ONIX ROCKET

Your Rocket Tyke Home Theater Enjoyment Guide

Yours exclusively through

AV123

2150 W. 6th Ave. • Suite L • Broomfield, CO 80020 • Toll Free 1-877-543-7500 • e-mail: info@av123.com

A Suggestion

Your Rocket Tyke home theater system is carefully hand-packaged utilizing molded foam inserts to protect its brushed aluminum finish. When removing your speakers take care not to exert pressure on the front grilles or sub-woofer driver.

We strongly recommend that you save the foam inserts and shipping cartons to protect your speakers, should ever need to move or ship them to a new location.

Thank you. And Congratulations!

Our thanks for buying Rocket Series speakers from AV123. 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 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) at any time for up-to-date product information and answers to FAQ's, as well as seeking advice from the AV123 community at our new online forum (www.forum.av123.com).

Should you require that personal touch, please don't hesitate to contact our support department, toll-free, at (877) 543-7500 option 2. You'll find our knowledgeable Technical Services Department eager and willing to help.

We ask you read this owner's manual first. It contains many tips on getting your new loudspeaker system set up, connected, configured, and performing its absolute best in your unique environment. We hope you find it clear, concise, and useful.

Again, thank you for your support.

AV123

Your Rocket Tyke Home Theater Enjoyment Guide

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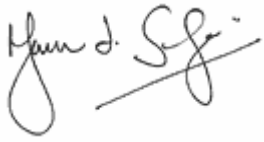
AV123

Introduction to AV123 and your new Rocket Tyke Home Theater System

At AV123, our absolute highest priority begins and ends with you, the customer. You can rest assured that if you're not 100% satisfied with your purchase within 30 days from your original receipt date, you may return your product(s) for a prompt refund in full (excluding shipping charges) with no explanation necessary. Coupled with the expert advice on our website and through our trained advisors, there is simply not a safer way or place to buy today. At AV123, misleading and high-pressure sales tactics have no place. Not only do we give you the tools and the resources to fully evaluate your purchase before your order is placed, we back this up after the fact by allowing you a full month to audition our products in your own home before your final decision is made.

We've done our best to provide you with products and services meeting or exceeding your expectations. However as good as our products are, they do not match our dedication to each and every sale. Should you need any further assistance in the future with your A/V system, you can bet that AV123 will be there supporting and assisting you as you make your way to your next level of audio/visual enjoyment.

The Onix Rocket Tyke 5.1 system is a very potent and agile loudspeaker system. However, this being said, the placement tips and suggestions in this manual are vital for proper imaging and soundstaging. Features of your new system include a 50-watt powered 8" ported subwoofer, (4) incredible 2-way, 2-driver satellites, a dedicated 2-way, 3-driver center channel, solid extruded aluminum enclosures with a beautiful brushed exterior finish, and color matched integrated wall-mounts. We hope you enjoy your new home theater, and thank you again for your support of AV123!



Section 1-Getting Started

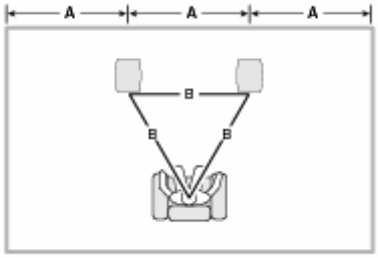
Your new Tyke loudspeaker system includes just about everything to get you up and running in a few short minutes. However, listed below are a few things you will need to complete proper installation. Should you have any questions about those items below or where to find them, feel free to call our support staff at any time.

- **H**ome theater receiver or preamp/ processor and amplifier.
- **A**n audio source such as a DVD / CD player.
- **S**peaker wire – 14 gauge or higher (smaller #).
- **S**ource Interconnects – A digital coaxial **or** fiber optic cable and possibly standard analog RCA cables depending on your equipment (if DVD-A or SACD is going to be used, you will need both digital and analog connections. See your player's manual for more information).
- **S**ubwoofer Connection – You will need a single **mono RCA cable** to make this connection.

Section 2-Placement

To achieve the best performance your Tyke system has to offer, there are several tips, suggestions, and guidelines to follow when setting up your system in its new environment. Details for the most common placement techniques are listed below. However, at the end of this section you will also find more information on placement alternatives in unique situations.

2.1-Front Speaker Placement

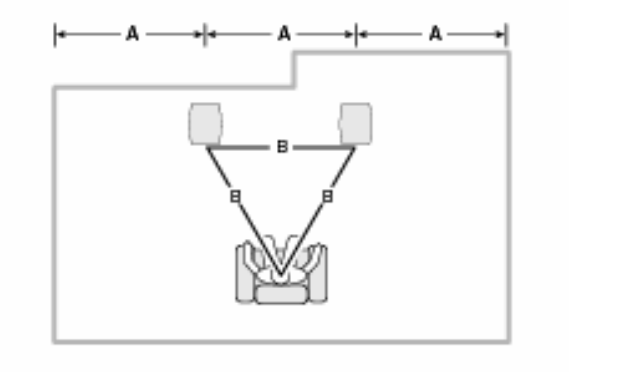


Try to place your main speakers (Left, Center, and Right) along the same wall of your listening/ viewing room. Although we've seen successful installations that didn't follow this guideline, they're generally more problematic in terms of system response and accurate theater sound reproduction.

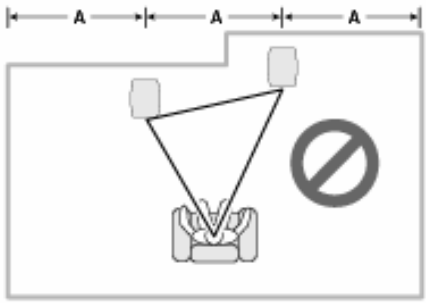
Use the "Rule of Thirds" whenever possible as a

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. 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 as well. If there's a conflict here (as would happen with an irregular wall behind the speakers), we suggest that you equalize the distance between the 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.

In other words, this…



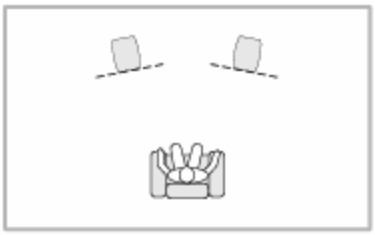
Is generally preferable to this…



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. 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. *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.

2.2 Should you "toe-in" your speakers?

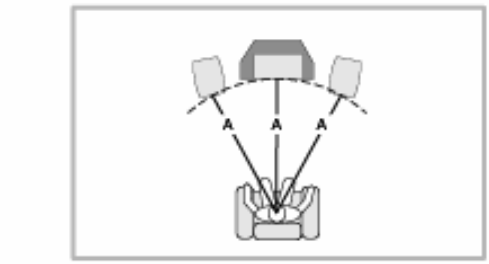


Some people like to "toe-in" their main speakers to get better performance. This simply means aiming both Left and Right speakers so that they point towards the prime listening/viewing position rather than straight ahead. This is how many people aim their speakers. "Toe-in" can improve imaging and add 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. Some time experimenting here can yield a better match to your room's acoustic properties, provide a clearer, more precise center channel speaker, or just better suit your own listening preferences. Enjoy!

2.3 Center Channel Speaker Placement

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. This will ensure 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 always good to start mechanically rather than electronically if possible).



2.4 Surround Speaker Placement

Surround speaker placement is a bit more challenging. Ideal placement can either be on the back or side walls of your listening/viewing room depending on how the system will be used. Regardless of exactly where they are placed on either wall, make sure to locate them above ear level. 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 Tyke speakers. Make sure you can see them when you're ready to enjoy some music or a movie!

2.5 Alternative Speaker Placement Options

We realize that the real world (family opinions, room traffic patterns, etc.) will have more impact on where you place your Rocket Tyke 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.

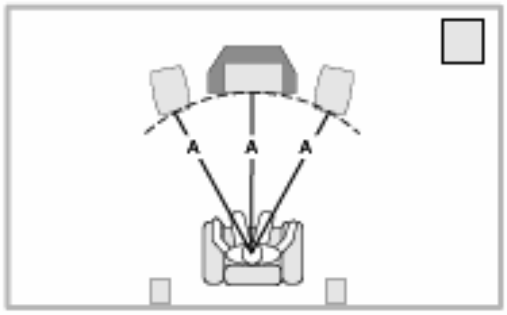
1. ***Shelf mounting:*** Logically, this may be your first consideration. That's fine if the shelf is sturdy enough and deep enough to hold your speakers securely. Remember, a shelf that is up against a wall should be at least 2" deeper than the speaker itself to allow for cable connections. Thus, since your Tyke front speaker is 3.75" deep, you will need to allow a minimum 5.75" of shelf space. Note that the Rocket Series speakers are sealed (acoustic suspension) enclosures, and thus do not need "breathing room" like many ported (bass reflex) loudspeakers.

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.

1. ***Wall mounting:*** Your Rocket Tykes include color-matched wall-mounts for all (5) speakers. Simply place these speakers at the appropriate distance along your wall, as indicated in the previous section, and hang using the included hardware and keyhole mounting cut-outs in each mount.

2.6 Your Tyke SW-8 Subwoofer Placement

Unlike most all-in-one home theater systems, your Tyke 5.1 system includes a true 50W powered 8" subwoofer. Because subwoofers play a frequency range few other speakers can handle, setup, configuration, and placement for this speaker is different from that we've just finished explaining.



Unlike regular loudspeakers, subwoofers work very well when placed in a corner - even if a few feet to the side and/or behind the closest main speaker. Try your front right or left corner first.

The low frequency sound waves emitted by the SW-8 are quite long and will therefore interact greatly with the walls of your room. Consequentially even small placement adjustments can make noticeable alterations to the sound you hear. A room corner will provide maximum output for a given power level.

Low frequencies tend to be non-directional so if your subwoofer is placed and calibrated well, you should not be able to *easily* localize it. Factors that can affect performance in this regard are rattles from walls or nearby objects, distorted output, or a high crossover point. If you are having issues with bass localization, try to isolate rattling or buzzing objects if any, or try another corner in your room. If the sub's output is distorted, check to see that you are not at the maximum sub level setting on your receiver. This can induce audible distortion, so you may need to turn down the subwoofer level on your processor and turn the level up on the subwoofer to compensate. ***Note:*** *Subwoofer placement in the back of the room can provide good results, but we find the most natural sound in most rooms is obtained with placement in front of the listeners.*

...One last note.

Although the advice in this section will certainly help you enjoy the best possible sound from your Rocket Tyke 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.

Section 3-Making the Connections

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...**then** you're done! No, we're not being funny here. You'd be amazed how many people forget that little step!*

3.1 Connecting Your Speakers

All Rocket Tyke speakers feature a single pair of spring loaded binding posts. Each terminal will accept bare wire or pins only and is not compatible with spade lugs or banana plug connections.

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). Twist the stranded copper leads tightly, depress the binding post, and insert the copper through the exposed hole in the center of the terminal. For pin connections, follow the same general guidelines. If you're attaching pins 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 bare wire. If you're using preterminated wires, the manufacturer has already taken care of this potential problem for you. With a pin termination, depress the binding post, insert the pin through the shaft hole, and release.

A Question of Polarity

If you're like most of us, you'll simply run speaker wire from the appropriate output of your receiver 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 Tyke speakers. 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 hurt anything.* We'll explain this further 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 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.
7. Follow steps 1 through 6 for all other amplifier - speaker connections in your system.

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.

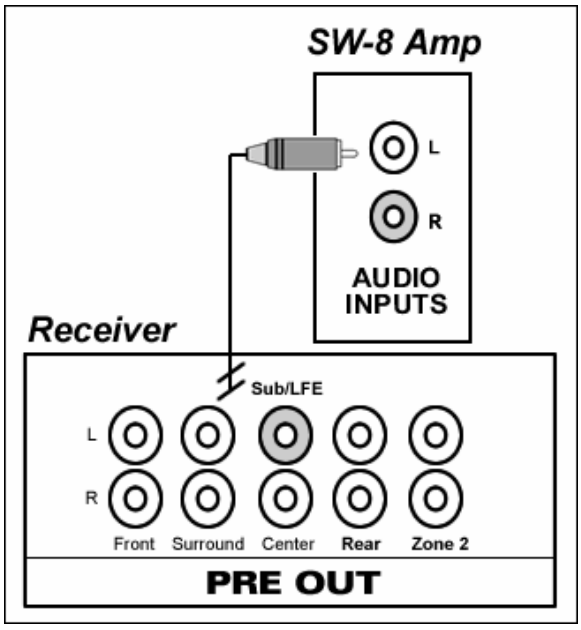
When speakers are connected "out of phase," the drivers fight each other - some move out while others move in. The result? You'll get less bass and blurred imaging. That's a pretty heavy price to pay for not taking just a few extra seconds to make sure your connections are correct.

3.2 Connecting your Tyke SW-8 Subwoofer

Because your subwoofer is a self-powered speaker, that runs off the built-in 100W amplifier (as opposed to your A/V receiver's internal amplifiers), it requires a different connection from your speakers.

Make sure the subwoofer is not plugged in and the rest of your system is turned off before proceeding.

When making your connections, be sure to use a high quality and reliable Mono RCA interconnect cable. It should be well shielded and long enough to do the job, but not excessively long—though it is likely to be the longest interconnect in your system. The simplest and recommended connection is from the sub/LFE output on the back panel of your receiver directly to either L or R RCA input on the SW-8.



Section 4-Features and Functions of Your Tyke SW-8 Subwoofer

4.1 Control Panel Features of Your Tyke Subwoofer (see figure on next page)

1. **Power switch**
2. **Frequency Adjustment** – This controls the high-frequency cut off. Generally this is set to 100 Hz if used. We will cover this in detail later in the manual.
3. **Gain (Level)** – This control allows you to match the output of your main/satellite speakers to the sub. Set this to the lowest level when you power your system for the first time, then try setting the gain at 1/4 of max to begin calibrating your system. It's good to have some room for adjustment, so try to keep from having either the subwoofer's gain or the subwoofer level in your receiver or pre/pro up near it's maximum level. This will also minimize the potential for a distorted input signal.
4. **Audio Inputs (RCA)** – Use standard RCA type cables. If your receiver has only one sub out, use either L or R. Both do not have to be used but a Y-cable can be used to gain an additional 3 db of output.. If your receiver has two sub outs, it is OK to use both.

4.2 Tyke SW-8 Setup

Though relatively "plug and play" the following information will help you configure your Tyke SW-8 properly in your new home theater environment.

Frequency

As shown in the figure on the next page (please see item # 2), your SW-8 subwoofer includes a continuously variable crossover adjustment built directly into the amplifier. This low-pass filter will allow you to limit the frequencies at which the subwoofer will produce an audible response. The number selected with this dial is the *highest* the subwoofer will play. Thus, for example, if set to 100 Hz your subwoofer will play ONLY 100 Hz information and below, regardless of what it is receiving. If used with a home theater processor or receiver, we recommend bypassing the SW-8s crossover (set to its maximum 150 Hz value) and using the electronic crossover built into your components.

Gain

The Tyke SW-8 Subwoofer also includes a continuously variable gain control. Adjust this level until your subwoofer blends seamlessly with your Tyke surrounds.

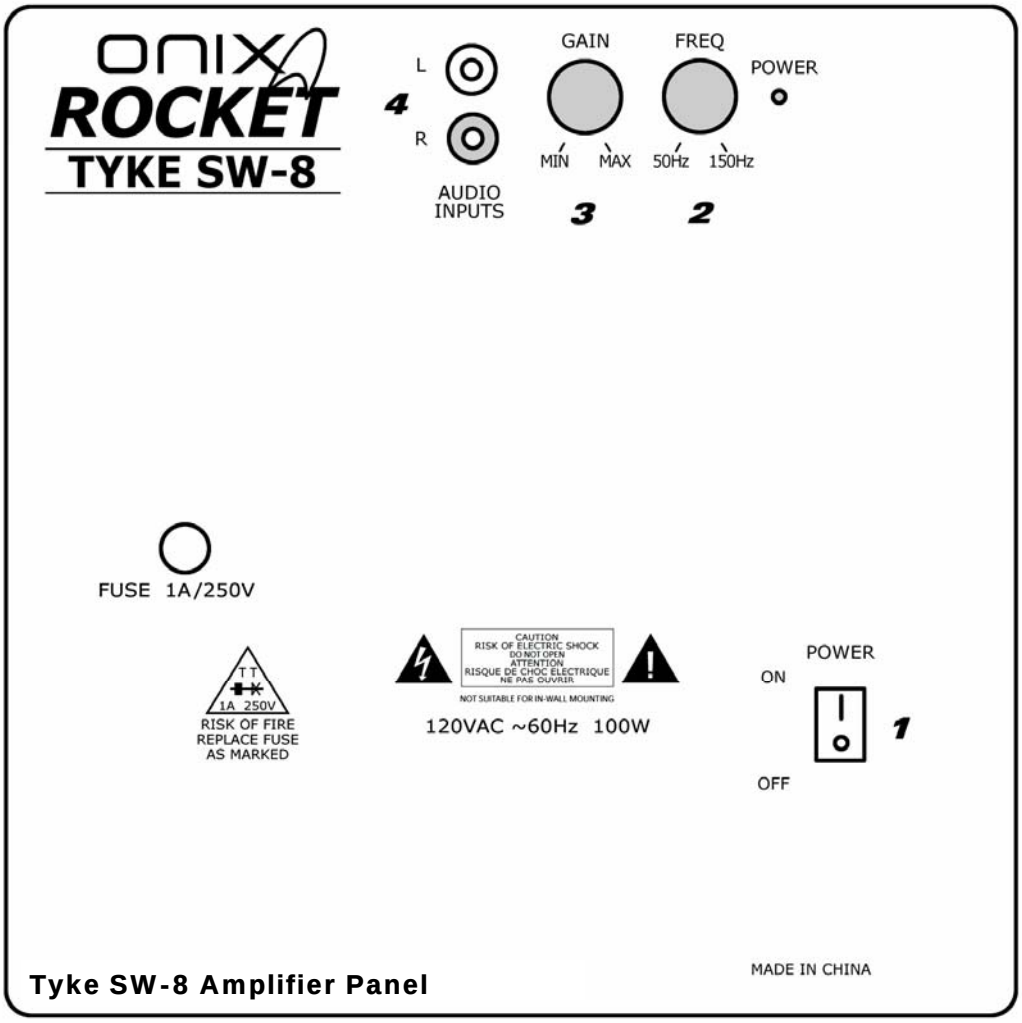
Section 5-Setting Up Your Receiver

Though much of this information may also be found in you're receiver manual, the guidelines below are specifically for your receiver to Tyke speaker connections, and should be followed for best performance.

5.1 Simple Calibration

First you'll need an SPL meter. Radio Shack sells an analog meter that works very well for this purpose.

Set the meter on 'slow' and "C" weighting. The dial should be set at either 70 or 80 depending on your pre/pro or receiver's test tone level. Consult your owner's manual to determine what reference point your unit uses (most use 75, so the 70 setting on the meter would be appropriate).



Tyke SW-8 Amplifier Panel

Let's start by setting the level of your sub to match the rest of your speakers.

From the receiver's speaker calibration menu, set the subwoofer level to 0 dB. Start with the gain on the subwoofer at about 1/4 max.

In the speaker configuration menu (as a part of the set-up on your HT receiver), be sure all your speakers are set to "small" with subwoofer to "yes". The crossover should be set to 100 Hz. Experiment with what you prefer. Typically, higher crossover settings are used for systems in extremely large rooms or with very demanding low-end material.

Set the volume control on your receiver to the "00 dB" level. See the note below if your unit uses a positive number scale for volume instead of a minus-to-plus scale.

Ensure that all main, center, and rear channels are calibrated to the reference point using your test tones, then direct the tone to the subwoofer. Adjust its level using the gain control on the subwoofer itself until it reaches the SPL level used for the other speakers. An assistant will be very helpful for this process. Some like to run their sub "hot" for movies by increasing the sub level by 5 dB or so above the main channel level. This can be very effective at lower listening levels, but be sure to use care when watching that big action movie for the first time! Especially at or near reference levels. Once the subwoofer is calibrated, small adjustments can be made easily using the subwoofer level control in your processor/receiver. If you find the need to go much above +2 or +3 consistently, we recommend adjusting the gain control on the sub upward instead and using a lower number for reference level* on the processor.

Note: If your unit does not use a minus/plus volume scale, activate the test tones and in-

crease the volume of your pre/pro or receiver until it reaches 75 or 85 dB on your SPL meter. Remember this number as this will be "reference level"*. Remember to check with your unit's manual to determine if they use a 75 or 85 dB test tone.

***What is "Reference Level?"**

Reference level allows for peaks of 105 dB from the speakers and 115 dB for the LFE (low frequency effects) channel. When calibrated as above, the correct relative volume of each speaker is as the director/sound engineer of the film intended.

5.2 Setting "Small" or "Large"

Like many things audio related, this is somewhat subjective, but it's also a function of your room. By a good majority, most rooms will obtain their best sound with all speakers set to "small" with the receiver's internal crossover setting engaged at 80 Hz-100 Hz. This is assuming a high performance subwoofer, as a good sub, ideally placed, will handle sub-80 Hz –100 Hz information better than "most" loudspeakers in "most" rooms. This is mainly due to the tendency for competing sources of information below 100 Hz that result in destructive bass wave cancellation, thus effectively eliminating the amount of total information you hear at the listening position. However, in addition to the greater overall output, an 80 Hz—100 Hz crossover setting will allow your other loudspeakers to play with greater ease and less distortion— free from the demands of deep and complex sub-100 Hz waveform reproduction. Your speaker system amplifier will see some benefit as well, since much of the stress of producing deep bass will be eliminated, and handled solely by the integrated 100W amplifier featured in your SW-8 subwoofer. Consequentially, your front loudspeakers will sound cleaner and more controlled.

The easiest way to test different methods and frequencies for crossing over your subwoofer is by using bass sweeps from the "*AVIA Guide To Home Theater*" DVD. Specifically, the tones that descend in frequency from the individual satellite speakers to the subwoofer are quite useful and effective. Using your SPL meter, watch for the smallest amount of overall needle fluctuation while you direct and descend the tones from speaker to subwoofer going around your system.

Section 6-Proper Care and Feeding

Your system should now be fully set up, and configured for optimum performance in your room. We hope this information has been straightforward and easy to follow. However, should you have any further questions or concerns that have not been addressed in this guide, please feel free to contact our support team at any time. You may either call us at 877-543-7500 or simply e-mail us at support@av123.com.

6.1 Speaker 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 Tyke 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 Tyke 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.

6.2 Speaker Care

Your Rocket Tyke Series speakers don't need much maintenance. Dust them occasionally. The durable brushed aluminum finish requires only some dusting, but can be wiped 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. Above all, listen and enjoy! That's what your Rocket Tyke Series speakers were designed for. And why AV123 takes such pride in bringing them to you!

6.3 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, please visit us online at www.av123.com.

Section 7-Specifications and Your Tyke Warranty

7.1 AV123 Warranty Policy and 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 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 for repair only and return shipping costs are the responsibility of the customer. All questions should be directed to customer service.

**All electronics are guaranteed for 2 years. This includes the SW-8 amplifier in the Tyke Subwoofer.*

7.2 Specifications

Satellites

High quality, all aluminum construction with NC machined components.
2.5” long throw woofer with 1” voice coil and Neodymium motor structure with unique, precision made progressive suspension system for low distortion and high output
3/4” silk dome tweeter with Ferro fluid damping and Neodymium motor structure
Internally damped cabinet
Full L/C crossover with tweeter overload protection
Precision large gauge speaker terminals
Universal Threaded insert for wall mounting
Smooth, flat frequency response from 80Hz-20KHz +/-3 dB

Center Channel

High quality, all aluminum construction with NC machined components.
Dual 2.5” long throw woofers with 1” voice coils and Neodymium motor structure with unique, precision designed progressive suspension systems for low distortion and high output
3/4” silk dome Neodymium motor tweeter with Ferro fluid damping
Internally damped cabinet
Full L/C crossover with tweeter overload protection, optimized for center channel use.
Precision large gauge speaker terminals
Universal Threaded insert for wall mounting
Smooth, flat frequency response from 80Hz-20KHz +/-3 dB

Subwoofer

Compact down firing, front ported design for extended low end and high efficiency
High quality MDF cabinet with internal damping
Long throw 8” subwoofer with rubber surround and heavy duty motor assembly
100watt internal amplifier with balanced dual drive topology
Auto turn on circuitry
Variable low pass frequency adjustment
Variable gain control
Fully protected against overload conditions
Adjustable spiked feet
Powerful low frequency response to 30Hz

Thank you for your support!

AV123