

## ***Expanded Flexibility with Mek's new Modular Top Down AOI***



Mek (Marantz Business Electronics), has recently launched new additions to its ground breaking SpectorBOX AOI systems. These include a massive 5 inch camera clearance that enables complete single pass inspection of virtually any assembly.

The [Mek SpectorBOX](#) modular AOI systems have long been optimized for the inspection of THT components to identify defects such as presence/absence, wrong polarity, color, type, and bent pins. And now, the unique top clearance of 130mm (5.12") allows the [Top-Down SpectorBOX](#) to inspect virtually any completed electronic and electro-mechanical assembly -- even when the tallest of components are present.

The SpectorBOX modules can be equipped with 8 wide field of view side cameras in addition to top view camera on the FWAz optical unit. Its large pixel (18,8 $\mu$ 2) capturing sensor delivers smooth and detailed images with great dynamic range.

Its Z-Axis adjustable optical head can adapt to any PCB thickness, and automatically compensates for warpage. The highly reliable text and polarity inspection on tall components enables the inspection of complex, completed assemblies without the need for fixtures or multiple inspections.

The addition of 8 simultaneously operating multiplexed angular side cameras which are available for the FWAz model, facilitate active automatic inspection, classification and repair, as the system displays and also stores 9 brilliantly clear defect review angles in full color.

Jeremy Saise, Mek Technical Director explained further, “Everyone’s goal is to minimize human mistakes. Our sensors also provide high quality images that aid operators in the defects classification process, and those same images are stored in a database. Imagine having fingertip access to all products with 8x views of every component.”

This new configuration effectively complements Mek’s [THT Bottom-Up Modular AOI](#) – a system that can be conveniently positioned at any conveyor location. Typically, bottom side PCB inspection requires flipping units combined with a standalone inline AOI. The slim design of the Bottom-Up SpectorBOX instead allows it to be positioned below existing return and/or feed conveyors, saving space and money.

A cost effective way to combine Bottom-Up and/or Top-Down inspections is provided by the [Nutek Main Frame](#), a turnkey solution that enables simple integration of one or two SpectorBOX systems into a production line. Built for flexibility, it can be configured to the output of any wave or selective soldering system. The ergonomic design is optimized for operators to have eye-height monitors as well as wrist height keyboard and mouse control. This makes operation easy in a standing or seated position, even when dual SpectorBOXes are in use via double monitor configuration. A manual mode allows for smooth offline programming preparation.

**-ENDS-**

### **About MEK Europe BV**

A former division of Marantz well known for its high quality Audio/Video products, MEK Japan (Marantz Electronics Kabushiki Kaisha), developed its first AOI system in 1994. Developed to inspect PCB assemblies for correct component placement and soldering, the company’s original AOI system was designed for use in Marantz factories. Proving to be a highly successful, cost-effective alternative to traditional human inspection, MEK developed its first generation commercial system in 1996. With a steadily growing installed base, MEK Japan and its European headquarters, MEK Europe BV, have sold over 5000 units worldwide to date. Now well established as a leading force in AOI technologies, the company recently launched a 5D post-print SPI system which combines 3D and 2D image processing methodologies to deliver unprecedented defect detection.

Mek contact Americas	MEK Contact - Europe	Agency Contact
John Rider <b>Mek Americas LLC</b> 5550 Painted Mirage Rd. Suite 320, Las Vegas, NV 89149, USA	Henk Biemans MEK Europe Polluxstraat 2B, 5047RB Tilburg The Netherlands	Helena Osborn Unit 1, Cutbush Court Danehill Lower Earley Reading, RG6 4UW UK
Tel: +1 702 818 1706 Email: <a href="mailto:john.rider@marantz-electronics.com">john.rider@marantz-electronics.com</a> <a href="http://www.marantz-electronics.com">www.marantz-electronics.com</a>	Tel: +31 40 7114111 Email: <a href="mailto:henk.biemans@mek-europe.com">henk.biemans@mek-europe.com</a> <a href="http://www.marantz-electronics.com">www.marantz-electronics.com</a>	Tel: +44 1189 759880 Email: <a href="mailto:helena@proteaninbound.com">helena@proteaninbound.com</a> <a href="http://www.proteaninbound.com">www.proteaninbound.com</a>