

BACL's New SAR Test System

Due to the recent advances in both Licensed Radio and Unlicensed Wireless Technologies (including but not limited to 4G LTE, 5 GLTE, and massive MIMO), BACL has committed to substantially upgrading its US-based SAR testing capability. To that end, BACL has purchased an extremely formidable, high-end SPEAG DASY6 System that is equipped with a new robotic system and controller, new phantoms, new measurement probes, new calibration dipoles, and the latest test software. This system is scheduled to be installed in late November and early December 2017 into our existing SAR Test Shielded Enclosure.



Test Facility Electrical Power Upgrades

BACL is now in the middle of a massive upgrade to its electrical power infrastructure. The purposes of this upgrade are to provide the following:

- EMI Filtered AC Power at up to 600 Volts AC at up to 400 Amperes per phase (three phase) in the 10 m Chamber;
- EMI Filtered DC Power at up to 60 Volts DC at up to 500 Amperes in the 10 m Chamber (provided by a new 60V/500A-rated DC Power supply);
- numerous 240 VAC / 60 Hz ("Split Phase") Power connection points throughout the entire ground-floor (high-bay) test facility;
- numerous additional 277/480 VAC Three-phase Power connection points throughout the entire ground-floor (high-bay) test facility;
- numerous additional 120 VAC Single phase Power connection points throughout the entire ground-floor (high-bay) test facility;
- numerous additional 120 VAC Single phase Power connection points in the 2nd Floor Lighting Test Laboratory; and,
- a dedicated 240 VAC / 60 Hz high current connection to the 2m diameter integrating sphere in the first floor lighting laboratory.

These upgrades will make servicing the testing needs of our customers easier, safer, and much more efficient. Additionally, it will allow us to cost-effectively and successfully test many classes of equipment that we were previously unable to handle. This upgrade project will be completed in early December 2017.

VCCI Rule Transition



Transition to VCCI Rules VCCI-32 (based upon CISPR 32 2nd Edition). The VCCI (Japan) is again advising manufacturers and importers of ITE and Multi-Media Equipment Products that Japan is now in the process of transition from its VCCI V-3 Rules (based upon CISPR 22) to its rules based upon CISPR 32 Edition 2.0. The use of either VCCI V-3 or VCCI -32 is allowed until April 1st, 2019, after which the use of VCCI-32 will be mandatory. What is often overlooked is that it is now required that—when a manufacturer submits its VCCI Report—the choice of standard be clearly indicated (i.e. *either* VCCI V-3 or VCCI-32, but not a mixture of both) in that report. Our readers should note that BACL is fully able to test to both the VCCI-32 rules and the VCCI V-3 rules. Our present course of action is to advise our customers to make this transition now (if possible), so as to avoid future problems as the April 2019 deadline gets closer.

US-Mexico MRA

The Mutual Recognition Agreement between the Government of the United States of America and the Government of the United Mexican States for Conformity Assessment of Telecommunications Equipment was signed on May 26th, 2011 and was implemented (by the US) on September 26th, 2017.

The agreement provides for the mutual recognition of testing laboratories and for the mutual acceptance of their test results in assessing conformity of equipment to applicable technical regulations.

Specifically pertaining to the US, the agreement provides for the Mexican regulatory authority, IFT (Instituto Federal de Telecomunicaciones), to accept test results from third-party US laboratories for the conformity of telecommunications equipment to specific Mexican technical regulations listed in Annex I (August 22, 2016) of the MRA.



This bi-lateral agreement covers the recognition of testing laboratories (and the acceptance of their test reports) **only** (Phase One MRA) and does not cover the recognition of certification bodies.

Also, the agreement does not include the electrical safety of telecommunications equipment and homologation (*N.B. homologation is handled directly by the IFT*).

In order to better serve our clients, BACL is in the process of submitting our application regarding this MRA to the NIST.

EPA Update

The U.S. Environmental Protection Agency (EPA) has finalized the amendments to the ENERGY STAR Lamps specification (V2.1). The V2.1 replaced V2.0 on October 1st, 2017 and will be operative for new certifications from that date forward. One of the major changes rising from this change in specifications is the refined flicker test. The test methodology is from an industry consensus-based standard. This new specification does not impact existing models certified prior to October 1st, 2017, and will not require any of these models to be re-certified.



EN 303 413 V1.1.1 (GNSS Receiver Performance)

EN 303 413 V1.1.1 was formally published by ETSI at the end of June 2017. The use of this standard is now effectively mandatory under Article 3.2 of the 2014/53/EU Radio Equipment Directive [RED]. This standard is applicable to **any** system that incorporates a Global Navigation Satellite System (GNSS) receiver. GNSS receivers come in many types, including GPS, Galileo, GLONASS, BeiDou [BDS], and a large variety of various Space-Based Augmentation Systems [SBAS]); the EN 303 413 Standard specifically addresses how all of these kinds of receivers are to be tested for compliance.

GNSS receivers are now ubiquitous in mobile devices (e.g., cars, trucks, small boats and large ships, piloted aircraft and drones, balloons, and spacecraft, and in some hand-held devices such as cameras, offender tracking units and cell phones). Please note that every cell phone sold in Europe requires a GNSS Receiver to be built-in so as to provide emergency location services (similar to the E911 services in the USA and Canada). The EN 303 413 requires the use of a specialized GNSS Satellite Signal Simulator and an Interference Generator; these are coordinated and operated under software control. Customers who require EN 303 413 testing will need to work with their GNSS Receiver/Engine suppliers to obtain real-time outputs of an unusual parameter— known officially as the Carrier to Noise Density Ratio [C/N0].

BACL is an independent Commercial Test Laboratory accredited to ISO 17025, a Product Certification Body accredited to ISO 17065 by A2LA, a Notified Body for New EMC and Radio Equipment Directives, and an OSHA NRTL.

Our Test Laboratory has a lengthy list of accredited testing standards and methods for Emissions, Immunity, Radio, RF Exposure, Safety, Telecom, Energy Efficient Lighting Products and the California Energy Commission (CEC).

If you have any questions, please call us at Tel: (408) 732-9162 or send your inquiry to sales@baclcorp.com. We would be more than happy to discuss any testing and certification process in more detail with you in order to meet your specific needs and requirements.