VR2AR Receiver, Transmitter and Acoustic Release

vemco

Receivers

The VR2AR (Receiver, Transmitter and Acoustic Release) combines an **acoustic release** with a VR2Tx (a VR2W receiver with a built in V16-like transmitter) that allows communications with receivers while still deployed, and also enables researchers to retrieve the unit using a simple and reliable built in acoustic release.

Acoustic Release Features

▸ Quick and reliable release typically within one (1) minute

▸ Easy re-arming method

▸ Release mechanism: push-off titanium pin has a copper sleeve to reduce bio-fouling and is controlled by a DC motor

▸ External case designed for easy attachment of flotation for buoyancy

Built In Transmitter

The built in transmitter can be used as a sync tag for improved VPS results and also provides a means to retrieve receiver status on demand through communications to a VR100 receiver at the surface. The VR2AR maintains all of the existing features of the VR2W plus the following:

Programmable Watch Table

▸ Sets a list of tag ID's and monitors the number of detections received from the watch table

▸ Collects summary detection information for VPS sync tags or range test tags to verify performance without having to retrieve receivers

Range Detection between VR2AR and VR100

▸ Estimates the distance between the VR2AR and the VR100

▸ Use the VR100 to locate a potentially lost VR2AR

Unit Discovery Mode

▸ Determines which receivers are within range of the VR100 without having to remember specific serial numbers and exact receiver locations

Programmable Built In Sync Tag

▸ Logs its own transmissions

▸ Four programmable power levels:
  - Low = 142 dB
  - Medium = 148 dB
  - High = 154 dB
  - Very High = 160 dB

▸ ID and random delay transmission interval factory programmed at VEMCO. Transmit frequency fixed at 69 kHz (compatible with all VEMCO 69 kHz receivers)

Surface to Receiver Communications Using the VR100 Receiver

The VR2AR communicates to the surface using the VR100 active tracking receiver with a transponding hydrophone. Researchers will be able to retrieve the following information, with a simple user interface, from any deployed VR2AR:

▸ Unit health

▸ Number of detections

▸ Programmable watch table

▸ Tilt, depth and temperature

▸ Estimated remaining battery life and memory

▸ Release status, arming the release and activating the release

▸ Ability to get range and depth information as the unit is rising to the surface

The VR2AR is compatible with all VR100-200 models sold since January 2013. Customers will require a new transponding hydrophone to attach to the VR100 to communicate with the VR2AR.
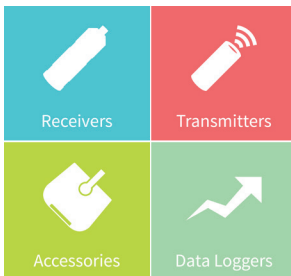
Transponding Hydrophone   **VR100 Receiver**

Receivers   **Transmitters**

Accessories   **Data Loggers**

Tel: (902) 450-1700
Fax: (902) 450-1704

www.vemco.com

VR2AR Specifications

Dimensions	Length: 397 mm, 342 mm without release lug Diameter: 81 mm Mooring bracket width: 165 mm	Communication	Acoustic via VR100 and Bluetooth®
Weight	2350 g in air, 500 g in water	Mooring	Mooring Lug Opening: 19 mm Float Attachment Bracket: 2 x 14 mm
Power supply	1 - 3.6 V Lithium D cell battery (Rx) 1 - 4V Lithium AA cell battery (AR)	Firmware	Field upgradeable receiver firmware
Rx battery life	Approximately 14 months	Software	VEMCO User Environment (VUE) software
AR battery life	> 100 releases per battery	Transmitters	Decodes and logs all VEMCO 69 kHz coded transmitters
Maximum depth	500 metres	Code Maps	Support for all current and planned VEMCO Code Maps
Frequency	69 kHz standard		
Storage	16 MBytes non-volatile flash memory (~1.6-million detects)		