

## Mek to Showcase latest range of AOI Technology at Apex



Mek (Marantz Electronics), will showcase a comprehensive range of AOI systems at this year's Apex, featuring the latest in 3D inspection technology. Application videos will offer visitors a full visual introduction to Mek's unique AOI capability across a very wide range of budgets. The Mek team will be on hand at booth #1718 to answer any questions and walk prospects through online demonstrations.

Mek offers a complete line of inspection equipment for maximized defects coverage, with minimum human interaction, at the lowest cost. The flagship 3D AOI system ISO-Spector M1A is the industry's most advanced high-speed 3D SMT solder joints and components AOI and introduces an exceptionally convenient fast automatic programming method while achieving production ready inspection results with very short cycle times. Carrying the industry's largest, 25 mega pixel sensor and 2.72" x 2.72" (69 x 69mm) FoV the M1 delivers ultra-high speed inspection of even 008004 components, leads and solder joints. Multiple Moiré fringe projections enable high precision, shadow free measurement of heights up to 1.18" (30mm) as well as 4 fully programmable side view high-res cameras able to actively inspect J- leads and other devices invisible to top side imagers.

The Artificial Intelligence of the system learns the production process values of assembled and reflowed PCB's then recognizes defects determined by hundreds of preset parameters based on CAD and Gerber data. This applies especially to solder joints, which are typically the most difficult and time consuming to program in AOI's

The [SpectorBOX GTAz 550 “Bottom Up/Top Down” system](#) is uniquely engineered to accommodate solder frames on return and/or feed conveyors. SpectorBOX offers bottom side, top side or simultaneous dual side inspection, deploying up to 18 cameras, Z axis positioning and auto-focus. The design is optimized for the inspection of THT components to identify defects such as presence/absence, wrong polarity, colour, type, and bent pins. Various integration alternatives are greatly enhanced by its slim, compact mechanical design.

The [entry level iSpector](#) JDz 520 boasts high specifications, including a 5 mega pixel camera, 15 micron telecentric lens, Co-Axial light and 20.5” x 18.1” (520 x 460mm) max. PCB size. This bench top powerhouse uses same high speed programming software as the PowerSpector series of machines.

The [desktop PowerSpector GTAz](#) 520 is designed for maximum defect coverage whilst maintaining short programming times. It is the only desktop AOI in the market that can be equipped with [9 cameras](#): 1 top and 8 side cameras. For maximum flexibility, the optical unit is configurable to fit your needs today while providing upgrade possibilities for the future.

The new [Mek PowerSpector BTL AOI system](#) offers synchronized inspection of the top and bottom side of PCBs after Reflow, Wave or Selective soldering & placement of SMT & THT components. Patented synchronized lighting technology delivers new capabilities. 9 cameras per side, with both heads inspecting the PCB at the same time, deliver fastest inspection times but without the high power lighting system of each head affecting the other inspection taking place. The elimination of flipping removes potential for stress on the assembly and improves long term reliability of solder joints.

For more information on Mek and the entire range of products visit [www.marantz-electronics.com](http://www.marantz-electronics.com), or visit us at booth #1718 at IPC APEX where we can discuss your application requirements.

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**About Mek (Marantz Electronics Ltd)**

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/American headquarters, Mek, have sold over 7000 units worldwide to date. Now well established as a leading force in AOI technologies, the company also manufactures a 5D post-print SPI system which combines 3D and 2D image processing methodologies to deliver unprecedented defect detection. At the beginning of March 2014 the company opened US offices in Las Vegas.

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