

Application Notes



Automotive Console Face Plate Inspection

Application description

An M180 (1628 x 1236 pixels) camera connected to an MX40 Vision Processor is used to inspect the face plate of a car stereo. The vision system is required to inspect the print quality of various text on panels, dials and buttons, as well as logos and labels. The vision system is also required to verify a small ID code located at the top right corner of the face plate. A high resolution camera is required due to the print sizes compared to the size of the face plate, since a single camera is required to cover an inspection area that is approximately 10 inches wide. When the face plate is loaded onto the inspection cell, a barcode reader reads the barcode and sends the plate model information to the machine vision device through the serial port. The MX40 Vision Processor then loads the corresponding part file and performs the inspection. Once the inspection is completed, the data is sent to a custom VB software application through ActiveX, which in turn links to a database that is part of the manufacturing plant's SQL server.

In order to provide an even coverage over the curved surface of the face plate, the inspection is done in an enclosed box with two diffused bar lights mounted above the part. This is a stand-alone system with cameras, lighting, optics, PC and various communication and electrical components enclosed. The system is also designed to accommodate additional devices within the same inspection cell for additional inspection requirements. The communication links to the SQL server is made possible through custom software and composite tools designed by Datalogic application engineers.

A fully enclosed system with camera lighting and PC within



APPLICATION HIGHLIGHTS

- A single high-resolution camera covering the entire inspection area
- Special diffused lighting mounted in enclosed system to provide even lighting over curved surface
- Complete stand-alone system with camera, lighting, optics, PC and communication components enclosed
- Composite tools and custom designed VB application are used to provide communications the SQL server through ActiveX