

ColorEye® XTH

**10 frequently
asked questions
about color
control in the
automotive
industry...**

A U T O M O T I V E



 GretagMacbeth™

1

Q: Why should I use instrumentation to measure color? Isn't my judgement good enough?

A: Visual color evaluation is inherently subjective. It relies on individual eye-brain limitations including color vision defects, age, and eye fatigue. This can be a problem when trying to establish uniform standards for communicating color results to suppliers and customers.

While visual inspection will always be a primary tool for making color decisions, instrumentation provides data to supplement, support, and substantiate subjective judgment. Instruments can detect color differences between a standard and a sample far below the minimum level perceptible to the human eye. And the repeatability of instruments permits creation of — and adherence to — consistent, uniform color standards.

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Q: What if I can't find a flat surface on a part? How will that affect gauge R&R?

A: Today's automotive parts are highly contoured. This is why GretagMacbeth's ColorEye *XTH* spectrophotometer incorporates a unique 3-D Targeting Technology. It provides precise repeatable color measurement on the most challenging sizes, shapes, and surfaces — curved and flat — for improved gauge R&R. For a finished part, that means you can measure the color on the actual product — not just a flat sample.

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Q: You say the ColorEye *XTH* is a spectrophotometer, not a colorimeter. What's the difference?

A: A colorimeter attempts to simulate the eye by measuring only three broad data points. A spectrophotometer measures reflectance across the entire visible spectrum, so it's more precise and accurate.

Also, spectrophotometers can detect metamerism, which is the phenomenon of colors matching under one set of viewing conditions but not another. Have you ever looked at interior trim and noticed that the color matches under one light source but not another? That's metamerism.

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Q: We produce a large variety of automotive parts. How many different instruments or attachments will I need to measure color on all these parts?

A: The ColorEye *XTH* can measure both large and small samples. In fact, the ColorEye *XTH* can work with samples much smaller than the minimum sample size required by most other portable color measurement instruments. Optional dual apertures enable a single unit to accommodate the broadest range of part sizes ... eliminating the expense of multiple systems.

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Q: How can instrumentation help us improve color control throughout the supply chain?

A: ColorEye *XTH* generates accurate, repeatable measurements with close agreement to the popular benchtop

ColorEye 7000 series and compact ColorEye 2180. We engineer all our color systems for inter-instrument agreement to ensure consistent readings. That means you match not only customer requirements but also the colors of vendors making different parts for the same car as you are.

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Q: Will I have to hire or train a technician to operate the color instrument?

A: A unique operator-friendly design, featuring separate buttons for standard and trial measurement, makes the ColorEye *XTH* as easy to use as turning on a flashlight. No special training is required. Anyone in your plant can use it, from engineers to production line workers.

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Q: What about system availability?

A: It's high, especially for a battery-operated handheld. The ColorEye *XTH* can be fully charged in about one-fifth the time of conventional portable instruments, maximizing system availability. And it has to be charged far less often, since each charge lets you operate up to four times longer than most other systems.

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Q: Will using ColorEye *XTH* in our production line slow us down?

A: Not at all. The ColorEye *XTH* features a single flash and 3-D Targeting foot, making the instrument quick and easy to use. A high-speed processor enables

the ColorEye XTH to measure samples up to twice as fast as your other portable instruments. That doubles the operator's productivity. The ColorEye XTH can even be mounted on robotic systems in automated assembly lines.

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Q: What makes ColorEye XTH more efficient than other portable color instruments?

A: New XT5 technology. It consists of a two-dimensional CCD that enables the ColorEye XTH to capture up to five frames of data at a time. This XT5 technology permits dual beam and simultaneous SCE (specular component excluded) and SCI (specular component included) measurements with no mathematical adjustments or multiple readings. Therefore, the ColorEye XTH can measure more samples in less time than conventional portables, which often require multiple readings to be taken per sample.

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Q: Can we afford ColorEye XTH on a limited budget?

A: *Absolutely.* The handy ColorEye XTH is half the cost of big benchtop units. It has more advanced features than other portables, yet sells for up to 30% less than these other, less-sophisticated models.

It's a colorful world.

Let GretagMacbeth help you take control.

Only one company, GretagMacbeth, provides a comprehensive, integrated, single-source solution for measuring, selecting, matching, formulating, evaluating and communicating color in all phases of the automotive industry. With ColorEye XTH, you'll meet customer color requirements with an ease and consistency like never before.

For a free, no-obligation needs analysis — and details on our **FREE Introductory Offer** — contact your GretagMacbeth representative today.



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