



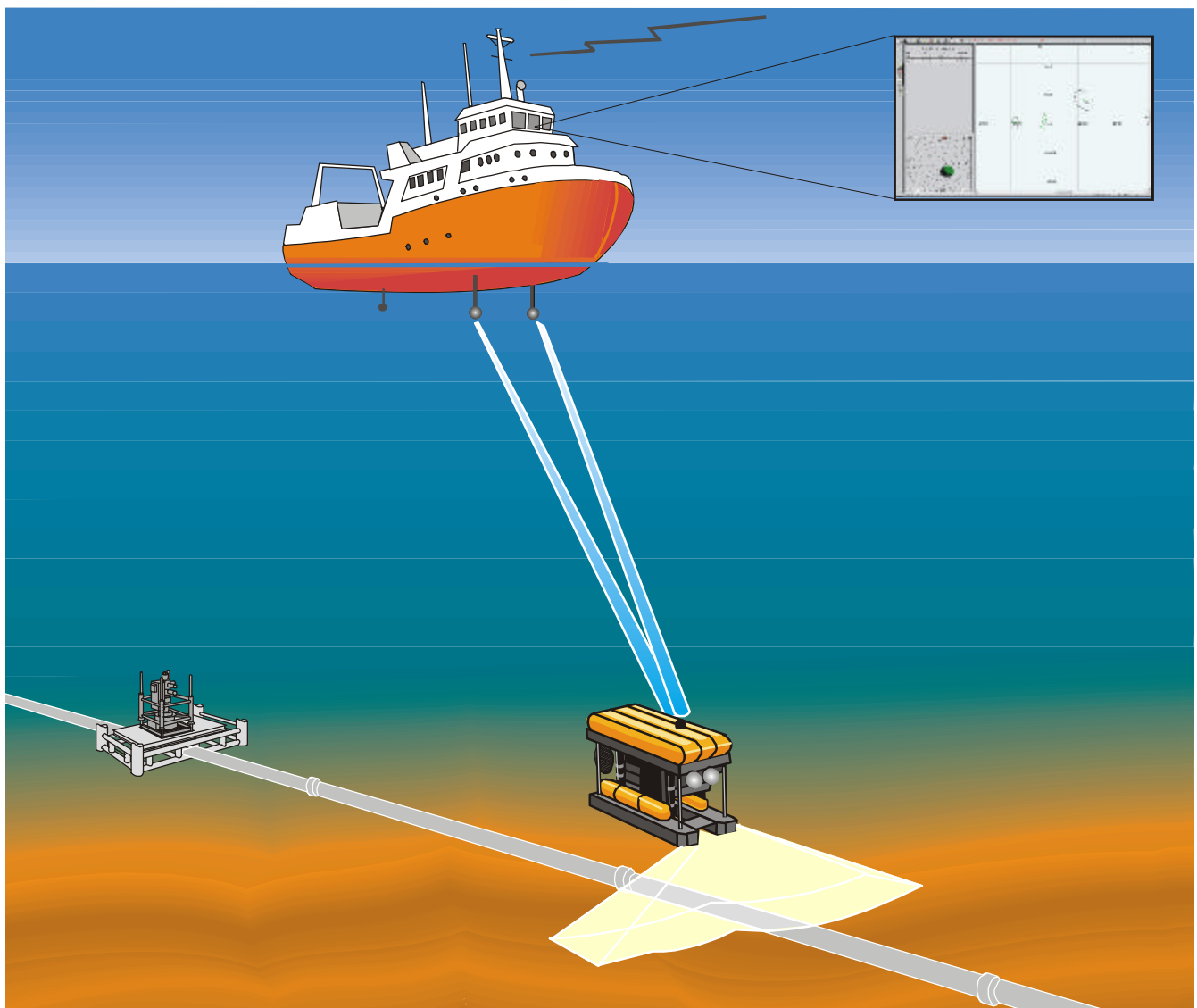
KONGSBERG

# Instruction manual

## APOS for the HiPAP system

Acoustic Positioning Operator Station (APOS)

Base version





# **APOS for the HiPAP system**

## Acoustic Positioning Operator Station (APOS)

Instruction manual - Base version

### **Note**

Kongsberg Simrad AS makes every effort to ensure that the information contained within this document is correct. However, our equipment is continuously being improved and updated, so we cannot assume liability for any errors which may occur.

### **Warning**

The equipment to which this manual applies must only be used for the purpose for which it was designed. Improper use or maintenance may cause damage to the equipment or injury to personnel. The user must be familiar with the contents of the appropriate manuals before attempting to install, operate or maintain the equipment.

Kongsberg Simrad AS disclaims any responsibility for damage or injury caused by improper installation, use or maintenance of the equipment.

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## Sections

This is the Instruction manual for the Acoustic Positioning Operator Station (APOS). It contains a general description of the Kongsberg Simrad Hydroacoustic Position Reference (HPR) 400 series systems, required protocols, and how to get started on the APOS. The manual includes the following sections:

### **1 APOS Operator manual**

*This section includes the standard operator manual for the APOS and includes an introduction to the APOS, abbreviations and terms, how to getting started on the APOS, LBL and SBBL principle of operation and operator maintenance.*

### **2 HiPAP 500 product description**

*This section describes the HiPAP 500 acoustic positioning system. It includes positioning principles, applications, system units, configurations and functions. It also includes technical specifications and drawings.*

### **3 HiPAP 350 product description**

*This section describes the HiPAP 350 acoustic positioning system. It includes positioning principles, applications, system units, configurations and functions. It also includes technical specifications and drawings.*

### **4 NMEA 0183 sentences**

*This section describes the ASCII sentences used by the HiPAP and HPR system that comply with the NMEA rules.*

### **5 Attitude formats description**

*This section describes the gyro and VRS formats the the HiPAP and HPR system can receive.*

### **6 HPR 400 Binary Communication Protocol**

*This section describes the HPR 400 standard telegrams sent to external equipment.*

### **7 HPR 300 telegrams**

*This section describes the HPR 300 external equipment telegram formats.*

### **8 Transponder Quick Reference Guide**

*This section includes the Transponder Quick Reference Guide, and references to the available transponder Instruction Manuals.*

## Remarks

### References

Further information about how to operate the Kongsberg Simrad Acoustic Positioning Operator Station (APOS) is found in:

- APOS On-line help system

Further information about the Kongsberg Simrad Acoustic Positioning systems using APOS software, are found in the following manuals

<b>HiPAP system</b>	<b>Hull units</b>
HiPAP Instruction manual	HiPAP hull units Instruction manual

### The reader

This manual assumes the operator has some knowledge of the general principles of operation, the standard display modes and terminology used in acoustic positioning systems.

## References

*(The information on this page is intended for internal use)*

### Documents

<b>Sect</b>	<b>Title</b>	<b>Archive</b>	<b>Reg. no.</b>	<b>Rev.</b>
0	Cover and contents	AA000	857-164581	A
1	Acoustic Positioning Operator Station (APOS) Operator manual	AA067	850-160841	*
2	HiPAP 500 product description	AA000	857-164556	*
3	HiPAP 350 product description	AA000	857-164557	*
4	NMEA 0183 sentences	AA038	850-160045	*
5	Attitude formats description	SS-100	853-201392	*
6	HPR 400 Binary Communication Protocol	AA067	857-160898	*
7	HPR 300 telegrams	AA067	849-108368	*
8	Transponder Quick Reference Guid	AA000	859-164414	*

( \* The latest versions of all document modules are included as standard.)

## Document logistics

Rev	Date	Written	Checked	Approved
A	01.06.98	GM	JEF	JEF
B	01.07.99	GM	JEF	JEF
C	10.10.01	GM	THG	JEF
D	14.12.01	GM	THG	JEF
E				
F				
G				

*(The original signatures are recorded in the company's logistic database.)*

Rev	Comments
A	Original issue.
B	Implemented the HPR 300 telegrams section. Minor corrections in the text
C	Implemented the Transponder Quick Reference Guide. New layout. Ref. EM 857-160925C.
D	Document changed to include only HPR 400 serie. Ref EM 857-160925

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To assist us in making improvements to the product and to this manual, we would welcome comments and constructive criticism. Please send all such - in writing or by e-mail - to:



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