

AMPHIBIANS AND REPTILES TRANSMITTERS WMI

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
LPR-3150	3 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	50	11	28 whip	+1 to +3	235	box turtle
LPR-3150A	3 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	45-90	11	28 whip	+1 to +3	177	aquatic turtle
LPR-2150M	CMOS 2 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	50 (150)	11	28 whip	-3 to -5	240	
LPR-2150AM	CMOS 2 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	45-90 (150)	11	28 whip	-3 to -5	179	
LPR-2150B	CMOS 2 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20-50	40-100	11	28 whip	-3 to -5	119	
LPR-3160	3 Stage	3.5 v 1600 ah Li	5x2.8x1.5	34-34	25	50	11	20 whip	-1 to +1	235	Snapping turtle
LPR-3800	3 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	50	11	28 whip	0 to +2	154	turtle
LPR-3800A	3 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	45-90	11	28 whip	0 to +2	116	
LPR-2800M	CMOS 2 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	50 (150)	11	28 whip	-5 to -7	157	
LPR-2800AM	CMOS 2 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	45-90 (150)	11	28 whip	-5 to -7	117	
LPR-2800B	CMOS 2 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	18-45	40-100	11	28 whip	-5 to -7	86	
LPR-3700	3 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	50	10	22 whip	0 to -3	152	snake
LPR-3700A	3 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	45-90	10	22 whip	0 to -3	114	
LPR-2700M	CMOS 2 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	40 (100)	10	22 whip	-6 to -8	192	
LPR-2700AM	CMOS 2 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	40-80 (150)	10	22 whip	-6 to -8	130	
LPR-2700B	CMOS 2 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	18-45	30-90	10	22 whip	-6 to -8	93	
LPR-3350	3 Stage	3.5 v 350 mah Li	2.4x2.2x.7	16-25	20	30	9	15 whip	-8 to 10	123	turtle
LPR-3350A	3 Stage	3.5 v 350 mah Li	2.4x2.2x.7	16-25	20	30-60	9	15 whip	-8 to 10	85	snake
LPR-2350M	CMOS 2 Stage	3.5 v 350 mah Li	2.4x2.2x.7	16-25	20	30 (100)	9	15 whip	-13 to -16	128	
LPR-2350AM	CMOS 2 Stage	3.5 v 350 mah Li	2.4x2.2x.7	16-25	20	30-60 (150)	9	15 whip	-13 to -16	87	
LPR-2350B	CMOS 2 Stage	3.5 v 350 mah Li	2.4x2.2x.7	16-25	20	30-90	9	15 whip	-13 to -16	43	
LPR-2320**	Multivibrator 2 stage	3.0 v 160 mah Li	4.1x1.4x1.4	14-18	19	35	4	22 whip	-15 to -20	199	
SOPR-2380**	Multivibrator 2 stage	1.5 v 350 mah	3.5x1.5x1.3	10-16	20	45	2.5	20 whip	-25 to -30	309	turtle
SOPR-2380A**	Multivibrator 2 stage	1.5 v 350 mah	3.5x1.5x1.3	10-16	20	35-70	2.5	20 whip	-25 to -30	267	
SOPR-2190**	Multivibrator 2 stage	1.5 v 175 mah	3.3x1.3x.8	4.6-5.0	19	35	2	20 whip	-25 to -30	248	turtle
SOPR-2190A**	Multivibrator 2 stage	1.5 v 175 mah	3.3x1.3x.8	5.6-6.0	19	30-55	2	20 whip	-25 to -30	209	salamander
SOPR-2070	Multivibrator 2 stage	1.5 v 70 mah	2.5x.9x.6	2.2-2.7	19	33	1.5	20 whip	-26 to -31	134	iguanas
SOPR-2070A	Multivibrator 2 stage	1.5 v 70 mah	2.5x.9x.6	2.2-2.7	19	25-45	1.5	20 whip	-26 to -31	127	snake
SOPR-2038	Multivibrator 2 stage	1.5 v 43 mah	2x.8x.6	1.8-2.1	19	33	1.5	20 whip	-26 to -31	83	toad
SOPR-2028	Multivibrator 2 stage	1.5 v 28 mah	1.6x.8x.6	1.6-1.7	19	33	1.5	20 whip	-26 to -31	54	snake
SOPR-2018	Multivibrator 2 stage	1.5 v 19 mah silver oxide	1.6x.8x.5	1.3-1.4	19	33	1.5	20 whip	-27 to -32	36	
SOPR-2012	Multivibrator 2 stage	1.5 v 11.5 mah	1.6x.8x.5	0.9-1.1	19	32	1.5	15 whip	-31 to -36	23	
SOPR-2011 HW	Hand-wired 2 stage	1.5 v 11.5 mah	.9x.5x.4	0.6-0.8	19	32	1.5	10 whip	-36 to -41	23	tarantulas, lizard, snake
SOPR-2007 HWSC	Hand-wired 2 stage	1.5 v 7 mah silver oxide	.9x.5x.4	0.55-0.6	19	32	1.5	10 whip	-38 to -43	14	Small lizard, snake, turtle

*Transmitters can be manufactured with a tuned loop antenna for implanting. Power output will decrease.

**Mortality can be added to this unit and will affect days life and add 1.1 grams to weight.



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The amphibian and reptile 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. Wildlife Materials will custom-build according to the researcher's specifications.

The efficient multivibrator-pulsed circuits used in Wildlife Materials' transmitters offer a clear, chirp-free 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 acrylic resin conformal coating.

The Behavior Circuit can be built into the transmitter (indicated by "B" at the end of the Transmitter Number on reverse) to change the transmitter's pulse rate gradually as the animal's level of activity increases. When an animal is at rest, the behavior circuitry's pulse rate is approximately 30 pulses per minute; the pulse rate increases to 120 pulses or more per minute when the animal is engaged in vigorous activity like running.

The optional Activity Switch (indicated by "A" at the end of the Transmitter Number) varies pulse rate according to the position or movement of the animal.

The Mortality Switch option allows the researcher to detect lack of movement in the animal. This lack of activity triggers a customer-specified increase or decrease in pulse rate. The time delay before indication of mortality can be programmed to be any period from a few seconds to over 12 hours. During normal activity in live animals, the mortality timer circuit is continually reset so that no mortality is indicated. The Mortality Switch is listed with an M at end of the Transmitter Number.

Combined Activity/Mortality features can be built into a transmitter, as indicated by "AM" at the end of the Transmitter Number.

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.

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.