

SIMRAD

Simrad EK80
Wide band scientific echo sounder
Harbour Acceptance Test

Vessel/Customer

Atlantis - WHOI

Document information

- **Product:** Simrad EK80
- **Document:** Harbour Acceptance Test
- **Document part number:** 401925
- **Revision:** C
- **Date of issue:** 03 July 2020

Copyright

The information contained in this document remains the sole property of Kongsberg Maritime AS. No part of this document may be copied or reproduced in any form or by any means, and the information contained within it is not to be communicated to a third party, without the prior written consent of Kongsberg Maritime AS.

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 and/or injury to personnel. You must be familiar with the contents of the appropriate manuals before attempting to operate or work on the equipment.

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

Disclaimer

Kongsberg Maritime AS endeavours to ensure that all information in this document is correct and fairly stated, but does not accept liability for any errors or omissions.

Support information

If you require maintenance or repair, contact your local dealer. You can also contact us using the following address: simrad.support@simrad.com. If you need information about our other products, visit <https://www.simrad.com>. On this website you will also find a list of our dealers and distributors.

Table of contents

INTRODUCTION.....	5
Purpose.....	5
Personnel and location	5
Tools and test equipment	6
ACCEPTANCE TEST SUMMARY.....	7
HARDWARE AND SOFTWARE REGISTRATION	8
Verification of previously tested items.....	8
Software items	9
Hardware items	10
Display.....	10
Processor Unit	11
Transceiver Unit	12
Transducers.....	13
Ethernet switch	14
EC150-3C Power Supply Unit	14
Software licenses	15
Transceiver hardware and software versions.....	16
VISUAL INSPECTIONS	17
Inspecting logistic items	17
Visual inspection of the display	18
Visual inspection of the Processor Unit	20
Visual inspection of the Wide Band Transceiver (WBT)	22
Visual inspection of the WBT Cabinet	24
Visual inspection of the EC150-3C Power Supply Unit.....	26
TESTING THE EK80 OPERATIONAL FUNCTIONALITY	29
Functional test of the EK80 Wide band scientific echo sounder	29
Functional test of the EK80 with EC150-3C	32
Measuring noise in passive operating mode	34
Reading the transceiver hardware and software versions	36
Verifying the communication with the course gyro.....	38
Verifying the communication with a navigation system (GPS).....	40
Verifying the communication with speed log	42
Verifying the communication with the motion reference unit (MRU)	44

Verifying the communication with a synchronization system	47
CUSTOMER ACCEPTANCE FORM	49
SECONDARY PROCEDURES	50
Turning on the EK80.....	51
Turning off the EK80.....	52
Verifying that the bottom is correctly detected	53
Switching between ADCP and echo sounder operation	54
Defining the raw data recording parameters	55
Recording raw data	57
Selecting <i>Replay</i> mode.....	59
Choosing which raw data file(s) to replay	60
Defining the processed data recording parameters	61
Recording processed data	63
Installing one or more transducers.....	65
Installing transceiver channels.....	68
Checking the data transfer on an external interface line.....	71
Reading the transceiver hardware and software versions	73
Installing and troubleshooting Network Time Protocol (NTP)	75
Installing Network Time Protocol (NTP).....	75
Installing Network Time Protocol (NTP) monitor	80
Troubleshooting the Network Time Protocol (NTP) service	84

Introduction

Topics

Purpose, page 5

Personnel and location, page 5

Tools and test equipment, page 6

Purpose

The purpose of this Harbour Acceptance Test is to verify that the EK80 system provided to the vessel is correctly installed, and fully functional. It is then ready for the Sea Acceptance Test. The EK80 can be provided in several different hardware configurations. In this Harbour Acceptance Test, you only need to do the tests that apply to the specific configuration provided.

When all the tasks have been done, the report form must be signed by the relevant parties. The completed document then becomes the official report.

Personnel and location

This Harbour Acceptance Test is done on board the vessel, alongside the quay. The test is done by personnel from Kongsberg Maritime. A representative from an authorized dealer or distributor can do the Harbour Acceptance Test on behalf of Kongsberg Maritime.

Tools and test equipment

Specific tools and test equipment are required for this Simrad EK80 Harbour Acceptance Test. The required tools and equipment must be made available before the test can start. The required test equipment is listed. For each item, record the instrument's serial number and - if relevant - its calibration expiry date.

- Multimeter

	Serial number	Calibration expiry date
Multimeter		

All external sensors (GPS, speed, heading etc) used during normal operation of the EK80 must be available.

Acceptance test summary

The purpose of this Harbour Acceptance Test is to verify that the EK80 system provided to the vessel is correctly installed, and fully functional. This acceptance test summary is provided to offer an overview of the functions and items that need to be tested. References are made to the individual chapters in this Harbour Acceptance Test.

Procedure

- 1 Record the software and hardware items that are included in the test.
 - [Hardware and software registration, page 8](#)
- 2 Do a visual inspection of each unit that is comprised by the EK80 delivery.
 - [Visual inspections, page 17](#)
- 3 Test the main functionality of the EK80.
 - [Testing the EK80 operational functionality, page 29](#)
- 4 When all the tests have been successfully concluded, open the *Customer acceptance* form, and fill it in with the relevant signatures.
 - [Customer acceptance form, page 49](#)

The end user and technical documentation for the EK80 contains several procedures that are also applicable for this Harbour Acceptance Test. These procedures are not part of the Harbour Acceptance Test. They are provided for reference purposes only.

- [Secondary procedures, page 50](#)

Hardware and software registration

Topics

- Verification of previously tested items, page 8
- Software items, page 9
- Hardware items, page 10
- Software licenses, page 15
- Transceiver hardware and software versions, page 16

Verification of previously tested items

It is not necessary to fill in registration tables for software and hardware items that have already been recorded in a previous test.

Are the EK80 user interface software and hardware units the same as those tested during the *Factory Acceptance Test*? If this is the case, it is not necessary to fill out the registration tables again. If no changes have been made to neither the software nor the hardware, sign the table below to verify this.

Verification of previously tested items
Neither user interface software, transceiver software nor hardware units have been changed on this EK80 system since the <i>Factory Acceptance Test</i> . For this reason, the registration tables have not been filled out.
Date and signature