

# The Bigger the Better

Does size matter?



Intuitively one might assume the headline statement to be correct; after all, for many technical items aboard, bigger (and usually more costly) is the defining comment on screens. Here Zeb Robin of Bond TM, in the first part of an occasional column, discusses some of the **generic criteria for screen choice** and shows where bigger is better, but also suggests alternatives where a smaller, more discreet display may better meet owner expectations.

**W**ith so many new technologies entering the electronics market in recent years, it is no surprise that the media are awash with information, reviews and commentary about how we should design our systems and spend money. In this column we will endeavour to help you cut through the confusion as we focus our attention towards the technology choices that are most important for the owners of yachts and the crews that run them.

Television displays are an area of technology that has advanced perhaps more drastically than any other in recent years. As such, displays are a constant source of questions posed to us. Having recently conducted a series of impartial head-to-head comparisons to make technology choices for our customers, we would like to pass along some tips for what to look for in your decision-making process. We won't decide a brand or model for you, but we will do our best to arm you so that you are ready to make your own choices of those with confidence.

### Screen size

While the tired old saying "bigger is better" often holds true, it isn't the sole decision-making factor. In fact, it is quite easy to over-specify the size of a screen if the purpose of the area and the tastes of the owner are not taken into account. Therefore the first questions we ask

when faced with needing to specify a screen size have little to do with the actual technology in the screen:

1. *What are the tastes of the Owner?*
2. *What is the purpose of the room it will be used in?*

Owners with a known craving for that 'big movie' experience will invariably desire different systems from those owners who hardly ever watch TV in the first place. Likewise, a sitting lounge may not need a huge screen if there is a dedicated 'movie night'/cinema location elsewhere on board. These thoughts may seem off topic since we aren't yet addressing any of the techno-babble found on the advertising brochures. However, a major part of successful AV planning stems from understanding the wishes of the owner and their designers.

Question: which would you say is more likely to receive criticism – a screen that is in gross conflict with the room's interior design, or a specific brand?

3. *What is the viewing distance?*

Once you have a good feel for the style and usage of an area, calculating the distance between the screen and the observer is the next crucial step. Formulae and guidelines abound; however, bear in mind that there is no one fixed rule since human preference and taste play such large roles. The best we can do is to create a range of screen

sizes for a given distance that are then tempered by our understanding of usage.

One of our favourite guidelines originates (loosely) from the THX specification. One can generalise that the viewing distance should fit within these ranges:

- Minimum: no less than two times screen width.
- Maximum: no more than five times screen width.

Although it incorporates a wide range of viewing distances for any given screen size, we only must observe the differences between sitting in the front and back rows of a movie theatre. This is very illustrative of the differences in taste amongst the public; however, ignoring taste for a moment, we can use this guideline to see where any given scenario fits between the extremes. Example: for a 65" Plasma Screen with a horizontal viewing area of approximately 1.44 metres, this yields a permissible viewing range between 2.8 and 7.2 metres.

If we know a customer to be a major film fan, we would work to keep the viewing distance ratio at the short side of the spectrum. If watching television is not the major purpose for a given room, we would let the ratio drift towards the greater distance.

*The 30-degree rule:* Another great guideline comes from the Society of Motion Picture & Television Engineers (SMPTE) who state that the optimum movie theatre screen should occupy a 30-degree field of the observer's view. This is handy if you are interested in judging how your screen size compares to a proper cinema configuration. Therefore, for the same 65" Plasma used above, this yields a viewing distance of 2.68 metres.

Note that this is at the very short end of the previous guideline as it's intended to give you a feel for what it would take to create a proper 'big screen' experience. It is also worth mentioning that with the new high-definition screens that are emerging on the market you no longer need to keep such a great distance between your audience and the screen to avoid them seeing the actual pixels. With this technical factor effectively gone the minimum distance then becomes completely one of taste.

In our next column, we will discuss image quality factors that lead to a superb image and how not all displays are created equally.

**Zeb Robin  
Bond TM**