# Exploring Benefits of OMNIA II's New Features: DualCHEK, My Menu and True RMS

*Associated Research, Inc.*

## DualCHEK

Ask any manufacturer that deals with production line electrical safety testing and they will tell you that the two most commonly performed tests are the Hipot test and some form of ground integrity test (usually referred to as a Ground Continuity test or a Ground Bond test). This is because most standards require these tests to be performed as 100% production line tests on every product before shipment. While traditional safety testers perform only one type of test, more advanced testers are capable of performing different types of tests in sequence, increasing efficiency on the production line. Associated Research offers electrical safety testing options for a variety requirements and budgets. The System 3100 (see Figure 1 below) consists of 2 independent manual testers (a 3705 Hypot 3 and a 3130 HYAMP 3) that allow the operator to perform a Ground Bond test and a Hipot test in sequence or simultaneously.


**Figure 1: System 3100**

While this type of test setup is the most economical, it delivers only the most basic gains in productivity and efficiency. For more advanced applications, customers often choose the OMNIA 8100 series (see Figure 2 below) which combines the functionality of the System 3100 along with additional features like an automated interface and data storage capability. When used in a production environment, the OMNIA 8100 series can perform a variety of safety tests, in sequence and completely automated when combined with a PC. The decreased DUT setup time and test time provide time and cost saving benefits in efficiency on the production line far beyond that of manual testers.



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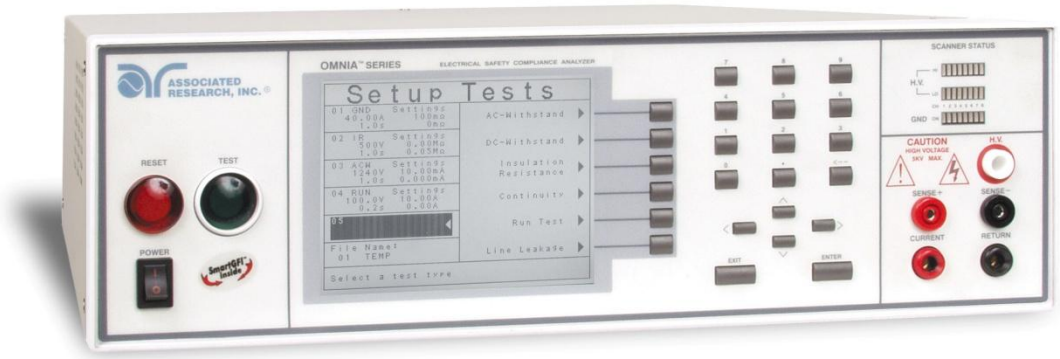


**Figure 2: OMNIA 8104**

With the release of the OMNIA II series, AR has created an electrical safety compliance analyzer with DualCHEK technology. DualCHEK further increases production line efficiency and throughput by enabling manufacturers to perform the Hipot test and the Ground Bond test simultaneously. This feature provides a host of benefits for most manufacturers that are required to perform a Hipot test and a Ground Bond test on the production line.


**Figure 3: OMNIA 8204**

While the safety testing station is usually a bottleneck during manufacturing, DualCHEK reduces the setup time and the test time to ensure products are safely tested as quickly as possible. This translates to more throughput and increased productivity during the manufacturing process.

**Color Display and My Menu**

One of the most important features of any piece of electrical equipment is the user interface. Customers require an interface that is intuitive, easy to navigate, and allows quick and accurate



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setup of the equipment. With OMNIA II, AR is proud to introduce the first electrical safety compliance analyzer with a customizable color display. With 4 different color themes, users can select the right mix of colors that works with their test station (Figure 3 above shows the "Midnight" color theme). In addition to being customizable, the color display provides the clearest indication of test results and testing status readouts through the use of green (signaling a PASS condition) and red (signaling a FAIL) condition.

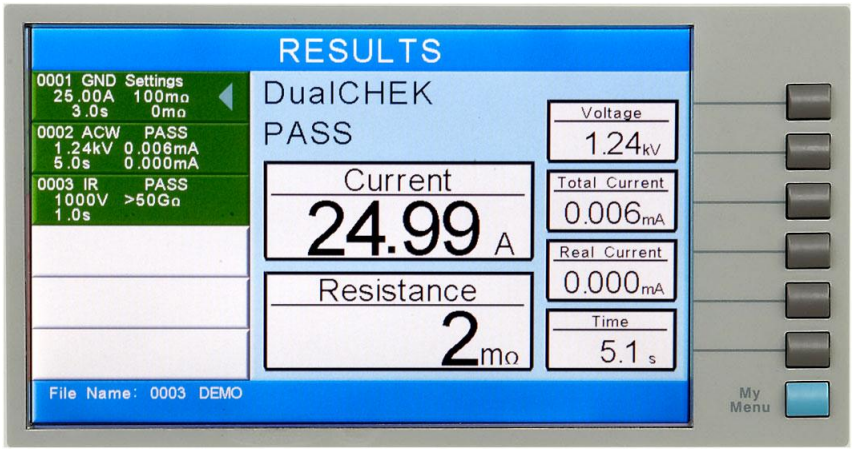


**Figure 4: Results Screen**

The OMNIA II also features our new My Menu technology. My Menu allows operators to select up to 6 of their most commonly used test menu screens and load them into a personalized hot key menu. Customize the My Menu screen to quickly proceed to the most relevant setup screens for your application.


**Figure 5: My Menu Screen**



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**True RMS Current Measurement**

The OMNIA II features true RMS current measurement capability during AC hipot testing. This technology represents a major step forward in accurate hipot test readings because most traditional testers, including the OMNIA 8100 series, use an average RMS current measurement. While average RMS measurements work well with linear loads, average RMS readings often suffer from accuracy issues when the current waveform is distorted due to non-linear loads. Many electrical products use mains input capacitors for filtering which can cause the current waveform to distort due to the application of high voltage. In these cases the accuracy of average RMS current readings is questionable at best. Yet with true RMS measurement capability, test operators can be assured that their current readings during AC hipot testing are accurate regardless of the type of DUT.



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