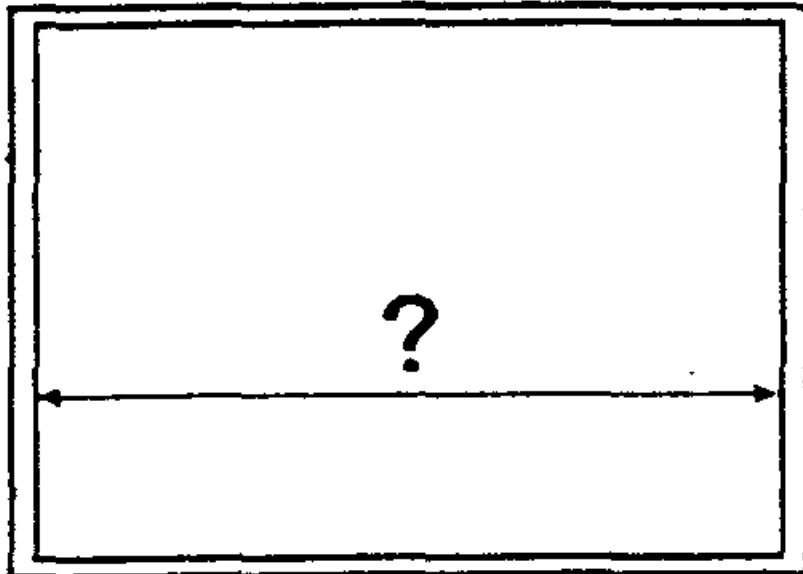


Screen Size Character Size

Description

What screen size should I use? How small can I make my text? There are many rules and thoughts on this subject. Presented here are some of the more widely accepted ones.



There are several factors which will influence your choice of screen size. These includes:

- 1) Type of images viewed.
- 2) Size of characters used.
- 3) Light output of your projector.

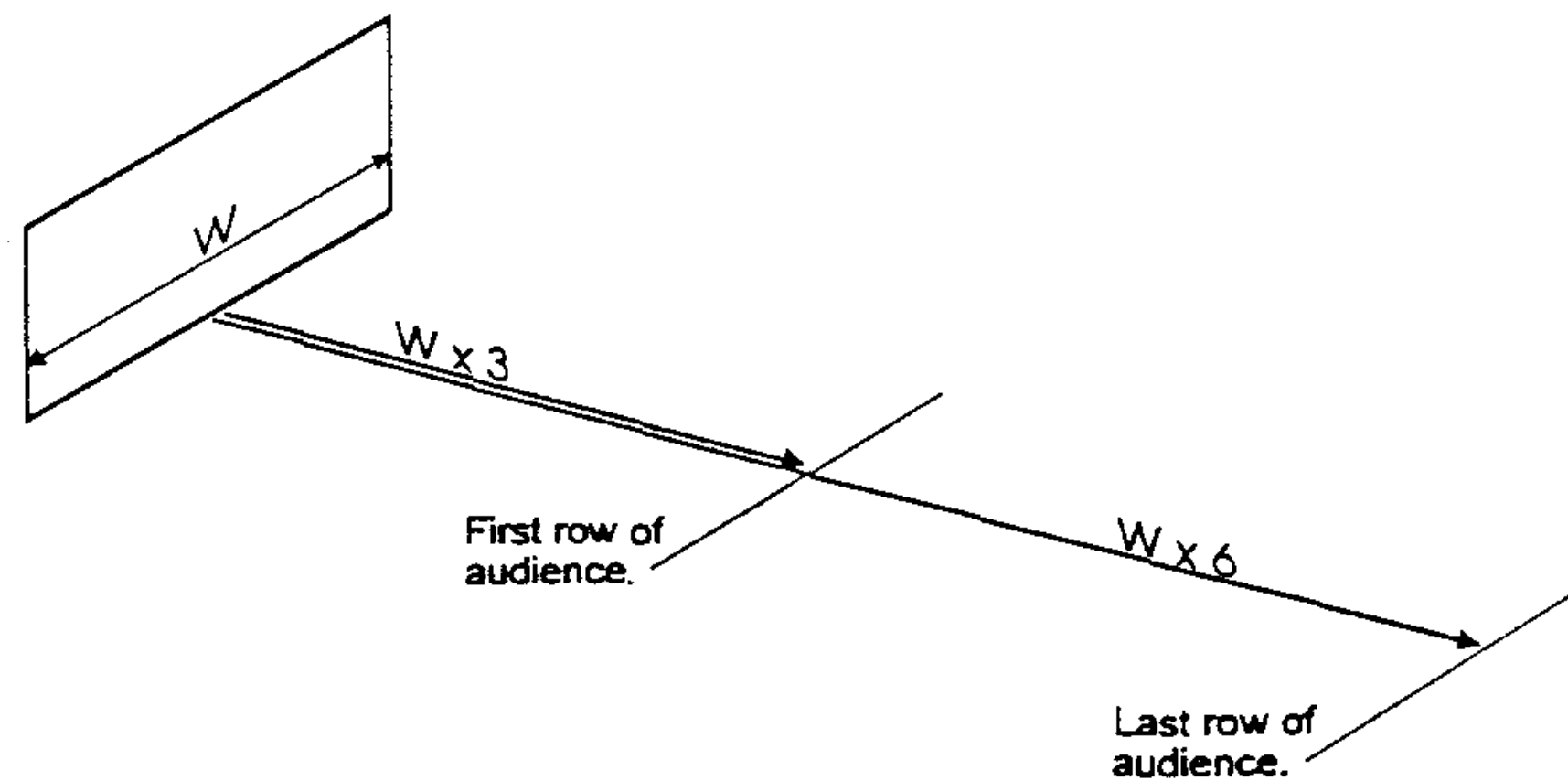
In multi-screen applications, like command and control centers, screen size could also be influenced by the number of screens required and the wall space available.

Very often you will be faced with conflicts between satisfying the rules for character size, television viewing or being able to fit the number of screens with the wall space available. Given these conflicts, considerations should be given to, changing the character size of your images, using switchers to multitask screens, or repositioning the operators to optimize viewing.

Type of Images If your customer uses primarily video (i.e. VCR) sources, then the rules for viewing television should be followed. If your customer uses a mixture of video and computer sources, the rules for television viewing may still be applied with the condition that your computer image satisfies the guidelines set out for character size (see below).

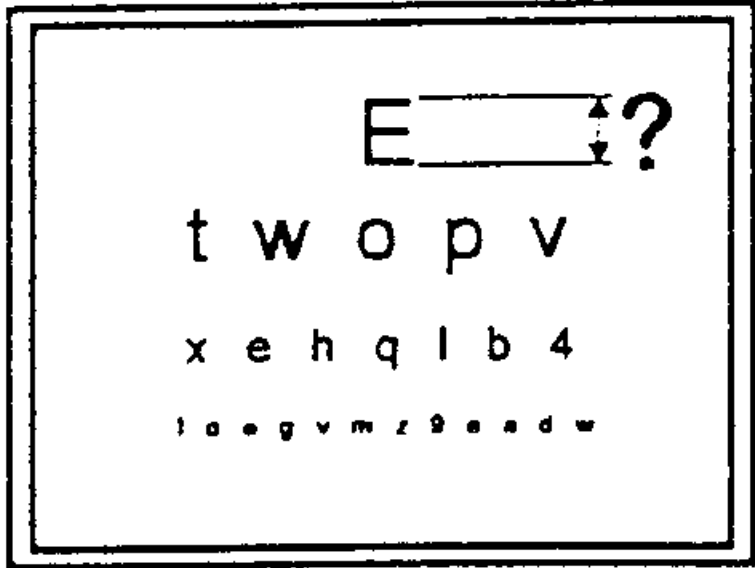
Screen size for television viewing

In today's large screen market, the accepted viewing distance should be between 3 to 6 times the width of the screen. For example, if you had a room with the audience being 20 to 30 feet away from the screen, the range of screen size would be calculated to be between 5 to 10 feet wide. In practice you would probably end up with a standard 100" diagonal screen.



Other Considerations

In addition to the rules above, you will need to ensure that there are no other overriding factors affecting your image. Site lines (clear view), price (too expensive), light output (not bright enough). For example, you may discover that the screen size chosen makes the light output too low to be useful. (see Application Notes on "Calculating System Light Output")

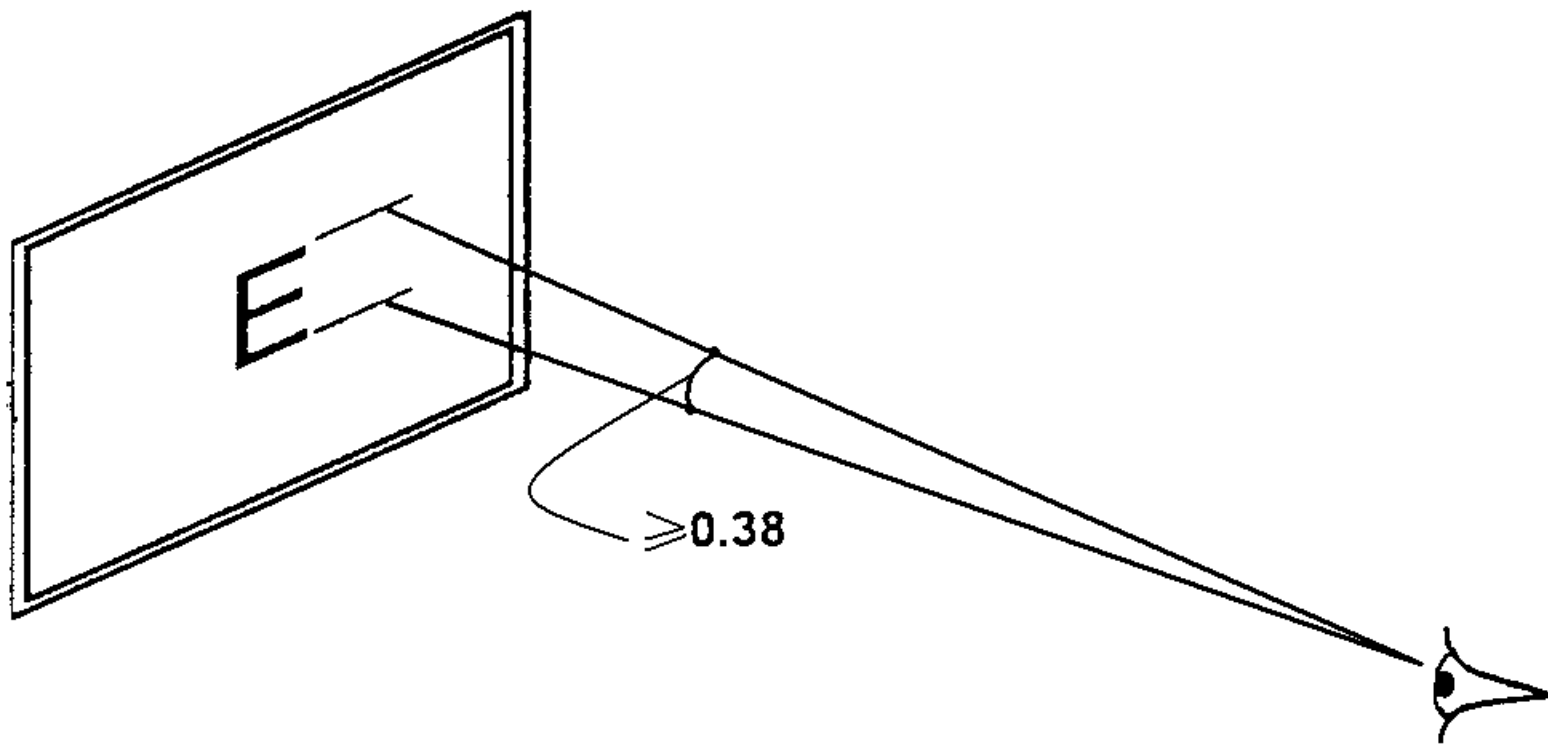


Character size quidelines

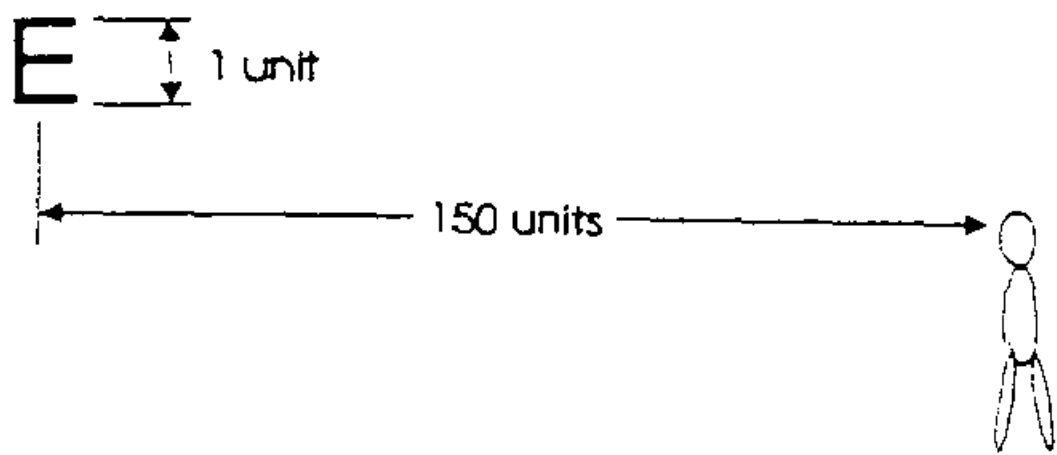
A common mistake users make is designing images based on the computer monitor in front of them. This method fails because the average large screen audience sits porportionaly further away from the screen then the average computer operator.

The size of your characters should be made large enough to be legible either by the main viewer or the furthest viewer, the choice is yours. Based on the human eye's acquity for projected images, the following guideline results:

Any alpha numeric character should sustain a vertical angle of no less than 0.38 degrees.



or



Another way of stating this rule is that the viewer should be no more than 150 units away if the character height is 1 unit high. This can be stretched to 200 units way if the characters have high fore ground to background contrast or if pixelated displays are used.