

**Bob Fox, Managing Director**

Welcome to another edition of Stimulating Times. The Holiday season is nearly upon us and its worth reflecting on an exciting and challenging year. In recent months we've seen the fruits of these efforts as we've delivered the first Griffen Medium-Range UV MWS Stimulators and the first UV LED Mallina variant. It is rewarding to know that the Griffen has already been fielded and performed flawlessly in its first operational trial. We have also completed the development and commissioning of a comprehensive MWS test bench that will enable a key customer to evaluate sensor performance in a simulated aircraft configuration. I would like to extend our seasonal best wishes to all our customers and colleagues.

**ESL DEFENCE WEBSITE**

We are excited to announce the launch of our new-look website; [www.esldefence.co.uk](http://www.esldefence.co.uk). Amongst all the usual information you would expect to find, this contains outline specifications of our products, headline information about ESL's capability and links to Textron's other business units and products. Please take a look and, if you require more details on our products or capabilities, one of our sales team will be happy to help.

**GRIFFEN**

Detection of a MANPAD threat is an important part of Aircraft Survivability in today's asymmetric counter-measure environment. The detection of an approaching missile is presently achieved by use of Ultra Violet (UV) missile warner technology. It is of the utmost importance that aircrew are confident in their defence system and this confidence can be achieved in a number of ways, including depot and flight-line testing. However, in both these cases, the confidence test is performed with the aircraft in "wheels down" mode and with the aircraft frame under strain, thus the defence system components are not in their airborne relaxed operational condition. To overcome this situation an alternative test philosophy can be adopted, where the aircraft is stimulated by a threat emitter either just after take-off or whilst a rotary aircraft is hovering undertaking airborne system checks, such as compass setting. To provide such a test philosophy requires an easy to use test set with rapid portability and a long range missile warner stimulation capability. To date the provision of such portability with long range stimulation performance has been a design conflict. To overcome this previously conflicting design requirement ESL Defence has developed the Griffen Threat Emitter. The Griffen Threat Emitter provides a high fidelity temporal simulation of a MANPAD surface to air missile engagement, which can be unclassified, to stimulate a passive missile warner. The Griffen is hand-held and ruggedized and is, therefore, very easily carried and deployed by ground crew. The Griffen is also provided with a soft protective cover to prevent damage during carriage and operation. The Griffen is self-contained with rechargeable batteries and can be easily programmed with eight different threats. A red dot x1 rifle sight is fitted for aiming the Griffen at an aircraft and the simulated missile engagement is initiated by the press of a button on the handle. The Griffen adopts the latest LED technology that provides the necessary spectral output within the missile warner's band of interest and is compatible with the use of night vision goggles by aircrew during night-time training. The Griffen is supplied in two variants, the Griffen -25 and -50, offering an affordable solution depending on the required maximum stand-off range. In addition to providing a pre-mission confidence test, the Griffen can provide a useful training tool.

Reflecting on ESL's achievements in 2009, I am proud to be part of the team that has launched 3 significant new products this year to address the EW test market; Griffen, our medium range Hand-held UV MWS Stimulator, the UV LED Mallina our replacement for the successful lamp based UV MWS EW range stimulator system and Phoenix Lite, our long-range Hostile Fire Indicator (HFI) System stimulator. I'm now looking forward to seeing these products used successfully in the coming years to save lives. Please see the contact section for more information.

**Steve Yoxon, Head of Sales & Marketing**

**Exhibitions:**

ESL / AAI staff can be found at the following exhibitions / events in the near future. We look forward to seeing you there.

2-7 Feb  
9-11 Feb

Singapore Airshow  
EW India Exhibition

**What is MWS Confidence Testing and why Baringa?**

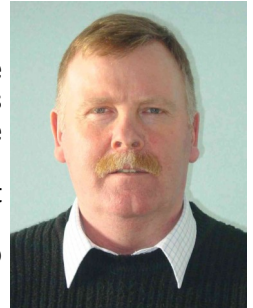
You may all be aware that flight line confidence testing of systems is not a new concept and proof of that is in the history of the Baringa. I have been involved in this history from 1997 when I took up a post with the MoD at RAF Wyton and was part of the Support Authority, then SM45, which looked after MWS and IR jammers and chaff and flares and of course the testing of them.

On many occasions I have been involved with trials with customers who have never carried out flight line confidence testing before and they always say they don't need it because they have a BITE or BIT system which checks out 95% of the system; that may be the case. What happens in the 5% that doesn't get checked, for example, CH-47 rear MWS sensors cross connected, C-130 rear MWS sensors cross connected, AH-64D rear MWS sensors cross connected, shall I go on? Similar situations have also been found whilst testing LWR systems where the sensors on the left and right sides of the aircraft have been transposed, this was discovered using another of our flight line testers, the Hydra.

When MWS systems were found to suffer from degradation, Baringa was adapted to carry out sensitivity testing to monitor the degradation and allow the Support Authorities to manage spares in a timely manner; it would also monitor the data lines to and from the sensor and also the power consumption of the sensor to ensure it is functioning correctly. In one instance during a competition between Baringa and a bespoke MWS system manufacturer's tester, Baringa declared the aircraft unserviceable but the system manufacturer's tester declared the system serviceable. The aircraft flew a full passenger load to a hot zone only to discover on its return and following further tests, that the MWS system was, in fact, unserviceable as discovered by the Baringa.

The Baringa can be used to carry out a full end to end test of a defensive aids suite. This is achieved by triggering the MWS system with an operational profile which in turn, causes the MWS to declare and automatically generate flare firing commands to the CMDS, the output of which can be monitored on the flare dispenser test boxes. Baringas come in both UV and single and dual colour IR, are fully programmable with up to nine profiles and are platform and MWS system independent. To complement the Baringa in the flight line confidence testing arena we also have the Hydra for LWR systems, Solent for IR jammers and the HRS for testing RWR.

If you currently don't do flight line confidence testing, please contact us and we will help you establish "Know Before You Go"™ confidence. **Chris South, Sales Manager**

**500th Baringa Celebration**

ESL Defence Ltd have recently delivered its 500th Baringa Missile Warning System Test Set. The Baringa is used in more than 15 countries around the world within Europe and Asia, as well as the United States and Australia, with the UK Ministry of Defence being the company's first and most prolific customer. Since its launch in 1992, the Baringa has been through several design enhancements, with the latest version also being able to perform a sensitivity test of a missile warning sensor. Baringa is a handheld unit that accurately simulates missile plume signatures to stimulate aircraft missile warning systems while in operational mode, allowing air crews to perform thorough go/no-go missile warning system testing. Baringa variants are available to accommodate multiple requirements including ultraviolet and infrared missile warner testing, as well as sensitivity measurement. This milestone occurred with a sale to the UK Ministry of Defence. In September 2009, the company celebrated the 500th delivery with a lunch at the Brampton Mill, near RAF Wyton. Bob Fox, Chris South and Keith Dalley from ESL Defence were in attendance, along with guests from the UK Ministry of Defence, each of whom were presented with a keepsake from the event

**ESL UPDATES**

**25th December 2009 to 1st January 2010—Office Closed for Festive Period**

**CONTACT US:**

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