

The International Hydrographic Review

Vol. 3 No. 2 (New Series)

AUGUST 2002



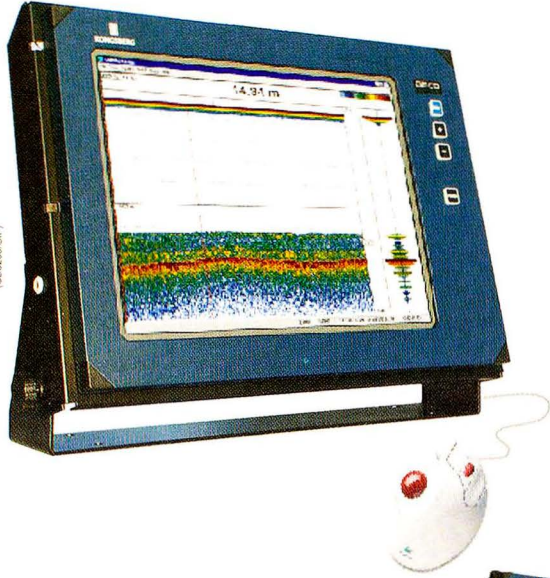
SPONSORED BY THE INTERNATIONAL HYDROGRAPHIC ORGANISATION



KONGSBERG

EA 600

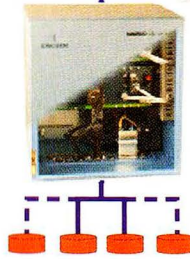
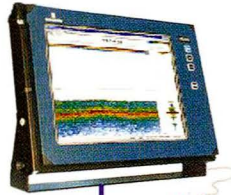
New Generation Hydrographic Single-beam Echo Sounder



- Flexible configuration saves installation costs on new-build or retrofit
- Quick & easy Microsoft Windows user interface
- Local storage on HDD
- Export of data to writable CD or Ethernet
- Up to four frequencies simultaneously - controlled independently

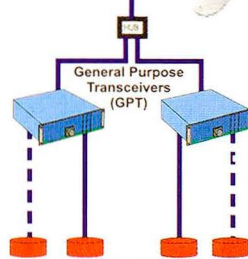
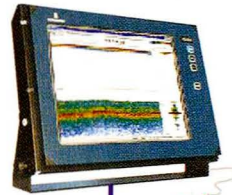
EA 600 Alternative Configurations

- 15 or 18 inch color LCD display (19 inch rack or table mounted)
- Sound Velocity Profile compensation, profile editor included
- Passive pinger tracking mode (12 kHz)
- Continuous measurement of alongtrack slope angle
- 12 kHz to 710 kHz frequency range



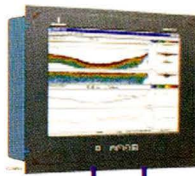
Alternative 1

Colour LCD display with built-in CPU, 2 GPT units installed in housing for rough area environment (IP55)



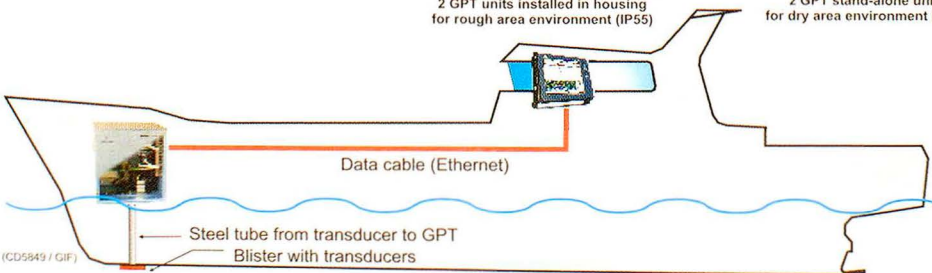
Alternative 2

Colour LCD display with built-in CPU, 2 GPT stand-alone units for dry area environment (IP40)



Alternative 3

EA600 for 19" rack mount: Colour LCD display with built-CPU & 2 GPTs



(CD5949 / GIF)

KONGSBERG SIMRAD

Norway
Tel.: 47 33 02 38 00
Fax: 47 33 04 47 53

USA
Tel.: 1 713 934 8885
Fax: 1 713 934 8886

Dartmouth, Nova Scotia
Tel.: 1 902 468 2268
Fax: 1 902 468 2217

WEB:
www.kongsberg-simrad.com

UK
Tel.: 44 1 224 226 500
Fax: 44 1 224 226 501

Singapore
Tel.: 65 899 5800
Fax: 65 899 1225

Italy
Tel.: 39 6 65 57 579
Fax: 39 6 65 57 859

EMAIL:
horten.sales@kongsberg-simrad.com

Vol. 3 No. 2 (New Series)

Augustus 2002

THE INTERNATIONAL HYDROGRAPHIC REVIEW

SPONSORED BY THE INTERNATIONAL HYDROGRAPHIC ORGANISATION

Published by:

GITC bv, P.O Box 112, 8530 AS Lemmer, The Netherlands

Tel.: +31 (514) 56 18 54, Fax: +31 (514) 56 38 98

E-mail: mailbox@gitc.nl, Web-site: www.gitc.nl

Contents

■ Editorial	5
Adam J. Kerr	
■ Articles	
From Mutiner to Hydrographer The Surveying Career of Peter Haywood	6
By Andrew David, UK	
The Navigation Surface: A New Database Approach to Creating Multiple Products from High-density Surveys	12
By LT Shepard M. Smith, NOAA, Dr. Lee Alexander and CAPT Andrew A. Armstrong, NOAA (ret.), Centre for Coastal Ocean Mapping/Joint Hydrographic Center, University of New Hampshire, USA	
An Investigation Regarding Seafarers' Resistance to Using ECDIS Black-background Chart Display Modes	27
By Tony Boyle and Ian Rodrigues, Faculty of Maritime Transport and Engineering, Australian Maritime College and Robert Ward, Australian Hydrographic Service, Australia	
International Co-operation to Improve Safety of Navigation in the Southern Red Sea	35
By Richard Dobson, U.K. Hydrographic Office, UK	
United Kingdom Hydrographic Office Experience of Producing Electronic Navigational Charts	45
By Dr Peter Wright, U.K. Hydrographic Office, UK	
LADS Survey - A Case Study on Australia's Northwest Shelf	53
By Commander Mark Sinclair RAN (Retd.), Tenix LADS Corporation, Australia	
Future Advancements in Airborne Hydrography	67
By Gary C. Guenther and W. Jeff Lillycrop, Joint Airborne Lidar Bathymetry Technical Center of Expertise, USA and John R. Banic, Optech Incorporated, Canada	
Hydrographic Data Standards and Standards-based Geospatial Data Infrastructures	91
By Timothy V. Evangelatos, Terraqueous Technologies, C. Douglas O'Brien, IDON Technologies Inc., Michael Casey and Don Vachon, Canadian Hydrographic Service, Fisheries and Ocean Canada, Canada	
The 175th Anniversary of the Russian Navy Hydrographic Service	103
By Admiral A.A. Komaritsyn, Chief of the HDNO, Captain 1st rank (ret.) and I.M. Miroshnikov, Former Chief of the HDNO Hydrographic Division, Russia	
■ Notes	
GIS As a Spatial Decision Support System for Offshore Pipeline Route Optimisation	109
By Alex Bade, Laser-Scan Ltd and William A. Mackaness, University of Edinburgh, UK	
Practical Accuracy Standards for Positioning	113
By Prof. Jac Spaans, the European Maritime Radio navigation Forum	
■ Book Review	
La Meridienne	116
By Pascale Bouzanquet, Librarian and French Editor, International Hydrographic Bureau	
■ Obituary	
Lt Cdr Alan Ingham RN (Retd), ARICS 1932-2002	118
■ Rectification	
References - The Baudin Expedition to Australia	120

The International Hydrographic Review

Publishing Company :GITC bv
 President :Ing. Johan Boesjes
 Publication Director :Drs. Ing. Floris Siteur
 Editor-in-Chief :Adam J. Kerr
 Editorial Board :Michael Casey
 :Joe Doyle
 :Horst Hecht
 :Rear Admiral Giuseppe Angrisano (International Hydrographic Organisation)
 Editorial Manager :Nynke van den Berg
 Account Manager :Johannes van der Schaar
 Circulation Manager :Jeroen Zaagemans

Instructions for Contributors

The International Hydrographic Review is an international journal publishing original works on all aspects of hydrography and associated subjects, ranging from the latest technical developments to history. It also provides a medium for discussions in the form of shorter articles and notes. Submissions should be sent to:

Mr. Adam Kerr
 Flagstaff Cottage
 Lamorna
 Penzance
 Cornwall TR19 6XQ
 UNITED KINGDOM
 Tel./Fax.: +44 (0)1736 - 731 976
 E-mail: kerr@cwcom.net

or
 Nynke van den Berg
 GITC bv
 P.O. Box 112
 8530 AC Lemmer
 THE NETHERLANDS
 Tel.: +31 (514) 56 18 54
 Fax: +31 (514) 56 38 98
 E-mail: nynke.vandenberg@gitc.nl

Submissions should be either as attached e-mail files or as two hard copies.

ARTICLES should be 4,000-6,000 words long, although longer articles may be considered. Authors are responsible for ensuring that all manuscripts are typed accurately before final submission. Contributions are normally received with the understanding that they comprise original, unpublished material and are not being submitted for publication elsewhere. Most articles will be refereed to ensure both accuracy and relevance and amendments to the script may be required before final acceptance. On acceptance, contributions are subject to editorial amendment. When time permits, authors will receive a copy of the final article before publication.

NOTES of approximately 1,500-2,000 words may be accepted if the subject does not lend itself to a full article. These will not be refereed but will be subject to editorial comment and amendments.

MEETING REPORTS. When appropriate, the Review may contain reports of relevant meetings.

BOOK REVIEWS are welcome. These should normally be approximately 1,000 words in length.

LETTERS TO THE EDITOR are welcome.

Layout of Articles

- Short title (up to 40 characters including spaces), subtitle (if desired), author(s) name(s) and affiliation(s)
- Abstract of approximately 100 words, outlining in a single paragraph the aims, scope and conclusions of the paper
- Main body of text, with sub-titles to emphasise changes of topic. Ideally in blocks of approximately 500 words
- References
- Appendices as required
- Illustrations in original form with captions, provided separately from the text. The use of coloured illustrations should be discussed prior to submission of the articles

References

Bibliographical references should be listed at the end of the articles in the standard Harvard

form. Footnotes should be kept to a minimum and the metric system used throughout.

Delivery of Material

Typescript: Deliver the manuscript on disc or by e-mail, preferably on Microsoft Word or RTF. Send an identical hard copy by mail or fax.

Illustrations: We prefer to receive hard copy illustrations (e.g. photographs, slides or negatives). If you decide to deliver digital illustration material, please note that the minimum resolution of the illustrations should be 367 dpi at reproduction size and conform to one of the following formats: TIFF, JPEG, BMP, GIF or TIF.

Reprints

Reprints of all articles (including articles published in earlier issues) can be ordered. For more information, please contact Nynke van den Berg at GITC.

Copyright

Any permission needed to incorporate material published elsewhere is the responsibility of the authors and it will be assumed that such permission has been maintained. The publisher is not responsible for statements made in the articles or advertisements nor is responsible for typing or converting errors. No material may be reproduced in whole or in part without written permission of GITC bv.

Subscription Information

The Journal is published three times a year by GITC bv and can be obtained regularly by subscription. Please find below the subscription rates:

	Europe	All other countries
1 year Individual	€ 61.00	US\$ 84.00
1 year Library	€ 78.00	US\$ 99.00

Should you wish to take out a subscription then please be so kind as to contact our Circulation Manager (jeroen.zaagemans@gitc.nl) and everything will be arranged correctly.