are sold in mirror imaged pairs. In other words, there is a left surround dipole and a right surround dipole and they should be so marked. Make sure you observe these markings as you mount the speakers. Take a look at the back panel of your RSS300. the EVEN serial numbered speaker goes on the LEFT wall, and the ODD serial numbered speaker goes on the RIGHT wall



Place dipole surround speakers properly ("left" speaker on left side and "right" speaker on right side) for proper phasing and better imaging.

In all cases, try not to place furniture between your speakers and your listening/viewing position. You have every right to expect a high level of sound quality from your Rocket Series speakers. Make sure you can see them when you're ready to enjoy some music or a movie!



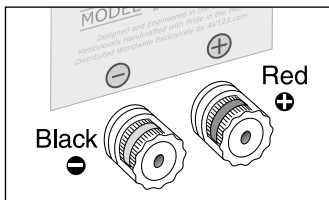
## Connecting Your Speakers

Now that you've got your speaker placed properly, it's time to connect them.

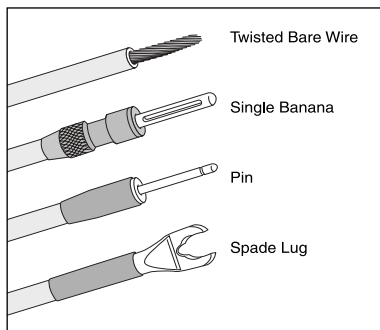
*Before you begin connecting your speakers, turn your system components OFF. That way, you won't run any chance of "shorting" your amplifier and possibly damaging it as you're hooking up your speakers.*

*And remember to turn your system back on when you're done! No, we're not being funny here. You'd be amazed how many people forget that little step.*

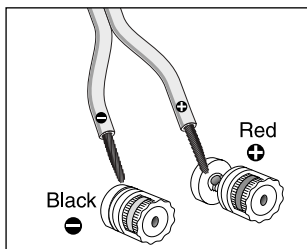
All Rocket Series speakers feature a pair of heavy-duty gold-plated binding posts for connecting the speaker cable from your amplifier, each composed of a red binding post (positive or "+") and a black binding post (negative or "-").



Each terminal is a heavy duty "four way" binding post that will accept bare wire, or wire terminated with pins, spade lugs, or single banana plugs. (The binding posts do not accept "dual bananas," a concession to the safety standards in force for our European customers.)



If you choose bare wire, pins, or spade lugs, simply unscrew the terminal's end cap (the piece with the red or white stripe on it) to expose the hole in the center of the shaft.



If you're using **bare wire** connections, make sure you've properly prepared the wire first. Expose about 3/8" of each conductor by stripping the insulation with a wire stripper or sharp knife. (BE CAREFUL, please!) Make sure

you twist all the individual strands of each conductor together before you insert the end into the hole in the shaft. Then tighten the end cap down over the wire so that there's a firm connection.

### Don't Over-Tighten!

Be careful when tightening the connector's end caps. Although logic may seem to indicate that compressing the wire as much as possible will result in better signal transfer from amplifier to speaker, it doesn't.

A firm mechanical connection is obviously better than a loose one. But don't go overboard. If a gentle tug on the speaker wire causes a bit of slippage, you probably need to tighten things up just a bit. But don't think you need a connection tight enough to let you swing the speaker by the wires!

In fact, you can strip some connectors by over-tightening them. We've designed Rocket Series connectors to minimize this concern but we still caution against over-tightening.

For **pin** and **spade lug** connections, follow the same general guidelines.

If you're attaching pins or spade lugs to your speaker cables, read the instructions supplied with the termination you've chosen. Make sure that you don't leave any loose strands of wire exposed as you're attaching the pins or lugs. If you're using pre-terminated wires, the manufacturer has already taken care of this potential problem for you.

*With a **pin** termination, unscrew the end piece, insert the pin through the shaft hole, and tighten carefully.*

*If you're using **large spade lugs**, unscrew the cap and place the lug so that it straddles the entire shaft.*

*If you're using a **smaller lug**, you'll probably have to insert one leg through the shaft hole.*

*In either case, tighten carefully and you're done.*

With **banana** connectors, you don't have to unscrew the connector's end cap. Simply insert the banana plug into the hole on the end cap's rear surface.





## A Question of Polarity

If you're like most of us, you'll simply run speaker wire from the appropriate output of your amplifier to the connectors on each speaker. However, you need to observe the proper *polarity* as you connect your components.

This simply means that you should connect the positive terminal on your receiver or amplifier (may be marked "+" or be colored red) to the positive terminal (red) on your Rocket Series speaker. Then connect the negative terminal on the amplifier ("—" or black) to your speaker's negative (black) terminal. *Don't worry about damaging anything if you inadvertently make a mistake here. Sound quality will suffer but you won't ruin anything.* (We'll explain this further in the section **Get In Phase!** below.)

If you're still concerned about the procedure, here are step-by-step instructions for connecting the Left front output from your receiver or amplifier to the Left front speaker.

1. Locate the Left front speaker output on the receiver or amplifier. Note that there are two connectors – one marked "+" (the positive terminal – usually red in color) and one marked "—" (the negative terminal – usually black).
2. Look at your speaker wire. You'll see that it has two different conductors. If the insulation is clear, the conductors themselves may be of different colors – silver and copper are the most common. If you can't see the conductors themselves, look closely at the insulation. You'll notice that the insulation over one conductor is different than that over the other conductor – one will have slight molded ridges in it, the other will be smooth, for example. Choose one of the conductors to carry the "+" signal. It really makes no difference which one you pick. **Just be consistent!!!** Note: Some specialized speaker cables are already marked to

### Some Advice On Speaker Wire

Your Onix Rocket Series speakers are already wired internally with high quality Onix cable. That's one of the reason they sound as good as they do. Why not extend that performance advantage even further by using Onix speaker cable between your amplifier and your new speakers?

You'll find several types of Onix speaker cable on the AV123.com web site. We'll be glad to advise you on the best match for your system. And, as a new Onix Rocket Series speaker owner, you're entitled to courtesy pricing on your cable choice. Just call us.

If you're satisfied with regular "zip cord" (the typical lamp wire you'll find in hardware stores), please use 16 gauge wire if your amplifier-to-speaker runs are under 50 feet. For longer runs, we strongly suggest 14 gauge.

avoid confusion but if you're using common "zip cord" (lamp wire), we suggest that you designate the copper colored conductor or the one with the molded insulation over it as "+". As we've already said, consistency is far more important than which conductor you choose.

3. Connect the "+" conductor to the "+" terminal on the amplifier.
4. Connect the "—" conductor to the "—" terminal on the amplifier
5. At the speaker end of the same wire, connect the "+" conductor to the "+" terminal on the speaker
6. Similarly, connect the "—" conductor to the "—" speaker terminal.

Then follow steps 1 through 6 for all other amplifier-speaker connections in your system.

## Get In Phase!

Why are we placing as much emphasis on consistency here? That's simple. We want you to get all the performance you pay for. When your amplifier-to-speaker connections are consistent, when "+" is always connected to "+" and "—" is always connected to "—," your speakers are said to be connected "in phase." That means the drivers (the active elements that produce sound) in each speaker will push out when they get a common positive signal from an amplifier and will pull in when they get a negative signal. When all the speakers in your system are "in phase," all the cones work together to give you the sound the original artists and engineers intended you to hear.

When speakers are connected "out of phase," the drivers fight each other – some move out while others move in. The result? You'll get less bass and blurred imaging. That's a pretty heavy price to pay for not taking just a few extra seconds to make sure your connections are correct.

### Some Miscellaneous Comments

#### Grilles On or Grilles Off?

The grille assemblies for all Rocket speakers have been custom-designed to have negligible effect on performance while affording some protection from inadvertent indiscretions of wayward children, adults with an uncontrollable urge to poke at your drivers, curious pets and some low-level environmental hazards (such as dust). While Rockets sound good and look good with the grilles on, you may prefer listening to and looking at your speakers with the grilles removed. Go right ahead. There is certainly no performance penalty in doing so.

## Break-In

Many audiophiles believe a component's sound quality improves with use. With speakers in particular, this belief has basis in fact.

With Rocket Series speakers, you'll notice an improvement in timbre, responsiveness, and sheer musicality during the first few weeks you use them. That's because, like all electro-mechanical devices, the drivers, especially the suspension elements that keep everything properly centered as they move in and out to produce sound, "settle in" with use.

How long should you wait until your Rocket Series speakers are ready to sing? That depends on the kind of music or movie soundtracks you play and the volume you feel comfortable with. If you regularly listen to AM radio at low volume, give your products about 100 hours to get comfortable. If, on the other hand, you favor orchestral music at levels you'd experience at Carnegie Hall, you won't need that kind of patience.

## Proper Care and Feeding

Your Rocket Series speakers don't need much maintenance. Dust them occasionally. If you wish, use furniture polish or wax on the gloss black every six months or so. The durable matte finish on the wood veneer requires only some dusting or it can be wiped off with a water-damp, soft cloth. Please do not try to push in the drivers with an aggressive finger! In fact, the tweeters are somewhat fragile so they should not be touched, and hand-forcing the driver cones and diaphragm will create mechanical damage.

Above all, listen and enjoy! That's what your Rocket Series speakers were designed for. And why AV123.com takes such pride in bringing them to you!

## Stay in Touch

Remember that personalized tech support is only a phone call away. Call USA toll-free (877) 543-7500, or worldwide (303) 543-7500. Whether you need our help, or you have some suggestions to make Rockets even better, or you simply want to let us know how much you are enjoying your new speakers, we encourage you to get in touch with us. We like hearing from our customers.

For the latest information on the entire Rocket line or to register your new speakers, go online at [www.av123.com](http://www.av123.com).

## AV123 Warranty Policy & Registration

All products sold through AV123 carry a limited manufacturer's parts and labor warranty. All Rocket Series loudspeakers are guaranteed to be free from manufacturer's defects for a period of one year from the date of purchase.

### ***Get an extra two years of warranty coverage free!***

When you go online and register your product, we will extend the warranty by an additional two years...that's three years total. This extended warranty is free simply for registering within 60 days of your purchase. We urge you to take advantage of this offer.

Warranties apply to the original owner only and are non-transferable. AV123.com will exchange all defective merchandise, including shipping charges to the original shipment destination, at no charge for up to 60 days after the date of purchase. After 60 days the product must be returned to AV123.com for repair only and return shipping costs are the responsibility of the customer. All questions should be directed to customer service.

Special Offer on Onix High Quality Speaker Wire and Cables  
***20% Off for the next 60 Days***

As we mentioned earlier, your Onix Rocket Series speakers are already wired internally with high quality Onix cable. You can maximize that performance advantage by using Onix speaker cable between your amplifier and your new speakers. Get in touch with AV123.com tech support and we'll be glad to advise you on the best match for your system.

As a new Onix Rocket Series speaker owner, for the next 60 days you are entitled to 20% OFF any Onix cable products you'd like to purchase. This includes not only speaker wire, but a full spectrum of excellent audio and video interconnects.

Enjoy!





*Onix Rocket Series Speakers are available  
Internet-direct and exclusively from*

**AV123**

WEB [www.AV123.com](http://www.AV123.com) • TOLL-FREE (877) 543-7500 • TEL (303) 543-7500