

# Mecalc selects MEK PowerSpector FDAz AOI system



Mek (Marantz Business Electronics) announces that Mecalc has selected its PowerSpector FDAz to enhance the company's inspection capabilities. The Centurion, South Africa-based firm, is a highly innovative Engineering Design House which designs, develops and manufactures advanced acquisition and control systems to optimize noise, vibration and structural integrity in prototype or quality control testing. Distributed through Müller-BBM VibroAkustik Systems, PAK MKII hardware ranks amongst the world leaders in data acquisition and control front-ends predominately used in markets like automotive or aerospace.

Established in 1989, [Mecalc](#), consists of a team of 75 electronic, mechanical and computer engineers together with mechanical production, electronic production, testing and support staff. As almost all production processes are handled internally, a fast turnaround time is possible between completing upcoming project's prototypes without compromising production volumes. Mecalc's state of the art electronic manufacturing facility with its highly sophisticated production line is able to accommodate a wide range of components down to the smallest chip scale packages. A need for exceptional and continuous quality, heightened by the compact nature and high density of their boards, is met by the new PowerSpector FDAz AOI system from Mek and an x-ray machine.

[PowerSpector FDAz](#) reliably inspects SMT and THT component bodies for presence/absence, type, polarity, offset, text, colours etc. and components solder fillets for excessive, insufficient, no solder, shorts or lifted leads. With its high resolution top camera with telecentric lens and new unique multiplexed 8x CameraLink side camera technology with shift tilt lenses in 45/45 orientation, defects become visible as never before.

Angelique Smit, head of Production Quality, explains the purchasing decision. "We have evaluated multiple AOI equipment suppliers; the Mek PowerSpector FDAz came out on top in its ability to meet

our specific technology and support requirements. Overall system speed, ease of programming and great solder joint, component body, text and colour inspection were influencing factors. The adjustable Z-axis for the inspection of tall components and the angular cameras for double-checking known problem areas were also considerations.”

She continued, “Quality is always our main priority and reliable inspection is hence vital. Mek AOI and the Mek Catch software provides us with the necessary process monitoring and quality control required. We had an iSpector before purchasing the PowerSpector FDAz. Our familiarity with the programming contributed to our decision to purchase the FDAz.”

“The FDAz replaced the iSpector and was up and running within a week. Our programming time improved significantly, primarily thanks to the advanced training from the Mek team who helped us to optimize programming time and the way we work. And if there is anything we are unsure about we turn to the Mek Technical Forum and iMentor which have proven to be invaluable.”

[www.mek-europe.com](http://www.mek-europe.com)

**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 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. At the beginning of March 2014 the company opened US offices in Las Vegas.

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