



V8 Coded Transmitters

Implantable transmitter for salmon smolt and juvenile species

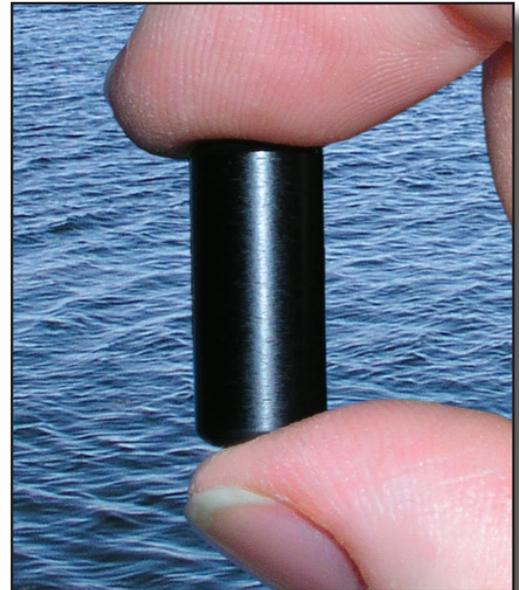
The **V8 coded transmitter**, 8 mm in diameter, was developed to provide researchers with the means to track the behaviour patterns of small and juvenile fish. This tag is particularly suited for seamless monitoring of salmon smolt migrations. V8 coded transmitters operate at 69 kHz and can be detected by all VEMCO 69 kHz receivers.

The V8 provides an excellent option between the V7 and V9. Smaller than the V9-1L, the V8 has considerably higher output power than the V7 which provides greater detection range.

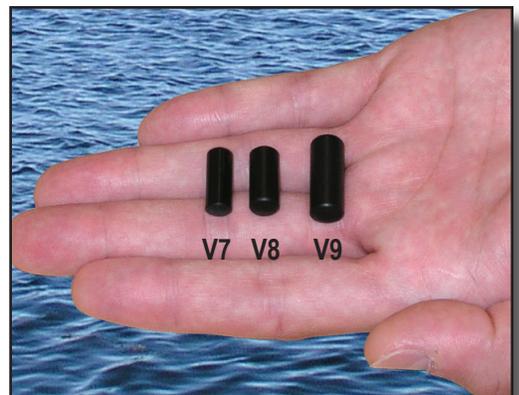
Physical Specifications

Model:	V8-4L	V8-4H
Length (mm)	20.5	20.5
Diameter (mm)	8	8
Power Output (dB re 1 uPa @ 1m)	144	147
Weight in air (g)	2	2
Weight in water (g)	0.9	0.9

Stated tag lengths are nominal. Small manufacturing variations can be expected.



The V8-4L weighs only about 0.9 grams in water and is only 20.5 mm long.



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Range Testing Tag

Range testing tags can be provided, at the same output power as your proposed study, to be used to conduct in situ range testing. VEMCO range test tags come with a sturdy, afixed end cap for ease of attachment to mooring lines. Range test tags are configured with a FIXED delay and an on-time of two weeks. This is a precautionary measure to ensure that the tag will expire within a reasonable period of time if accidentally dropped overboard. The tag on-time can be reset using the external magnet.



Expected Battery Life

The life span of the V8 depends on the output power (high/low) and the delay between transmissions [seconds]. V8 battery life can vary from several weeks to over a year depending on which of the many tag programming options you use. The table below shows the estimated battery life for the V8-4L and V8-4H transmitter battery options using the most common delay settings. Note that V8 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). Contact VEMCO for information.

Projected Battery Life (Days)		
Nominal Delay (seconds)	V8-4L	V8-4H
60	152	55
120	231	97
180	281	132

Notes: 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. Tags can be programmed for shorter lives, if required.

The table above is for our most popular nominal delay settings. Please contact VEMCO for more information regarding battery life for other nominal delay settings.

Programmable ON/OFF

VEMCO transmitters are available with programming options that allow users to take greater advantage of the transmitter's behaviour over the life of their tags. In order to control the characteristics of their tags, users have the option of using between one to four programming steps to define the tags transmission: Status (ON/OFF), time interval, acoustic power level (L/H) and nominal delay.

This is an example of how tag programming options can be utilized to provide a staged release tag behaviour.

Interval	Status	Time (Days)	Power (L/H)	Nominal Delay (sec)
Step 1	ON	1	L	30
Step 2	OFF	9		
Step 3	ON	30	H	120
Step 4	ON	117	L	180

When finished LOOP back to Step 4. Estimated tag life in this example is 157 days.

Step 1: The tag is programmed to start in LOW power mode with a nominal delay setting of 30 seconds for a period of 1 day. This allows a researcher to activate a tag and have it transmit for 1 day during the surgical implantation phase of the study.

Step 2: The tag is programmed to turn OFF for a period of 9 days. In order to conserve battery life while the animals recover from surgery, the tags are switch to the OFF status since the location of the animals is known.

Step 3: The tag is programmed to turn ON in HIGH power mode with a nominal delay setting of 120 seconds for a period of 30 days. This allows a researcher to release and track the animals during a 30 day migration period through a given study area.

Step 4: The tag is programmed to stay ON in LOW power mode with a nominal delay setting of 180 seconds for a period of 117 days. This allows a researcher the ability to track the animals for 117 days during what might be a more residency type setting. Note the Loop control setting is set to Step 4 thus keeping the tag in the ON status until the tag reaches its battery end of life.

