

Coded Transmitters - 69 kHz

Transmitters with unique ID codes for surgically implanting in a broad range of aquatic animals from salmon smolts to great whites

Vemco's family of 69 kHz coded transmitters provides researchers with the means to track and monitor movement and behaviour patterns of a wide variety of aquatic animals. Coded tags are programmed with a unique ID that is specific to each individual fish being tagged.

The tags can function as basic pingers giving location and time of arrival near receivers or used for more detailed research when equipped with temperature and or depth sensors.

Available in a range of sizes from 7 mm to 16 mm in diameter and in a variety of battery models, the tags can be used for studies from one month up to several years in duration. Transmission range can be in excess of several hundred meters depending on environmental conditions.



Coded Tag Sensor Options

For research requiring temperature and depth information, V7, V9, V13 and V16 tags can be equipped with temperature (T) or depth (P), or both temperature and depth sensors (TP). The V8 tag is not available with sensor options.

Temperature Sensors (V7, V9, V13, V16)

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

V7 and V9 Pressure Sensors (at room temperature)

Max Depth	Accuracy	Resolution
17 m	±0.5 m	0.075 m
34 m	±0.5 m	0.15 m
68 m	±1.0 m	0.3 m
136 m	±1.0 m	0.6 m
204 m	±1.0 m	0.9 m
290 m	±2.0 m	1.28 m

V13 and V16 Pressure Sensors (at room temperature)

Max Depth	Accuracy	Resolution
17 m	±1.7 m	0.075 m
34 m	±1.7 m	0.15 m
68 m	±3.4 m	0.3 m
136 m	±6.8 m	0.6 m
204 m	±10 m	0.9 m
340 m	±17 m	1.5 m
680 m	±34 m	3.0 m

Range Test Tags

Range test tags programmed at the same output power as your proposed study are used to conduct in situ range testing. They are configured with a FIXED delay and an ON time of two weeks as a precautionary measure to ensure the tag will expire in a reasonable period of time if accidentally dropped overboard.



Case Options

The V16 comes in two case styles. The internally implanted unit comes in an epoxy case with rounded ends. The externally mounted unit is made of PVC with attachment holes at either end. The externally mounted unit is 18 mm in diameter and is approximately 19 to 23 mm longer than the internal V16 depending on the model.



Programmable ON/OFF

Programming options allow users to take advantage of tag behaviour over the life of their tags. Users can use between one to four programming steps to define the tags transmission: status (ON/OFF), time interval, power level (L/H) and nominal delay.

For example, tags can be programmed to start in LOW power mode for one day during the surgical implantation phase.

Program to turn OFF for the surgery recovery period to conserve battery life since the location of the animals are known.

If you are tracking animals during a migration phase, the tag can be programmed to turn ON in HIGH power mode for several weeks or months at a time.

To track animals in a residency type setting, the tag may be programmed to stay ON in LOW power mode for extended periods of time.

Pair With

Coded 69 kHz transmitters are used as a system with all Vemco 69 kHz receivers:

- » VR2Tx Transponding Receiver
- » VR2AR Transponding Receiver and Acoustic Release
- » VR2W-69 kHz Receiver
- » VR4-UWM (Underwater Modem)
- » VMT (Vemco Mobile Transceiver)



PRODUCT SPECIFICATIONS

Tag Family	Diameter (mm)	Length (mm), Min - Max	Weight in Air (g) Min - Max	Power Output (dB re 1 uPa @ 1m)	Sensors*	Battery Life (days)** Delay 60 secs	Battery Life (days)** Delay 180 secs
V7	7 mm	19.5 - 24	1.5 - 1.9	137 - 141	T, P, TP, D, DT	173	387
V8	8 mm	20.5	2.0	144 - 147	N/A	172	403
V9	9 mm	24 - 31	3.6 - 4.9	146 - 151	T, P, TP, A, AP, D, DT	496	912
V13	13 mm	30.5 - 39	9.2 - 11	147 - 152	T, P, TP, A, AP	935	1825
V16	16 mm	68 - 98	24 - 36	152 - 158	T, P, TP, A, AT	3650	3650

* T - Temperature, P - Pressure, TP - Temperature/Pressure, A - Acceleration, AP - Acceleration/Pressure, AT - Acceleration/Temperature, D - Predation, DT - Predation/Temperature

** Battery life examples simulated for standard coded tags without sensors

Ready to Get Started? Contact us today.

About Innovasea

Innovasea designs the world's most technologically advanced aquatic solutions for fish tracking and builds them to withstand the toughest conditions. It's all driven by a commitment to make our ocean and freshwater ecosystems sustainable for future generations. Today. Tomorrow. For life.