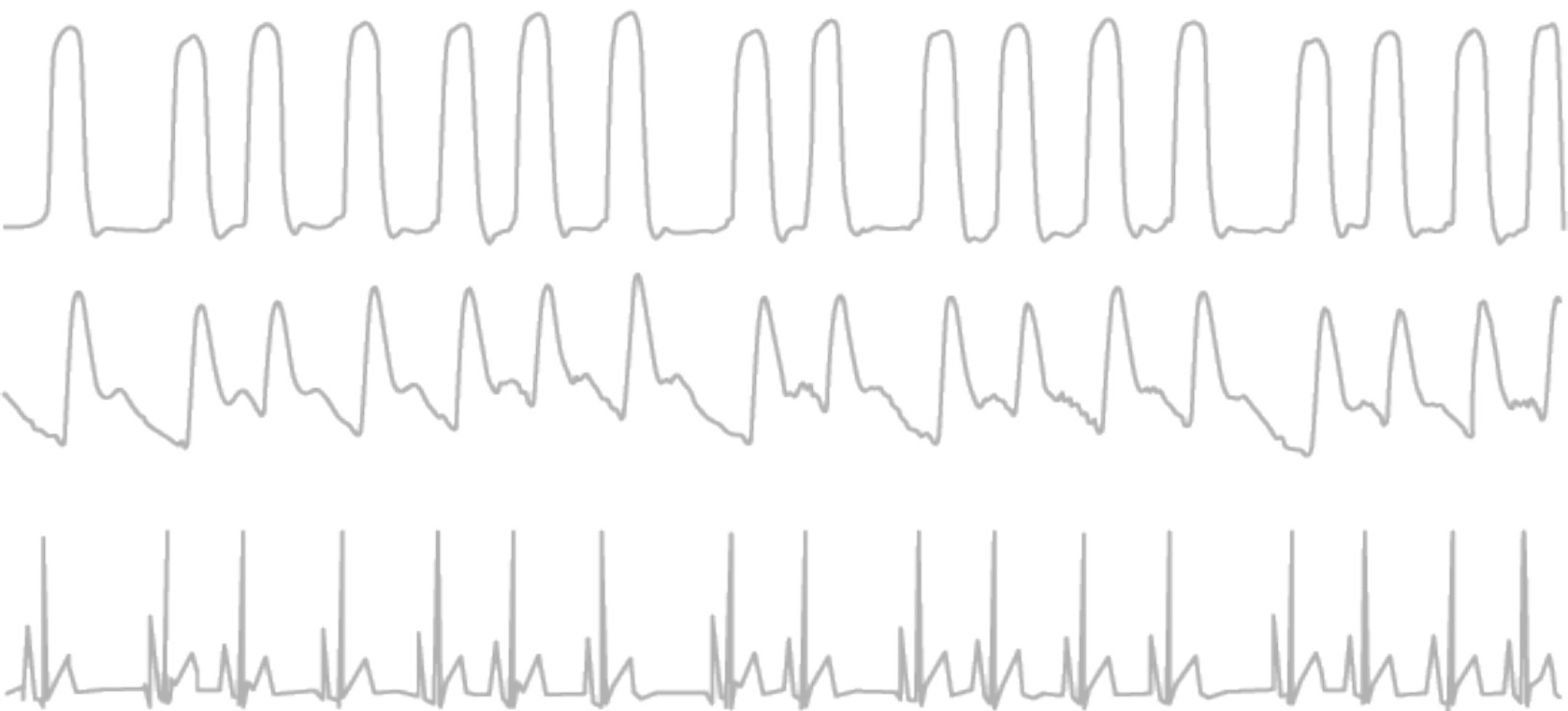


PhysioTel™ Digital

# Large Animal Telemetry



Discovery ▪ Safety Pharmacology ▪ Toxicology ▪ Biodefense



**DSI**™

a division of  
Harvard Bioscience, Inc.

## Proven and preferred for over 30 years

DSI telemetry is used by more researchers than any other in the market with more than 5,000 publications cited from over 1,000 institutions globally.

1980s

1984: DSI founded

1985: First DSI telemetry implant

1990s

1987: First DSI telemetry implant for large animals

2000s

2006: DSI purchases Ponemah

2007: Jacketed External Telemetry (JET) released

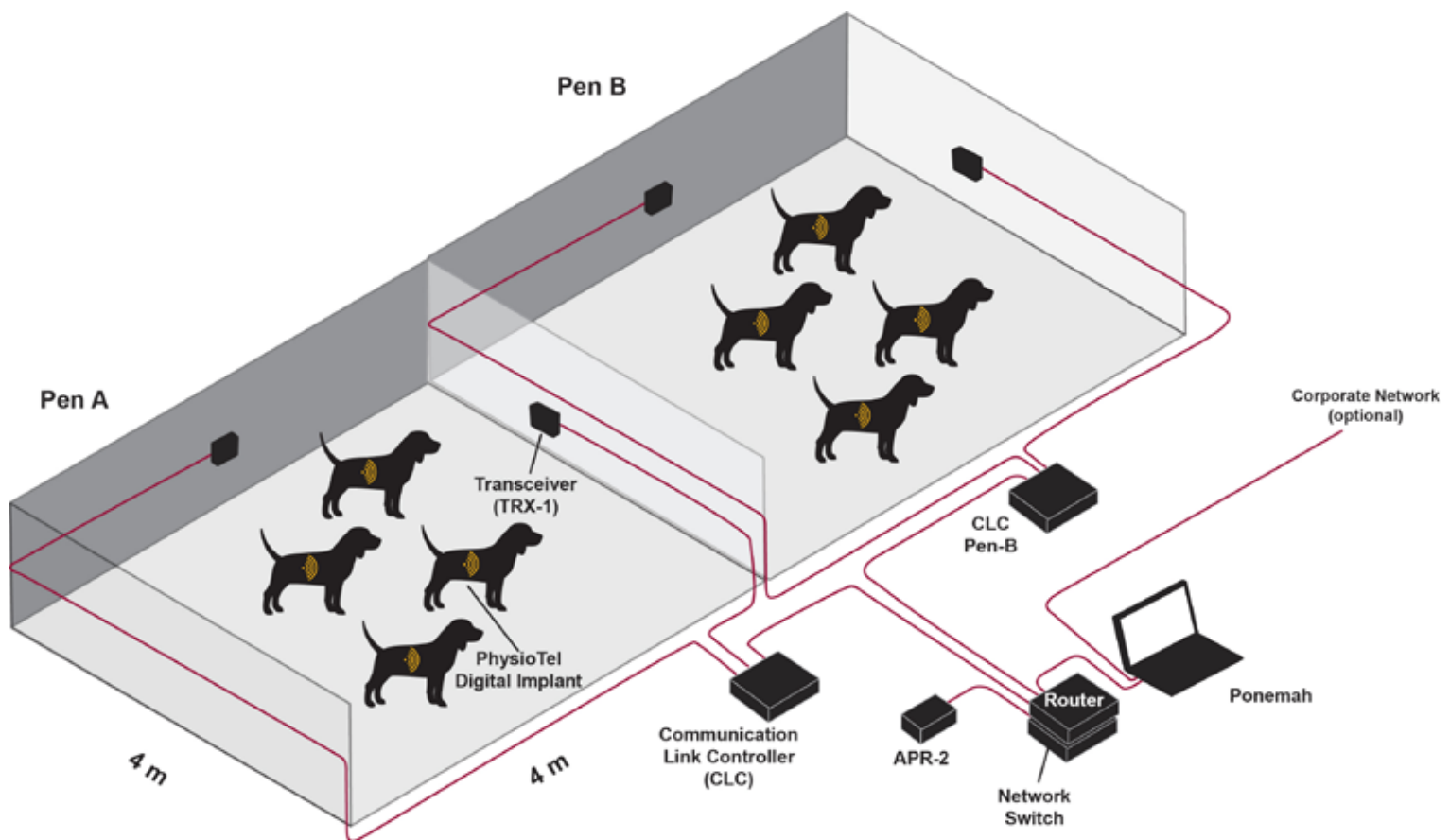
2010s

2012: PhysioTel Digital released

## PhysioTel Digital

The best choice for you and your test subjects

- Social housing compatible with a wide range of enclosures
- Automated configuration eliminates human errors and provides a fast study start-up
- Encoded animal ID ensures traceability and GLP compliance
- Remote programming for convenient, safe, and easy device battery management



## Benefits of Implantable Telemetry

Acquire, analyze, and report physiologic data with telemetry implants in conscious, freely moving laboratory animals. Benefits include:

- Stress-free data
- Fewer animals needed
- Around the clock measurement

## PhysioTel Digital Implants: One room, one platform with multiple implants to fit your specific application needs

**L series:** These implants are designed for chronic physiologic monitoring research in colony animals. Implants are used in safety pharmacology studies to address core battery requirements in cardiovascular (CV), neuroscience, and respiratory applications. Core CV measurements include systemic pressure and ECG and includes LV pressure as a secondary measurement. L series implants are also eligible for the DSI Exchange program, reducing your ongoing study costs while ensuring implant quality, in vivo reliability, and performance.



**M series:** The smaller size of M series allows PhysioTel Digital technology to be expanded into a broader range and size of species including rabbits and cats. Primary applications for M series are toxicology, biological defense, discovery, and glucose metabolism studies. Single use implants are ideal for shorter duration studies.

### Learn about Pfizer's experience with PhysioTel Digital:

Cordes JS, Heyen JR, Volberg ML, Poy N, Kreuser S, Shoieb AM Steidl-Nichols J. (2016). Validation and utility of the PhysioTel™ Digital M11 telemetry implant for cardiovascular data evaluation in cynomolgus monkeys and Beagle dogs. *J Pharmacol Toxicol Methods*. 79: 72-9.

Model	Pressure	Biopotential	Respiratory Rate**	Temperature	Activity	Continuous Glucose	Warranted Battery Life	Implant Weight (g)	Implant Volume (cc)
M00				1	1		100 days	13.7	11
MOG* <b>NEW</b>				1	1	1	95 days	13.7	11
M1G* <b>NEW</b>	1		1	1	1	1	48 days	13.7	11
M01		1	1	1	1		40 days	13.7	11
M10	1		1	1	1		55 days	13.7	11
M11	1	1	1	1	1		35 days	13.7	11
L03 <b>NEW</b>		3	1	1	1		90 days	56	29
L04 <b>NEW</b>		4	1	1	1		95 days	56	29
L11	1	1	1	1	1		105 days	56	29
L11R <b>NEW</b>	1	1	1	1	1		120 days^	56	29
L21	2	1	1	1	1		84 days	56	29

\* Sensor often functions for 6-8 weeks, warranty is 4 weeks.

\*\* The L11R provides respiratory volume and respiratory rate via respiratory impedance. All other implants can derive respiratory rate from pleural pressure, blood pressure or diaphragmatic EMG.

^The LV capable L11R warranted battery life is 105 days

## Ponemah Data Management

The amount of data generated in telemetry studies can be overwhelming. You need powerful tools to collect, analyze and manage your data. Because PhysioTel Digital implants were designed for use with Ponemah software, researchers experience a tightly integrated system that is simple to set up, yet delivers the power and flexibility to support your most sophisticated study designs. For example, the Ponemah system can send an email or text message alert based on fever detection or low heart rate, or automatically quantify arrhythmia over 24 hours of ECG datasets. Third party acquisition and analysis options are also available for use with PhysioTel Digital.



## Implant Specifications

Feature	L series	M series
Implant capacity per system	24 - North America, 18 - Europe, China 12 - Japan	
Implant capacity per study area	48 - North America 30 - Europe, China 18 - Japan	
Transmission Range	3-5 meters	
Implant Weight	56 grams	13.7 grams
Implant Dimensions	59 x 38 x 15 mm	40 x 26 x 14 mm
Warranted Implant Duration	18 months	6 months
Additional Specifications	<a href="https://datasci.com/products/implantable-telemetry/specification-overview">datasci.com/products/implantable-telemetry/specification-overview</a>	

## DSI's Scientific Services

### Data Services



Keep your study on time with data experts to assist you with collection, analysis, or reporting data.

### Surgical Services



Free surgical consultation, plus preimplantation services and multiple surgical training options.

### Technical Services



Get the most from your DSI products with software training from our experts.



DSI proudly manufactures all products in St. Paul, Minnesota. DSI's network of global logistics partners reliably delivers the products you need, when you need them. View our corporate video at [datasci.com/about-DSI](https://datasci.com/about-DSI)

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