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THE MEDIA LABORATORY
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When Media Lab sponsor Fisher-Price,
a subsidiary of Mattel, Inc., unveiled
Symphony Painter
in the fall of 2004, everyone saw
the good things that can happen
when the Media Lab and a toy company
join together to bring young kids
a whole new way to create music.



Symphony Painter is a music composition tool that is a simple "add-on" cartridge to Pixter Color™, Fisher-Price's popular, hand-held, digital drawing platform, which comes complete with a touch-sensitive, color screen and drawing stylus. Using **Symphony Painter**, kids can "magically" convert their Pixter drawings into music. Different colors and different strokes create musical elements, such as melody, rhythm, and timbre; "hidden" technology smooths out clashing notes to create more harmonic pieces.

If this seems a bit familiar to those who have experienced Media Lab Professor Tod Machover's *Toy Symphony* (<http://www.toysymphony.net>), that's because **Symphony Painter** is a direct descendant of **Hyperscore**, the principal digital composition tool created for the *Toy Symphony* by the Lab's Opera of the Future group member Mary Farbood and recent graduate Egon Pasztor, under Machover's direction.

In designing **Hyperscore**, Machover's team has created a software tool that introduces children to musical composition in an intuitive and dynamic way, and which requires no previous music knowledge. The system interprets the gestures of a child's drawing, mapping them to structural elements in music. Using only a selection of colors and strokes, the child creates original musical motives, which are assigned to orchestral timbres, and then annotated along the piece's narrative, harmonic line, converting visual information into music.

Symphony Painter, which is targeted for children four years old and up, costs about \$20. To help keep the price affordable, Machover, Farbood, and Pasztor worked closely with Fisher-Price to redesign code for the Pixter platform. The first prototype took about a year to develop.

"The idea," says Jeff Miller, manager of product design at Fisher-Price, "was to keep the essence of **Hyperscore**, but adapt it to a much simpler chip set, keeping the technology invisible so that the kids would never feel intimidated."

David Ciganko, Fisher-Price's vice president for product development, sees **Symphony Painter** as the culmination of years of working closely with the Media Lab. Ciganko, who shares Machover's conviction that we can do a lot better than "canned" music for preschoolers, says he convinced Machover that many of his team's ideas could easily work for very young children, and was a thorn in Machover's side to make this technology—starting with **Hyperscore**—available to them.

"We both believe that igniting the spark of musical composition in very young children will have a wonderful impact on music," says Machover. "The challenge came in figuring out how to do it. **Hyperscore** broke ground, and now **Symphony Painter** will make it widely accessible to children."

So roll over Beethoven, here come the kids . . .