



IMPLANTABLE TRANSMITTERS

| Transmitter Number | Type | Battery | Dimensions LxWxH (cm) | Mounted Weight (grams) | Pulse Width (ms) | Pulse Rate (ppm) | Peak Current (ma) | Antenna Length 218 MHz* (cm) | Power Output (dBm) | Battery Life (days) | Typical Species |
|--------------------|--------------------------|--------------------------------|-----------------------|------------------------|------------------|------------------|-------------------|------------------------------|--------------------|---------------------|--|
| LPI-31100 | 3 Stage | 3.6 v 13.5 ah Li | 6.6x3.5x3.6 | 102-110 | 25 | 50 | 15 | tuned loop | -18 to -26 | 1541 | manatee, catfish, snake |
| LPI-3140 | 3 Stage | 3.6 v 5.2 ah Li | 5.4x2.6x2.7 | 60-70 | 25 | 50 | 11 | tuned loop | -20 to -28 | 812 | otter, beaver, salmon |
| LPI-3124 | 3 Stage | 3.6 v 2.6 ah Li | 4.4x3.8x1.8 | 36-42 | 25 | 50 | 11 | tuned loop | -20 to -28 | 380 | otter, beaver, salmon |
| LPI-3150 | 3 Stage | 3.6 v 1.3 ah Li | 4.4x1.8x1.9 | 28-33 | 25 | 40 | 11 | tuned loop | -28 to -36 | 235 | fox, piglet, raccoon |
| LPI-3800 | 3 Stage | 3.6 v 850 mah Li | 3.4x1.8x1.9 | 11-20 | 20 | 30 | 10 | tuned loop | -28 to -36 | 268 | snowshoe hare, marten |
| LPI-3160 | 3 Stage | 3.5v 1600 mah Li | 5x2x.8x1.5 | 34-40 | 20 | 50 | 11 | Tuned loop | -28 to -36 | 235 | snowshoe hare, marten raccoon, beaver |
| LPI-3370 | 3 Stage | 3.6 v 370 mah Li | 2.4x2.4x1.2 | 15-21 | 20 | 30 | 8 | tuned loop | -30 to -38 | 140 | raccoon, beaver |
| LPI-3700 | 3 Stage | 3 v 750 mah Li | 3.5x2x.9 | 9.5-14 | 20 | 30 | 7 | tuned loop | -36 to -46 | 330 | mongoose, medium fish |
| LPI-3350 | 3 Stage | 3.6 v 350 mah Li | 2.3x2x.9 | 7-9 | 20 | 30 | 7 | tuned loop | -36 to -46 | 152 | small and medium fish |
| LPI-2320 | Multivibrator 2 Stage | 3.0 v 160 mah Li | 4.1x1.4x1.4 | 14-18 | 19 | 35 | 4 | tuned loop | -15 to -20 | 102 | fish, snake |
| SOPI-2380 | Multivibrator 2 Stage | 1.5 v 350 mah silver oxide | 3.7x1.8x1.7 | 7-14 | 20 | 45 | 2.5 | tuned loop | -45 to -46 | 309 | squirrel, king snake |
| SOPI-2190 | Multivibrator 2 Stage | 1.5 v 175 mah silver oxide | 2.6x1.3x.7 | 4-6 | 20 | 35 | 2 | tuned loop | -48 to -58 | 237 | squirrel, mole |
| SOPI-2070 | Multivibrator 2 Stage | 1.5 v 70 mah silver oxide | 2.2x.8x.6 | 2-3 | 20 | 30 | 1.5 | tuned loop | -50 to -60 | 139 | mouse, gopher, flying squirrel |
| SOPI-2038 | Multivibrator 2 Stage | 1.5 v 43 mah silver oxide | 2.2x.8x.6 | 1.8-2.2 | 20 | 30 | 1.5 | tuned loop | -50 to -60 | 86 | mouse, gopher, other small animals |
| SOPI-2028 | Multivibrator 2 Stage | 1.5 v 28 mah silver oxide | 2.2x.8x.6 | 1.5-1.7 | 20 | 30 | 1.5 | tuned loop | -50 to -60 | 56 | Indigo snake |
| SOPI-2018 | Multivibrator 2 Stage | 1.5 v 19 mah silver oxide | 2.1x.8x.6 | 1.4-1.6 | 20 | 30 | 1.5 | tuned loop | -53 to -63 | 37 | Indigo snake |
| SOPI-2012 | Multivibrator 2 Stage | 1.5 v 11.5 mah silver oxide | 2.0x.8x.6 | 1.3-1.5 | 20 | 30 | 1.5 | tuned loop | -55 to -65 | 23 | tiny mammals |
| SOPI-2011 HW | Hand-wired 2 Stage | 1.5 v 11.5 mah silver oxide | 1.8x.8x.6 | 1.2-1.4 | 20 | 30 | 1.5 | tuned loop | -60 to -70 | 23 | tiny mammals |
| SOPI-2007 HWSC | Hand-wired 2 Stage | 1.5 v 7 mah silver oxide | .9x.5x.4 | 0.55-0.6 | 19 | 32 | 1.5 | tuned loop | -38 to -43 | 14 | Tiny mammals |

*Available also with a small-diameter flexible stainless steel whip antenna for better range

**Call for information on Mortality option.

BlueSky Telemetry

The Corner, Crieff Road, Aberfeldy, Scotland, PH15 2BJ T: +44(0) 1 887 820 816 | F: +44(0) 1 887 820 844

E: info@blueskytelemetry.com | W: www.blueskytelemetry.com

© and made by WMI 2008



IMPLANTABLE TRANSMITTERS

The implantable transmitters shown in this table are meant only as examples of typical applications for multivibrator two stage circuitry. The table in no way exhausts the many combinations of transmitter type, weight, peak current, pulse width, pulse rate, battery, and mountings available. Bluesky Telemetry will custom-build according to the researcher.s specifications.

The efficient multivibrator-pulsed circuits used in Wildlife Materials. transmitters offer a clear, chirpfree signal that is easy to tune and hear in receiver noise. Multivibrator-pulsed transmitters permit greater flexibility in customizing for optimum output and duty cycle. Because pulse rate and pulse width remain virtually constant throughout the life of the battery, transmitter performance is more predictable than that of older designs.

Surface mounting techniques enhance miniaturization by allowing more chip components to be placed on a smaller, flatter circuit board. The low-profile, rugged components also greatly improve reliability in punishing environments.

To minimize weight and provide packaging strength, transmitters are waterproofed with a tough epoxy resin conformal coating. The epoxy is a neutral substance which will not harm the animal after implanting.

Implantable transmitters are effective for any species with a body shape that precludes a collar or backpack, such as an otter, snake, or fish. When implanting a radio device in the species. peritoneum, researchers should take precautions to prevent infection.

These transmitters use a tuned loop antenna, which is coiled around the transmitter. However, a small-diameter flexible whip antenna may be used. This enhances the signal range and is not injurious to the animal if implanted correctly. Especially in snakes, the antenna is implanted between skin and muscle. Many researchers use a technique described in **Copea** (1982 (3): pp. 702-705) for inserting the antenna under the skin.

Exact output of the listed transmitters may vary, depending on the transmitter.s antenna length and the frequency range used. Available crystal frequencies include, but are not limited to, 40-50 MHz, 148-155 MHz, 160-165 MHz, and 216-222 MHz.

Each transmitter's signal range will be influenced by tracking conditions. Signal range can be diminished by rugged terrain, natural obstacles such as mountains and timber, dense vegetation, swamps and fog, along with large concrete structures. Best signal range occurs in flat, open country, in line-of sight conditions. Air-to-ground radio monitoring also enhances the received signal.

Clients should contact our facility by telephone, mail, fax or e-mail. Detailed written specifications and drawings allow us to recommend the best possible combinations of options for a particular study.

BlueSky Telemetry

The Corner,Crieff Road, Aberfeldy, Scotland, PH15 2BJ T: +44(0) 1 887 820 816 | F: +44(0) 1 887 820 844

E: info@blueskytelemetry.com | W: www.blueskytelemetry.com

© and made by WMI 2008



IMPLANTABLE TRANSMITTERS

Contact us for warranty information. If refurbishing is required so that a transmitter can be used in a different study, we will provide a conversion estimate after inspecting the transmitter.

BlueSky Telemetry

The Corner, Crieff Road, Aberfeldy, Scotland, PH15 2BJ T: +44(0) 1 887 820 816 | F: +44(0) 1 887 820 844
E: info@blueskytelemetry.com | W: www.blueskytelemetry.com

© and made by WMI 2008