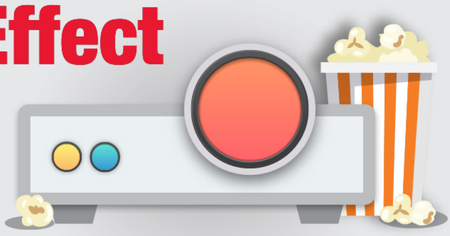
Study sponsored by Epson

THE Rainbow Effect

What Is It?
Who Sees It?
Is There a Cure?



Home theater projectors deliver larger than life entertainment. But 1-chip projectors can produce the "Rainbow Effect", flashes of red, green, and blue that can be distracting and annoying.

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CONSUMERS WATCHED A TEST PATTERN VIDEO

Has modern 1-chip DLP technology eliminated the Rainbow Effect?

To find out, we invited consumers to a focus group facility in suburban Los Angeles to watch a black and white test pattern video on one of three top-selling 1-chip home entertainment projectors. While the study wasn't large enough to definitively state which color wheel, brand, resolution or price point is most likely to produce the Rainbow Effect, the results were surprising.

MYTH 1 FACT

Modern 1-chip DLP projector technology has eliminated the Rainbow Effect

All three top-selling 1-chip projectors tested produced the Rainbow Effect

MYTH 2 FACT

A very small percentage of consumers are sensitive to noticing the Rainbow Effect

Up to 42% of the participants noticed the Rainbow Effect

MYTH 3 FACT

The Rainbow Effect will be less noticeable on more expensive 1-chip DLP projectors

The most expensive projector tested – the 4K UHD Optoma UHD60 – had the *highest* incidence of reported Rainbow Effect

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Optoma

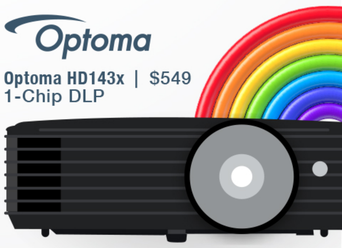
Optoma UHD60 | $1799
1-Chip DLP

42%
NOTICED THE EFFECT*

36%
OF THOSE FOUND IT DISTRACTING/ANNOYING

Optoma

Optoma HD143x | $549
1-Chip DLP



36%
NOTICED THE EFFECT*

39%
OF THOSE FOUND IT DISTRACTING/ANNOYING

BenQ

BenQ HT2050 | $799
1-Chip DLP

18%
NOTICED THE EFFECT*

54%
OF THOSE FOUND IT DISTRACTING/ANNOYING

GOOD TO KNOW

100% of 3-chip projectors are free of the Rainbow Effect

*Does not include participants in control group
Prices listed are MSRP as of study date.

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