



## December 2012 Newsletter

Issue 16

### Greetings

This month we are featuring our newest line of switchable impedance transformers. Also, in this issue you will find our tradeshow coverage, which includes highlights from the most recent show we exhibited at, as well as a look ahead at next year's calendar. Additionally, we are pleased to share the recent FDA approval, which now offers a new treatment option for cancer patients.

### Product Watch

In order to maximize the power transfer from your amplifier to your load, you need to ensure that the impedance of both the source and the load, are the same. All E&I amplifiers have a characteristic output impedance of 50 ohms - if the impedance of your load is not 50 ohms, you will have some power reflected back to the amplifier. This is not a problem for the amplifier, but it does mean that you are wasting power.

E&I's [Locked-On Series](#) of switchable impedance transformers enable one to match the 50 ohms to drive higher or lower impedances over the entire frequency range from 500 KHz to 5 MHz. Maximum power transfer is achieved by simply switching from 50 ohms to the multiple tap settings.



The Locked-On transformers are available with several options. From an impedance range standpoint, we offer two versions: HI-Z (impedance outputs: 50, 100, 200, 400, and 800 ohms ) and LO-Z (impedance outputs: 100, 50, 25, 12, and 6 ohms). Additional options include an LCD display, and also a hot switch.

For more information on all models available, please refer to

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### Event Calendar

The IEEE UFFC Society, has announced a joint symposium to take place in Prague, Czech Republic in July of 2013, to celebrate it's 60th anniversary. Next year's International Ultrasonics Symposium (IUS), will be joined together with the International Symposium on the Applications of Ferroelectric - Piezoresponse Force Microscopy Workshop (ISAF-PFM), and the International Frequency Control Symposium - Europe Frequency and Time Forum (IFCS-EFTF). In addition to covering a wide range of topics, the joint symposium will provide an opportunity for interaction amongst exhibitors and attendees of these vast fields.

Other events on next year's calendar for E&I include the UIA on April 22 - 24, in Lake Buena Vista, Florida and ISTU on May 12 - 15, in Shanghai, China.

our [website](#). If you have any questions, please [Contact Us](#) and we would be happy to help you select the most efficient, cost effective solution for your application.

#### Related Content:

[Matching Transformers](#) - If you know your impedance, E&I provides a full line of step-up/step-down transformers

[A Good Match](#) - Technical advice on matching input and output impedances

## Tradeshaw Highlights

E&I recently exhibited at the 2012 IEEE International Ultrasonics Symposium, which was held in Dresden, Germany, from October 7th - 10th. The show brought together leading experts, new research, and the latest technology. Some of the major topics of discussion included: Medical Ultrasonics, Sensors, Nondestructive testing, NDE & Industrial Applications, Physical Acoustics, Microacoustics, and Transducers & Transducer Materials.



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## Customer Spotlight at the IEEE

The image below displays one of E&I's amplifiers being used by [Onda Corporation](#), in a demonstration at the IEEE IUS show in Dreden. Onda used the E&I 2100L amplifier, to



power a HIFU transducer that was acoustically tested with their fiber optic hydrophone (HFO-660). Onda's fiber optic hydrophone was

designed uniquely to support high intensity fields for applications such as HIFU, proving both acoustic pressure and temperature measurements simultaneously.

E&I's [2100L amplifier](#) is very suited for ultrasound applications, providing 100 Watts of power output over the entire frequency range of 10 KHz through 12 MHz.

## In the News...

Last month, the FDA approved [InSightec's ExAblate](#) MRI-guided Focused Ultrasound to treat patients suffering from painful bone metastases. ExAblate uses MRI-guided focused ultrasound technology that combines MRI and high intensity focused ultrasound to thermally ablate tumors inside the body, non-invasively. The focused ultrasound acoustic energy destroys the nerves causing the pain, resulting in rapid reduction in pain. The FDA approval now gives cancer patients another option in seeking treatment, one in which is non-invasive and non-ionizing. For more details, [View the Press Release](#) or watch the video below:

## Feedback

As always, we welcome your feedback. If there is a specific topic that you would like addressed, please let us know. Any questions or comments can be sent directly to [Jen Elkins](#).

Happy Holidays!



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