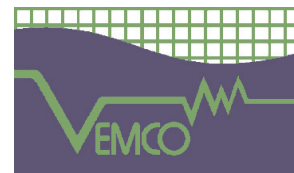


V9 Continuous Transmitter



A division of **AMIRIX**

Continuous pinger for real-time study of small species

The **V9 continuous tag**, 9 mm in diameter, was developed to provide researchers with the means to track small and juvenile fish in real-time for behavioural studies. The V9's have been successfully implanted in salmon pre-smolts as small as 150 mm fork length. They feature rounded ends for better implant retention but have also been externally attached. The tags are shipped with a magnetic switch for easy activation.



The V9 transmitter.

Continuous Mode

In continuous transmission mode, the acoustic ping is sent as a fixed rate that is factory pre-set and typically between one and two seconds. This mode is ideal for real time tracking studies. V9 continuous tags can be used with several receiver systems including the VR100, VR28, VR60 (with Option 07 version 2.01) and VRAP buoy system.

four temperature ranges: -5 to 35°C, -4 to 20°C, 0 to 40°C and 10 to 40°C. (See table following page.)

V9 Continuous Tag Sensor Options

For research requiring temperature and depth information, V9 tags can be equipped with temperature, V9T, or depth, V9P, or both, V9TP. V9P pressure transmitters are available in the following full scale pressure options: 50, 100 and 200 meters. V9T temperature transmitters are available in

Available Frequencies

V9 continuous pingers are available in the following frequencies: 63.0, 75.0, 78.0, 81.0, 84.0 kHz and can be used with a number of hydrophone and receiver types. For information on specific applications of the V9 or for technical details, please contact VEMCO.

Physical Specifications

The size of the V9 pinger will vary with battery option. The table below describes the physical specifications for each battery type.

	Battery Option:	6L	1L	1H	2L	2H
V9	Length (mm)	21	24	24	29	29
	Weight in air (g)	2.9	3.6	3.6	4.7	4.7
	Weight in water (g)	1.6	2.2	2.2	2.9	2.9
	Power Output (dB re 1uPa @1m)	146	146	151	146	151
V9TP	Length (mm)	39	40	40	47	46
	Weight in air (g)	4.6	5.2	5.2	6.4	6.4
	Weight in water (g)	2.2	2.7	2.7	3.5	3.5
	Power Output (dB re 1uPa @1m)	147	147	150	147	150

Stated tag length, weight and output power are nominal. Small manufacturing variations can be expected.

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Expected Battery Life

The V9 continuous pinger's life span depends on battery size (either 6, 1, or 2), power output (high or low) and the ping period (in milliseconds). The table describes the life span of each battery type at the standard ping periods.

Notes: The projected battery life is an estimate and users will experience a decrease in battery life if their tags are operating in extreme warm or extreme cold temperatures.

VEMCO transmitters are programmed to stop transmitting when they reach their stated battery life.

VEMCO tags are warranted to be free from defects in material and workmanship for one year from date of delivery.

Please contact VEMCO for additional information regarding battery life.

V9 tags with sensors will ping at varying rates depending on the sensor readings and therefore battery life will vary depending on the behaviour of the animal. The two battery lives shown for sensor tags are the extremes. Consult your VEMCO representative to determine the expected battery life for your study and for additional information regarding battery life.

V9 pingers incur a small current drain prior to activation. Tag life will be reduced if tags are shelved for a significant period of time (months). V9 pingers should be activated within 6 months of delivery. Contact VEMCO for information.

V9 Continuous Tags Battery Life (days)					
Period	V9-1L	V9-1H	V9-2L	V9-2H	V9-6L
1000ms	20	7	37	13	14
2000ms	37	14	68	25	26
V9T Series					
	V9T-1L	V9T-1H	V9T-2L	V9T-2H	V9T-6L
1000 ms	19 (9)	7 (3)	34 (17)	12 (6)	13 (7)
2000ms	35 (23)	13 (8)	66 (51)	23 (18)	24 (16)
V9P Series					
	V9P-1L	V9P-1H	V9P-2L	V9P-2H	V9P-6L
1000 ms	6 (3)	4 (2)	11 (5)	7 (3)	3 (1)
2000ms	12 (7)	8 (5)	22 (14)	14 (9)	6 (4)
V9TP Series					
	V9TP-1L	V9TP-1H	V9TP-2L	V9TP-2H	V9TP-6L
1000 ms	12 (8)	6 (4)	21 (15)	10 (7)	7 (5)

Temperature Sensor		
Range	Accuracy	Resolution
-5 to 35 °C	±0.5 °C	0.15 °C
-4 to 20 °C	±0.5 °C	0.1 °C
0 to 40 °C	±0.5 °C	0.15 °C
10 to 40 °C	±0.5 °C	0.12 °C

Pressure Sensors (at room temperature)		
Max Depth	Accuracy	Resolution
50 m	±2.5 m	0.22 m
100 m	±5 m	0.44 m
200 m	±10 m	1.2 m

How to Order V9 Continuous Transmitters

When ordering the V9 continuous transmitter, please specify the following:

- [1] Frequency
- [2] Ping period
- [3] Output power level (high or low)
- [4] If a depth sensor (V9P) is required, what is the maximum depth (50, 100 or 200 meters)?
- [5] If a temperature sensor (V9T) is required, what is the temperature range (-5 to 35°C, -4 to 20°C, 0 to 40°C or 10 to 40°C)?
- [6] Quantity of tags

