



Dossier du BHI N° S3/2543

LETTRE CIRCULAIRE N° 45/2005
28 avril 2005

**SYSTEMES MONDIAUX D'EXPLORATION CARTOGRAPHIQUE
DES FONDS OCEANIQUES**

Références : A. LC du BHI N° 10/2001 du 15 février 2001
B. LC du BHI N° 37/2003 du 27 mai 2003

Monsieur le Directeur,

Le groupe informel d'utilisateurs OHI de systèmes multifaisceaux, établi dans la LC mentionnée en référence A, s'occupe de la tenue à jour de la liste mondiale des systèmes d'exploration cartographique des fonds océaniques. Une version actualisée de la liste publiée en Référence B est jointe en annexe à la présente, à titre d'information. Il est demandé que toute correction/ajout à la liste soit adressée à :

M.Hartmut PIETREK, (hartmut.pietrek@bsh.de) avec copie au BHI (sshipman@ihb.mc)

La liste peut également être téléchargée sur le site Web de l'OHI www.iho.shom.fr > Publications > Download list.

Veillez agréer, Monsieur le Directeur, l'assurance de ma haute considération,

Pour le Comité de direction,

A handwritten signature in blue ink, appearing to be 'H. Gorziglia', is written over a faint circular stamp.

Capitaine de vaisseau Hugo GORZIGLIA
Directeur

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

VESSEL NAME	OPERATOR	SYSTEM	INSTALL YR
AUSTRALIA:			
CASUARINI (Leeuwin Survey Launch)	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-200	1997
COOK (retired, disposed of)	ROYAL AUSTRALIAN NAVY	SEABEAM	1965 (retired)
DUYFKIN (Melville Survey Launch)	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-200	1998
FANTOME (Leeuwin Survey Launch)	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-200	1997
GEOGRAPH (Melville Survey Launch)	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-200	1998
JOHN GOWLAND (Melville Survey Launch)	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-100	1998
INVESTIGATOR (Leeuwin Survey Launch)	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-200	1997
LEEUWIN	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-100	1997
MELVILLE	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-100	1998
MEDA (Melville Survey Launch)	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-200	1998
TOM THUMB (RAN School Ship) "Reserve"	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-200	1998
	ROYAL AUSTRALIAN NAVY	ATLAS FANSWEEP-20-100 (2 systems)	1997, 1998
	FUGRO SURVEY PTY. LTD	RESON SEABAT	
	JAMES COOK UNIVERSITY	RESON SEABAT8101	1999
	RACAL-AUSTRALIA	RESON SEABAT 9003-350	
	SEISMIC ASIA PACIFIC	SEABEAM 1055 Dual frequency	uprade 2000
	WOODSIDE PETROLEUM	ATLAS FANSWEEP-10	1993
AUSTRIA:			
ALPHA	DANUBE OPERATION AUTHORITY-VIENNA	ATLAS FANSWEEP-20-200	1996
KREMS	B.M. FUR VERKEHR SCHIFFAHRTSBEHORDE	SIMRAD EM-3000 (DUAL)	1996
WIEN 3	DANUBE OPERATION AUTHORITY-VIENNA	ATLAS FANSWEEP-20	1996
WIEN 4	DANUBE OPERATION AUTHORITY-VIENNA	ATLAS FANSWEEP-20	1996
BANGLADESH			
	OCCIDENTAL PETROLEUM OF BANGLADESH	RESON SEABAT	
BELGIUM:			
BELGICA	BELGIAN MATHEMATICAL MODEL OF THE NORTH SEA	SIMRAD EM-1002 (retractable hull unit)	1999
JACQUELINE	SILT-ZEEBRUGGE	ATLAS FANSWEEP-20-100	1996
OOSTEND 11	SILT-ZEEBRUGGE	ATLAS FANSWEEP-20-100	1996
PAREL II	DIVISION COAST - HYDROGRAPHIC OFFICE	SIMRAD-EM-3000D	2001

TER STREEP	DIVISION COAST - HYDROGRAPHIC OFFICE	SIMRAD EM-950	1994
VEREMANS	DIVISION COAST - HYDROGRAPHIC OFFICE	SIMRAD EM-950	1996
BRAZIL:			
TAURUS	BRAZILIAN NAVAL HYDROGRAPHIC OFFICE	SIMRAD EM-1000	1998
	BRAZILIAN NAVY	RESON SEABAT 9001-350	
BRUNEI			
	BRUNEI SHELL PETROLEUM COMPANY SDN BHD	RESON SEABAT	
CANADA:			
AMUNDSEN	ARCTICNET NCE	SIMRAD EM-300 (with ice window)	2003
ANNE S. PIERCE	SEAMAP GEOSURVEYS INC	SIMRAD EM-1002 (w/hull unit)	1999
FREDERICK G. CREED	CANADIAN HYDROGRAPHIC SERVICE [Laurentian Region]	SIMRAD EM-1002S	2005
FUGRO JACQUES	FUGRO	RESON SEABAT 8101	
GARROT	CANADIAN HYDROGRAPHIC SERVICE (Quebec Region)	Navitronic 2000 (6 Transducer System)	2005
GC 03 (SWEEP SYSTEM)	CANADIAN HYDROGRAPHIC SERVICE (Quebec Region)	Navitronic 2000 (6 Transducer System)	1980
GUILLEMOT	CANADIAN HYDROGRAPHIC SERVICE (Laurentian Region)	SIMRAD EM-3002S	2005
HARBOUR QUEEN	PORT OF SAINT JOHN	SIMRAD EM-3002	N/A
HERON	UNIVERSITY OF NEW BRUNSWICK	SIMRAD EM-3000	2002
LOUIS M. LAUZIER	CANADIAN HYDROGRAPHIC SERVICE	SIMRAD EM-100	1989 [Retired 2002]
MATHEW	CANADIAN HYDROGRAPHIC SERVICE [Atlantic Region]	SIMRAD EM-710	2005
MERLIN	CANADIAN HYDROGRAPHIC SERVICE (Central & Arctic Region)	SIMRAD EM-3002S	2004
MORILLON	CANADIAN HYDROGRAPHIC SERVICE (Quebec Region)	Navitronic 2000 (6 Transducer System)	2005
OTTER BAY	CANADIAN HYDROGRAPHIC SERVICE [Pacific Region]	SIMRAD EM-3002S	2005

**SEABEAM 1180/II and ELAC BCC /II-180 KHz are identical

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

PENGUIN	NRCAN (ATLANTIC)	SIMRAD EM-3002S/SUBMETRIX 2000 Swath Plus	2005/temporary mount
PETREL	CANADIAN HYDROGRAPHIC SERVICE [Central&Arctic Region]	SIMRAD EM-3002S	2005
PELICAN	CANADIAN HYDROGRAPHIC SERVICE	SIMRAD EM-3002S	2005
PLOVER	CANADIAN HYDROGRAPHIC SERVICE [Atlantic Region]	SIMRAD EM-3002S	2005
PROFILER	PUBLIC WORKS CANADA - PACIFIC (1)	Navitronic 2000 (6 Transducer System)	N/A
	PUBLIC WORKS CANADA - ATLANTIC (2)	Navitronic 2000 (6 Transducer System)	N/A
	PUBLIC WORKS CANADA -QUEBEC (3)	Navitronic 2000 (6 Transducer System)	N/A
	PUBLIC WORKS CANADA -ONTARIO (4)	Navitronic 2000 (6 Transducer System)	N/A
PUFFIN	CIDCO/UQAR	SUBMETRIX	N/A
	UQAR	RESON 8101	N/A
FCG SMITH (SWATH/SWEEP SYSTEM)	CANADIAN HYDROGRAPHIC SERVICE [Laurentian Region]	NAVITRONICS (210 kHz)	n/a
VECTOR	CANADIAN HYDROGRAPHIC SERVICE [Pacific Region]	SIMRAD EM-1002S (with hull unit)	2005
	DEFENCE RESEARCH ESTABLISHMENT-ATLANTIC (DREA)	RESON SEABAT 8125	2002
CCGS VECTOR	CANADIAN HYDROGRAPHIC SERVICE (Pacific Region)	SIMRAD 1002 (with hull unit)	2002
	ST. LAWRENCE SEAWAY AUTHORITY	RESON SEABAT 9001	N/A
	ST. LAWRENCE SEAWAY AUTHORITY	Navitronic 2000 (6 Transducer System)	N/A
CHILE:			
CABRALES	CHILEAN NAVY	ATLAS HYDROSWEET MD-2, FANSWEEP-20-200	1999
CHINA:			
DAYANG YI HAO	CHINA OCEAN MINING RESEARCH ASSOCIATION	SEABEAM 2112.360, SEABEAM 3012 (upgrade)	1995, 2002
FEN DOU 4	MINISTRY OF GEOLOGY-GUANGZHOU	SIMRAD EM-3000, EM-950	1997
HAI-YANG 4	MINISTRY OF GEOLOGY	SEABEAM 2112	1995
HAE-YANG 2000	MINISTRY OF TRANSPORTATION	SEABEAM 2112.360 (12/36 kHz)	1998
HUBAOYU 2378	SHANGHAI WATERWAY BUREAU-CMSA	ATLAS FANSWEEP-20-200	1999
HYDRO 2	HONG KONG MARINE DEPARTMENT	SIMRAD EM-3000	1997
"SURVEY VESSEL"	SHANGHAI PORT AUTHORITY	ATLAS FANSWEEP-10	1993
	BOHAI OIL COMPANY	TRITON-ELICS HYDROSUITE	2001
	BUREAU OF YANGTZE RIVER HYDROLOGY	RESON SEABAT 9001S	1998
	CHINA MARITIME SAFETY ADMINISTRATION-SHANGHAI	ATLAS FANSWEEP-20-200	2001
	CHINESE NAVY - ZHAN ZIANG	ATLAS FANSWEEP-20-200	2002
	EGS SURVEY COMPANY-HONG KONG	ELAC BCC II-180 kHz (3 sys)	1994, 1996, 1997
	EGS SURVEY COMPANY-HONG KONG	SEABEAM 1050 D (DUAL FREQ-upgrade)	1999
	EGS SURVEY COMPANY-HONG KONG	SEABEAM 1180	2000
	FIRST INSTITUTE OF OCEANOGRAPHY	SIMRAD EM-3000, EM-950	1997
	HARBIN SHIPBUILDING INSTITUTE	RESON SEABAT	
	HONG KONG CIVIL ENGINEERING (HYDROGRAPHIC DEPT)	ODOM ECHOSCAN	2000
	HONG KONG MARINE DEPARTMENT	RESON SEABAT 9001S-350	
	HONG KONG POLYTECHNIC UNIVERSITY	SEABEAM 1185	2000
	INSTITUTE OF GEOPHYS. & GEOCHEM. EXPLOR.-HONG KONG	ELAC SEABEAM 1180	2002
	INSTITUTE OF OCEANOLOGY-CHINESE ACAD. SCIENCE	RESON SEABAT	
	JIANXI INSTITUTE OF WATER RESOURCES-JUIJIANG PORT	RESON 8101	2000
	MINISTRY OF GEOLOGY-QIANGDAO	SIMRAD EM-3000, EM-950	1998
	MINISTRY OF GEOLOGY-SHANGHAI	SIMRAD EM-3000, EM-950	1997
	OCEAN UNIVERSITY-QINGDAO	SEABEAM 1050	2002
	SECOND INSTITUTE OF OCEANOGRAPHY, HANGZHOU	SEABEAM 1050 D (DUAL FREQ)	1998
	SHANGHAI WATERWAY BUREAU-CMSA	ATLAS FANSWEEP-20	2000
	STATE OCEANIC ADMINISTRATION - SECOND INSTITUTE	RESON SEABAT 8101	2000
	SOUTH CHINA SEA INSTITUTE OF OCEANOLOGY	RESON SEABAT	
	THIRD INSTITUTE OF OCEANOGRAPHY, XIAMEN	SEABEAM 1180 (DUAL)	1999
	YAHGTZE RIVER THRID NAVIGATION ENGINEERING COMPANY	ATLAS FANSWEEP-15 (2 systems)	2002
LIANJIANLIAN-1	TIANJIN MARITIME SAFETY ADMINISTRATION	RESON SEABAT 8101(ER)-240KHz /Caris HIPS f. Win.	
	TIANJIN MARITIME SAFETY ADMINISTRATION	RESON SEABAT 9003	1998
	TIANJIN MARITIME SAFETY ADMINISTRATION	RESON SEBAT 8125	2004
HAICE-1005	SHANHAI MARITIME SAFETY ADMINISTRATION	ATLAS FANSWEEP-10	2001
HAICE-1007	SHANHAI MARITIME SAFETY ADMINISTRATION	ATLAS FANSWEEP-20/Hydrormap (Unix)	
	SHANHAI MARITIME SAFETY ADMINISTRATION	RESON SEABAT 9003	2001

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WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

B-344	GUANGZHOU MARITIME SAFETY ADMINISTRATION	RESON SEABAT 8101(ER)-240KHz/Caris HIPS f. Win.	1998
	GUANGZHOU MARITIME SAFETY ADMINISTRATION	RESON SEABAT 9003	2001
	SHANGHAI WATERWAY BUREAU	ATLAS FANSWEEP-20/ Hydromap (Unix)	2001
DANMARK			
PAUL LØWENØRN	ROYAL DANISH ADMIN OF NAVIG. & HYDROGRAPHY	RESON SEABAT 8125	2002
MARIDAN 600 AUV	MARIDAN SURVEY A/S	RESON 8125	2001
O-1	ROYAL DANISH NAVY MATERIAL COMMAND	RESON SEABAT 8101	2000
O-2	ROYAL DANISH NAVY MATERIAL COMMAND	RESON SEABAT 8101	2001
SKA 11	ROYAL DANISH NAVY MATERIAL COMMAND	RESON SEABAT 8111	
SKA 16 SURVEY VESSEL	ROYAL DANISH NAVY MATERIAL COMMAND	SEABEAM 1180 (upgrade)	1999
SKA 15 SURVEY VESSEL	ROYAL DANISH NAVY MATERIAL COMMAND	SEABEAM 1180 (upgrade)	1999
GRIBBEN	ROYAL DANISH NAVY MATERIAL COMMAND	RESON SEABAT 8101 (EXTENDED RANGE)	2005
EKKO	COPENHAGEN HARBOR AUTHORITY	RESON SEABAT 9001	N/A
	DANISH FOREIGN MINISTRY	RESON SEABAT	
	DANSURVEY	RESON SEABAT	
	EIVA A/S	RESON SEABAT 9001-350 (2 systems)	
DIG1	KYSTINSPEKTORATET	RESON SEABAT 8101-210	N/A
DIG2	KYSTINSPEKTORATET	RESON SEABAT 8101-210	
	ROYAL DANISH ADMIN OF NAVIG. & HYDROGRAPHY	ELAC BCC-180 KHz (4 sys)	1991, 1994 (3)
	SOVOERNETS MATERIELKOMMANDO	RESON SEABAT	
	STOREBOELTSKONSORTIET	RESON SEABAT	
	SVITZER A/S	RESON SEABAT 9001-350	
EGYPT			
	SUEZ CANAL AUTHORITY	ATLAS FANSWEEP 20-200	2002
ESTONIA			
	ESTONIA MARITIME BOARD (ENMB)	RESON SEABAT	
FINLAND:			
SUUNTA	FINNISH NAVY	ATLAS FANSWEEP-10	1993
	FINNISH NAVY	RESON SEABAT	
	FINNISH MARITIME ADMINISTRATION-HYDROG OFFICE	RESON SEABAT 8111	1997
	FINNISH MARITIME ADMINISTRATION-HYDROG OFFICE	RESON SEABAT 8101 (2 systems)	1999
FRANCE:			
L'ATALANTE	IFREMER	SIMRAD EM-12 (DUAL), SIMRAD EM-1000	1990/1994
BEAUTEMPS - BEAUPRE	SHOM	SIMRAD EM-120 (1°x1° system)/EM 1002S	2002
BORDA	S.H.O.M.	SIMRAD EM-1002	1998
JANUS	COMEX	RESON SEABAT 8101/Triton Elics HS150	2001
LAPÉROUSE	S.H.O.M.	SIMRAD EM-1002	1999
LAPLACE	S.H.O.M.	SIMRAD EM-1002	2000
MARION DUFRESNE II	IFRTP (FRENCH POLAR INSTITUTE)	THOMSON MARCONI TSM 5265	1996
MOUETTE	PORT AUTONOME DE DUNKERQUE	ATLAS FANSWEEP 20-200	2000
LE SUROIT	IFREMER	SIMRAD EM-1000, EM-300 (1x2° system)	1991, 1997
OCEAN SURVEYOR	LD CANOCEAN	SIMRAD EM-12, EM-950	1990, 1994
VH 90 (La Zélée)	S.H.O.M.	ATLAS FANSWEEP 20-200	2000
Fassmer Launches (x7)	SHOM	Simrad EM3000/ EM-3002 (allto be upgraded into 3002	2003 -end 2005
Pourquoi pas ?	SHOM/Ifremer	Reson 7111- Reson 7150 dual frequency (12/24 kHz 1x 1° /0.5x0.5°)	Commissioning end 2005
	DRAGAGES PORT	SIMRAD EM-3000	2001
	LD CANOCEAN	RESON SEABAT	
	GTM DUMEZ	SIMRAD EM-3000	1998
	GROUPE DE ETUDES SOUS MARINE DE LA ATLANTIQUE	RESON SEABAT 8101	
	MESURIS	RESON SEABAT 8101 (x2)	n/a
	PORT AUTONOME LE HAVRE	RESON SEABAT 8101	n/a
	PORT AUTONOME ROUEN	RESON SEABAT 8101	n/a
	PORT AUTONOME MARSEILLE	RESON (Model n/a)	n/a
GERMANY:			
BALTIC	WASSER UND SCHIFFAHRTS AMT-STRALSUND	SIMRAD EM-3000D	2002
BIENE	WASSER UND SCHIFFAHRTS AMT-HAMBURG	SIMRAD EM-3000 D	1998
DEEPENSCHRIEWER III	PORT OF HAMBURG	ATLAS FANSWEEP-20-200	1996

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WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

DENEB	BSH	ATLAS HYDROSWEEEP MD	1993
GENIUSBANK	O.S.A.E., BREMEN	RESON SEABAT 8101	
KOMET	BSH	ATLAS FANSWEEP 20-200	1998
KOMET 4 (Komet Survey launch)	BSH	ATLAS FANSWEEP 15	1998
KOMMANDOR JACK (ex-Valdivia)	O.S.A.E., BREMEN	SIMRAD EM-120, SIMRAD 1002	1998
JADE	WASSER UND SCHIFFFAHRTS AMT-WILHELMSHAVEN	ATLAS FANSWEEP 20-200	2002
JENS UWE LORNSSEN	WASSER- UND SCHIFFFAHRTSAMT-TOENNING	ATLAS FANSWEEP 20-200	1998
METEOR	DFG/BMFT/RF	ATLAS HYDROSWEEEP DS	1986
NADIR	WASSER UND SCHIFFFAHRTS AMT-BREMEN	ATLAS FANSWEEP 20-200	2003
ZENIT	WASSER UND SCHIFFFAHRTSAMT BREMERHAVEN	ATLAS FANSWEEP 20-200	2004
KRABBE (Survey Launch)	WASSER UND SCHIFFFAHRTS AMT-BREMERHAVEN	ELAC BCC II 180 khz	1998
WFS PLANET	GERMAN NAVY	RESON 8125	2004
POLARSTERN (Icebreaker)	ALFRED-WEGENER-INSTITUT FUR POLARFORSCHUNG	ATLAS HYDROSWEEEP DS-2	1994
REIHER	WASSER UND SCHIFFFAHRTS AMT-DUISBURG	SIMRAD EM-3000 D	1998
SONNE	BMFT/RF	SIMRAD EM 120	2001
SOUNDING SYMPHONY	O.S.A.E., BREMEN	ATLAS FANSWEEP-10	
LUDWIG PRANTL / STORCH (portable System)	G.K.S.S.	SIMRAD EM-3000S	1999
TANGENS	WASSER UND SCHIFFFAHRTS AMT-REGENSBURG	SIMRAD EM-3000 D	1998
UNKELSTEIN	WASSER UND SCHIFFFAHRTS AMT-BINGEN	SIMRAD EM-3000 D	1999
WEGA	BSH	SIMRAD EM-3000D	2001
	NAVITRONICS GmbH (Schaeffermeier)	RESON SEABAT 9001-350	
	NICOLA ENGINEERING	SIMRAD EM-120	1999
	NICOLA ENGINEERING	SIMRAD EM-3000 (portable system)	1999
	WASSER UND SCHIFFFAHRTS AMT-TOENNING	RESON SEABAT	
GREECE			
AEGAEO	GREEK NATIONAL CENTRE FOR MARINE RESEARCH	SEABEAM 2120	1999
NAFTILOS	HELLENIC NAVY HYDROGRAPHIC SERVICE	SIMRAD EM-1002	2001
PITHEAS	HELLENIC NAVY HYDROGRAPHIC SERVICE	SIMRAD EM-2000	2001
	GREEK NATIONAL CENTRE FOR MARINE RESEARCH	SEABEAM1180	2000
	UNIVERSITY OF ATHENS	SEABEAM 1055	2002
HUNGARY			
GYÖR 1	NORTH-TRANS-DANUBIAN DISTRICT WATER AUTHORITY	ATLAS FANSWEEP 20-200	1997
ICELAND			
ÁRNI FREDRIKSSON	ICELAND MARINE RESEARCH INSTITUTE	SIMRAD EM-300	2000
INDIA:			
DARSHAK	NAVAL HYDROGRAPHIC OFFICE	SEABEAM 2112	1996 (2)
INVESTIGATOR	NAVAL HYDROGRAPHIC OFFICE	SEABEAM 2112	1998
SURVEY LAUNCHES (2)	NAVAL HYDROGRAPHIC OFFICE	SEABEAM 1180 (6 systems)	1996 (2), 1998 (4)
R/V ????????	NATIONAL INSTITUTE OF OCEANOGRAPHY	SEABEAM 2112	1999
SAGAR KANYA	NATIONAL INSTITUTE OF OCEANOGRAPHY	ATLAS HYDROSWEEEP DS	1989
	NATIONAL INSTITUTE OF OCEAN TECHNOLOGY	RESON SEABAT 8101-350	1996
INDONESIA:			
BARUNA JAYA	BAKO SURTANAL (INDONESIA SURVEY CO)	SEABEAM 1050	1994
BARUNA JAYA I	BAKO SURTANAL (INDONESIA SURVEY CO)	SIMRAD EM-1000	1996
BARUNA JAYA I (SURVEY LAUNCH)	BAKO SURTANAL (INDONESIA SURVEY CO)	SIMRAD EM-950	1996
BARUNA JAYA II	BAKO SURTANAL (INDONESIA SURVEY CO)	SIMRAD EM-1000	1996
BARUNA JAYA II (SURVEY LAUNCH)	BAKO SURTANAL (INDONESIA SURVEY CO)	SIMRAD EM-950	1996
BARUNA JAYA III	BAKO SURTANAL (INDONESIA SURVEY CO)	SIMRAD EM-12 (DUAL)	1996
BARUNA JAYA VII	BAKO SURTANAL (INDONESIA SURVEY CO)	SIMRAD EM-1000	1997
BARUNA JAYA VII (SURVEY LAUNCH)	BAKO SURTANAL (INDONESIA SURVEY CO)	SIMRAD EM-950	1997
BARUNA JAYA VIII	R&D CENTRE OF OCEANOLOGY	SIMRAD EM-950, EM-1000	1996, 1997
	P.T. CALMARINE	RESON SEABAT	
	P.T. CALMARINE	SEABEAM 1180	1999
IRELAND			
BLIGH	GLOBAL OCEAN TECHNOLOGIES (GOTECH) LTD	SIMRAD EM-120 / EM-1002	2000
CELTIC EXPLORER	MARINE INSTITUTE, DUBLIN	SIMRAD EM-1002	2002
CELTIC VOYAGER	MARINE INSTITUTE, DUBLIN	SIMRAD EM-950, SIMRAD EM 1002S	1999, 2000
SIREN	GLOBAL OCEAN TECHNOLOGIES LTD	SIMRAD EM-120 (2x2) / EM-1002	2000

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WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

	GLOBAL OCEAN TECHNOLOGIES LTD	SIMRAD EM-12 / EM-1002	2000
ISRAEL:			
ETZIONA	IOLR Ltd / GEOLOGICAL SURVEY OF ISRAEL	SIMRAD EM-1002	2001
ITALY:			
MAGNAGHI	ITALIAN HYDROGRAPHIC OFFICE	SEABEAM 1050 MK II upgrade	1998
ODIN FINDER	GAS ASSISTANCE AND SERVICES (GAS)	SIMRAD EM-300, EM-3000	1999
OGS-EXPLORA	INST. NAZI. DI OCEANOGR. E DE GEOFIS. SPERIMENTALE - OGS	RESON SEABAT 8111, 8150	2002
RAVELLO	DIAMAR	?????	
RAIS	CENTRE OCEANLOGICO MEDITERRANEO (CEOM)	SIMRAD 3000	1997
TELIRI	ELLETRA	SIMRAD EM-12, SIMRAD 3000, SIMRAD EM-950	1996
THETIS	CNR ISTITUTO DI ACOUSTICA	RESON SEABAT 8111-ER	2001
	AZIENDA REGIONAL PER LA NAVIGAZIONE SUL PO	RESON SEABAT	
	CNR ANCONA	SIMRAD EM-3000	2000
	COMMUNICATION TECHNOLOGY SRL	ODOM ECHOSCAN	1999
	GEOLAB	SIMARD EM-3000	2001
	GEOLOGICAL ASSISTANCE AND SERVICE	SIMRAD EM-3000	1997
	INTERMARINE	SIMRAD EM-300 (2 systems)	1999
	INTERNATIONAL MARITIME ACADEMY-TRIESTE	ELAC BCC-180 kHz MkII (2 sys)	1997
	IMPRESUB	ELAC BCC-50 kHz Mk II upgrade	1997
	NAUTILUS SURVEY COMPANY	ELAC BCC Mk II -180 kHz	1997
	NORDEST RILIEV	SIMRAD EM-3000D, EM 300	1999
	SNAMPROGETTI	RESON SEABAT	
JAPAN:			
CHIBA-MARU (317t)	CHIBA PREFECTURE / FISH EXP.	FURUNO HS-200/II	1992
DAINISENSYU-MARU (18t)	AKITA PREF. FISH. RESEARCH & MGMT CTR	FURUNO HS-200/II	1991
ECHIGO-MARU (187t)	NIIGATA PREFECTURE / FISH EXP.	FURUNO HS-200/II	1996
FUKAE-MARU	KOBE UNIV.-MMA	FURUNO HS-100	1987
HAMASHIO	JMSA / 3RD REGIONAL MARITIME SAFETY HQ	RESON SEABAT 8101 (ER)	2000
HAKUHO MARU	UNIV. TOKYO	SEABEAM 2120	1999
HAKUREI MARU II	MMA/DORDO	ATLAS HYDROSWEEEP DS	1991
HAYASHIO	JMSA / 7TH REGIONAL MARITIME SAFETY HQ	RESON SEABAT 8101 (ER)	1999
ISESHIO	JMSA / 4TH REGIONAL MARITIME SAFETY HQ	RESON SEABAT 8101 (ER)	1999
ISOSHIO	JMSA / 10TH REGIONAL MARITIME SAFETY HQ	RESON SEABAT 8101 (ER)	2000
IWAKE MARU	FUKUSHIMA F.R.S.	ATLAS FANSWEEP-15	1999
IWATE-MARU	IWATE PREFECTURE	FURUNO HS-200/II	1990
IZU	JAPAN MARITIME SAFETY AGENCY	FURUNO HS-200/II	1996
KAIREI	JAMSTEC	SEABEAM 2112.004	1996
KAIUN-MARU (208t)	AOMORI PREFECTURE / FISH EXP.	FURUNO HS-200/II	1993
KAIYO	JAPAN MARITIME SAFETY AGCY / HYDROGRAPHIC DEPT	SEABEAM 2000	1993
KAIYO (SWATH HULL)	JAMSTEC	SEABEAM	1983
KAIYO-MARU (299t)	NIIGATA PREFECTURAL KAIYO HIGH SCHOOL	FURUNO HS-200/II	1994
KOTAKA-MARU (59t)	FISHERIES AGENCY / NANSEI REGION	FURUNO HS-200/II	1994
KURUSHIMA	JMSA / 6TH REGIONAL MARITIME SAFETY HQ	RESON SEABAT 9001S	1997
MEIYO	JMSA / HYDROGRAPHIC DEPARTMENT	SEABEAM 2000	1997
MIRAI	JAMSTEC	SEABEAM 2112.004	1996 (upgrade '99)
MIYAKO	TOKYO MET/FISH EXP.	FURUNO HS-100	1987
MOGAMI-MARU (98t)	YAMAGATA PREFECTURE / FISH EXP.	FURUNO HS-200/II	1991
MYOJIN-MARU NO. 8	FISHERIES AGENCY	FURUNO HS-100	
NATSUSHIMA (Shinkai 6500 mother ship)	JAMSTEC	SEABEAM 2000	
NOJIMA, (820t)	JMSA (3rd REGION / YOKOHAMA	FURUNO HS-100	1985
OJIKAI (861t)	JMSA (2nd REGION)	FURUNO HS-200/II	1990
OKISHIO	JMSA / 11TH REGIONAL MARITIME SAFETY HQ	RESON SEABAT 8101 (ER)	1999
OSHIMA-MARU (226t)	OSHIMA NAT'L COLLEGE OF MARITIME TECHNOLOGY	FURUNO HS-200/II	1993
OYASHIO-MARU (178t)	HOKKAIDO PREFECTURE / FISH EXP.	FURUNO HS-200/II	1990
RISHIRI (960t)	JMSA (1st REGION / KUSHIRO)	FURUNO HS-100	1987
SATSUMA (1250t)	JMSA (10th REGION)	FURUNO HS-100	1995
SHOYO	JMSA/HYDROGRAPHIC DEPARTMENT	SEABEAM 2112	1997
SURVEY LAUNCH	JMSA/HYDROGRAPHIC DEPARTMENT	RESON SEABAT 9001S	1995
SURVEY LAUNCH	JMSA/HYDROGRAPHIC DEPARTMENT	RESON SEABAT 9001S	1997
TAJIMA (140t)	HYOGO PREFECTURE / TANNBA FISH OFFICE	FURUNO HS-100	1988
TAKUYO	JMSA / HYDROGRAPHIC DEPARTMENT	SEABEAM 2100	upgrade '95

**SEABEAM 1180/II and ELAC BCC /II-180 KHz are identical

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

TANEICHI-MARU (33t)	IWATE PREFECTURE / TANEICHI HIGH SCHOOL	FURUNO HS-500	1989
TENYO	JMSA / HYDROGRAPHIC DEPARTMENT	SEABEAM 1180	2000
TONAN-MARU (174t)	OKINAWA PREFECTURE / FISH EXP.	FURUNO HS-200/II	1994
UZUSHIO	JMSA / 5TH REGIONAL MARITIME SAFETY HQ	RESON SEABAT 8101 (ER)	2000
WAKATAKA-MARU (692t)	FISHERIES AGENCY / TOHOKU REGION	FURUNO HS-200/II	1994
YOKOSUKA (4500t)	JAMSTEC	FURUNO HS-10, SEABEAM 2112	1989, 1999
YOSYU (60t)	EHIME PREFECTURE	FURUNO HS-100	1985
08 AGS	JMSDF	SEABEAM 2112.004	1997
	4TH PORT CONSTRUCTION BUREAU	RESON SEABAT 8124	1999
	AERO ASAHI CORPORATION	RESON SEABAT 9001S-350	1996
	AKITA FISHERIES RESEARCH STATION	RESON SEABAT 8101-300	1997
	DISASTER PREVENTION RES. INST. / KYOTO UNIVERSITY	FURUNO HS-500/II	1991
	EHIME UNIVESITY	RESON SEABAT 8101	2000
	ENGINEERING INSTITUTE	ATLAS FANSWEEP-10	1993
	FUYO MARINE DEVELOPMENT	RESON SEABAT 8101 (ER)	1999
	GOYO CORPORATION	RESON SEABAT 9001S	1999
	JAMSTEC	FURUNO HS-200	1987
	JMSA/HYDROGRAPHIC DEPARTMENT (HQ)	RESON SEABAT 9001S-350	1995
	JAPAN SELF DEFENSE AGENCY	RESON SEABAT 8101-300	1998
	KAGOSHIMA FISHERIES RESEARCH STATION	RESON SEABAT 9001S-350	1996
	KOKKUSAI KYOGO CO LTD.	SIMRAD EM-3000D	2000
	KOKUSAI AERIAL SURVEY	RESON SEABAT 9001S-350 (2 systems)	1996, 1999
	KOKUSAI MARINE ENGINEERING CORP.	RESON SEABAT 9001S-350	1995
	NAT'L FEDERATION OF MEDIUM TRAWLERS	FURUNO HS-100	1988
	OCEAN ENGINEERING CORP.	RESON SEABAT 9001S-350 (3 systems)	1996, 1998, 1999
	PENTA-OCEAN CONSTRUCTION CO., LTD.	RESON SEABAT 9001	1996
	SANYO TECHNO MARINE, INC.	RESON SEABAT 9001S-350 (2 systems)	1995/1997
	SHIZUOKA FISHERIES RESEARCH STATION	RESON SEABAT 9001S-350	1994
	SINKO CONSTRUCTION CO., LTD.	RESON SEABAT 9001S-350	1996
	TAISEI CONSTRUCTION CO., LTD.	FURUNO HS-500	1987
	TOA CORPORATION	RESON SEABAT 9001S-350 (2 systems)	1995
	TOKYO PORT BUREAU	RESON SEABAT 8101	1998
	TOTTORI FISHERIES RESEARCH STATION	RESON SEABAT 8101-300	1997
	TOYO CORPORATION	RESON SEABAT 9001S-350	1994
KOREA:			
BANDARO	NORI	SIMRAD EM-300	2001
BORARO 1	NORI	SIMRAD EM-3000	2000
DONG HAE RO	NORI	SIMRAD EM-3000, EM-950	1997
HAE YANG 2000	KOREAN HYDROGRAPHIC SERVICE	SEABEAM 2112.360	1997
HWANG HAE RO	NORI	SIMRAD EM-3000	1999
NAM HAE RO	KORDI/SAROK	SIMRAD EM-3000D	1998
IODO	KORDI	SIMRAD EM-1002	2000
ONNURI	KORDI	SEABEAM 2000	1992
TAMHAE II	KOREA INST. OF GEOLOGY, MINING & MATERIALS	SIMRAD EM-12, EM-950	1996
	HYUNDAI I.C.T.	RESON SEABAT	
	KORDI	RESON SEABAT	
KUWAIT			
	AL SABAH MARINE COMPANY	ATLAS FANSWEEP 15	2002
LATVIA			
	MARITIME ADMINISTRATION OF LATVIA	RESON SEABAT	
LITHUANIA			
	HARBOR AUTHORITIES, KLAIPEDA	ELAC BCC-1180 (180 KHz)	1995
VARUNA	LITHUANIAN MARITIME SAFETY ADMINISTRATION	SEABEAM 1185	2003
MALAYSIA:			
K.D. PERANTAU	ROYAL MALAYSIAN NAVY	ATLAS HYDROSWEEEP MD-2	1997
PLUTO (Perantau Survey Launch 124)	ROYAL MALAYSIAN NAVY	ATLAS FANSWEEP 20-100	1997
UTARID (Perantau Survey Launch 123)	ROYAL MALAYSIAN NAVY	ATLAS FANSWEEP 20-100	1998
KD MUTIARA	ROYAL MALAYSIAN NAVY	ATLAS HYDROSWEEEP MD-2	2002/03
TEKNIK GLORA	TL GEOHYDROGRAPHICS SDN BHD	SIMRAD EM 1002	2000
TEKNIK KEMBARA	TL GEOHYDROGRAPHICS SDN BHD	SUBMETRIX ISIS 300	

**SEABEAM 1180/II and ELAC BCC /II-180 KHz are identical

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

TEKNIK PUTRA	TL GEOHYDROGRAPHICS SDN BHD	SIMRAD EM-3000	2001
	JURUKUR TEGUH (M) SDN BHD	ODOM ECHOSCAN	1999
JABATAN LAUT SEMENANJUNG	MARINE DEPARTMENT PENINSULAR MALAYSIA	SIMRAD EM 3000D	2002
JABATAN LAUT SARAWAK	SARAWAK MARINE DEPARTMENT	GEOACOUSTICS GEOSWATH	2002
	HYDROSIS (private Company)	ODOM ECHOSCAN	n/a
MALTA			
FRES	ALEXANDER NAVIGATION CO LTD	SIMRAD EM-120 / EM-1002	2000
MEXICO			
SHOGUN	SEAPROD	RESON SEABAT 9001	2000
NATO:			
ALLIANCE	SACLANTCEN-LA SPEZIA	ATLAS HYDROSWEEP MD	1990
ALLIANCE	SACLANTCEN-LA SPEZIA	SIMRAD EM 3000	1997
NETHERLANDS:			
ANS	BOSKALIS	SIMRAD EM-3000	1998
ARCA	RIJKSWATERSTAAT NORDZEE	SIMRAD EM-3000 (DUAL)	1997
BLOMMENDAL	RIJKSWATERSTAAT	BATHYSCAN 300	
CHR. BRUNINGS	RIJKSWATERSTAAT	SIMRAD EM-100	1989
CYGNUS	RIJKSWATERSTAAT / ZUID-HOLLAND	ATLAS FANSWEEP 20-200	1998
BURSKYES	VAN OORD (fallpipe)	BATHYSCAN 300	
EUROWERKEN	PORT OF ROTTERDAM	ATLAS FANSWEEP-20-200	1996
FAIRWAY	BOSKALIS	SIMRAD EM-3000	1997
HOUTVLIET	RIJKSWATERSTAAT	SIMRAD EM-3000 D	1997
JACKY	BOSKALIS	SIMRAD EM-3000	1997
MARGO	BOSKALIS	SIMRAD EM-3000	1996
OCTANS	RIJKSWATERSTAAT	SIMRAD EM-950	1993
PAVO	RIJKSWATERSTAAT / ZUID-HOLLAND	ATLAS FANSWEEP 10, FANSWEEP 20	1994
QUEEN OF THE NETHERLANDS	BOSKALIS	SIMRAD EM-3000D	1997
ROTTERDAM	RIJKSWATERSTAAT / NORDZEE	SIMRAD EM-3000	2002
SEAHORSE	ROCKWATER	SIMRAD EM-3000	1998
TERTNES	VAN OORD (fallpipe)	RESON SEABAT 8125	2002
TROLLNES	RIJKSWATERSTAAT	RESON SEABAT 9001	
WIJTVLIET	RIJKSWATERSTAAT / ZEELAND	SIMRAD EM-950 (hull unit), EM-1002	1993, 1999
	NETHERLANDS NAVY	RESON SEABAT	
	NETHERLANDS NAVY	SIMRAD EM 3000D (2 systems)	2002
	ALLSEAS BV	RESON SEABAT	
	BALLAST NEDAM DREDGING	RESON SEABAT	
	BOSKALIS	SIMRAD EM-3000 (2 systems)	1996, 1997
	BOSKALIS	SIMRAD EM-3000S	2000
RESEARCH VESSEL	DAMEN SHIPYARD	SIMRAD EM-1002	2002
	DREDGING INTERNATIONAL	RESON SEABAT	
	HAM DREDGING	RESON SEABAT 8101	1997
	HAM DREDGING	RESON SEABAT 9001-350 (2 systems)	1999
	NeSA	RESON SEABAT 9001-350 (5 systems)	
	NeSA	RESON SEABAT 9003-350	
	NeSA	RESON SEABAT 8101-300 (2 systems)	
	NeSA	RESON SEABAT 8125 (4 systems)	1999
	OCEONICS INTERSITE BV	ATLAS FANSWEEP-10	1990
	SEATEAM BV	RESON SEABAT	
	TIDEWAY OFFSHORE AND MARINE CONTRACTORS	RESON SEABAT 9001-350	
	VAN OORD ACZ	RESON SEABAT 9001S-350 (4 systems)	
	VAN OORD ACZ	RESON SEABAT 8125 (5 systems)	2002
NEW CALEDONIA (FRANCE)			
	IRD.UMR GEOSCI AZURE LAB DE GEOL/GEOPHYS	SIMRAD EM -1002	2001
NEW ZEALAND			
SMB ADVENTURE	ROYAL NEW ZEALAND NAVY	ATLAS FANSWEEP 20-200	1999
HMS RESOLUTION	ROYAL NEW ZEALAND NAVY	ATLAS HYDROSWEEP MD-2/30	1999
TANGAROA	NIWA	SIMRAD EM-300	2000
	BTW ASSOCIATES, LTD	RESON SEABAT	

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

NORWAY:			
ARGUS ROV	ARTEC SUBSEA	SIMRAD EM-3000	2001
BERGEN SURVEYOR	STOLT-NIELSEN NORWAY	SIMRAD EM-100	1988
DIV. "U"	FORSVARETS FORSKNINGSINSTITUTT	SIMRAD EM-100	1989
GEOGRAPH	GEOCONSULT A/S	SIMRAD EM-100, EM-1000	1987, 1991
GEOFJORD	GEOCONSULT A/S	SIMRAD EM-100, EM 300 (1° system)	1986/1997
GEOFJORD	GEOCONSULT A/S	RESON 8125	2001
GEOMASTER	GEOCONSULT A/S	SIMRAD EM-1000	1992
GEO PROSPECTOR	FUGRO-GEOTEAM A/S	SIMRAD EM-300	1996
GEO SCANNER	FUGRO GEODETIC / GEOTEAM	SIMRAD EM-1000, EM-1002	1993, 1999
GEO SURVEYOR	STOLT COMEX SEAWAY	SIMRAD EM 300 (1° sys), EM-3000	1997
HYLSEFJORD	BLOM A/S	SIMRAD EM-950, EM-3000	1993, 1998
HUGIN 1 (AUV)	KONGSBERG SIMRAD / FORSVARETS FORSKNINGSINSTITUTT	SIMRAD EM-3000 (2)	1996
HUGIN 3000 GC (AUV)	GEOCONSULT A/S	SIMRAD EM-2000	2002
ICE KING	ICE KING A/S	SIMRAD EM-100	
LANCE	NORWEGIAN POLAR INSTITUTE	SIMRAD EM-100	1987
NORDKABEL	BLOM A/S	SIMRAD EM-1002 (with hull unit)	1999
NORTH SEA SURVEYOR	STOLT-NIELSEN NORWAY	SIMRAD EM-100	
NUI EXPLORER (AUV)	NORWEGIAN UNDERWATER INTERVENTION	SIMRAD EM-3000	2002
ODIN-FINDER	FORSVARETS FORSKNINGSINSTITUTT	SIMRAD EM-100 (sold to Italy-GAS)	
G. O. SARS	UNIVERSITETET I BERGEN / INSTITUTE OF MARINE RESEARCH	SIMRAD EM-300, EM 1002, SM-2000	2002
SEAWAY SURVEYOR	STOLT COMEX SEAWAY	SIMRAD EM -300 (2°X2°)	1996
SIMRAD	SIMRAD SUBSEA	SIMRAD EM-1000	1991
SIMRAD ECHO	SIMRAD SUBSEA	SIMRAD EM-950	1994
SJØTROLL	NORWEGIAN HYDROGRAPHIC SERVICE	SIMRAD EM-3000D	1999
H. U. SVERDRUP	FORSVARETS FORSKNINGSINSTITUTT	SIMRAD EM-100, EM-1002	1989, 2000
	ALCATEL CABLE A/S	RESON SEABAT	
	CONOCO-NORWAY	RESON SEABAT	
	DEEP OCEAN A/S-DPII	RESON SEABAT 8111	2000
	DEEP OCEAN A/S-DPII	RESON SEABAT 8125 (3 sys.-HIROV 3000)	2000
	ELF AQUATAINE-NORWAY	RESON SEABAT	
	FORSVARETS FORSKNINGSINSTITUTT	SIMRAD EM-1002 (with hull unit)	1999
	FORSVARETS FORSKNINGSINSTITUTT	SIMRAD EM-3000 (on HUGIN 1)	2002
	GEOCONSULT A/S	ATLAS FANSWEEP-10	1990
ROV	GEOCONSULT A/S	SIMRAD EM-3000 (DUAL)	1997
	GEOCONSULT A/S	RESON SEABAT	
	GEOTEAM	RESON SEABAT	
	MAERSK OLJE & GAS	RESON SEABAT	
	NORSKE HYDRO	RESON SEABAT	
	NORSK SHELL	RESON SEABAT	
Sjøfalk	NORWEGIAN HYDROGRAPHIC SERVICE	SIMRAD 3000D	1999
Sjørokk	NORWEGIAN HYDROGRAPHIC SERVICE	SIMRAD 3000D	1999
	STATOIL	RESON SEABAT	
	STOLT-COMEX SEAWAY	SIMRAD EM-3000 (DUAL)	1996
ROV	STOLT-COMEX SEAWAY	SIMRAD EM-3000D	1999
	STOLT-COMEX SEAWAY	RESON SEABAT	
	TROMSO UNIVERSITY	RESON SEABAT	
	WESTMINSTER OFFSHORE	RESON SEABAT 9001-350 (2 systems)	
OMAN			
MABRUKAH	ROYAL NAVY OF OMAN	SIMRAD EM-1002	2001
PAKISTAN			
BEHR PAIMA	PAKISTAN HYDROGRAPHIC DEPARTMENT	RESON SEABAT 8101	2003
BEHR PAIMA (Survey launch)	PAKISTAN HYDROGRAPHIC DEPARTMENT	RESON SEABAT 8102	2000
PANAMA			
	PANAMA CANAL COMMISSION	ODOM ECHOSCAN (2 systems)	1998
PERU			
AEH-174	PERU NAVY - HYDROGRAPHIC OFFICE	ATLAS FANSWEEP-20-100	2000
PHILIPPINES			

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

PRESBITERO	NAT'L MAPPING & RESOURCE INFO AUTH-DENR	SEABEAM 2112.360	1997
VENTURA	NAT'L MAPPING & RESOURCE INFO AUTH-DENR	SEABEAM 2112.360	1997
	NAT'L MAPPING & RESOURCE INFO AUTH-DENR	SEABEAM 1180 Mk II upgrade (2 sys)	1997
	NAT'L MAPPING & RESOURCE INFO AUTH-DENR	ELAC BCC II 180kHz	1997
POLAND:			
ANIA	PORT OF GDANSK	SIMRAD EM-3000	1995
DOKTOR LUBECKI	MARITIME INSTITUTE-GDANSK	RESON SEABAT 9001	1996
HYDROGRAPHER 10	HYDROGRAPHIC INSTITUTE / GDYNIA	ATLAS FANSWEEP-10	1994
NAVIGATOR 21	UNIVERSITY OF SZCZECIN	SEABEAM 1180	1998
PARNICA	URZAD MORZKI W GDYNI	ATLAS FANSWEEP-20	1998
	MARITIME OFFICE - STETTIN	SIMRAD EM-3000	1997
PORTUGAL:			
UAM CORAL	INSTITUTO HIDROGRAFICO (IHPT)	SIMRAD EM-950	1995
NRP DON CARLOS I	INSTITUTO HIDROGRAFICO (IHPT)	SIMRAD EM-120	2001
	INSTITUTO HIDROGRAFICO (IHPT)	SIMRAD EM-3000D	2001
ROMANIA			
ANGELIC SALIINI	PORT OF CONSTANZA AUTHORITY	ATLAS FANSWEEP -20-200	1997
RUSSIA:			
AKADAMICIAN IOFFE	INSTITUTE OF ACOUSTICS-RAS	HOLLMING EKHOS XD	1989
AKADAMICIAN M.A. LAVRENTYEV	RUSSIAN ACADEMY OF SCIENCES	HOLLMING EKHOS II	
R/V DMITRY MENDELEEV	P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY-RAS	HOLLMING EKHOS MD	
AKADAMICIAN BORIS PETROV	V.I. VERNADSKY INSTITUTE OF GEOCHEMISTRY-RAS	ATLAS HYDROSWEEEP DS-2	2002
AKADAMICIAN NIKOLAY STRAKHOV	P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY-RAS	HOLLMING EKHOS II	
AKADAMICIAN SERGEI VAVILOV	INSTITUTE OF ACOUSTICS-RAS	HOLLMING EKHOS XD	1989
ECARMA	POSEIDON	SIMRAD EM-1000	1996
GELENDZHEK	RUSSIAN CENT. MAR. GEOL. & GEOPHYS. EXPED.	SIMRAD EM-12	1995
PETER KOTTSOV	RUSSIAN HYDRO OFFICE / (Long term lease to Racal, UK)	SIMRAD EM-12S, ELAC BCC Mk II	1990, 1998
GS 525	MINISTRY OF DEFENCE	ATLAS FANSWEEP 20-200	1998
	CORRECT MARINE	SEABEAM 1180	2002
	PORT AUTHORITY-KALININGRAD	SIMRAD EM-3000	1997
	PORT AUTHORITY-SANKT PETERBURG	SIMRAD EM-3000	1997
	YUZHMOREGEOLOGIYA	SIMRAD EM-3000D	2001
SAUDI ARABIA:			
KARAN 8	ARAMCO	SIMRAD EM-1000	1994
	ARABIAN OIL COMPANY	RESON SEABAT	
	ARAMCO	RESON SEABAT 9001S-350 (2 systems)	
	MacARTNEY A/S	RESON SEABAT	
SINGAPORE:			
SEA WIND	FUGRO GEODETIC PTE LTD	SIMRAD EM-950	1994
SIMRAD ECHO	KONGSBERG SIMRAD ASIA PTE, LTD	SIMRAD EM-950, EM-3000	1994/1997
SINGAORA	FUGRO GEODETIC PTE LTD	SIMRAD EM-1002	2002
TEKNIK PERDANA	TL GEOHYDROGRAPHICS	SIMRAD EM-120, EM-1002	2000
	ASHTREAD TECHNOLOGY S.E. ASIA	RESON SEABAT 9001-350 (2 systems)	
	ASHTREAD TECHNOLOGY S.E. ASIA	RESON SEABAT 9001-800	
	HYDRONAV	TRITON-ELICS HYDROSUITE	2001
	SEATRONICS PTE LTD	SIMRAD EM-2000	2002
SOUTH AFRICA:			
PROTEA	RSA NAVY-HYDROGRAPHIC DEPARTMENT	ATLAS HYDROSWEEEP MD	1992/1993
IVAN PRINCEP	TRANS HEX GROUP	RESON SEABAT 8125	2001
NAMAKWA	TRANS HEX GROUP	RESON SEABAT 8125	2002
	DE BEERS MINING	RESON SEABAT	
	UNDERWATER SURVEYS	RESON SEABAT	
SPAIN:			
HESPERIDES	CONSEJO SUPERIOR DE INVESTIGACIONES CEINTIFICOS	SIMRAD EM-12S-120, EM-1000, EM-1002	1990, 1991, 1998
RIEGEL	IHM SPAIN	SIMRAD EM-3000	2000
VISCONDE DE EZA	IEO	SIMRAD EM-300, EM 3000D	1999

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

	CASTELLON HARBOR	RESON SEABAT	
	CONSEJO SUPERIOR DE INVESTIGACIONES CEINTIFICOS	SIMRAD EM-300	2000
	ECOMETRIA	SIMRAD EM-3000	2000
	GEOMY TSA	RESON SEABAT 9001-350	
	IEO	SIMRAD EM-3000D	1999
SWEDEN:			
ALE	SWEDISH NATIONAL MARITIME ADMIN (SNMA)	ELAC BCC-180 KHz Mk II / SEABEAM AM 1180	1996
JACOB HAGG	SWEDISH NATIONAL MARITIME ADMIN (SNMA)	ELAC BCC-180 KHz Mk II /SEABEAM AM 1180	1995
NILS STRÖMCRONA	SWEDISH MARITIME ADMIN (SMA)	RESON SEABAT 8101	1997
MB 28	SWEDISH MARITIME ADMIN (SMA)	RESON SEABAT 9001	1998
MR. BEAM	MARIN MÄTTEKNIK	SIMRAD EM-950	1994
	FORSVARETS FORSKNINGSANSTALT	RESON SEABAT	
	MARIN MÄTTEKNIK	SIMRAD EM-3000D	2000
	MARIN MÄTTEKNIK	SIMRAD EM-1002	2000
	SWEDISH NAVY	RESON SEABAT	
	BOFORS UNDERWATER SYSTEMS AB	RESON SEABAT	
TAIWAN ROC:			
TAKUAN	MINISTRY OF TRANSPORT & COMMUNICATION	SIMRAD EM-12(DUAL), EM-1000	1994
	TAIWAN NAVY HYDROGRAPHIC OFFICE	SEABEAM 1180	2002
	NATIONAL TAIWAN UNIVERSITY	RESON SEABAT 9001S-350	
	SUN-YAT SEN UNIVERSITY	RESON SEABAT 9001-350	
TURKEY:			
TCG CESME (ex-USNS Silas Bent T-AGOR 26)	TURKISH NAVY, DEPT OF NAVIG, HYDROG & OCEANOGR.	SEABEAM 1050	2001
TCG CESME SURVEY LAUNCH	TURKISH NAVY, DEPT OF NAVIG, HYDROG & OCEANOGR.	SEABEAM 1180	2001
TCG CUBUKLU	TURKISH NAVY, DEPT OF NAVIG, HYDROG & OCEANOGR.	ELAC BCC 50 KHz	1997
TCG MESAHA-2	TURKISH NAVY, DEPT OF NAVIG, HYDROG & OCEANOGR.	SEABEAM 1180	2000
UNITED ARAB EMIRATES:			
	UNIQUE SYSTEMS	SIMRAD EM 3000	1999
UNITED KINGDOM:			
AUTOSUB (AUV)	SOUTHAMPTON OCEANOGRAPHY CENTRE	SIMRAD EM-2000	2002
CHARLES DARWIN (RRS)	NERC / SOUTHAMPTON OCEANOGR. CENTRE	SIMRAD EM-12 S/120	1993
DISCOVERY (RRS)	NERC / SOUTHAMPTON OCEANOGR. CENTRE	GLORIA (system retired)	
EASTERN EXPLORER	RACAL SURVEY LTD	SEABEAM 1050 D upgraded 1998	1997
HMS ECHO	ROYAL NAVY / VOSPER THORNYCROFT (UK) LTD	SIMRAD EM-1002	2001
Survey motor boat "PATHFINDER"	ROYAL NAVY / VOSPER THORNYCROFT (UK) LTD	SIMRAD EM-3000	2001
HMS ENTERPRISE	ROYAL NAVY / VOSPER THORNYCROFT (UK) LTD	SIMRAD EM-1002	2001
Survey motor boat "PIONEER"	ROYAL NAVY / VOSPER THORNYCROFT (UK) LTD	SIMRAD EM-3000	2001
HMS ENDURANCE	ROYALNAVY	SIMRAD EM-710	2005
FARNELLA	JOHN MARR SHIPPING	GLORIA (system retired)	Retired
GEO SEARCHER	FUGRO-GEOTEAM LTD	SIMRAD EM 1002	2001
GEO SURVEYOR	FUGRO-GEOTEAM LTD	SIMRAD EM-1000	1997
HMS(L)	ROYAL NAVY	SIMRAD EM-3002	2005
JEAN CHARCOT	FUGRO-GEOTEAM LTD	SIMRAD EM-12, EM-1000	1991/1992
L'ESPOIR	SVITZER LTD. / BRITSURVEY	ATLAS HYDROSWEEEP DS-2, FANSWEEP-20-100	1994, 1998
MAGELLAN	SVITZER LTD. / BRITSURVEY	ATLAS HYDROSWEEEP MD-2	1994, 1997
MERIDIAN	SVITZER LTD. / BRITSURVEY	ATLAS HYDROSWEEEP MD-2	2000
MERCATOR	SVITZER LTD. / BRITSURVEY	ATLAS FANSWEEP-20-100	1996
NESBITT	MINISTRY OF DEFENCE	ATLAS FANSWEEP-20-200	1996
ORIENT EXPLORER	RACAL SURVEY LTD	SEABEAM 1050 D	1997
OWEN	ROYAL NAVY HYDRGRAPHIC SCHOOL	SIMRAD EM-3000	2002
JAMES CLARK ROSS	NERC / BRITISH ANTARCTIC SURVEY	SIMRAD EM-120 (1x1)	2000
HMS ROEBUCK	ROYAL NAVY	SIMRAD EM-1002	2005
Survey motor boat "NESBITT"	ROYAL NAVY	SIMRAD EM-3002	2004
SCOTIAN SHORE	MARITIME SURVEYS LTD	RESON SEABAT 8160	2001
HMS SCOTT	ROYAL NAVY	SASS IV	1997
SEA EXPLORER	GARDLINE SURVEYS LTD	SIMRAD EM-1000	1996
SEA PROFILER	GARDLINE SURVEYS LTD	SIMRAD EM-1000	1996
SEA SURVEYOR	GARDLINE SURVEYS LTD	SIMRAD EM-12, EM-950	1999
SEA TRIDENT	GARDLINE SURVEYS LTD	SEABEAM 1050 MW	1999

**SEABEAM 1180/II and ELAC BCC /II-180 KHz are identical

WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

	MINISTRY OF DEFENCE	ATLAS FANSWEEP-20	1997
	ALLUVIAL MINING COMPANY	RESON SEABAT	
	ASHTeAD TECHNOLOGY LTD	RESON SEABAT 9001-600 (2 systems)	
	ASHTeAD TECHNOLOGY LTD	RESON SEABAT 8101-300	2000
	ASHTeAD TECHNOLOGY LTD	RESON SEABAT 9001S-350 (2 systems)	
	ASHTeAD TECHNOLOGY LTD	RESON SEABAT 8125 (2 systems)	2000
	ASSOCIATED BRITISH PORTS	RESON SEABAT	
	BARROW IN FURNESS PORT AUTHORITY	RESON SEABAT	
	BRITISH PETROLEUM	RESON SEABAT	
	CABLE AND WIRELESS MARINE, LTD	RESON SEABAT	
	CALEDONIAN GEOTECH	RESON SEABAT	
	CHEVRON OIL COMPANY	RESON SEABAT	
	COFLEXIP STENA OFFSHORE	RESON SEABAT	
	DONALD CAMERON	RESON SEABAT	
	DRA	RESON SEABAT	
	EGS SERVICES	RESON SEABAT	
	ENTERPRISE OIL LIMITED	RESON SEABAT	
	EUROPEAN MARINE CONTRACTORS	RESON SEABAT 9001S-350 (2 systems)	
	FUGRO-UDI LTD	RESON SEABAT	
	GEOCONSULT	OMNITECH ECHOSCOPE 1600	
	HARWITCH HARBOUR AUTHORITY	RESON SEABAT 9001-350 (2 systems)	
	HERIOT-WATT UNIVERSITY	RESON SEABAT	
	HMB SUBWORK LTD.	RESON SEABAT	
	J.P. KENNY	RESON SEABAT	
	MAFF - MARINE LABORATORY	RESON SEABAT	
	MARCONI-UDI	RESON SEABAT	
	McDERMOTT MARINE CONSTRUCTION	RESON SEABAT	
	MORRISON-McLEAN ASSOCIATES	RESON SEABAT	
"Reserve"	MINISTRY OF DEFENCE	ATLAS FANSWEEP-20-200	1997
	NORCOM TECHNOLOGY, LTD	RESON SEABAT	
	OCEANSCAN, LTD	SIMRAD EM-3000 (LEASE)	1996
	OCEANSCAN, LTD	RESON SEABAT 8101	1998
	OCEANTEAM	RESON SEABAT	
	OCEANEERING	RESON SEABAT	
	OCTOPUS MARINE SYSTEMS	ELAC BCC 180 kHz Mk II (2 sys)	1996, 1997
	OCTOPUS MARINE SYSTEMS	SEABEAM ELAC 1180	
	OCTOPUS MARINE SYSTEMS	OMNITECH ECHOSCOPE 1600	
	OSAE	RESON SEABAT 9001-350 (2 systems)	
	OSAE	RESON SEABAT 9001-500 (2 systems)	
	OSPREY LEASING, LTD	SIMRAD EM-3000	1996
	RACAL SURVEY LTD	SEABEAM 1050 D (2 sys.) upgrad 1998	1996, 1997
	RACAL SURVEY LTD	SEABEAM 1180 (2 systems) upgrad1998	1996, 1997
	ROSS OFFSHORE	RESON SEABAT	
	ROYAL NAVY TRAINING SCHOOL	SIMRAD EM-3000	2001
	SAGA OIL AND GAS	RESON SEABAT	
	SCANTRON LTD / EIVA	RESON SEABAT 9001-350 (2 systems)	
	SHELL UK	RESON SEABAT	
	SONSUB	RESON SEABAT	
	STENA OFFSHORE	RESON SEABAT	
	STOLT-COMEX SEAWAY	RESON SEABAT	
	SUBSEA OFFSHORE	RESON SEABAT 9001-500	
	SUBSEA SURVEY	RESON SEABAT	
	TOTAL OIL	RESON SEABAT	
	UDI LTD	RESON SEABAT	
	UNDERWATER EXCAVATION INTERNATIONAL LTD	RESON SEABAT	
	WIMPOL LIMITED	RESON SEABAT	
SIR WILLIAM	HALCROW GROUP LTD	RESON SEABAT 8101 (210 DEGREE)	2003
UNITED STATES OF AMERICA			
US ARMY CORPS OF ENGINEERS			
	ANCHORAGE	RESON SEABAT 9001-350	
	BALTIMORE	ODOM ECHOSCAN	1998
	BUFFALO	RESON SEABAT 9001-350	
	CHICAGO	RESON SEABAT 9001-350	
	DETROIT	RESON SEABAT 9001S-350	

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WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

	GALVESTON	RESON SEABAT 9001-350	
	GALVESTON	ODOM ECHOSCAN (2 systems)	1998
	JACKSONVILLE	RESON SEABAT 9001-350	
	LOS ANGELES	RESON SEABAT 9001-350	
	LOS ANGELES	ATLAS FANSWEEP 20-200	2001
	LOUISVILLE	RESON SEABAT 9001-350	
	MEMPHIS	RESON SEABAT 9001-350	
	MOBILE	RESON SEABAT 9001-350	
	MOBILE	RESON SEABAT 8125	2002
	NEW ENGLAND	RESON SEABAT 9001-350	
	NEW YORK	RESON SEABAT 8101-300	
	NEW YORK	ODOM ECHOSCAN	1998
	NORFOLK	RESON SEABAT 8101-300	
	PORTLAND	RESON SEABAT 8101-300	
	SAN FRANCISCO	RESON SEABAT 8101-300	
	SAULT ST. MARIE	RESON SEABAT 8101-300	
	SAVANNAH	RESON SEABAT 8101-300	
	SAVANNAH	RESON SEABAT 8125	2002
	SEATTLE	RESON SEABAT 8101-300	
	SEATTLE	ELAC SEABEAM 1185/TEI ISIS	2001
	ST. LOUIS	RESON SEABAT 8101-300	
	TULSA	RESON SEABAT 8101-300	
	VICKSBURG	RESON SEABAT 8101-300	
	WALLA WALLA	RESON SEABAT 8101-300	
	WATERWAYS EXPERIMENT STATION	RESON SEABAT 8101-300	
	WILMINGTON	RESON SEABAT 8101-300	
US COAST GUARD			
USCGC HEALY (WAGB-20) (Icebreaker)	US COAST GUARD	SEABEAM 2112 (Ice)	1999
	US COAST GUARD	RESON SEABAT	
US NOAA (National Oceanic and Atmospheric Administration)			
S/V BAY HYDROGRAPHER (S-5501)	NOAA/NOS/Coast Survey	RESON SEABAT 8125	2002
R/V AHI (F-2505)	NOAA/PIFSC/HL	RESON SEABAT 8101	2003
NOAAS RAINIER (S-221)	NOAA/NMAO (NOAA Marine and Aviation Operations)	SEABEAM 1050D	1999
LAUNCH RA-3 (RA1021)	NOAA/NMAO	RESON SEABAT 8101 ER	1998
LAUNCH RA-4 (RA1016)	NOAA/NMAO	SEABEAM 1180, RESON SEABAT 8125	2000, 2002
LAUNCH RA-5 (RA1006)	NOAA/NMAO	RESON SEABAT 8101 ER	2003
LAUNCH RA-6 (RA1015)	NOAA/NMAO	SEABEAM 1180	2000
NOAAS FAIRWEATHER (S-220)	NOAA/NMAO	RESON SEABAT 8111ER, RESON SEABAT 8160	2004
LAUNCH (FA1010)	NOAA/NMAO	RESON SEABAT 8101ER	2004
LAUNCH (FA1018)	NOAA/NMAO	RESON SEABAT 8101ER	2004
NOAAS RONALD H. BROWN (R-104)	NOAA/NMAO	SEABEAM 2112A	1997
NOAAS THOMAS JEFFERSON (S-222)	NOAA/NMAO	SIMRAD EM 1002	2003
LAUNCH (TJ1005)	NOAA/NMAO	RESON SEABAT 8101 ER	1998
LAUNCH (TJ1014)	NOAA/NMAO	RESON SEABAT 8125	2002
NOAAS RUDE (S-590)	NOAA/NMAO	RESON SEABAT 8125	2002
LAUNCH (RU1419)	NOAA/NMAO	RESON SEABAT 8124	2003
NOAAS OSCAR DYSON (R-224)	NOAA/NMAO	SIMRAD SM2000 (to be upgraded to SM20)	2004
NOAAS HI'IALAKAI (R-334)	NOAA/NMAO	SIMRAD EM3002D, EM300	2005
NAVIGATION RESPONSE TEAMS			
	NRT5 NOAA/NOS/Coast Survey	SIMRAD EM3000	2004
	NRT6 NOAA/NOS/Coast Survey	SIMRAD EM3000	2004
	NRT7 NOAA/NOS/Coast Survey	RESON SEABAT 8125	

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WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

NO LONGER IN NOAA SERVICE - Decommissioned			
NOAAS SURVEYOR	NOAA/NOS	SEABEAM	1979 (Decommissioned 1995)
NOAAS DAVIDSON	NOAA/OMAO	HYDROCHART	(Decommissioned 1989)
NOAAS DISCOVERER	NOAA/OMAO	SEABEAM	1986 (Decommissioned 1996)
NOAAS HECK	NOAA/OMAO	RESON SEABAT 9001	1992 (Decommissioned 1995)
NOAAS MT MITCHELL	NOAA/OMAO	SEABEAM	1987 (Decommissioned 1995)
NOAAS WHITING	NOAA/OMAO	SIMRAD EM 1002	2001 (Decommissioned 2003)
US ENVIRONMENTAL PROTECTION AGCY			
	USEPA	RESON SEABAT	
US FISH AND WILDLIFE SERVICE			
	USFWS	RESON SEABAT	
US GEOLOGICAL SURVEY			
	USGS - Woods Hole	SUBMETRIX 2000 - 234kHz	2001
US NATIONAL BIOLOGICAL SERVICE			
	USNBS	RESON SEABAT	
US NAVY / MSC OPERATED			
USNS BOWDITCH (TAGS-21)	NAVOCEANO	SASS	1965 (ret.)
USNS BOWDITCH (TAGS-62)	NAVOCEANO	SIMRAD EM-121A (1° system), EM-1000	1995, 1997
USNS SILAS BENT (TAGS-26)	NAVOCEANO	SEABEAM (to Turkey-TCG CESNEI)	1989 (ret '99)
USNS BRUCE HEEZEN (TAGS-64)	NAVOCEANO	SIMRAD EM-121A (1° sys) / EM-1000, EM-1002	1999, 1997, 2000
SURVEY LAUNCHES (2)	NAVOCEANO	SIMRAD EM-3000 (1 per launch)	1998
USS DUTTON (TAGS-22)	NAVOCEANO	SASS	1965 (retired)
USNS MATTHEW HENSON (TAGS-63)	NAVOCEANO	SIMRAD EM-121A (1° system) / EM-1000	1995
SURVEY LAUNCH #34009	NAVOCEANO	SIMRAD EM-3000	1998
SURVEY LAUNCH #34010	NAVOCEANO	SIMRAD EM-3000	1998
USNS HARRY HESS (TAGS-28)	NAVOCEANO	SASS	1965 (ret '90)
USNS ELISHA KENT KANE (TAGS-27)	NAVOCEANO	SEABEAM	1989 (ret '92)
USNS LITTLEHALES (TAGS-52)	NAVOCEANO	SIMRAD EM-100, EM-1002	1991, 1999
USNS MATTHEW F MAURY (TAGS-39)	NAVOCEANO	SASS IV (to California Maritime Academy)	1989 (ret '94)
USNS JOHN MCDONNELL (TAGS-51)	NAVOCEANO	SIMRAD EM-100, EM-1002	1990, 2000
USNS MIZAR (TAGOR-11)	NAVOCEANO	SEABEAM	(ret '90)
USNS ALBERT MYER (T-ARC-6)	NAVOCEANO	SEABEAM	1992
USNS NEPTUNE (T-ARC-2)	NAVOCEANO	SEABEAM	(ret '91)
USNS OBSERVATION ISLAND	NAVOCEANO	SASS	1965 (retired)
USNS PATHFINDER (TAGS-60)	NAVOCEANO	SIMRAD EM-121A (1° system), EM-1002	1994, 1999
USNS MARY SEARS (TAGS-65)	NAVOCEANO	SIMRAD EM-1002, EM-121A (1°system)	2000
USNS SUMNER (TAGS-61)	NAVOCEANO	SIMRAD EM-121A (1° system), EM-1002	1995, 1999
USNS TANNER (TAGS-40)	NAVOCEANO	SASS IV (to Maine Maritime Academy)	1990 (ret '93)
USNS WATERS (TAGS-45)	NAVOCEANO	SEABEAM	1992
USNS WILKES (TAGS-33)	NAVOCEANO / SPAWAR	SEABEAM (to Tunisia)	(ret '95)
USNS WYMAN (TAGS-34)	NAVOCEANO	SASS IV/BOTASS	1989 (ret '99)
USNS ZEUS (T-ARC-7)	MILITARY SEALIFT COMMAND	SIMRAD EM-121 (1° system)	1993
R/V LANEY CHOUSET	NAVOCEANO	SEABEAM	1988
SEA LION / ORCA	COMSUBDEVGRU 1	SIMRAD EM-950	1994
ORCA I (ROV)	NAVOCEANO	SIMRAD EM-950	1994
ORCA II (ROV)	NRL	SIMRAD EM-950	1994
	NAVAL FACILITIES ENGINEERING COMMAND	SIMRAD EM-3000	1998
	NAVOCEANO	RESON SEABAT 9001-350	
SURVEY LAUNCHES	NAVOCEANO	SIMRAD EM-3000 (10 systems)	1998, '99, 2000, '01
	NRL	RESON SEABAT 9001-350 (2 systems)	
	NUWC-KEYPORT WA	SIMRAD SM 2000/Triton-Elics HS150	2001
	USN EXPLOSIVES ORD. DISPOSAL CTR-INDIAN HEAD	SIMRAD SM-2000 (4 systems)	2000
US RESEARCH INSTITUTIONS			
ATLANTIS (AGOR-25)	WOODS HOLE OCEANOGRAPHIC INSTITUTION	SEABEAM 2112A (Ice)	1995
ATLANTIS II	WOODS HOLE OCEANOGRAPHIC INSTITUTION	SEABEAM	1983
BELLOWS	UNIVERSITY OF FLORIDA	SIMRAD EM-3000	1998
ROBERT CONRAD (AGOR-3)	LAMONT-DOHERTY EARTH OBSERVATORY	SEABEAM	1984 (ret '89)
MAURICE EWING	LAMONT-DOHERTY EARTH OBSERVATORY	ATLAS HYDROSWEEEP	1990
KA'IMIKAI O KANILOA	UNIVERSITY OF HAWAII	SEABEAM 2100	
KNORR (AGOR-150)	WOODS HOLE OCEANOGRAPHIC INSTITUTION	SEABEAM 2112	1994

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WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

MELVILLE (AGOR-14)	SCRIPPS INST OF OCEANOGRAPHY	SEABEAM 2000	1992
MOANA WAVE (AGOR-22)	UNIVERSITY OF HAWAII	MR 1 (SEAMARC 1)	
NATHANIEL PALMER (Icebreaker)	NSF/EDISON CHOUSET, ASA	SIMRAD EM120/ (ICE) (1°x2°)	2002
ONRUST	MARINE SCIENCE RESEARCH CTR-(SUNY)-STONYBROOK	SIMRAD EM-3000	1998
ROGER REVELLE (AGOR-24)	SCRIPPS INST OF OCEANOGRAPHY	SEABEAM 2112A (replaced: 2000)	1995
ROGER REVELLE (AGOR-24)	SCRIPPS INST OF OCEANOGRAPHY	SIMRAD EM-120 (2x2) / EM-1002	2000, 2001
THOMAS THOMPSON (AGOR-23)	UNIVERSITY OF WASHINGTON	SIMRAD EM-300 (1°x1°)	2002
THOMAS WASHINGTON (AGOR-10)	SCRIPPS INST OF OCEANOGRAPHY	SEABEAM (to Chile)	1981 (ret '92)
KILO MOANA (AGOR-26) SWATH VESSEL	UNIVERSITY OF HAWAII	SIMRAD EM-120 (1°X2°), EM-1002	2001
	WOODS HOLE OCEANOGRAPHIC INSTITUTION	RESON SEABAT	
US STATE AGENCIES			
	ALASKA FISHERIES	RESON SEABAT	
	HAWAII UNDERSEA RESEARCH LABORATORY	RESON SEABAT	
	MISSOURI DEPT OF TRANSPORTATION	RESON SEABAT	
	NEVADA WATER AUTHORITY	RESON SEABAT	
US COMMERCIAL OPERATORS			
BEACON	MAREX MARINE	????	
CAPTAIN PETE	WEEKS MARINE	ODOM ECHOSCAN	2001
COASTAL SURVEYOR	C&C TECHNOLOGIES (to NOAA/UNH CCOM-2002)	SIMRAD EM-3000D (portable)	1999
DAVIDSON	OCEAN SERVICES LLC	RESON SEABAT 8150-F	2000
DIAMOND REEF	GREAT LAKES DREDGE AND DOCK	ATLAS FANSWEEP-20-200	1998
ROBERT I ENGLE	HANSON PROFESSIONAL SERVICES INC	RESON SEABAT 9001S-350	1996
EDISON CHOUSET	CHOUSET	SEABEAM 1050/ER	1997
FALCON EXPLORER	PGS, HOUSTON	SEABEAM 2112A	1997
FUGRO AUV	FUGRO	SIMRAD SM 2000E	2002
HS AUTOSUB	HALLIBURTON SUBSEA	SIMRAD EM 2000	2002
HUGIN 3000 (AUV)	C&C TECHNOLOGIES	SIMRAD EM-2000, EM-2000 (SPARE)	2000
INEZ McCALL	C&C TECHNOLOGIES	SIMRAD EM-3000D (portable)	1999
INLAND SURVEYOR	C&C TECHNOLOGIES	SIMRAD EM-950 (portable)	1993
MERLION	C&C TECHNOLOGIES	SIMRAD EM-12S	1997
NEUVILLE	GREAT LAKES DREDGE AND DOCK	ATLAS FANSWEEP-20	2000
NORTELLA	BELL GEOSPACE	SIMRAD EM-3000 (2°x4°); EM-950, EM-12S	1999,1997, 1997
NORTELLA	BELL GEOSPACE	SIMRAD EM-950	1997
OCEAN ALERT (retired 2001)	C&C TECHNOLOGIES	SIMRAD EM-300 (1X2°)	1997 (ret. 2001)
OCEAN EXPLORER	SCIENCE APPLICATIONS INTERNATIONAL CORP.	RESON SEABAT	
OCEAN EXPLORER	PGS, HOUSTON	SIMRAD EM-300 (1°X2°)	1998
OCEAN SURVEYOR	C&C TECHNOLOGIES	SIMRAD EM-1000 (portable)	1993
S/V SEABAT 1	C&C TECHNOLOGIES	RESON SEABAT 9001SS-350	
ST. JOHN/S RIVER	GREAT LAKES DREDGE AND DOCK	ATLAS FANSWEEP-20-200	2000
SEIS SURVEYOR	JOHN CHANCE AND ASSOCIATES	SEABEAM 2100	1996
SHOAL RUNNER	GREAT LAKES DREDGE AND DOCK	ATLAS FANSWEEP-20-200	1999
SURF SURVEYOR	C&C TECHNOLOGIES	SIMRAD EM-950 (portable)	
	ALLIANT TECHSYSTEMS, INC.	RESON SEABAT	
	ALLIED SIGNAL-OCEAN SYSTEMS	ELAC BCC-180kHz	1996
	ALLIED SIGNAL-OCEAN SYSTEMS	RESON SEABAT 9001S-600	
	APPLIED REMOTE TECHNOLOGY-RAYTHEON	RESON SEABAT 9001-350	
	ARC SURVEYING AND MAPPING	SIMRAD EM-300 (2X4°)	1997
	ASHTeAD TECHNOLOGY, INC.	RESON SEABAT 8160	2001
	CH2M HILL	RESON SEABAT	
	CHEVRON USA INC.	RESON SEABAT	
	CHUSTZ SURVEY	RESON SEABAT 8125	2002
	COASTAL SYSTEM STATION	RESON SEABAT	
	C&C TECHNOLOGIES	RESON SEABAT 9001S-350	
	CRA INC.	RESON SEABAT	
	CRA NW	RESON SEABAT	
	CRA-NW	ELAC BCC-180 kHz	1995
	DAVCO	ECHOSCAN	2000
	DAVID EVANS AND ASSOCIATES	RESON SEABAT	
	DIMCO	ODOM ECHOSCAN	2000
	FUGRO USA	SIMRAD EM-2000 (spare)	2001
	FUGRO WEST, INC.	RESON SEABAT	
	GAHAGAN & BRYANT	ODOM ECHOSCAN	1998

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WORLDWIDE SEAFLOOR SWATH-MAPPING SYSTEMS

	GEORGIA PACIFIC	RESON SEABAT		
	GLOBAL EXPLORERS	RESON SEABAT		
	GOLDER ASSOCIATES	RESON SEABAT		
	INTERNATIONAL INDUSTRIES, INC./RENTMAR	ATLAS FANSWEEP-10	1991	
	INTERNATIONAL INDUSTRIES, INC./RENTMAR	ODOM ECHOSCAN		
	INTERNATIONAL INDUSTRIES, INC./RENTMAR	RESON SEABAT		
	JOHN CHANCE AND ASSOCIATES	ELAC BCC-180 kHz	1996	
	JOHN CHANCE AND ASSOCIATES	ATLAS FANSWEEP-10	1992	
	JOHN CHANCE AND ASSOCIATES	RESON SEABAT 9001-350		
	JOHNSON-McADAMS	RESON SEABAT 9001S-350		
	LOCKHEED MISSILES AND SPACE, INC.	RESON SEABAT		
	MANSON CONSTRUCTION	RESON SEABAT 8125	2002	
	MORRIS HEBERT & ASSOCIATES	RESON SEABAT		
	OCEAN SURVEYS INC	RESON SEABAT		
	OCEANEERING TECHNOLOGIES	RESON SEABAT 8101-300		
	OCEANIC IMAGING CONSULTANTS, INC.	RESON SEABAT 8101 (2 systems)	2000	
	P.T.I. ENVIRONMENTAL	RESON SEABAT		
	RLDA SURVEYING AND MAPPING	ODOM ECHOSCAN (PUERTO RICO)	1998	
	PELAGOS CORPORATION	RESON SEABAT		
	PERRY TECHNOLOGIES	RESON SEABAT		
	PORT OF LOS ANGELES	RESON SEABAT		
	RACAL SURVEY INC.	RESON SEABAT		
	RACAL-NCS	RESON SEABAT 8101-1200		
	ROGERS SURVEYING	ROSON SEABAT 8101	2000	
"DEMO"	SCIENCE APPLICATIONS INTERNATIONAL CORP.	SIMRAD EM-3000	1997	
	SCIENTIFIC SERVICES, INC.	RESON SEABAT		
	SEAFLOOR SURVEYS INTERNATIONAL / FUGRO	RESON SEABAT		
	SEAFLOOR SYSTEMS INC	SEABEAM 1180	2002	
	SEARCH AND SURVEY, INC	RESON SEABAT		
	SEA VISUAL, INC.	RESON SEABAT		
	SOLUS SCHALL	RESON SEABAT		
	SQUIRE ASSOCIATES	RESON SEABAT		
	SUMMIT TECHNOLOGIES	RESON SEABAT		
	SURVEY EQUIPMENT SERVICES, INC.	RESON SEABAT		
	TERRA SURVEYS, INC.	RESON SEABAT		
	TRITON ELICS INTERNATIONAL INC.	RESON SEABAT		
	VERNON F MEYERS & ASSOCIATES	RESON SEABAT		
	WILLIAMSON & ASSOCIATES INC.	RESON SEABAT		
URUGUAY				
	S/V OYARVIDE	SERVICIO DE OCEANOGRAFIA, HIDROGRAFIA Y METEOROLOGIA	SEABEAM 1180	1998
	Lancha Hidrográfica Trieste	SERVICIO DE OCEANOGRAFIA, HIDROGRAFIA Y METEOROLOGIA	SEABEAM 1180	2001
VENEZUELA				
	NAVY HYDROGRAPHIC OFFICE	SEABEAM 1050D	2002	
YUGOSLAVIA				
	SAVEZNA JAVNA USTANOVA	ATLAS FANSWEEP-20-200	2001	
VESSEL NAME	OPERATOR	SYSTEM	INSTALL YR	