



# SVR DUAL

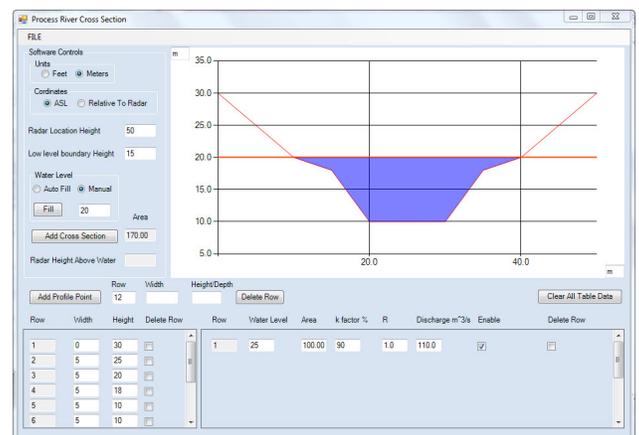
Surface Velocity Radar with  
Water Level Sensor

## Accurate Water Speed Measurement

The SVR Dual integrates the SI-3L SVR Doppler radar speed sensor with a ranging radar water level sensor and is designed specifically to measure the discharge of streams and rivers. The SVR DUAL gives you precise speed, channel level and discharge measurements from a permanent position above the body of water. It is extremely valuable for ongoing channel measurement both during normal and flood conditions.

### Features

- Allows scientists to determine the surface water velocity, channel height and discharge
- Includes cosine correction, allowing the unit to compensate for horizontal angles. Vertical permanently set at 40 degrees
- Directional - Select approach, recede or both (toward & away)
- Adjust features such as Hold Time, Update Rate and Sensitivity.
- Outputs include RS232, RS485, SDI-12, and Analog output 4-20 mA
- Compact size, measures only 16.5cm(H) x 17.8cm(W) x 33cm(L)
- Narrow Beam width:  
Speed Sensor: 6.5° (H) by 5.5° (V)  
Distance Sensor: 8° (both Horizontal & Vertical)
- Range:  
Speed Sensor: 100 meter typical  
Range Sensor: 35 meter typical
- Speed Range of 0.1 - 20 meters-per-second
- Operates off of standard nominal 12VDC (+10 VDC to +24 VDC)
- Weather proof. Meets European Community Standard IP67
- Weights only 3.2 kg



*Over 60 Years of Doppler Radar Experience*

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The SVR Dual simultaneously measures water surface velocity and distance to the surface of the channel. Using this data the discharge rate (volume in cubic meters-per-second) can be output when river cross section is defined by the end user.

At a minimum this software requires input of the riverbed contour (in the form of profile points) and the SVR DUAL mounting height. A profile point is a two-dimensional coordinate representing a specific point on the riverbed relative to the SVR DUAL location. To increase accuracy of the discharge rate calculation, the user may add any of the following: low-water level boundary, known discharges, and error correction K coefficients.

## Software Features

1. OPEN and SAVE - open and save the profile and discharge tables.
2. UNITS - Selection of metric or imperial units
3. COORDINATES - Select either ASL (Above Sea Level) or relative to SVR DUAL location.
4. RADAR LOCATION HEIGHT - Reference height location for the SVR DUAL radar
5. LOW LEVEL BOUNDARY HEIGHT - The height at which the SVR DUAL will ignore low water levels.
6. WATER LEVEL FILL - Allows selection of a predetermined water level fill height or depth.
7. ADD CROSS SECTION - Adds a data points of known values to the discharge table to help increase accuracy in the discharge calculation.
8. RADAR HEIGHT ABOVE WATER - Shows distance from SVR DUAL radar to surface of water as water level is changed in the model.
9. ADD PROFILE POINT - First column is the list of ROW data pairs that represent a specific pint along the riverbed. The second column is the width of the measurement between points or the distance between the current point and the previous point.
10. PROFILE POINT TABLE DATA - Shows list of profile points describing the contour of the riverbed.
11. DELETE ROW - Removes selected data points in the profile data table or discharge data table.
12. DISCHARGE DATA TABLE - Table of known discharges and corresponding water levels for accuracy improvement.
13. CLEAR ALL TABLE DATA - Deletes all table data in both the profile and discharge data tables.
14. RIVER PROFILE GRAPH AREA - Details river cross section area as defined from the riverbed profile points.

