



# TBSI

a division of Harvard Bioscience, Inc.

# Triangle BioSystems International

**\*Neuro News\***

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## Upcoming Events

**SfN 2016 Conference**  
**Booth 2729**

**Poster Presentation (#561.04)**  
**"Implantable Stimulation and Recording**  
**for in-vivo Electrophysiology on**  
**Freely Moving Animals"**  
**San Diego, CA**  
**November 12-16**



## Greetings!

Greetings from Triangle BioSystems International! We are glad to provide you news on our company and new announcements with this Pre-SfN conference edition of our periodic newsletter. As a reminder, we would like to invite all Neuroscience attendees to our TBSI kiosk located within the Harvard Bioscience booth 2729 at the San Diego Convention Center. We hope to see you there!

We'd also like to thank everyone who attended our Webinar on Implantable Headstages last week. For those of you who missed this webinar, you can view the recorded version by clicking here:

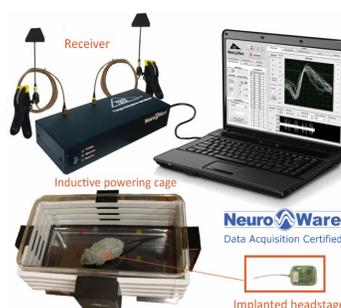
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Sincerely,

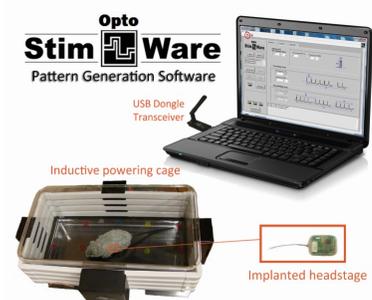
Robby Padia  
 Technical Support Specialist  
 Triangle BioSystems International

## Implantable Neural Recording and Stimulation Systems

TBSI will announce at SfN 2016 our implantable neural recording and stimulation systems which are shown below:



[Implantable Neural Recording](#)



[Implantable Neural Stimulation](#)

The implantable recording systems are available in 5ch, 16ch and 32 channels. Below are some system features of the neural recording system.

- Wireless operation across 1 meter for recording
- Voltage gain of system 800, other gain offerings available
- Bandpass filtering per channel at .8 Hz to 7 kHz
- 90-day package life
- 50 Khz per channel sampling rate
- 24/7 operation

The implantable stimulation system offers both electrical and optogenetic stimulation. Below are some of the neural recording and stimulation system features:

- Wireless operation across 4 meters for stimulation
- Available with 2 channels
- Wavelength of 465.5 nm for optogenetics
- Up to +/- 1mA output
- Drives electrodes up to 20 kOhm resistance
- 24/7 operation



5ch Transmitter	29 x 23 x 12mm @ 5.2 grams
16ch Transmitter	29 x 23 x 12mm @ 5.2 grams
32ch Transmitter	31 x 25 x 12mm @ 5.7 grams
OptoStim Transmitter	31 x 25 x 12mm @ 7.8 grams
E-Stim Transmitter	33 x 27 x 12mm @ 8.3 grams

Both systems include an inductively powered cage collar, implantable headstage, and NeuroWare, StimWare, and OptoStimWare software.

## ***Solutions for Behavior and Ephys Integration***

The acquisition of Triangle BioSystems International by [Harvard Bioscience](#) builds a new environment for integrating technologies, know-how, and resources; a synergy for creating innovative solutions for Neuroscience research.



In this context, the combination of experience from the [TBSI](#), [Panlab](#), and [Coulbourn](#) brands opens new possibilities for combining *in vivo* neuronal recording and stimulation with behavioral analysis, especially with video tracking and operant conditioning paradigms.

Ask for more information about our current developments and beta-testing opportunities at [support@hbiosci.com](mailto:support@hbiosci.com).

***Darpa SBIR Phase II Funding Award***



TBSI has been awarded a Phase II SBIR contract to develop implantable headstages for neural stimulation and recording that can be used on rodents and non-human primates.

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## ***Company Overview***

**TBSI** develops neurological research equipment for brain/nerve monitoring, recording and stimulation. Our hardware and software enables the acquisition of action potential signals (spikes) from individual neurons, as well as low frequency field potential signals in wireless and miniature tethered packages. Offering state of the art miniaturized and integrated solutions for a variety of species, TBSI's stand alone software and hardware solutions are available in many configurations and are compatible with many applications.



[TBSI Products](#)



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