



## SPECTRA User Manual

### Glossary

Reference: SPCTRA\_2.0/USER/GLOSS/2.0  
Issue Date: 23<sup>rd</sup> May 1997  
Author: Dave Skett

Approved by:

Project Manager:

Technical Publications:


Distribution:

Internal  
Customers  
Prospects

This document is the property of **Concept Systems Limited**. It must not be copied, in whole or in part, or otherwise disclosed, without prior written consent. Any copies of this document, or part thereof, must also include a copy of this legend. This document is supplied without liability for errors or omissions.

© Copyright Concept Systems Limited 1997

1 Logie Mill, Beaverbank Business Park, Logie Green Road, Edinburgh EH7 4HG, Scotland  
Tel: (+44)131 557 5595 Fax: (+44)131 557 2367 Telex: 727673 CONCEP G



# Table of contents

<b>Chapter 0 - About this document.....</b>	<b>0-1</b>
<b>Revision history .....</b>	<b>0-1</b>
<b>Document cross-reference .....</b>	<b>0-1</b>
<b>Conventions used in this document .....</b>	<b>0-2</b>
<b>Chapter 1 - General glossary.....</b>	<b>1-1</b>



# Chapter 0 - About this document

This document contains a glossary of terms and useful definitions used throughout the SPECTRA system. It is part of the suite of user manuals for the SPECTRA system.

---

## Revision history

Document Reference	Date	Notes
SPCTRA_2.0/USER/GLOSS/1.0	12 <sup>th</sup> November 1996	First issue.
SPCTRA_2.0/USER/GLOSS/2.0	23 <sup>rd</sup> May 1997	Interface unit definition added. Variable offsets/scales now implemented.

---

## Document cross-reference

Document Reference	Title
SPECTRA/USER/BEGIN	<i>SPECTRA User Manual - Beginner's Guide</i>
SPECTRA/USER/ALGO	<i>SPECTRA User Manual - Algorithms</i>
SPECTRA/INSTALL_2	<i>Spectra Software Installation and Set Up</i>
SHARED/RTNU_OP_2	<i>RTNU &amp; Closure Unit Hardware Installation and Operation</i>
SHARED/MICRO_4	<i>RTNµ Hardware Installation and Operation</i>
SHARED/VDS_2	<i>Video Display Subsystem Hardware Installation and Operation</i>
SHARED/DATDIS_1	<i>Data Distributor Hardware Installation and Operation</i>
SHARED/INTS_2	<i>Interface Reference</i>
SHARED/HEAD_2	<i>Header Output Reference</i>
SPECTRA/USER/DSN	<i>SPECTRA User Manual - Data Server Node</i>
SPECTRA/USER/DTN	<i>SPECTRA User Manual - Data Transfer Node</i>
SPECTRA/USER/NCN	<i>SPECTRA User Manual - Network Calculation Node</i>
SPECTRA/USER/RTCN	<i>SPECTRA User Manual - Real Time Configuration Node</i>
SPECTRA/USER/LMN	<i>SPECTRA User Manual - Line Management Node</i>
SPECTRA/USER/DN	<i>SPECTRA User Manual - Display Node</i>
SPECTRA/USER/BCN	<i>SPECTRA User Manual - Binning Configuration Node</i>
SPECTRA/USER/BN	<i>SPECTRA User Manual - Bullseye Node</i>
SPECTRA/USER/TN	<i>SPECTRA User Manual - Turn Node</i>
SPECTRA/USER/DLN	<i>SPECTRA User Manual - Data Logging Node</i>
SPECTRA/USER/QCLN	<i>SPECTRA User Manual - QC Logging Node</i>
SPECTRA/USER/QCN	<i>SPECTRA User Manual - QC Node</i>
SPECTRA/USER/BDN	<i>SPECTRA User Manual - Back Deck Node &amp; Back Deck Configuration Node</i>
SPECTRA/USER/UN	<i>SPECTRA User Manual - Utility Node</i>
SPECTRA/USER/SRIN	<i>SPECTRA User Manual - SRI Node</i>
SPECTRA/USER/RN	<i>SPECTRA User Manual - Replay Node</i>
SPECTRA/USER/NLN	<i>SPECTRA User Manual - Navigation Logging Node</i>

---

## Conventions used in this document

The conventions used in this, and all other SPECTRA user manuals, are those defined in the *SPECTRA User Manual - Beginner's Guide*.



<i>Buoy Reference Node</i>	<p>This type of reference node defines the reference point of a tailbuoy or navigation buoy.</p> <p>In SPECTRA:</p> <ul style="list-style-type: none"> <li>• For a navigation buoy, the reference node position should be set to the nominal distance from the node to the reference point of the towing vessel. The reference node of this node is the towing vessel's reference node.</li> <li>• For a tailbuoy, the reference node position should be set to the nominal distance from the node to the reference point of the towing streamer. The reference node of this node is the towing streamer's reference node.</li> </ul>
<i>BVA</i>	The rate of change of <i>BDA</i> . Abbreviation used on some displays.
<i>BVC</i>	The rate of change of <i>BDC</i> . Abbreviation used on some displays.
<i>CDP</i>	Common Depth Point.
<i>CMG</i>	Course Made Good. This is the direction of travel of the vessel with respect to North. (This is distinct from the gyro, which gives the <i>orientation</i> of the vessel with respect to North). It is the resultant bearing from a previous vessel position to the latest vessel position and it is derived from the respective coordinates of these positions.
<i>CMP</i>	Common Mid Point.
<i>C-O</i>	Computed minus observed values, in measured units. C-O is also used to refer to the pattern calibration parameter, in measured units.
<i>Configuration</i>	<p>Whilst the Data Server holds configuration data, it is volatile and lost when either the Data Server, or the Node from which the configuration data was obtained, is shut down. Each time SPECTRA is started up, configuration data must be presented to the Data Server. This is usually accomplished by:</p> <ol style="list-style-type: none"> <li>1. Reading in the saved configuration from file. All existing configuration data will be replaced by the values in the file. Old values will be lost, unless you have already saved them.</li> <li>2. Submitting the configuration to the Data Server. Note that the values you read from file only replace those held in the Node - the actual configuration used by the Data Server does not change unless you submit the new values.</li> </ol>
<i>Connecting</i>	<p>Each SPECTRA Node must establish communications with the Data Server, which then furnishes the Node with a channel for communication with other Nodes. The Node can then obtain data provided by other SPECTRA Nodes, and the Node's own data can be submitted to the Data Server for use by other Nodes.</p> <p>Note: connecting in itself does not submit data.</p> <p>The Node's connection with the Data Server may be broken at any time by disconnecting from the Data Server. This will remove from the Data Server any data items previously produced by the Node.</p>













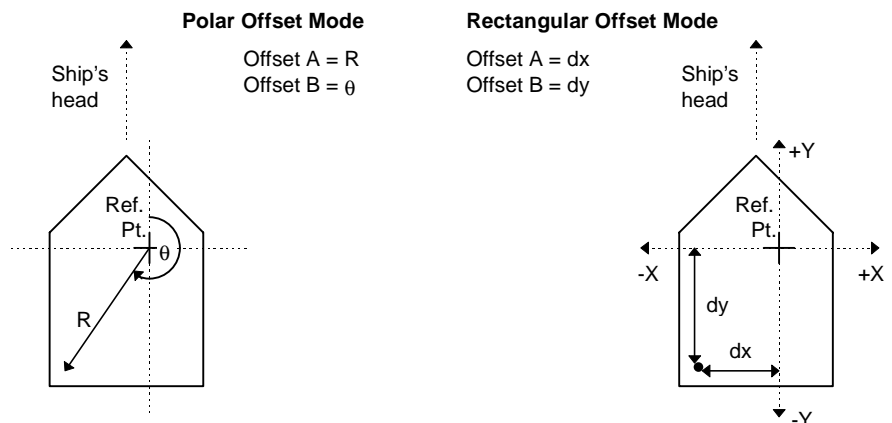
In this diagram node types are shown in italics, node names in normal text, and a node's reference node is in brackets. The reference nodes include the vessel, gun array, streamer and tailbuoy reference points (RP, RGA, RSA, RSB, RTA and RTB). Other nodes have offset coordinates specified relative to a reference node.

*Normalised residual* Due to random noise and possible errors there will always be a discrepancy between the set of observations and the defined model. The projection of these discrepancies onto the vector representing a given observational error assumption (e.g. all observations except the distance A to B are correct), divided by the theoretical (*a priori*) standard deviation of this projection, is called the normalised residual. Assuming there are no errors of the specified (or similar) type, the normalised residual will have a mid value of zero and a standard deviation of one. *A posteriori* values significantly different from these *a priori* values require either the reasoned rejection of observations or the adjustment of the defined model.

*NORTH* A Northing observation. It requires one node to be specified (*a from* node).

*NR* Normalised Residual. Abbreviation used on some displays.

*Offset mode* The offset mode determines the coordinate system in which position offsets from a reference position (usually the vessel reference point) are represented. It can be *polar* or *rectangular*. Offsets are referred to as offset A and offset B. For the *polar* offset mode, offset A is the range and offset B is the bearing, measured from the reference point to the target. For the *rectangular* offset mode, offset A is the relative X coordinate (X-axis positive to starboard), and offset B is the relative Y coordinate (Y-axis positive for'ard). This is illustrated below:



Offsets are expressed in metres or degrees, as appropriate.











