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YOUR A/V WISH LIST
What you need and what
you crave in onboard
entertainment

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ESSENTIAL A V

With an onslaught in new audio-visual technology, how does an owner choose the systems with the most lasting power?

TEXT BY **KELLY SANFORD**





NUMPTIA / 103" 3D FLATSCREEN TV IN THE BRIDGE-DECK LOUNGE

AUDIO-VISUAL ENTERTAINMENT HAS UNDERGONE a major metamorphosis in the last five years. With a tsunami-sized wave of new technology, many yacht owners are revamping “antiquated” systems (which may in truth be only a few years old) or struggling to wrap their minds around the options available for a new build design. It can be difficult to ascertain what’s here to stay and how to make good choices in A/V entertainment now, so we’ve turned to the experts.

THE YACHTING DISADVANTAGE

Advances in high-definition (HD) and digital technology have been exponential over the last several years. Systems that were oppressively expensive five years ago are remarkably affordable today, and innovative features such as live streaming reward our thirst for instant gratification like never before. Yet the ability to enjoy the same standard of affordable, instantaneous and unlimited access to digital programming is still in its infancy for yachts.

Steve Segall, president of Seattle-based Audio Video Concepts and Design, explains that bandwidth is a substantial hurdle for owners who want to take the entertainment technology they have in their home and bring it to their yacht. “Bandwidth is everything, because bandwidth equals speed,” he says. “When your home A/V system is directly attached to a fiber-optic cable, you can get lightning-fast access to massive amounts of digital programming. Though VSAT access to bandwidth on yachts is getting faster, this speed is very expensive and is still going to feel dial-up slow compared to what an owner might experience at home.”

For yacht owners hoping to do away with an onboard server for digital entertainment and switch to live streaming from a source like Netflix or The Cloud, Segall says the ability to do this is still a ways off. “Live streaming is great technology for in the home and at the dock where there is access to the Internet from a cable, but streaming is popular because there is instant access to just about

anything. Trying to duplicate this kind of experience will be neither instant nor gratifying if you are expecting fiber-optic quality and speed from data coming over a VSAT.... Achieving comparable speeds from satellite data is simply not feasible today. Can you get close? Possibly—there are certainly boats that have tried, but the hardware and service costs are astronomical and the result will not be equivalent...for now anyway.”

Segall prefers hardware and hard-copy media archives of digital music and movies on board—and in the home for that matter—because even though the convenience is not as remarkable as streaming, the quality from CDs and Blu-ray DVDs is substantially better. “In order for audio and video recordings to be transmitted digitally or streamed at high speed, the recordings must be compressed. If you really care about image and sound quality and want to get the most from your A/V investment, if you like to immerse yourself in music and movies, the experience is going to be far superior when the data has not been compressed,” he says.

In today’s market, there are a couple things a yacht owner needs to have on board for the A/V system to be highly functional and high performance and make the best use of the entertainment options available for a yacht. Segall says it starts with VSAT and both a wired and wireless network on the boat. He also recommends that every yacht owner make it a priority to hire at least one tech-savvy crewmember who can troubleshoot the computer and A/V technology and do no harm.

VISUAL IMPACT

Many options are available when it comes to the A/V display. Segall suggests starting with an HD native 1080p (pixel) resolution, multi-standard, network-connected smart TV in order to best make use of what is available now and what is soon to come. There is no magic formula in selecting the screen size. Although very large screens tend to take over a room, dedicated theater rooms

PHOTO BY MASSIMO LISTRY (NUMPTIA); BUGSY GEDLEK (NORTHERN STAR); COURTESY OF CAT



NORTHERN STAR / MEDIA ROOM WITH AMX MATRIX AUDIO SYSTEM, BOSE AND KALEIDESCAPE



CUSTOM-MADE MOUNTABLE SPEAKER FROM CAT

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are nearly ubiquitous on large yachts today. The current largest off-the-shelf displays are nearly fifty percent larger than they were five years ago—maxing out at 153 inches. Whether the screen is LCD or plasma is often a matter of personal preference as is the investment in 3D capability.

THE 3D DILEMMA

“The 3D experience is a subjective one which gets varied reviews as to whether it is good or not,” says Segall. The objective issues with 3D are limited content in 3D programming and how the three dimensions are achieved. To see in 3D, the viewer must wear glasses, of which there are two types, active or passive, which best relay 3D images to a “sweet spot” directly in front of the screen. When contemplating 3D, carefully evaluate the room’s layout and the viewing angles for people seated in that space before committing to that technology.

If you are on the fence about 3D, Segall says it may be worth waiting as 3D may soon be eclipsed by panel technology. Today’s HD—1920 x 1080p resolution—is 2K technology. That standard is about to double. The next generation of HD will be 4K. Pixel counts will double and resolution and color will be exceptional. This technology will be slow in coming, but Segall suspects its eventual arrival will relegate 3D to the land of trends gone by.

MOVIE MENU

DVD players remain a necessary extension of a yacht’s entertainment base, and Blu-ray is now the standard for this technology. Not only are the prices currently on par with standard DVD players, but Segall professes that the quality is so far superior that Blu-ray is definitely worth the commitment.

For now, the ultimate in onboard access to movies and music is still through a central server, like an HD, Blu-ray-compatible Kaleidescape, which is considered the apex pioneer in this kind of technology. The company has announced it is launching a downloadable service that will become available in early 2012. There are many other options for servers, too, and a budding trend is comprehensive, custom, multifunction systems that have been designed to suit an owner’s preferences and can be controlled by off-the-shelf devices like an iPad.

THE SOUND OF MUSIC

Surround sound is the final ingredient of an A/V recipe for which “season to taste” is an appropriate metaphor. Sound is a much more diversified medium. Segall states that again, personal preference will play a major role in weighing sound options. He does emphasize that if you are retrofitting an existing system, you must add an HD/HDMI connector because the clock is ticking on analog.

For a top-of-the-line audio experience, the options are nearly unlimited. There are many high-quality sound systems available. Brian Barr, president of California Audio Technology CAT in Sacramento, California, explains that sound does not share video’s limitations. The development of video technology is extremely expensive (it takes years to bring a new concept to the market), so variations in display technology are limited and rarely customized.

Audio components can be very simple and affordable and still effectively produce moderate volume and background sound. However, Barr explains that sound produced by inexpensive



COMPANIES LIKE ADVANCED NEW TECHNOLOGIES ARE ABLE TO REPURPOSE THE ONBOARD CINEMA TO FUNCTION AS A MINI OPERATIONS CENTER.

A highly functional A/V system on a yacht needs VSAT, both a wired and wireless network and, not least, a tech-savvy crewmember.

tions.” The application of custom sound can range from off-the-shelf price compatibility to more than one million dollars for serious audio aficionados.

TV IN THE TENDER

The latest A/V craze in yachting is incorporating audio/visual entertainment in the tender. Newer, remarkably compact

materials tends to be slow, muddy, tubby or boomy. Superior sound requires dense enclosures, well-milled components and sophisticated electronics that will produce clean, accurate, fast, musical sound.

Sound quality comes from four interdependent components, says Barr. The first component is the enclosure, which is the box or cabinet. Products made from plastic and fiberboard are going to be undesirable because they cause audio distortion. He advises looking for dense construction materials (e.g. Corian, aluminum or 316L stainless steel) in the cabinet, which resist vibration.

The second component of an audio experience is the drivers, which are the parts that move—the woofer, mid-range and tweeter. Avoid components of simple construction, which may be made from plastic or paper parts, in preference to machined parts made from materials like aluminum or titanium for exceptional sound.

The third component is the crossover, or electronic control, which, depending on the sophistication of the device, can be tuned to compensate for the fabrics or grills that cover the speakers and are further calibrated to provide accurate sound in all listening positions. Finally, there are the amplifiers that, if powerful and accurate enough, can recreate rock concert volume and better than theater-quality sound.

The amount of space needed and the form factor of a high-end, off-the-shelf sound system often impedes its application on yachts. So to produce surround sound to complement the new HD standard, custom sound is an emerging trend in yacht design. Custom manufacturing of high-end sound components turns the vessel's voids into dense audio cabinets. Drivers are then milled out of high-end materials for “wristwatch accuracy” and sophisticated electronic controls are incorporated that calibrate the system to perform at what Barr calls “Formula One specifica-

satellite domes make adding television on your tender an easy adaptation. Although the smaller domes are not as powerful as their larger counterparts, in near-coastal applications tender A/V is more than a mere novelty.

In late October, New Zealand-based company Fusion debuted its 700 series True Marine line of entertainment systems, which will soon be appearing on a vessel near you.

A long time coming, Fusion entertainment systems are specifically designed for marine use. Dave Deacle with Fort Lauderdale, Florida-based Yachtronics says, “We like these systems; they’re pretty impressive, and they have some really well-thought-out features like a USB and iPod dock.”

The most innovative feature is the Fusion 700 remote display’s ability to be connected directly to the NMEA 2000 data bus and display any information from other sensors connected to the bus—including VHF and navigation electronics, without having to run a second cable—which makes this system particularly well suited for applications on the tender. Once installed, there are iPod/iPad apps, which allow the device to control the functions of the 700 system.

It’s hard to imagine that less than 10 years ago, today’s essentials like onboard wireless networks and entertainment servers were groundbreaking technology. Today, these features are commonplace, and yachts are able to stay connected and entertained like never before. Although still lagging a bit behind in some applications used daily in the home, contemporary choices for A/V entertainment aboard yachts are impressive. Entertainment technology advances have become exponential and despite our best efforts to keep up with all the latest trends, even the most impressive A/V will undoubtedly be eclipsed by innovations in the works now that will soon take our breath away. So take a seat front and center, adjust your 3D glasses and enjoy the show. ■