Introduction
I remember spying the YSP-1 at the 2005 CES Expo in Las Vegas. Audioholics is no stranger to this technology, but I had never personally gotten my hands on a Digital Sound Projector to review. With that about to change I readied a couple of reference rooms and thought about different ways I’d like to test such a progressive product. Many companies have employed dual channel virtual-surround systems using various technologies (and even some gimmicks) but I had never heard any systems that truly worked well enough to satisfy anyone who had previously heard respected discrete surround sound. It’s one thing for your Aunt Martha to listen to two speakers with DSP and phase delay and be impressed with the “surround” effects – it’s an entirely different thing to impress a seasoned listener. Well, I’m writing this review in real time, so I’ll let you know when I’m impressed – right now there’s a world of potential given Yamaha’s reputation for understanding DSP and I’ve resolved myself to be “skeptimistic.”

First Impressions
The YSP-1100 is a third-generation product, so Yamaha has had plenty of time to refine what was already a pretty impressive looking package. One of the things that attracted me about doing a review of their newest Digital Sound Projector was that Yamaha had added in the ability to automatically set up the IntelliBeam using a YPAO-like configuration process. Mark my words, I’ll do both a manual and automated setup, but the presence of this “convenience” feature takes this product and makes it much more user-friendly for the intended consumer and custom installer audience.
The system itself is a combination of 42 drivers and amplifiers along with all of the basic electronics you’d find in a digital AV receiver. This means that the YSP-1100 can take the place of an entire 5.1 surround system. From 6 boxes (5 speakers and a receiver) down to just 1 box is bound to make lots of spouses very happy. In comparing the YSP-1100 to the original YSP-1 we reviewed in 2005, there are several notable differences and improvements (see chart page 3). As you can see, the majority of changes with the system occur in software. The addition of more DSP power to handle YPAO-like optimizer setup functionality is the largest improvement and deserves kudos. The original YSP-1 was a bit difficult to setup and became a bit of a hassle for non-installers to configure. Manual configuration is still available, of course, but this is a stellar improvement that should be a “Page 1” notation.

Build Quality
The YSP-1100 is available in either silver or black. The non-removable grill cover is of steel that is carefully designed not to ring or rattle. It also works well with the design to not disrupt the intended frequency response of the system. The effect of the unit as a whole, with its almost 29 pounds of mass, is that of a serious piece of equipment. If this unit were designed any sturdier it would be suitable for military use. Let me just explain something...I wanted to get y'all a picture of the actual drivers. Well, after removing about 40 screws and still not coming to the end of what I needed to safely remove the steel grill I gave up and reassembled the unit (and after going through this process I recommend that no one try this). That’s what I call build quality!

The gloss black lower portion of the Sound Projector carries a blue LCD screen which delivers valuable information in a way that is easily visible but not overt or intrusive (i.e. you won’t be blinded or drawn to it like a moth during movies). As part of my deconstruction mission I did manage to get hold of the LCD panel for a closer look. The components I saw were all of high quality (most of the real interesting technology is located behind the YSP-1100 front panel and drivers, not below it). Design Overview
The very nature of this system shows that Yamaha is fully capable of combining form and function into a stylish box that looks as good as it performs. From the blue LCD display on its piano black finish to the silver or black steel grill which covers the 42 drivers, Yamaha’s YSP-1100 is an elegant piece to look at. As we mentioned, it will fit well underneath a 42-inch flat screen and it almost begs to be wall-mounted. With this type of system there is a ton of flexibility in placement but the best rooms are going to want to cater to this box, not use it as a last resort for rooms that cannot support rear speakers. To do that would be a shame.

Set up
When installing the YSP-1100 (or any other Yamaha Digital Sound Projector product) it’s important to note a few things about your room before selecting a location or moving forward with the placement of the system. If you think the YSP-1100 will work in any room under any conditions you’ll need to check out a few scenarios where we do NOT recommend placing this type of system:
• In a heavily acoustically-treated room or where reflective surfaces have been minimized
• In a room where furniture obstructs the beam paths (firing at roughly 30 degrees and 60 degrees from the center of the unit if parallel-mounted)
• In a room that is more akin to a football field or warehouse than a listening room (the room has to be within 23’ x 23’ and preferably less than 12’ tall)
• Rooms missing both side walls

In the middle of a casino (ok, that last one is obvious)
Here are some scenarios where the Digital Sound Projector Will work, but in a reduced capacity:
• Seating areas that are very close to or against the back wall (3-Beam mode and Stereo modes will work as will My Beam mode)
• Corner-arranged rooms where one or more side walls include large openings
• Normal listening rooms where one or more side walls include large openings
• Rooms missing an entire wall
• Rooms with high levels of ambient noise (this goes for any ambient sound system)

OK, you've found your ideal location and eliminated the 4th first reflection acoustic materials you'd custom designed for your listening room prior to purchasing the YSP-1100. Now what? Well, you can mount the YSP-1100 on top of or below the TV. A 42-inch flat panel is the perfect match, but to be honest it looks fabulous with anything up to 50-inches (I had it under a 47-inch LCD display). I tried a number of configurations, but my favorite was actually placing the unit on top of a StudioTech DP-2 RW flat panel/AV component stand and mounting the LCD display high enough for it to clear the Yamaha. If you have a wall-mounted display, then pick up the optional SPM-K1 wall hanging bracket and put the unit on the wall below (preferred) or above the set. If you are doing a corner mount, consider mounting the speaker above the TV in order to ensure that you get some additional clearance for the beamers. In either case take a look around the room and see what might be getting in the way of a good “beam steerage” (start throwing that terminology around at the office on Monday morning). Also remember that with a corner mount location the system will operate in Stereo + 3Beam mode with the front two channels coming directly out of the system (5Beam is disabled).

Connecting Your Gear
OK, now that the unit is positioned you’ll want to work on your physical connections. Fortunately, the YSP-1100 comes with a plethora (I still love that word) of inputs for the typical home theater user and certainly well targeted for a lifestyle product. Let’s take a brief look at the back of this device: As you should be able to see here, there are dual component inputs as well as three sets of composite inputs.Audio can be either analogue (5 inputs) or digital (3 inputs). The idea is that you would mate digital inputs for each of the component inputs and then mate analogue for each of the two composite inputs. That leaves another digital input which can either be utilized or retained for an option. A subwoofer output connection is present and should be connected to the mono line input of your powered subwoofer.

Review Summary
YSP-1100 Custom Home Theater System
Manufacturer: Yamaha Elec. Corp.
Over-all Rating: 4/5 Stars
Value Rating: 5/5 Stars
MSRP: $1,699
www.yamaha.com/yec

Pros
• Optional wall-hanging bracket
• Comes in silver or black
• Multiple “Beam” modes for easy “on-the-fly” customization
• Wider sweet spot than any other “virtual surround” system we’ve heard
• Improved programmable remote control
• Perfectly sized for 42” flat panel displays
• No component video upconversion
• No OSD via component video
• Auto setup requires manual tuning in certain room configurations
• Remote control not backlash

Cons
• No audio connections to wall plate
• No OSD via component video
• Remote in, RS-232C interface, IntelliBeam controller
• Detachable power cord, multi-function programable remote control (with batteries), optimizer mic with cardboard module, optimizer microphone input, IR OUT terminal
• Wider sweet spot than any other “virtual surround” system we’ve heard
• Improved programmable remote control
• Perfectly sized for 42” flat panel displays
• No component video upconversion
• No OSD via component video
• Remote in, RS-232C interface, IntelliBeam controller

Features & Options
YSP-1100 Custom Home Theater System
Speakers:
Main drivers: 40 x 1 5/8” (13 kg)
Midrange: 2 x 4 3/8” woofers
Beam modes: 5-beam, stereo, 3-beam, stereo + 3-beam, My beam
Compatible Decoding Formats:
 Dolby Digital, DTS, Dolby Pro Logic II, Music/Video/Game, DTS Neo 6
Music/Cinema
Cinema DSP:
Concert Hall, Music Video, Jazz Club, Cinema DSP:
Music/Movie/Game, DTS Neo:6
Audio Connections:
2 optical/1 coaxial S/PDIF digital inputs, 2 analogue audio inputs, 1 subwoofer output terminal
Misc Connections:
Remote in, RS-232C interface, IntelliBeam optimizer microphone input, IR OUT terminal
Audio Connections:
Main drivers: 40 x 2W (main drivers) + 2 x 20W (midrugs) 0.1W standby power consumption
Dimensions:
40”w x 7”h x 4 5/8”d (1030mm x 194mm x 118mm)
Video Connections:
3 composite video inputs and 1 composite video output, 2 component video inputs and 1 component video output
Weight:
28.7 lbs (13 kg)
Power:
40 W (main drivers) + 2 x 20W (midrugs)

Value Rating:
5/5 Stars
MSRP:
$1,699

Cons
• Rooms missing an entire wall
• Normal listening rooms where one or more side walls include large openings

Build Quality
The YSP-1100 is available in either silver or black. The non-removable grill cover is made of steel that is carefully designed not to ring or rattle. It also works well with the design to not disrupt the intended frequency response of the system. The effect of the unit as a whole, with its almost 29 pounds of mass, is that of a serious piece of equipment. If this unit were designed...
You don’t necessarily need a subwoofer with the YSP-1100, but your system will sound much better with it. OK, I changed my mind – you do need a subwoofer. A single composite (for OSD or legacy devices) or component video output (best quality) sends video to your display.

**Automatic Setup**

Automatic setup isn’t too difficult and involves a couple of easy steps, depending upon whether you are running a full setup or just applying the Sound Optimization to an existing Beam configuration. To run the Auto setup simply plug in the included optimizer microphone (the input is on the left side of the enclosure), place the mic on the included card board stand and position it at the listening position (try to ensure it is at ear height). At this point you can either press and hold the “Auto Setup” button on the remote for 5 seconds or enter the Auto setup using the on-screen menu system.

The Auto setup is not without its potential hang-ups, but as with all room optimizations systems I’ve seen, are well-named for their functions. I’ll point out some of the areas I think should be highlighted below.

**Manual Setup**

If you’re a tweaker you probably won’t be using a YSP-1100 in your main room. If, however, you’re like me and have a secondary reference system, or you are a custom installer, then the Manual Setup is likely going to occupy some of your time during the setup process – at least if you want the best results. I found the manual setup process to be a very handy tool for fine tuning the settings – and for ensuring that the system doesn’t make incorrect assumptions about your room or setup.

The Manual Setup menu is composed of four main areas with corresponding submenus: Sound, Beam, Input, and Display menus mark the top level and, unlike some menu systems I’ve seen, are well-named for their functions. I’ll point out some of the areas I think should be highlighted below.

**Sound Menu**

The Sound menu is where you have access to Tone controls, Subwoofer settings, Mute level (either full or -20dB), and Audio Delay (0-160ms in 1ms steps). The Room EQ submenu also present here does not, as some will think on initial glance, provide automatic room EQ. Instead, it sets the mounting position of the YSP-1100 (shelf or wall) and whether the room is “Normal” or “High Echo”. If you don’t have much furniture and have wood floors, you may want to select “Hi Echo”.

**Beam Menu**

In the Beam Menu you are presented with Settings Parameters (corner or wall placement and height) and the Beam Adjustment menu. Here you’ll have access to horizontal and vertical angle adjustments as well as the beam travel height, focal length and treble gain. But what exactly that means will ultimately determine if any of this info is useful to you. First of all, the system gives you pink noise for Horizontal and Vertical Angle adjustments, as well as for focal length, but not for the other submenu items. This means that the first two can be done from the listening position using your ears (imagine that!) but the last three will need to be a combination of measuring and trial and error. This, of course assumes you weren’t satisfied with the Auto Setup which configures all of this for you.

**Input Menu**

The Input menu gives the user manual control over input assignments, modes, and tints. You can also rename the inputs. I was pleased to see level tints included in this menu. What is not present are any options for upconversion – this unit doesn’t even convert composite video to component video. This means that you’ll need to run both component video to your television as well as composite should you have legacy equipment or use more than two devices with component video outputs. Another thing to note is that the YSP-1100 does not allow the on-screen display to function over component video (the signal paths are completely separate and isolated). While this may actually yield higher quality component video it also serves as a potential hassle for setting up the unit or making adjustments.

The final menu controls the front panel auxiliary functions. It actually allows you to have an auxiliary dimmer. It actually allows you to have an auxiliary control – at least for those that again was convincing and completely without boundaries. Violins were in the room and vocals had good separation. The bass had that solid flooring sound and the bass wasn’t losing the lower midrange tonality that I experienced on other systems. If you want a more defined surround field then direct radiating speakers will deliver that component video immersive feel of the Yamaha was something to behold.

**Remote Control**

I’m going to keep this brief. It’s efficient, easy to program and seems to have everything one would need to run the system – including basic functions for controlling a TV, DVD/CD player or other legacy device. The big thing it lacks is backlighting – which I think should definitely be included.

Direct input buttons are included – a plus, and all of the buttons seem to be well within reach – at least for my fingers. I liked the easy sliding switch on the right side which flips the remote from YSP-mode to TV/AV (so that the number buttons can control auxiliary functions in addition to the IntelliBeam controls.) It’s a decent remote that gets a good rating and could use some minor improvement.

**Listening Tests - Music**

As always music is an important part of what we do here at Audioholics. It was important, to me at least, to see how well the Yamaha YSP-1100 would handle surround music as well as stereo. With a unique system such as this I was curious and quickly fired up several different discs and tracks with which I was very familiar.

**High Resolution 96 kHz/24-bit PCM Stereo: Jonathan McEuen One Step Ahead (corner placement)**

On this album (which I have heard it now on several different loudspeaker systems in several different rooms – numerous times. The YSP-1100 put everything one would expect from this album to the fore. The bass reproduction was very good. Vocals lacked the tonality that I experienced on other systems. That again was convincing and completely without boundaries. Violins were in the room and vocals had good separation. The bass had that solid flooring sound and the bass wasn’t losing the lower midrange tonality that I experienced on other systems. If you want a more defined surround field then direct radiating speakers will deliver that component video immersive feel of the Yamaha was something to behold.

**High Resolution 96 kHz/24-bit PCM Stereo: Jonathan McEuen One Step Ahead (parallel placement)**

Wow, with an immense soundstage this album really takes off. There seemed to be a slight mid-bass emphasis that was more noticeable without a sub than with one (and you really have to have a sub with this system – have we beaten that into your head yet?) “Two of Us” had a realistic guitar and vocals, while a tad bit sibilant, had a natural quality. If McIntosh can use a hundred and ten drivers in a single cabinet and charge $40k, I suppose it’s possible for Yamaha to get $1,600 worth of excellent sound out of 42!
“Ocean” features acoustic bass and a gentle guitar intro with solid, heavily reverberant vocals. As the reverb is natural and not an effects box, this was a good demonstration of the YSP-1100’s best effort to fill my reference system with a nice, smooth and reverberant sound. It accomplished the goal and soundstaging was wide and open. Nothing seemed out of place or forced by the system. Yamaha seems to have found a very natural method of steering the channel information where it needs to go. As with the other discs, a parallel setup was clearly superior to the corner placement — again due to the wider front soundstage which is hard to reproduce in Stereo + 3Beam mode.

**DVD: Marillion Marbles on the Road (corner placement)**

Marillion is cool. They walk onto stage when they play — no fanfare needed, just excellent performances and talented musicians.

From the opening number, crowd noise filled the room — though it didn’t quite make it behind me — likely due to the corner placement and room/wall issues. The 5.1 Dolby Digital track on this DVD is a “stage mix” where you are in the audience, so everything is pretty much up in the front with good ambiance and crowds in the “surrounds.” For this type of music, the Yamaha seemed to do very well. Steve Hogarth’s voice was clear and natural. Drums and cymbals came through with a nice edge and no audio distortion or lack of upper midrange. Guitars had a good clean and crisp top end and the synths seemed to exude a gentle reverber that leaked into the listening room along with the watery vocals of Marillion’s first track “The Invisible Man”.

“The Incredibles” (parallel placement)

During the “100 Mile Dash” chapter the sound was switched to engage producer David Barbe. Environments were sumptuous and DTS frequently showed up in the soundtracks as did the flying vehicles. In the ending battle scene against the giant robot there was a lot of “off-screen” action which was well represented directionally by the YSP-1100. The height channels were very prominent during this sequence and the surround side was more prominent than the front. The mix took on a more “live” environment.

During the “100 Mile Dash” chapter the surround was employed in a variety of ways. The rear surround channels were engaged in overdrive. In the ending battle scene against the giant robot there was a lot of “off-screen” action which was well represented directionally by the YSP-1100. The height channels were very prominent during this sequence and the surround side was more prominent than the front.

**Listening Tests - Movies**

I utilized the Manual setup since I had a corner placement setup at the start of the evaluation (I’ll actually be evaluating the system in two reference systems — so take note of my setup details). Auto Setup did not correctly configure the system as being in a corner-oriented installation, so I was unable to use the auto setup.
Conclusion
The Yamaha YSP-1100 is NOT a typical pseudo-surround system. This is a sophisticated device that literally does what it says. Taking just one physical box you are able to convincingly recreate a 5-speaker surround environment – but that's not exactly true. While 5 speakers can give you surround sound, and inexpensive system is often localizable and highly directional. The Yamaha YSP-1100 almost envelopes you in a sound “bubble” and is an altogether different experience. If you think you’ve heard these “one speaker does all” systems before, take another look – the YSP-1100 is NOT like anything else I have ever encountered in the industry. This is breaking new ground and I like where it’s going. Perfect for consumers who are looking for lower profile system, the YSP-1100 replaces an AV receiver as well as a surround sound speaker system. Taking into account that there are a host of manufacturers who charge more for a simply combined flat panel LCR speaker, the YSP-1100 is a veritable steal and has earned its 5-star value rating.

By Clint DeBoer
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Score Card

The scoring below is based on each speaker doing the duty it is designed for. The numbers are weighed heavily with respect to the individual cost of each unit, thus giving a rating equal to: Performance x Price Factor/Value = Rating

Audioholics.com Note: The ratings indicated below are based on subjective listening and objective testing of the product in question. The rating scale is based on performance/value ratio. If you notice better performing speakers in future reviews that have lower numbers in certain areas, be aware that the value factor is most likely the culprit. Other Audioholics reviewers may rate speakers solely based on performance, and each reviewer has their own system for ratings.

Audioholics Ratings Scale:

- Outstanding (reserved for features or areas that exceed market norms)
- Above Average
- Average
- Below average
- Very poor

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About Yamaha
Yamaha Electronics Corporation (YEC), USA, based in Buena Park, California, is a wholly owned subsidiary of Yamaha. YEC offers home theater components and systems, featuring A/V receivers, amplifiers, DVD/CD, speakers, mini-systems, video projection, as well as A/V & IT convergence products.