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# Technical Bulletin

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## Re: Marquee 9000 Throw Distance and Lens Information

The following is an explanation of the differences between three Marquee 9000 lenses;

**DELTA HD-10L            HD-10GT17            HD-10GT26**

All three lenses can be easily changed without having to disturb the liquid chamber between the CRT face and the lens. The main difference between the three lenses lies in their abilities to focus at various throw distances and hence they have different resolution performance at different screen sizes. In the following formulas provided, the throw distance (TD) is defined by Electrohome as the distance from the centre of the projected screen image to the centre of the green front lens element on the projector. The width (W) refers to the width of the projected data or video image (which matches the screen width).

DELTA HD-10L (standard on Marquee 9000 model number 38-P13092-94)

This lens has been designed to give optimum performance with smaller screen sizes. It provides the best performance between the three lenses on screen sizes from 5' (1524mm) to 9' (2743mm) measured diagonally (4:3 aspect ratio).

**Please note that the minimum specified screen size for the Marquee 9000 is 8' (2438mm) diagonal and the maximum specified screen size is 25'(7620mm) diagonal.**

For this lens and model of projector use:

<b>TD = 1.54*W + 3.3"    (TD, W in inches)</b>
<b>TD = 1.54*W + 84.9mm (TD, W in mm)</b>

	<b>minimum</b>	<b>maximum</b>
<b>W (width)</b>	47.1" (1196mm)	240" (6096mm)
<b>TD (throw distance)</b>	76.0" (1930mm)	372.9" (9472mm)

**A Marquee 9000 projector equipped with DELTA HD-10L lenses may be used the Electrohome Retro III. In some cases, the lens-stop may need to be removed to allow the image to be best focused optically.**

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HD-10GT17 (standard on Marquee 9000 model number 38-P13093-94)

This lens has been designed to give optimum performance with midsize screens. It provides the best performance on 9' (2743mm) to 20' (6096mm) diagonal screens.

For this lens and model of projector use:

$\text{TD} = 1.49 * \text{W} + 4.8'' \quad (\text{TD, W in inches})$ $\text{TD} = 1.49 * \text{W} + 122\text{mm} \quad (\text{TD, W in mm})$
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and

	<b>minimum</b>	<b>maximum</b>
<b>W (width)</b>	66.6'' (1691mm)	240'' (6096mm)
<b>TD (throw distance)</b>	104'' (1930mm)	362.4'' (9205mm)

Some Marquee 9000 projectors model 38-P13091-93 may be equipped with HD-10GT17 lenses.

HD-10GT26 (available through special arrangement)

This is a lens which is optimized for very large screen sizes. It provides the best performance on 20' (6096mm) diagonal and larger screens. Contact the factory for information.

For this lens use:

$\text{TD} = 1.54 * \text{W} + 0.5'' \quad (\text{TD, W in inches})$ $\text{TD} = 1.54 * \text{W} + 13\text{mm} \quad (\text{TD, W in mm})$
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and

	<b>minimum</b>	<b>maximum</b>
<b>W (width)</b>	74.4'' (1890mm)	240'' (6096mm)
<b>TD (throw distance)</b>	115'' (2921mm)	370.1'' (9401mm)

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