

Application CH1. Automotive Speaker Inspection.

Problem: A manufacturer of automotive speakers needed to automatically verify the assembly of a number of manually mounted components. The differences between one speaker assembly and another were considerable.

Solution: Stand-alone inspection station retrofitted onto an existing manual inspection station.

Parts are manually loaded onto a fixture where a variety of components are assembled onto the speaker. Two cameras and light sources illuminate the part from the top. After all components are assembled, the operator touches a button commencing the automated inspection. If the part passes, a green light is illuminated and the part can be removed from the fixture; if the part fails, a red light is illuminated and the part is locked in the fixture for assessment by supervisory personnel.



Figure 1: Automotive Speaker

Avalon Vision Solutions LLC helps manufacturers reduce costs by identifying process defects in real time. It is a privately held company managed by the primary owners of the company. The headquarters is located in Lithia Springs, Georgia a suburb of Atlanta, Georgia USA. Avalon has sales offices in Michigan, Colorado, and Monterrey, Mexico. Field service support is located in Pennsylvania, Michigan, California, and the company headquarters in Atlanta, Georgia.

The company's product line is a series of machine vision systems designed for rugged manufacturing environments. The company has installed over 2,000 mold protection machine vision systems into more than 450 plastic injection-molding plants in North America.



Figure 2: Validator Product

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