

# 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

Coded 69 kHz transmitters provide 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 6.3 mm to 16 mm in diameter and in a variety of battery models, the tags can be used in 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.

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

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

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.

## Pair With

Coded 69 kHz transmitters are used as a system with:

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



## PRODUCT SPECIFICATIONS

Tag Model	Diameter (mm)	Length (mm)	Weight in Air (g)	Weight in Water (g)	Power Output dB re 1 µPa @ 1m (Low / High)	Battery Life (days)* Delay 60 secs	Battery Life (days)* Delay 180 secs
V6-2x	6.3	13	0.9	0.5	137 / 141	91	154
V7/V7T-2x	7	19.5	1.5	0.7	137 / 141	119	268
V7/V7T-4x	7	21.5	1.8	0.9	137 / 141	173	387
V7P/V7TP-2x	7	21	1.7	0.8	137 / 141	99	228
V7P/V7TP-4x	7	23	1.9	1.0	137 / 141	143	329
V8-4x	8	20.5	2.0	1.0	144 / 147	172	403
V9-1x	9	24	3.6	2.0	146 / 151	274	650
V9/V9T-2x	9	27.5	4.5	2.7	146 / 151	496	912
V9P/V9TP-2x	9	31	4.9	2.8	146 / 151	410	730
V13-1x	13	30.5	9.2	5.1	147 / 152	911	1825
V13T-1x	13	34	9.7	4.8	147 / 152	752	1751
V13P/V13TP-1x	13	39	11	5.5	147 / 152	523	1285
V16/V16T-4x	16	68	24	10.3	152 / 158	3650	3650
V16/V16T-5x	16	95	36	16.9	157 / 162	2208	3650
V16/V16T-6x	16	95	34	14.9	152 / 158	3650	3650
V16P/V16TP-4x	16	71	26	12.0	152 / 158	2806	3650
V16P/V16TP-5x	16	98	37	17.5	157 / 162	1860	3650
V16P/V16TP-6x	16	98	36	16.5	152 / 158	3650	3650

\* Battery life examples shown are for LOW power and non-sensor variants only. Please contact your Sales Representative to obtain battery life estimates for HIGH power and sensor tags. Note also that shelf life will affect tag life and therefore tags should be deployed within a reasonable amount of time from purchase. Please contact your Sales Representative to determine the time frame within which your tags should be deployed.

**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.

