Holy Subwoofer Batman!

A user review of the Rythmik[®] F18 - 18" Sealed Subwoofer <u>MSRP</u> \$1850 ea Piano Black Finish \$1630 each in Black Oak or Matte Black (vinyl) Multiple Sub Discount available at checkout

Rythmik Audio – Austin, Texas http://www.rythmikaudio.com



Published Specifications (More Available At http://www.rythmikaudio.com/F18.html)

Rythmik[©] F18 Subwoofers

Driver	DS1820 18" high excursion with custom sensing coil
Driver materials	One piece black anodized dish aluminum with rubber surround
	Cast aluminum basket
	Multiple aluminum flux de-modulation shorting rings
Amplifier	900W RMS Hypex class-D patented servo controlled
Dimensions	20-1/2"(W) x 20-1/2" (H)x 21"(D) - (23" D with grille and heatsink)
Shipping Weight	133 lbs (115lbs net)
Frequency Response	14 - 200 Hz (0db/-2db) with LFE inputs
	10 - 250Hz (+/-3db) with LFE inputs
	14 - 90 Hz (-2 dB @ 14 Hz) with LINE IN inputs
Crossover slope	Selectable 12 or 24 dB / octave (PEQ and XLR versions)
Crossover range (Low pass)	25 - 100Hz
Rumble Filter (High pass)	20 Hz 18 dB / octave
Phase response	90 degrees phase shift at 20 Hz (measuring mic has 18 degrees shift)
Phase adjustment	0 - 180 degrees continuously variable
Bass damping factor settings	high (Q=0.5), med (Q=0.7), and low (Q=1.1)
Finishes	Available in black oak and black matte vinyl
Warranty	5 years warranty on driver and 3 years on electronics
	45 day satisfaction guarantee



I finally decided it was time to upgrade my aging and inadequate subwoofer(s). I purchased a pair of Definitive Technology[®] PF15's back in the day (1996) and they have served me well. Of course, I did purchase them with a pair of DTI BP2000s... one of the first speakers that sported a built-in 15" powered subwoofer. I used them as a center channel subwoofer and as a subwoofer for the surrounds using the BP2000's for the front right/left subs. Yes, I know, I know... probably overkill (or just plain not needed) but I thought it was the bomb and I didn't have to worry about phase matching the front speakers! Of course, placement, with the subs built into the main speakers was something you could do little about.

About 6 years ago I sold the BP2000's and most of the media room equipment, along with my last house but brought the PF15's with me. I set up a new Media Room and purchased and installed B&G Radia 520i's for the main right and left speakers, a B&G Radia 220i for the center channel speaker, and B&G SA320i's for the surrounds. I have been using the DTI PF15's as my system subwoofers ever since. Because I use them in conjunction with 2 Earthquake Sound[©] Q10B Tactile Transducers I felt I had adequate low end content for movies.

However, lately I've been drifting more and more back to my first love.... Music! Along with that change in focus came a sort of discontent with the low end supplied by the PF15's. I felt that they didn't really have the low end extension or impact needed (or wanted) for music or movies anymore. My biggest concern was they lacked the speed, accuracy, and the tactile bass I was now looking for. I invested in a calibrated microphone and installed REW and took a few measurements. It didn't take long to confirm that the PF15's, that were certainly adequate in their day, had nothing below 30HZ and were kind of sloppy in their rendition of low and fast bass.

I started on the path to subwoofer enlightenment (research :-) even venturing out into the wild to listen to a few different subs at Magnolia and a couple of other spots around the Dallas area. Not finding anything that brought me to subwoofer nirvana I turned to the modern "book of enlightenment" on, well, everything... the internet!

I started with top ten lists.... Useless! It is amazing just how many "Top Ten" and "best of" lists out there that have very little to do with science, testing, actual listening, or even common sense. These lists were so "all over the place" that they did not help at all.

I had heard JL Fathom (\$3900ea) and Gotham (\$16000ea) subs at CEDIA one year and was very impressed with the performance but left in shock by the price.

A friend has two 15" Earthquake Sound SuperNova VI Subs (\$2900ea) that I had a chance to listen to for an extended time. We had also listened to these subs at CEDIA as well (All the neighbors of the Earthquake booth had surely heard them as well ⁽³⁾)! For sheer volume, impact and "shakeage" the Earthquakes were certainly worth considering since I could get a good deal on them. But I felt they were not as MUSICAL as I wanted. The search continued....

I perused different forums and sites like AV Nirvana, Audioholics, Audiogon, and several others, reading threads and reviews. From this cyber-stalking came several names that kept popping up as the biggest bang-for-the-buck options. Hmmm, I did have a budget after all....

SVS, PSA, Hsu, and Rythmik kept repeating as the Internet darlings on the boards and searches. I started looking for reviews and found many to look over on all of the brands mentioned.

The two I really started to focus in on were Hsu and Rythmik. The Hsu for the Price/Performance and the Rythmik for Performance/Musicality. The Hsu VTF-15H MK II came in a close second on my decision tree but I went with the Rythmik F18 (sealed cabinet) for a few reasons;

- 1. Published Performance The 18" sealed model, the F18, has a performance spec very close to Rythmik's top single 15" ported subwoofer, the FV-15HP, in a manageable size box.
- 2. Many positive reviews by *both* customers and professional reviewers.
- 3. Value vs. Performance (Hey! Christmas Sale!)
- 4. Musicality This was a common thread with any discussion of the Rythmik brand
- 5. Servo Control/High Power Flexible Amp (900 watts using Hypex Class D Amplifier Modules)
- 6. Testing and results posted on <u>https://data-bass.com/systems</u>
- 7. 45 day review and return policy
- 8. Rythmik is located in Austin Texas... Close enough I could return the Subwoofers in the back of my SUV if needed.

Now, don't get me wrong.... I understand I was relying on other folks reviews and perceptions but when I go solely on other peoples reviews I tend to use the Olympic Scoring Method and throw out the highest score **and** the lowest score and use a composite of the rest. I also realize that sometimes, as in speaker selection, internet shopping is not the way to do it. But in this case it seems Internet Direct shopping for a subwoofer was an accepted, good and valid way to go and I felt comfortable with approach.

My decision was made after much gnashing of teeth and back and forth waffling and placed my order on 12/20/2018 for Qty 2 – Rythmik F18 subs... and sat back to wait. Upon ordering I received an instant confirmation email from Rythmik and an order number for reference. And then... not much! Usually, I am used to all kinds of communication after a sale... estimated shipping time, stock issues... and so on but nothing showed up in my cyber mailbox on the day I ordered. I waited a bit and then sent two emails through different channels on the 22nd asking for status of the order, just to encourage a little communication. I received an answer from Enrico at Rythmik the same day. He indicated that they were preparing the order for shipping and would be taking to the UPS distribution center on Sunday (the next day).

I thought that was that but the next morning, Sunday, I received a call from Brian Ding (owner and designer at Rythmik) confirming the subwoofers would be shipped today.

12/23/2018 Arrival Day!

To my surprise and delight the subs arrived the same day Brian had called. I had a doorbell ring and when I answered Brian Ding was standing there! He and his wife Lynn were actually delivering my subwoofers! I had not quite understood when Brian had told me that morning he would be delivering the subs that day believing him to mean he would be delivering to the UPS terminal as earlier indicated by Enrico.

He proceeded to unload his SUV and using a hand truck he had brought with him we boosted the subs into the foyer. My media room is on the second floor over my garage. I showed him the room and talked to him for a few minutes about the subs. We then went down and Brian volunteered to help me move the subs upstairs! Which we proceeded to do. He volunteered again to even help me unpack the subs which I declined knowing I was going to have to do some moving and tweaking. Normally I would have asked many questions and pumped the designer of the speaker for advice and information but I felt I had certainly occupied enough of their time. I introduced Brian and Lynn to my wife and we chatted for a while and then they were off to shop Dallas, returning to Austin that night. I was so grateful for his help! Brian and his wife are incredibly gracious and lovely people. What an incredible delivery experience!!

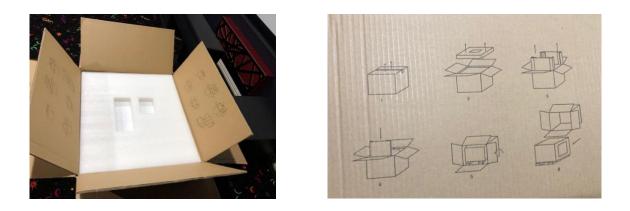
The Packaging

The packaged F18 weighs in at a whopping 133lbs with the subwoofer itself clocking in at 115lbs!

Packaging at first glance certainly appeared adequate with the box proudly displaying what was inside.



Opening the first box and folding back the flaps revealed a second equally heavy duty box. Instructions for unpacking were printed on the inside flaps of both inner and outer boxes.



Opening the second box disclosed a closed cell foam cap with the accessory boxes inserted into individual niches. Pulling the cap off revealed more closed cell foam corner and side protectors.



I then, following the instructions, removed all of the corner and side foam pieces then turning and reinserting one of the side protector/skids onto one of the two "solid" sides of the sub.

Then, turning the package over on its side and using the side protector as a sled to slide the entire subwoofer out of the package. Couldn't have been easier!



Setup and First Impressions

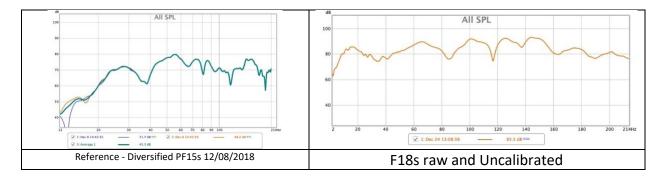
First impressions are important , or so my mother told me all those years ago. That was usually closely followed by "Cut your hair boy!"

My first impression of the Rythmik F18's were... WOW! The build quality looked good and the cabinets responded to the "Rap Test" with a good solid "thunk!" and no reverberations or ringing noted. The subwoofer is a sealed cube 20" on each side with the grilles removed. With the grilles off the 18" aluminum coned woofers looked *REALLY NICE* giving the subs a very serious, almost brutish, appearance. and while I knew I would have to cover them with the grilles to keep "you-know-who" happy I seriously considered displaying them sans grilles.

They set on four medium sized rubber, screw in, feet. I normally set my subs on concrete platforms with large rubber isolation feet to decouple them from the carpeted floor. And, while they would sit on the 18" platforms my old subs previously sat on the overhang of the cabinet didn't look very good so onto the carpet they went. When I get around to it I will search out some 20" x 20" pads or pour them myself.

My room is somewhere around 3200 cubic feet and is 22.5' by 18.5' (9.5" high at the center) with 30 degree angled soffits on all four walls. The side and rear surrounds are mounted in this angled area.

I started the setup of the subs by placing the F18's in the same spots just vacated by the Diversified Tech PF15's.



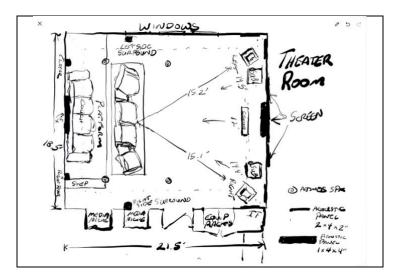
That spot was to the inside (16"), of my two main right and left speakers and flanking my center channel speaker (16" either side). The subs were 12" from the front wall and about seven feet apart center-to-center. The size of my screen dictates a pretty big spread between my right and left with a noticeable toe-in for the speakers toward the prime listening position. *See room diagram.* This spot was determine by the "subwoofer crawl" method and just plain listening. I tried corner placement and it did boost the bass, but, with the PF15's it exaggerated their natural "boominess" and limited range so I brought them more toward the center of the front wall to compensate.

I have four small (1'x4'x4") bass trap/diffuser/absorbers and four 2'x4'x2" absorber/diffusers in the room as a nod toward room tuning but they are really just there to smooth things out and tame the bass a bit. The walls have several niches for the equipment racks, media storage and the entrance door along one wall and three windows with cellular blinds along the other side wall add to the dispersion of the upper and mid frequencies.

I started with a rough measurement with no Audyssey correction just to see what it looked like. It was ugly pointing out some major suckouts centering at around 40Hz, 84Hz and 115Hz.

I then ran the Audyssey 32XT room correction application on the Marantz AV7703 using the Denon/Marantz iPad Audyssey App and the supplied Audyssey microphone to see what kind of curve it generated and ran REW again to see how Audyssey had compensated.

I quickly determined that the old placement spots sucked with the new subs. I tried corner placement and, just as with the PF15s, just did not like the sound. Running Audyssey again did little to change my mind. I did some measurements and marked my spots and placed the F18s at the ¼ and ¾ spots along the front wall. This placement did work much better and smoothed the curve considerably. I did some movement in and out, and right and left to try and smooth the room modes a bit more. The subs settled into their new home spots and I settled into some serious tweaking.





The Fiddle Factor

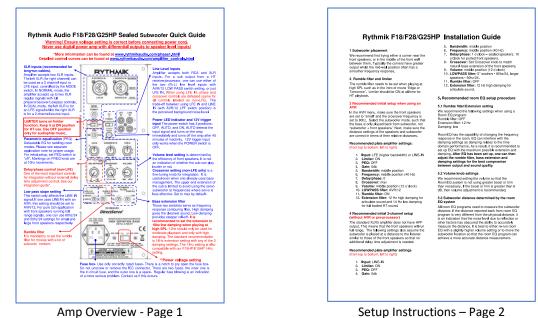
The amplifier supplied with the F18s allows for considerable fiddling. And, as I fiddled looking over the two page instruction sheet I started the process to dial in the subs.



The 900 Watt RMS – HX1000XLR3

One thing to note is the supplied instructions may only be two pages but you should read them carefully.... Completely and carefully! There is a lot of information tucked into those two pages and you will save yourself a lot of grief, frustration and time if you read them carefully!

Did I mention read carefully? I did a very typical "guy" sort of thing and just scanned the instructions (if that). As a result I wasted a good hour, or more, in useless pursuit of a good starting point when that setup is printed clearly on the instruction sheet.



Setup is key with these subs and after my false start I reset and started with all amp controls/settings at Rythmik's suggested starting point and ran another Audyssey calibration. Lo and Behold! This resulted in a much smoother curve and a much more listenable sound. I did some additional tweaking with the PEQ to iron out the smaller, but still present, dip at just above 40Hz (Room Mode). I got a curve I liked and started a Mini Break-In.



I ran multiple iterations of the REW sub sweep test (with my main speaker amps off). I then started a movie (Edge of Tomorrow) and let it play through twice to allow for a little "Break-In" of the subwoofers. I didn't really expect much benefit from any break-in, and I realize this was not a truly meaningful length of time, but wanted to stress the subs a bit before any critical listening.

After running my little "mini break-in" I settled in for a bit of critical listening and started with movies.

The final resting place for the Amplifier settings were as pictured below. The only thing I experimented with, and that only with the music listening were the Damping selections changing between Medium and High.



One last note... All testing was done *WITHOUT* the Q10B tactile transducers engaged. I actually listened to each scene, and most music selections, at three levels....

- 1. Someone (wife) watching with me levels
- 2. Action Movie Loud level.... and
- 3. *Stupid* Loud Level
 - 1. GI Joe, Rise of the Cobra (Blu-Ray)– This is one of my favorites gotos. When I want to show off my theater I always start with GI Joe! I started with Chapter 2 the battle in the forest. This scene has plenty of low frequency action with the aerial battle and the ground fighting, most especially the multiple explosions and the 50 caliber action. The explosions were certainly tactile and the 50 cal (note: when it changes the gun operator perspective at about 8:25) was so percussive and each round could be felt as a solid thud in the chest. My old subs really did not do justice to this scene without the Earthquake Q10B Tactile Transducers (everybody sit down please :-) engaged. With the F18's the percussive effect was so intense I actually got up from my chair and double-checked just to make sure I had *REALLY* turned off the Q10B's.
 - 2. Edge of Tomorrow (iTunes) I started with a couple of scenes (among many in the movie) that had always impressed me with digging deep. The opening scene hints at what is come with some snippets of battle and lows drones interspersed among the newscasts. The extended looping battle sequence starting at Chapter Three is where it all kicks in and certainly have an extraordinary amount of low bass The subs delivered, never flinching even at the highest volumes.

3. The Dark Knight Rises (Blu-Ray) – I played the opening scene where Bane (Chapter 1) is taken aboard the plane in its entirety. This scene is not just bass but has significant high end energy bouncing about as well. The bass was incredibly deep and hard hitting and perfectly rendered by the F18's. There was definitely also some infrasonic action happening as the subwoofers loaded the room. The result was a very unsettling feeling. At no time did the subs show any signs of stress or emit what I thought might be a strained or extraneous noise. In fact the low end sounded solid yet effortless at all levels.

Left a bit short of breath and with a sore chest (well, possibly a *minor* exaggeration :-) I rested a bit before going to some music. I was very interested in how music would playout through the Rythmik's Servo Controlled subs just to see if they lived up to the hype and word of mouth about their purported musicality.

I have a fairly eclectic music collection that reflects my wildly disparate tastes so I have plenty of material to draw from. My goal with music has never been to punish myself with excessive bass or fry my brain with scorching highs but to enjoy the overall experience. However, this is a review of subwoofers so I tried to choose some cuts and clips with known substantial bass content and what I considered great, well recorded sound and balance.

As I have several sources to draw from I tried to use a little something from each pile.

CD (OPPO UPD-203)

Steely Dan (you knew that was coming, right?) - Two Against Nature

Steely Dan has long been a go to band for demonstrating speakers. They have always had the highest quality recording production values. Add that to the fact the music is always so crisply and technically rendered in the studio you usually have a winning demo LP/CD/Whatever you can depend upon. Although I have pretty much every Steely Dan recording I chose the Grammy winning 2000 recording *Two Against Nature* for this review.

I sampled every track on the CD and ended up listening to the CD from end to end while I was tweaking this review. Steely Dan has always been a studio creature for the most part with the one constant always being Walter Becker (RIP Mr. Becker) and Donald Fagen.

Two Against Nature continued in this tradition using a variety of studio musicians. Despite five different drummers and two different bass players the sound remains remarkably solid and consistent. You need go no further for a textbook perfect drum/bass sound on virtually any Steely Dan recording (exception being the debut album (IMHO :-). Tightness and integrations of the bass and kick drum has always been a hallmark of a Steely Dan recording and the Rythmik F18's certainly displayed this in a much more convincing manner than my old subs.

Thomas Dolby – The Aliens Ate My Buick

On the 1988 *The Aliens Ate My Buick* Thomas Dolby foray into funk the bass digs deep and provided the subs with a nice test. Some Love it... Some hate it but the bass supplied by the late Terry Jackson and synths by Mike Kapitan and Dolby himself provides a deep, articulate and

well defined bass foundation. Good, snappy, well defined, funky bass is often a issue with some subs but the F18's rocked it!

SACD (OPPO UPD-203)

Pink Floyd – Wish You Were Here - 5.1 Surround Special Limited Edition SACD Welcome to the Machine

I queued up Welcome To the Machine and had a listen. The introduction with the odd machine noises panning about the room have some low end content, some of it quite low. The noises were crisp and percussive with the low end drones solid and well-integrated with the system and surrounds. Low end impact, especially the synth lines, was visceral and impactful but blended well with the bass guitar. Roger Waters bass remained a separate instrument each note separate and distinct throughout the entire song while riding Richard Wright's synth drones. During the outro the abrupt noise that sounds like a car door (and probably was) was a punch in the gut.

<u>Have a Cigar</u>

As I listened to Have a Cigar I was struck with Rodger Waters overlaying bass line being distinct and perfectly integrated with Nick Mason's kick drum.

Hiromi – Brain – 5.1 Surround SACD

I like Hiromi Uehara... Better known as just Hiromi she is a popular "jazz" pianist/keyboardist. Hiromi is a frenetic powerhouse of energy and dynamics and plays piano and synthesizer with a technical skill and energy that few can match. Some of her works are solo piano but most feature small combos of wonderful seasoned players either in a acoustic or electrified format. Most of her releases are in the SACD format.

The opening number of *Brain, Kung-Fu Champion of the World* is a deep digging full combo number featuring Piano and Synth with bass and drums accompanying. The subs rendered and played the complex interactions and dialog between piano, synth, electric bass and drums effortlessly.

I sampled the rest of the tracks and was very satisfied with the F18's speed and clarity.

Another Mind – Hiromi - 5.1 Surround SACD

I moved to another Hiromi SACD disk and was blown away by the title track, *Another Mind*. This track has a lot of energy on the piano's lowest registers. This is the type of music that many speakers just give up on and that goes for subwoofers especially. The Rythmik F18's reproduced this music easily and effortlessly with each crashing chord distinct and well defined bass. I was in fact startled by the depth of the tunes intro as I had never heard those deepest note on my old subs. As an experiment I moved the disk downstairs to my office and played the disk on my Presonus Eris E5 nearfield monitors. While the sound was pleasing, well defined and high energy the lowest registers of the piano were missing in action again and while I certainly heard the cords they just did not have the same impact as on the F18's

DVD/Blu-Ray Audio (OPPO UPD-203)

Yes - Close to the Edge (1972) Siberian Katru

The word "Remastered" always sends a chill down my spine when seen. Many of the classics are probably better left untouched let alone remastered into 5.1 surround sound! However, I think a few definitely can and do benefit from a do over. Many of the older progressive classics lend themselves very well to updates and remastering.

This remastering of *Close to the Edge* gives you multiple versions of the classic yes album in DVD Audio and **includes the original master in stereo** along with the remastered versions in stereo and 5.1 surround (both Dolby and DTS). The remastering and mixing to 5.1 was done by studio wizard Steven Wilson.

Chris Squire (RIP) has always been my idea of a bassist's bassist. Treating the bass almost as a lead instrument he wove complex rhythms throughout Yes tunes and yet still provided the solid foundation when needed for the other members of Yes to build upon. This studio line-up of Yes was the dream-team of Anderson, Howe, Wakeman, Squire and Bruford.

The subs rendered the complex bass with ease and left me very satisfied with the depth of the remastered material. The original master presented at the higher bit rate/depth afforded by the DVD audio format was a treat as well. The remastered stereo version of the album was very close to the original but with increased bass range and a little more energy on the top end. In 1972 when the album was recorded, the 18 minute *Close To the Edge* track time was pushing the boundaries of what LP technology and conventional recording wisdom of the day thought could be placed on an LP with maximum fidelity. The compromise was usually at the expense of some low end energy. The remastering from the original master tapes by Wilson restore some of that energy in the remastered version.

Apple TV 4K (Pandora)

Primus - Les Claypool (Pandora Channel)

Wow! Nothing compares to a full on bass assault by Les Claypool! If you doubt me give a listen. I happen to love both the talent and the humor put forth by Mr. Claypool in his various band incarnations. It is always a fun thing to listen to! Just add that to the fact that having a BASS PLAYER as the star player in a band is just damn unusual (and, it is a sort of perverse pleasure for some of us :-).

Even with this slightly lesser quality source material (Pandora claims the equivalent quality of a CD 16bit 44.1KHz on the subscriber stream but I believe there is a little compression going on there :-) the subs were great on this material. The powerful but always articulate bass of Les Claypool is truly the star here. The subs rendered the trademark sounds without missing a beat.

I did try setting the damping between High and Medium while listening and did not hear a significant difference. Medium might be a good compromise position for those that don't want to take a stroll to the back of the subwoofer when switching from Music to Movies.

While I listened to a lot of other tunes in several genres it is too much to burden you with. Once I got started I could not stop!

<u>Summary</u>

I had high hopes going in based on specs and reviews for the Rythmik F18's and those hopes were well met by these powerful and deep digging subwoofers. At around \$1600 ea they aren't the least expensive ID subs out there, but to my ears, and wallet, they are certainly amongst most versatile and accurate subs out there at even much higher prices. And, what I perceive as the high build quality, outstanding performance, musicality and appearance make them a bargain in my eyes.

The theater performance is on a level that I have seldom experienced. Those two 18" woofers **MOVE A LOT OF AIR** when called for. I played the movies, and a lot of the music, at what is to be considered insanely high volumes. Not something even an aging rock-in'-roller like me would, or should, consider doing on a regular basis. Not once during the torture tests did I hear a complaint or sign of strain from the subs.

And, (notice the **BIG** "**AND**"?) there is no doubt in my mind that the Rythmik F18's excel at music reproduction. They are fast and dig deep when called for. With music some subs have a problem of getting in the way or fail to integrate well with the main speakers. Some are a bit sloppy, boomy, or emphasize certain notes/ranges over others. The F18's are certainly not guilty of that at all. Adding to the music only when called on to do so and adding just what was needed they performed so well with music I was left wondering why didn't I do this a long time ago!

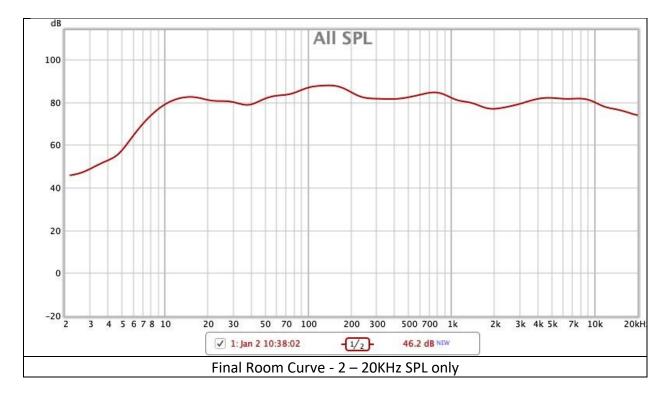
What makes these subs so pleasing, at least to me, is their direct and distinct appeal to different two camps... Music Lovers and Theater Lovers. The combination of insanely solid, crushing, punishing lows when called for, and tight articulate, controlled bass make them winners in both camps and are a great choice for either! This is especially true for someone like me that enjoys both theater and music. Listening to these subs I am (re)falling in love with both my music and movie collections. I have earmarked a lot to replay in the coming weeks and months. What was old is now new again....

Thank you for reading through to the end! And, thank you AV Nirvana for allowing me the platform to present this review and my opinions. I hope that other end-users will utilize these pages to post reviews and opinions of what is in their audio and video arsenals!

Reviews, like both the professional reviews presented by AV Nirvana staff (and others), and end-user reviews like this are, hopefully, done to give us all a fair chance at making a good decision with equipment that sometimes requires a significant investment, and that many of us will keep for years. And, to save us from the grief and frustration of a poor decision based on too little or biased information.

I welcome your comments and suggestions so I can make improvements and the next review better and more meaningful!





Equipment used during this review

Pre/Processor and Amplification Marantz AV7703 Parasound A21, A52+, ZoneMaster 450 Amplifiers

Sources OPPO UDP-203 Apple TV 4K Apple MacBook Pro (2013)

Display JVC DLA-RS500

<u>Speakers</u>

BG Radia 520i (LR) BG Radia 220i (C) BG Radia SA320i (Side and Rear Surrounds) Polk CS-6 (ATMOS)

Rythmik F18 Subwoofers (Reviewed)

<u>Measurements</u> MiniDSP UMIK-1 calibrated microphone REW Running on a MacBook