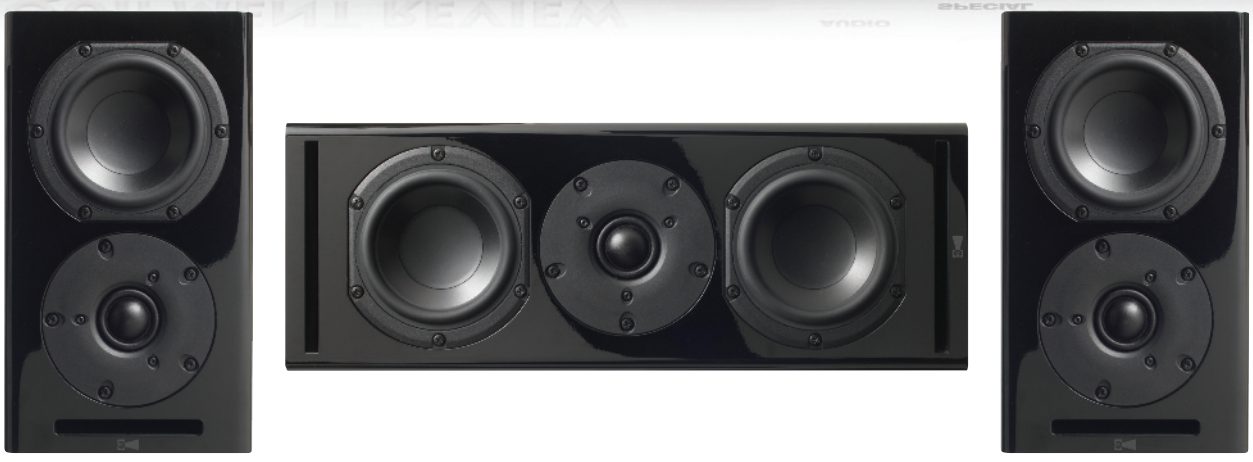
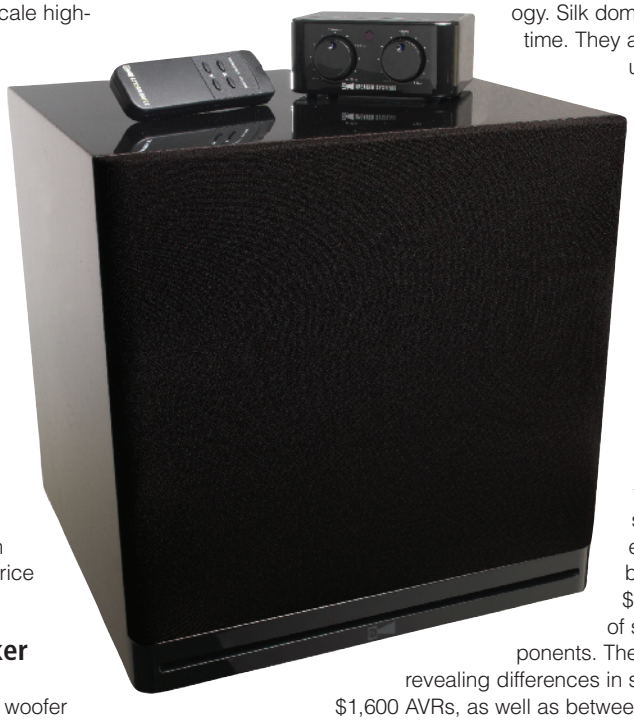


RSL 5.1 Loudspeaker System

Doug Blackburn

RSL loudspeakers originated back in the early 1970s as a brand manufactured by the Southern California retailer, Rogersound Labs. By 1989 there were eight Rogersound Labs stores and the original owner sold the business to new owners who lasted only three years before shutting the doors. RSL loudspeakers started out being manufactured in a shop located in the back of the original Rogersound Labs store in North Hollywood. Many years ago, the founder of Rogersound Labs and RSL loudspeakers repurchased the brand name. A few years ago, he began the process of designing and manufacturing the new generation of RSL Speaker Systems. These are new designs with modern components, an upscale high-gloss black finish, and moderate prices.

The 5.1 system retails (online-direct only) for $2,075 including shipping. There's a 30-day refund policy that *includes* free return shipping. So you could order the loudspeakers, decide they aren't quite right for you, and return them and be $0 out of pocket. It's not likely you'll return the loudspeakers, though. As we will see, they're a pretty good value. Warranty is five years on loudspeakers. Electronic components like the subwoofer amplifier are warranted for two years. As with so many products today, the RSL loudspeakers are manufactured in China to stay competitive in this price range.



CG4 Bookshelf Loudspeaker

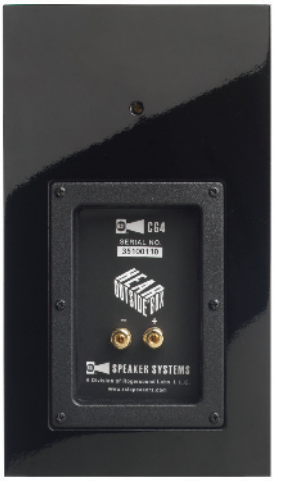
With a single 4-inch poly-cone woofer and an enclosure size that's bordering on tiny, expectations for bass out of the CG4 loudspeakers (front left and right and surround left and right) wasn't too high. You can get about 100 Hz out of them, perhaps a little more if they are close to a wall. Listening to them by themselves wasn't all that satisfying. The lack of bass below 100 Hz interferes quite a bit with the enjoyment of both music and movies. Even a snare drum, something not associated with bass, sounds imbalanced without bass below 100 Hz. It really needed the bottom end whack to balance the higher-frequency sounds of the head and the wire snares on the bottom.

The 1-inch silk dome tweeter can be thought of two ways: as a safe choice or as a highly developed and proven technology. Silk dome tweeters have been around a *long* time. They are probably the most understood/researched/developed type of tweeter available today. It seems to be difficult to make a silk dome tweeter sound offensive. Every loudspeaker I can recall hearing that had a silk dome tweeter has always sounded, at least, very listenable. Getting a silk dome tweeter to sound special is a bit more work.

The integration of the tweeter and woofer (crossover at 2,500 Hz, 12 dB/octave) was seamless sounding to me. I could never identify where the woofer stopped and where the tweeter started. The CG4 produces a very coherent sound from top to bottom. It also produces a spacious sound with plenty of depth when the electronics are up to the job. That can be difficult to find in AVRs below about $800. They just can't produce the sense of space you get with better audio components. The CG4s are completely capable of revealing differences in sound quality between $600 and $1,600 AVRs, as well as between several different surround processors in the $4,000 to $11,000 price range. So don't assume that because

these loudspeakers are $500 per pair that any old electronics will be good enough. Select something that doesn't sound good to start with and the CG4s are *not* going to cover up the bad sound.

The CG4s employ RSL's Compression Guide™ tuning system for improving sound quality, primarily in lower frequencies. Using an internal diagonal "board," they divide the cabinet volume into a number of spaces to break up the box resonance required to properly load the woofer. RSL says Compression Guide tuning is responsible for better bass "speed," lower distortion, and lack of bass "overhang." One place most people have probably heard overhang is in PA systems used in many concert venues from large to small. RSL's example uses a kick drum. In real life, an unamplified kick drum produces a very sharp initial impact of head on drum followed by a pressure wave that hits you in the chest, stomach, legs, or all three. Over the PA system you hear "boom," which sounds *nothing* like a real unamplified kick drum. Box loudspeakers have to load the woofer for proper performance, but RSL believes that conventional loading leads to overhang and loss of bass fidelity. The CG4 has a Compression Guide enclosure to help the lower end of the woofer's operating range to be freer from overhang and for it to integrate as well as possible with the sound of the Speedwoofer 10 that also has Compression Guide tuning. In fact, the Compression Guide in the CG4 loudspeaker is responsible for the tweeter ending up on the bottom. The Compression Guide and woofer frame and magnet structure determine where the Compression Guide board and the slotted port are located. The remaining space was where the tweeter had to go. RSL says there's absolutely nothing wrong with flipping the CG4 upside down to put the tweeter on top if the loudspeaker sounds better that way when placed on your stands. With the stands I own, the tweeter was just a couple of inches below ear-level when the tweeter was on the bottom. I thought the sound was a bit fuller and more detailed with the tweeter on top. Your result will depend on your seat height, stand height, your own height from butt to ears, and room placement. You should be able to tell if inverting the loudspeakers will improve sound quality just by stretching up or slouching down to change the relationship of your ear height with the height of the tweeter.



It's difficult to tell if a technology like Compression Guide is responsible for any of what you hear in a finished product when you don't have a comparison with identical components but lacking the Compression Guide, but the CG4 loudspeakers do indeed have nice, clean-sounding bass—what there is of it. And the CG4s definitely integrate very well with the Speedwoofer™ 10 subwoofer.

The grilles are curved and perforated metal, held in place with magnets. The sound is just a bit smoother, focused, and precise with the grilles removed. Since removing or replacing them takes no more than one second, it's easy to remove them for critical listening and put them back on for protection from toddlers and wayward pets. The two all-metal binding posts are in a recessed "cup" on the back. The posts will accept spades, pins, bare wire, or banana plugs. The opening of the U in the spades on my loudspeaker cables was just a bit too small to fit over the center post, so I had to slip one leg of each spade into the hole in the center post where you'd insert a pin or bare wire connection. That worked well enough for a review, but long-term, I'd prefer to have the spades fit properly. RSL may be changing posts in the future to fit the fairly common spade connector with the smaller opening. There are some spades with slightly larger center openings that should fit the current post without issues.

The very high-gloss black finish is highly polished polyurethane so it should be durable and long-lasting. The gloss on the review samples was quite impressive and made all the RSL loudspeakers look classy.

For the review, I used 28-inch-high stands and a sticky, putty-like material to secure the loudspeakers to the stands. With the loudspeakers weighing only nine pounds each, even the weight of heavy-ish loudspeaker cables could pull the loudspeakers off the stands. So using something that helps the loudspeakers "stick" to the stands is helpful. The putty-like material is fairly widely available as a type of removable adhesive. It looks something like chewing gum and comes in colors like blue, brick red, gray, and yellow. Office supply and home improvement stores carry it, though, Lowes seems to have dropped it sometime in the last year. I like it because it keeps the loudspeakers from actually touching the loudspeaker stand but secures the loudspeakers nicely. The soft resilient putty-like material helps dampen vibrations as well. I used four pea-sized blobs for each stand-mounted CG4. CG4s have a threaded insert on the back to use with wall or ceiling brackets. I really don't like the sound of loudspeakers mounted in or on walls (or ceilings), so if you have a choice, use stands. But when there's no option, it's handy to have the threaded insert.

For amplifier power, RSL says anything from 25 to 125 watts per channel is enough, but they also, realistically, say that there's nothing wrong with more power as long as you don't push the CG4/CG24 to sound-pressure levels that could damage the loudspeakers. Bear in mind that AVR amplifier watts are still so over-stated that you'd probably want to think in terms of 50 to 250 watts from an AVR and 25 to 125 watts from standalone amplifiers that make "real" watts, as measured by feeding all channels with full spectrum audio at the same time.

CG24 Center Channel Loudspeaker

The center channel uses two of the 4-inch woofers with the same 1-inch silk dome tweeter between them. Bass extension is down to 85 dB compared to 100 Hz for the single-woofer bookshelf loudspeaker. The center channel model can be used horizontally or vertically. I will always recommend vertical placement of loudspeakers with this design whenever possible because the horizontal dispersion characteristics are better, while vertical dispersion is a bit more uneven. When you lay the loudspeaker down horizontally, the dispersion variations are horizontal, while vertical dispersion is better. In spite of my preference, the surface I had available for the center channel loudspeaker was so close to the bottom of the projection screen, I had to lay the CG24 down horizontally. It's not a huge problem, but you do want to center the tweeter on the main seat as best you can. Those sitting to your left or right may not get sound that's quite as good from the center channel, but it's still "serviceable" sound. The second woofer brings second slotted port. There are two threaded inserts on the back of the CG24 to accommodate wall or ceiling mounting.

Speedwoofer10 Subwoofer

At first the Speedwoofer 10 looks too basic for its own good. The connections on the back include: LFE, line level in, line level out, loudspeaker level in, loudspeaker level out, power cord socket, and what looks like an Ethernet port. The only other controls are: an on-off switch, switch to select "Auto" (amplifier shuts off after 20 minutes of no bass signal) or always "On," and a two-position phase switch (0, 180). As it turns out, RSL put the crossover frequency selector and the volume control for the sub in a small box you can place anywhere convenient. The crossover frequency and volume are set with an included remote control. The small box connects to the Speedwoofer 10 with a cable using the "Ethernet" socket, though, it has nothing to do with actual Ethernet. The cable carries power and control signals to and from the external box. I put the box right on top of the Speedwoofer 10. The rubber feet on the box insure no rattling or other noises, even

during the most robust moments of bass. Adjustments can also be made manually by turning the two knobs on the tethered box.

The limited bass extension of the CG4 and CG24 satellites means the Speedwoofer 10 has to operate at higher frequencies than many subs. Integrating with the CG4 loudspeakers required high-quality bass all the way up to and beyond 100 Hz (the crossover does not instantly stop bass after 100 Hz, there is a controlled overlap zone where both the sub and CG4/CG24 produce bass). The Speedwoofer 10 isn't one of those tiny subwoofers with the 1000+ watt amplifier and gigantic rubber surrounds that support three inches of movement to get down to maybe 30 Hz, all in the name of a tiny box size. I've seen one of those loudspeakers move itself across the carpet because the force of the woofer moving was so huge. Of course, there were no spikes installed to steady the little guy. Subwoofers that tiny are distortion and overhang monsters. RSL chose a compact size, but not too compact. Rather than the box having less than 1 cubic foot of volume, RSL chose to go a bit larger, but still compact enough that most spouses won't be too grossed out. RSL's specs say the Speedwoofer 10 is -3 dB at 24 Hz. I matched that in my room without having to resort to placement near a wall or in a corner, but I don't consider my room to be very typical. There's a good chance that in your room, the Speedwoofer 10 will need to be placed close to a wall or in a corner to augment the lowest frequencies so they don't drop off too quickly. A 20 Hz test tone was quite low in output in my room. Operating range of the Speedwoofer 10 is about what I'd expect from a subwoofer with an enclosure of this size and a 10" driver, so there are no real surprises there. What, perhaps, is a surprise is how tidy the bass is over the entire operating range. I've heard subs selling for double the cost of the Speedwoofer 10 that are much sloppier. There's a distinct lack of overhang or boom. There's no tendency towards one-note bass, like every bad car subwoofer you've ever heard. You hear a lot of different pitches, notes, tones, and textures through the Speedwoofer 10, as it should be. Simultaneous multiple bass notes are reproduced cleanly and distinctly, something that can give subs, even some surprisingly expensive ones, trouble. Whether it's the Compression Guide design or just overall attention to detail, the Speedwoofer 10 deserves its name. And it's a good thing because the little CG4 satellite loudspeakers need a sub this clean and quick to integrate smoothly with the sound of the CG4s. When the sub and satellite loudspeakers sound like two different entities in the room rather than sounding like a single source of sound, music and movie sound become annoying rather than entertaining.

Audyssey and other automatic room-correction software systems that come with many AVRs and surround processors these days can't fix all the problems caused by less-than-ideal placement of a subwoofer. I've seen rooms where there were as many as five deep suckouts or holes in the bass frequency response with the subwoofer in a specific location. These are caused by cancellations related to the dimensions of the room. Moving the subwoofer or listening seat, or both, is the only way to get rid of those. But they are very difficult to pinpoint without measurement gear, at least an SPL meter. Without a meter, it's really difficult to tell if the next position is an improvement or not. Audyssey and other software can't fix suckouts either because they are cancellations. You might think you could just boost 50 Hz by 8 dB to remove an 8 dB suckout, but audio doesn't work like that. If you re-measure you'd still have an 8 dB or worse suckout at 50 Hz because the added bass just cancels itself out since the room dimensions and locations of the sub and listener have not changed. Therefore, the suckout will still be present at 50 Hz. Move the listener or the sub, or both, and you can get rid of the 50 Hz suckout, but there could be a suckout at a different frequency in the new location… or maybe even at two different frequencies at the new location. You'll never get rid of bass suckouts with any equalizer or room correction software.

Bass peaks can also be caused by unfavorable room dimensions, or the position of the sub or listener, or all of the above. But bass peaks

SPECIFICATIONS

Features – CG4 Bookshelf Loudspeaker
- One 4-inch woofer, polypropylene cone, die-cast aluminum frame
- One 1-inch silk dome tweeter
- One front slotted port
- Compression Guide™ tuning
- Recessed all-metal, gold-plated multi-way binding posts
- Magnetically attached perforated metal grille cover
- Crossover components: air core inductors & polypropylene film capacitors
- Threaded insert on back for mounting bracket

Specifications – CG4 Bookshelf Loudspeaker
- Frequency Response: 100-25,000 Hz (+/- 3 dB)
- Nominal Impedance: 8 ohms
- Crossover Frequency: 2,500 Hz
- Crossover Type: 12 dB / octave
- Sensitivity: 88 dB
- Recommended Amp Power: 25-125 watts (more power OK as long as maximum volume level is not applied to the loudspeakers)
- Dimensions (HxWxD): 10.5 x 6 x 6.375 (inch)
- Weight: 9 lbs per loudspeaker
- Designed in: USA
- Manufactured in: China
- Warranty: 5 years parts and labor
- Direct Sale Price: $250 each including shipping

Features – CG24 Center Channel Loudspeaker
Same as CG4 except
- Two 4-inch woofers
- Two slot ports on front
- Two threaded inserts on back for wall or ceiling mounting

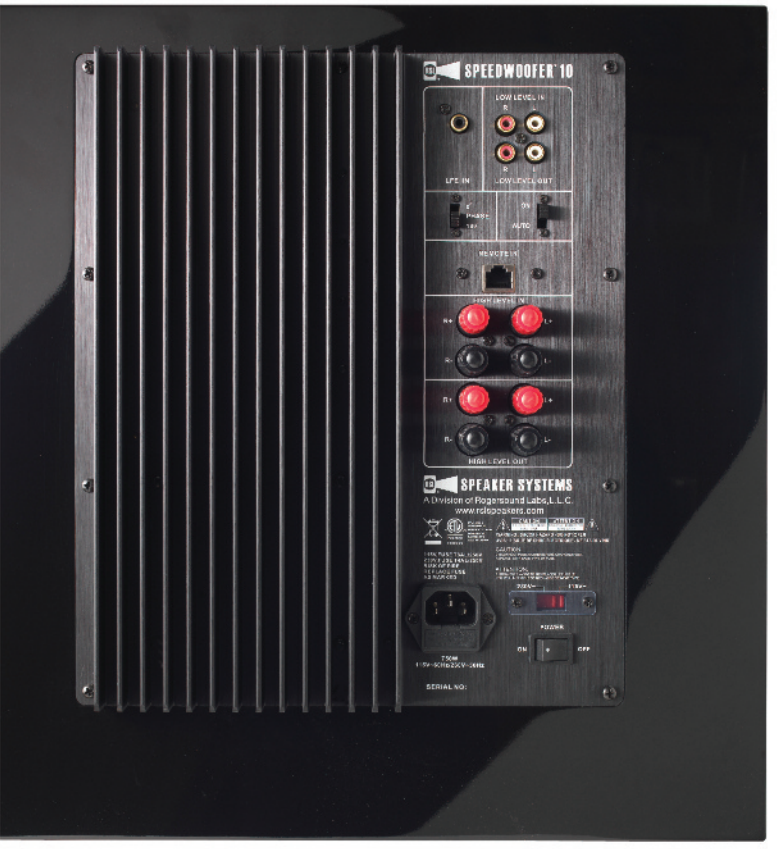
Specifications – CG24 Center Channel Loudspeaker
- Frequency Response: 85-25,000 Hz, +/- 3 dB
- Nominal Impedance: 4 ohms
- Crossover Frequency: 2500 Hz
- Crossover type: 6 dB / octave
- Sensitivity: 90 dB
- Recommended amp power: 10-250 watts
- Dimensions (HxWxD): 6 x 16 x 6.375 (inch)
- Weight: 13 lbs
- Designed in: USA
- Manufactured in: China
- Warranty: 5 years parts and labor
- Direct Sale Price: $325 including shipping

Features – Speedwoofer™ 10 Subwoofer
- One 10-inch forward-firing woofer
- One forward firing slotted port
- Spike feet for carpet, non-marring rubber feet for hard floors
- Compression Guide™ tuning
- Input options: LFE, stereo line level, and stereo amplifier level inputs
- Remote control crossover frequency and volume controls
- Phase switch: normal (0) or inverted (180)
- Class AB all-analog amplifier
- Auto on or always on option plus back panel on/off switch

Specifications – Speedwoofer 10 Subwoofer
- Frequency Response: 24-180 Hz +/- 3 dB
- Crossover Frequency: adjustable from 40 Hz to 170 Hz
- Crossover input slope: 12 dB per octave
- Crossover – Line Level Output: 12 dB per octave
- Crossover – Loudspeaker Level Output: 6 dB per octave
- Amplifier power: 375 watts continuous
- Distortion: less than 1% at full rated power
- Power consumption: 750 watts maximum (unspecified, estimate); 20 watts in Auto mode with no signal; 14 watts in standby mode
- Power Requirement: 115 VAC / 60 Hz or 230 VAC 50 or 60 Hz
- Dimensions (HxWxD): 16.5 x 16.5 x 17.25 (inch), without feet
- Weight: 64 lbs
- Designed in: USA
- Manufactured in: China
- Warranty: 2 years on electronics, 5 years on rest of sub
- Direct Sale Price: $750 each including shipping

- Complete 5.1 System Direct Sale Price: $2,075 including shipping

Manufactured By:
RSL Speaker Systems
A Division of Rogersound Labs, L.L.C.
26500 W. Agoura Rd., Suite 571
Calabasas, CA 91302
Phone: 800 905 5485 or 818 871 9880
Web site: www.rslspeakers.com



can be fixed by Audyssey or other room-correction schemes. So don't expect your room-correction software to fix all your subwoofer problems. You really need to be involved in the placement process or hire someone to get it right for you. Having a second subwoofer may help in some cases, but when you have two subs producing the same sound at the same time, what you end up with is a single subwoofer in a virtual location half-way between the two physical subwoofers. So if you want the bass to perform like it would if there was a sub right between your two main satellite loudspeakers, you could place one sub behind and to the left and a second sub ahead of the main loudspeakers and to the right. When the two subwoofers are placed properly, your virtual subwoofer will be right between your main loudspeakers. You could also place two subs even with the two main loudspeakers at the left and right sides of the room and the virtual sub you have created will perform like it would if there was a single sub placed in the center of the two main loudspeakers. You could even place two subwoofers so that the virtual sub location is right at the listening position. This is all predicated on the two subwoofers having the same playback levels. If you make one subwoofer louder than the other, it would be like changing the balance control on a preamplifier or AVR. It's not a simple process to place two subs in any given room, so you'll want to start with a single subwoofer and only add a second subwoofer if there's a placement or response issue that makes a single subwoofer problematic.

Speaking of being right in the center… there is an audio axiom that bass from 100 Hz and lower is omnidirectional. That means you can place the subwoofer anywhere in the room and you won't be able to tell where it is located as long as the subwoofer isn't producing sound above about 100 Hz. I personally don't find that to be true. I can localize a subwoofer without any difficulty down to about 75 Hz. You may find out it works that way for you also… or not. You may find you can't tell where the subwoofer is located up to 100 Hz or thereabouts. Just understand that if you *can* locate a subwoofer producing bass below 100 Hz, you aren't alone. For me, that means a subwoofer-satellite setup must have the subwoofer centered between the satellites to sound right. I can move the subwoofer forward and backward a fair amount without any negative effects, but you have to keep checking whether you need to move the phase switch. Luckily this room and my last room in New York both produce the best subwoofer bass measurements with the single sub centered between the main loudspeakers. You may not be so lucky. This is another place where measurements are a huge help. I ended up with the sub in the center, just a few inches farther behind the plane of the main loudspeakers.

The Speedwoofer 10's loudspeaker level binding posts have to fit in a fairly confined space. They ended up having to use the binding posts I hate the most… those found on many AVRs these days. They have a barrier around the center post that blocks anything but bare wire or pin terminations from fitting through the tiny slot. Pins or bare wire are the only things the post can tighten onto. I hate bare wire and have never used pins. Your only other connection option is to pull the small plugs from the tips of the posts, to expose the banana socket. I'd say banana plugs are your best option for loudspeaker level connections on the Speedwoofer 10.

The Speedwoofer 10 comes with both chromed spikes for use on carpet and with rubber dome feet for use on hard floor surfaces you don't want damaged by the very pointy spikes. There are four of each type of foot, so you have to be careful to get them all positioned so they each carry an equal amount of weight.

Stereo Sound

I think most purchasers of this and most other 5.1 loudspeaker systems will probably connect the five loudspeakers to five amplifier channels and the subwoofer to the LFE output of the AVR or surround processor. They would then either do manual or automatic system setup (Audyssey, etc.) and that would be how the system worked from that day forward. Of course, I tried that setup and used it for a while before trying different setups. For some reason, I liked the RSL system's sound the most when I did not use the LFE input. Instead, I connected the subwoofer via the line level inputs and told the surround processor that the main loudspeakers were large, the center and surrounds were small, and that there was no LFE subwoofer. In the "old days," when bass management was a mess, this would likely have been a disaster. But since the advent of HDMI, bass management has gotten far less flighty and most AVRs and processors handle bass-management chores with reasonably good logic and results. With the main loudspeakers set to large, the LFE channel bass is (or should be) directed to the main channels when they are set to "large." You need to confirm that the LFE bass is directed to the main channels when there is no LFE subwoofer, though. There might be some random AVRs that continue to "throw away" the LFE channel if there is no LFE subwoofer. And if your AVR or processor is five years old or more, there's a greater chance that it would discard the LFE channel when there is no LFE subwoofer connected.

When using the line level inputs and outputs from the Speedwoofer 10, the integration of the sub and satellite loudspeakers seemed more coherent. More like there were two well-designed, full-range loudspeakers, instead of two tiny satellites and one subwoofer. This wasn't critical *at all* for movies. In fact, for movie sound, any of the connections performed the same as far as I could tell. The only time I liked the line level solution better was for listening to stereo music. This connection allowed me to use the AVR's or processor's direct or pure mode to bypass digitization of incoming analog signals and also eliminate any processing of incoming analog or digital music signals. Getting the satellite and subwoofer levels matched properly with this connection is just guesswork without a hand- or tripod- held sound-pressure level (SPL) meter that can cost as little as $35 for one accurate enough for these kinds of measurements.

Audyssey, or other room-correction software, can also be used, especially if your AVR or processor allows you to turn it on and off. I tend to prefer movie sound with room correction enabled, but stereo music often sounds better to me with Audyssey or other room correction turned off. When you turn the room correction off, you have to have proper level matching between the subwoofer and other loudspeakers, so that meter really becomes a necessity.

With the system completely set up and using excellent associated gear (Crestron PROCISE processor and amplifier circa $19,000, AudioControl Maestro M3 processor and Savoy G3 amp circa $9,000, Bryston SP3 processor with the AudioControl amplifier circa $12,500), the RSL system produced impressive sound with excellent clarity, detail, and harmonic richness. Recordings with good spatial characteristics were presented with an excellent sense of depth and width. Transients were as fast as they needed to be and high frequencies sounded detailed and smooth, with no raggedness, grit, or hash. I've heard better high-frequency sound quality, but not close to the $500 per pair price range. Silk dome tweeters may not be the last word in speed or detail, but RSL's silk dome tweeter is very good and has no obvious faults that call attention to themselves. The result is highly listenable and very enjoyable music. Sounds that have content that uses the tweeter's operating range come very close to sounding lush and sweet without actually crossing the line. That's a good thing because any more of that character would have been too much, like a second cotton candy fresh from the machine. It might sound like a good idea, at first, but there is such a thing as too much. As they are, the highs lean the right way to make music sound wonderful, but they absolutely don't go so far that you overdose on the lush, sweet character, even over long listening sessions.

Without the Speedwoofer 10, I can't imagine anybody being too happy with the CG4 loudspeakers operating full-range. With no significant bass below 100 Hz, you miss so much, and the higher frequencies dominate so much, that the CG4s alone sound a bit like the way a great kitchen with an empty pantry makes you feel. As soon as the Speedwoofer 10 comes online, music just comes alive. The CG4s wouldn't be a good match for every subwoofer. Some subs just aren't going to work well with the CG4s. The Hsu Research VTF-3 Mk4, with its larger driver and deeper low-end response capabilities just can't handle the range from 80 Hz to 150+ Hz that's needed to mesh well with the CG4 satellites. The Speedwoofer 10 operates in that range with aplomb. If your spouse is insisting on one of those micro subs mentioned earlier… their level of distortion is going to be far higher than the Speedwoofer 10's distortion. I can't think of a sub near the Speedwoofer 10's price that would work as well with the CG4 satellites. And more expensive subs rarely focus on performance in the 80- to 150+ Hz range. So I think if you want small satellites and a small center channel like the CG4s and CG24, stick with the Speedwoofer 10, you'll be glad you did. RSL didn't make the Speedwoofer 10 as any old generic $500 to $1,000 subwoofer might be made. They made it specifically to work well with the CG4 and CG24 loudspeakers, and they succeeded.

There's no sense of wide-range sounds coming from two separate sources when you use the CG4s with the Speedwoofer 10. For example, the snare drum example, while you don't think of the snare having much bass content, when you hear it through the CG4 alone, then hear it again with the CG4 and Speedwoofer 10, you realize there is definitely some short-lived bass right when the drum is struck. When that's missing, the sound of the drum is clearly not right. The CG4/Speedwoofer 10 combo gets those sounds right. Paula Cole's incendiary *This Fire* album has quite a few instances where she is banging on the piano with both hands, deep bass from the left and more mid-range-y notes from the right hand. With the CG4/Speedwoofer 10 combo, it sounds like she's playing the same instrument. Stick a sub in there that can't handle the 80 to 150+ Hz range, or one that has too much overhang, and it sounds like she's playing two different instruments at the same time. RSL has gotten the integration right and it seems ill-advised to look elsewhere for a sub to use with the CG4 and CG24 loudspeakers when the Speedwoofer 10 is so perfect with them.

I haven't said much about the CG4/CG24 4-inch mid-woofer driver. Not because there's anything wrong with it, but because it is so characterless. That may not seem like a compliment, but believe me, in the world of loudspeakers, that's extreme praise. If you can identify a characteristic of any loudspeaker driver, something's not right. Operating over the range of 100 Hz to 2,500 Hz nominally, I don't hear anything about the sound of the mid-woofer that I can even comment on. It simply does everything well without putting any kind of "flavor" on the sound.

Surround Sound

There's really not much more to add here. Surround sound is just as good as the stereo assessment. I did find surround was just as enjoyable via the LFE connection as with the line-level connections. So if music is only background noise for you and you don't spend time really listening to music with the lights off and no distractions, there's really no reason to use anything but the LFE connection.

As you would expect from a sub of this size, just a little larger than 16 inches on each side with a 10-inch driver, bass isn't the house-shaking experience you get with physically larger subs and drivers, but the Speedwoofer 10 is certainly entertaining enough for a good home theatre experience. During reviews, I like to focus less on how much bass there is or how low the bass goes, and at least for a while, focus on whether the entire system is delivering an immersive listening experience that's visceral, tender, rollicking, evocative, menacing, or melancholy as needed. *Terminator: Salvation* is one of my go-to discs for overall sound quality and for evaluating the low frequency performance of subwoofers. It's definitely on the visceral end of the spectrum and exercises the bottom-end capabilities of the system in many ways over much of the movie. The RSL system did a good job of creating realistic spaces and the feeling of the moment, much of which relies on the subwoofer to deliver the foundations of battle sounds, submarine sounds, various vehicles and terminators, and various outdoor and indoor environments. While a larger sub with more extended deep bass response might deliver a more house-shaking experience, the sub itself would likely be too large for spousal approval. I've had conversations with people who want an exciting movie experience but really aren't that interested in shaking the entire house. If that's your goal as well, the RSL system is going to be just what you're looking for.

Summary

The RSL 5.1 system is a well-designed, moderate-cost system that delivers better music playback quality than is typical for this price range. Movie soundtracks benefit from the same qualities that make the system sound so good while playing music. The excellent integration of the subwoofer's sound with the sound of the satellite loudspeakers helps the system create realistic soundscapes for both movies and music. The clean, low-distortion sound of the Speedwoofer 10 subwoofer is a relief from moderately priced subs that can be just a little too boomy, with a slight lean towards one-note-bass that often mean higher distortion and overhang. RSL used a combination of highly developed and proven components with diligent design work to produce a 5.1 system suitable for both music lovers and movie fans. Direct sales to customers, a 30-day return policy with free shipping both ways, five-year warranty (2 years on electronic components), high-quality gloss black finishes, and compact sizes that are spouse-friendly help RSL deliver a desirable high-performance system at a moderate cost. WSR