



Serving The Marine Industry For 200 Years



### Notable Dates



- John Lilley & Son established in London.
- 7 out of 44 shipyards on the Tyne were using iron.
- 10 out of 44 shipyards on the Tyne were using steel. This was a period of development for steel ships and the magnetic compass.
- John Wilson Gillie born.
- **1870** Sir William Thomson (later Lord Kelvin) designed his dry card standard compass.
- John Wilson Gillie was apprenticed to J.J. Wilson & Sons, Nautical Instrument Makers of Sunderland.
- J.W. Gillie formed a company in North Shields known as Wilson & Gillie. The business became agents for the Thomson compass. Later, John Gillie re-designed the compass suspension and patented the 'Unit', a standard compass.
- Wilson & Gillie are established as agents for Admiralty Charts and Publications.
- Through a disagreement with Sir William Thomson, John Lilley & Son of London lost the agency for Kelvin Binnacle. This resulted in financial difficulties. John Gillie rescued the business to control it jointly with John Lilley.
- Wilson & Gillie merged with John Lilley & Son to form John Lilley & Son of London and North Shields.
- John Lilley retired and J.W. Gillie gained full control of the company.
- John Lilley & Son of London merged with Reynolds and Son, Dobbie & Clyde Ltd., to become Lilley & Reynolds., with J.W. Gillie as Chairman.
- John Lilley & Son of North Shields is re-named John Lilley & Gillie Ltd.
- **1953** John Wilson Gillie died and his son, John Calder Gillie, became Chairman
- John Lilley & Gillie Ltd incorporates the South Shields business of T.L. Ainsley Ltd.
- John Lilley & Gillie Ltd is sold by John Gillie to the Holland America Line (owners of Observator, Rotterdam). John Gillie remains Chairman.
- London based chart agent Brown & Perring is purchased by John Lilley & Gillie Ltd.
- John Lilley & Gillie Ltd acquires the assets of Henry Browne & Sons (Sestrel) Ltd, a major competitor.
- Holland America line sold the shares in Lilley & Gillie, Brown & Perring, and Observator to Kopeke International Supply Systems. John Gillie retires.
- Following a Management Buy Out (with financial support from Iver C. Weilback, Copenhagen), Chris Turnbull becomes the majority shareholder, Chairman and Managing Director.
- Lilley & Gillie Ltd is purchased by The Charente Steam Ship Company Ltd., Liverpool (with subsidiary companies Harrison Line, and Dubois Phillips McCallum).
- Through re-organisation, Lilley & Gillie Ltd., Dubois Phillips McCallum (DPM), and DPM (Singapore), become known as Harrison Maritime Holdings Group Companies.
- July 2nd Royal visit by HRH The Princess Royal to Commemorate the Bicentenary of Lilley & Gillie.
- John Lilley & Gillie Ltd sells its chart and publication business to concentrate on the marine equipment market.

Visit by the Princess Royal ..... Compass Adjustment ..... The Total ECDIS Solution ..... SPOS Weather Routeing ..... Marine Equipment .... ECDIS/ECS Software and Hardware Walker Equipment ..... Magnetic Compass Systems ..... Lilley & Gillie Marine Instruments . Electronic Services and Sales Netw

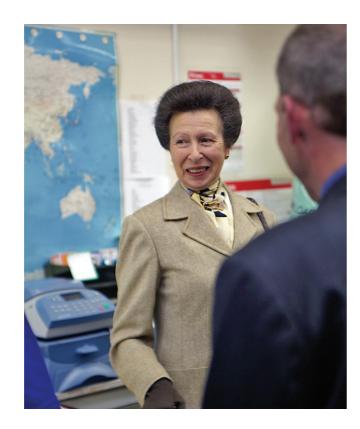


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### Visit by the Princess Royal





In 1812, John Lilley, aged 24, founded John Lilley and Son in London. John Lilley is recorded as being an optician and the company manufactured nautical instruments, magnetic compasses, sextants and telescopes.

In 1885 John Wilson Gillie founded Wilson & Gillie in North Shields as Admiralty chart agents and magnetic compass and nautical instrument makers. Over the years John Wilson Gillie patented many improvements to the magnetic compass and binnacle.

In 1913 the two companies merged, and in 1943 were renamed as John Lilley & Gillie Ltd.

Now, in 2012, after 200 years in business, John Lilley & Gillie Ltd have consolidated our position as the UK's pre-eminent manufacturer of magnetic compass outfits and as one of the world's leading International Admiralty Chart Agents. We have moved into larger, more modern warehouse and office premises to better serve our international customer base.

On the 2nd of July 2012 to mark our bicentenary we had the very great honour of hosting a visit to our North Shields head office from Her Royal Highness The Princess Royal. Her Royal Highness toured our premises accompanied by Glenn Heathcote, our Managing Director, and met with a wide variety of our staff, including our Chairman and our Chief Executive, (and other main Board Directors), team members from our charts and equipment warehouse, our magnetic compass testing/calibration technicians, sales and sales administration staff, electronic equipment service engineers and our IT departments.

During her tour Her Royal Highness saw demonstrations of our latest, state of the art, fully Type Approved electronic navigation equipment, including our NAVMASTER Electronic Chart Display Information System, (ECDIS), our Bridge Navigation Watch Alarm System, (BNWAS) and our new Intelligent Wind Alarm System, (IWAS). She also saw a prototype of our brand new SESTREL NAVIGATOR compass, which is soon to begin Type Approval testing.





## 2nd July 2012



Compass Adjustment





Lilley & Gillie employs two very experienced and fully qualified D.O.T. certified compass adjusters, who are available 24 hours per day to carry out onboard adjustment and service.

Annex 13 of the MCA publication - Safety of Navigation - Implementing SOLAS Chapter V which superseded MGN 57 states that each magnetic compass required to be carried by the regulations shall be properly adjusted and its table or curve of residual deviations available at all times.

#### Magnetic compasses should be adjusted when:

- They are first installed
- They become unreliable
- The ship undergoes structural repairs or alterations that could affect its permanent and induced magnetism
- Electrical or magnetic equipment close to the compass is added, removed or altered; or,
- A period of two years has elapsed since the last adjustment and a record of compass deviations has not been maintained, or the recorded deviations are excessive or when the compass shows physical defects.

#### **Equipment Repairs**

As manufacturers of a wide range of navigation and electronic equipment, Lilley & Gillie are fully equipped to carry out repairs on both our own and other companies magnetic compasses and equipment. Our engineers would be happy to inspect a piece of equipment and provide a quotation prior to repair.

As the only commercial company in the UK approved to carry out re-certification of magnetic compasses (see Annex 13) we are also able to issue a certificate upon completion of repairs or modifications.

To ensure vessels meet the IMO ECDIS mandatory fit requirements is the daunting task facing ship owners and managers. These are some of the questions that need to be addressed.

#### Hardware

Do we need single, double, triple installations and how will this work with the current bridge layouts?

#### Chart Data

How do I order? How does the update service work? What type of data do I require to meet regulations?

#### **Crew Training**

What are the types of training requirements? How do new crew keep up to date with the systems installed?

#### System Maintenance

What if there is a new ECDIS standard in future years? What happens about warranty?

The Total ECDIS Solution is the answer to all of these questions.

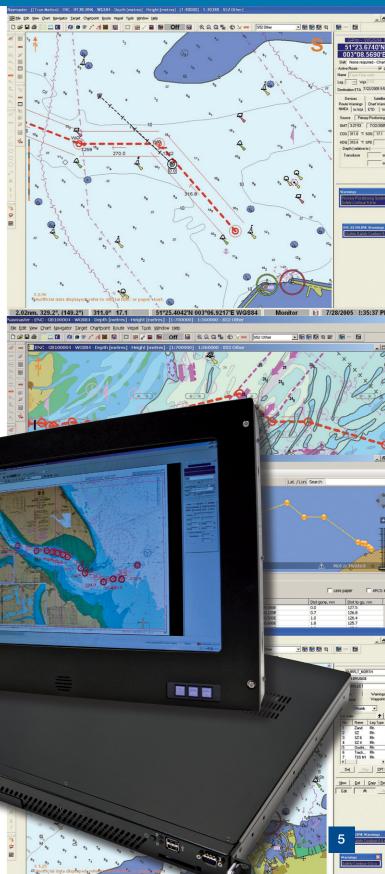
#### Hardware

The hardware is manufactured in-house and is supplied with Navmaster ECDIS software. The result is a system type approved by DN, GL, CCS, and is also wheelmarked. The modular hardware provides a flexible solution with console mount, desk top mount or pedestal mount installations. Installation and system commissioning is carried out by a global network of fully trained engineers. Standard hardware specifications suit most existing bridge layouts:

- 19", 24" & 27" monitor pricing
- Solid state hard drives
- PCI card connection for 8 inputs and 4 outputs



# The Total ECDIS Solution



### The Total ECDIS Solution



#### Chart Data

The Lilley & Gillie Navmaster ECDIS can accept the widest range of digital charts. This includes services from the Admiralty, Primar, NOAA, Jeppesen and others. Navmaster also supports the innovative pay-as-you-sail services now coming onto the market.

For updating, Navmaster supports the full range of options from traditional physical media (DVD/CD) to email or online download of updates.

#### Crew Training

The requirements of two types of training are necessary.

A generic IMO ECDIS course that is to be held and certificated by a Flag State Approved School.

Type specific training covering the ECDIS fitted onboard.

We have formed global partnerships with Flag State Approved Schools. These schools run the Navmaster training systems and are able to provide both generic and type specific training in a single course. Total ECDIS Solution provides either details of a school to suit vessel crewing arrangements or a fixed end user price to cover training requirements.

#### Type specific training (Onboard)

Constant development of skills in operating the make and model of ECDIS fitted onboard is vital for all crew/users. The CBT (Computer Based Training) module is supplied alongside our annual support contract to ensure crew members, in their own time, are able to refresh and develop their Navmaster ECDIS skills.

#### Maintaining your investment

The IMO has decreed that ECDIS is one of the first mandatory fit systems that must be maintained to current standards. February 2009 was the last IMO update to MSC232. By subscribing to Lilley & Gillie's Annual Support Contract, owners will receive the following:

- Support Hotline via phone or e mail
- CBT
- Flexible warranty terms (extra cost)
- Upgrade to current standards

#### Customers facing warranty procedures

Ensuring vessels are kept going with a fast and reactive service is key to our warranty. Installation of our ECDIS is completed by trained professionals through a breakout box system. This allows both monitor and PC to be connected only by a single cable. This means any future removal and replacement can be done by crew to reduce the need for external service engineers.

### Steps to resolve a typical warranty issue

- Defective monitor reported.
- Replacement is shipped in accordance to vessel instructions by courier/3-day service worldwide.\*
- Crew replace defective monitor and ship back according to our instructions.
- Assessment of defective monitor. No further action if covered by warranty. Any damage caused outside warranty new monitor is charged to owners account.

\*There are exceptions to the 2/3 day courier service where customs and import issues are possible (e.g. Brazil and China). Agents in these countries are established to ensure parts are available when required.

## The Total ECDIS Solution





## SPOS Weather Routeing

All relevant weather forecast details and tools to optimise voyage planning are available with this SPOS (Ship Performance Optimisation System) routeing system. Lilley & Gillie in conjunction with MeteoGroup provide this using the latest technology which makes it is less expensive than routeing with meteorologist onshore support. Taking into account the elements, wind, waves, swell, and current, with SPOS the ship's route can be optimised on-board. With the knowledge that the system is accurate and gives high quality updates, the crew are always aware about the weather ahead and can plan accordingly.

- It is a proven accurate and reliable weather data system
- Efficient voyage and ETA planning is provided
- Easy to use and operate
- Saves time and fuel
- Weather damage is prevented and reduces ship and cargo insurance

SPOS is designed to enable captain and crew to use their knowledge about their vessel and cargo's characteristics to make route calculation user adjustments. Therefore, in the prevailing conditions, for safety and efficiency, the optimum route can be charted by the captain.

#### Fleet Module

- Relative to weather, monitor fleet vessel performance
- Crew safety levels are increased
- Historical weather data is provided
- Weather operations support is available whenever required

#### **SPOS Fleet Management**

- Monitor Fleet and ensure ETAs, fuel consumption, and weather conditions remain in limits
- Monitor vessel progress and run post voyage performance analysis compared to Charter conditions

Supplied to owners, charterers, and ship's managers SPOS has been installed on more than 2500 vessels. ensuring they navigate the world safely and efficiently with better fuel consumption and environmental benefits.

The definitions of radio and navigation equipment, contained within SOLAS, the international Convention for the Safety of Life at Sea, as adopted by the International Maritime organization (IMO), led to the formulation and adoption of EN 60945. This lays down the "General requirements for maritime navigation and radiocommunication equipment and systems, methods of testing and required test results". Other resolutions, adopted by the IMO, led to the introduction of performance standards. These too have to be met, as appropriate to the type of equipment concerned. For example, speed and distance measuring equipment must meet the requirements of BS EN 61023, which specifies performance requirements, methods of testing and required test results. The latest edition of this standard also added a requirement for a serial interface. so that speed and distance data was readily available for transmission to other suitable shipboard equipment. Type Approval certification of specified equipment is also necessary before such equipment or systems can be marketed within the European Community. The Marine Equipment Directive (MED) covers all such equipment and lists all applicable standards to which such equipment must conform.



# Marine Equipment

EN 60945 specifies that all maritime navigation and radiocommunication equipment must be able to withstand the specified limits of these environmental tests:

- Normal and low temperatures
- Dry heat and damp heat
- Vibration
- Rain, spray and water immersion
- Very high or low humidity
- Solar radiation
- Oil resistance
- Corrosion

The Lilley & Gillie paradigm is one of continuous development through innovation over almost two centuries. Its axiom of quality and reliability is widely acknowledged. The Technical Centre continues to move forward through design innovation, implementation, harmonised adaptation and multi discipline integration.

# ECDIS/ECS Software and Hardware

#### Navmaster 800

Type approved ECDIS with 24" monitor and 19" rack mount processor. Variety of mounting options.



Navmaster 1000

Type approved Panel PC ECDIS. All in one with 21.3" monitor



#### **Navmaster Pilot**

Designed as a portable easy-to-use system to assist pilots. Can be connected to the vessel's AIS to show the vessel's data.

#### Navmaster 1200

Type approved with 19" monitor and 19" rack mount processor. Variety of mounting options.



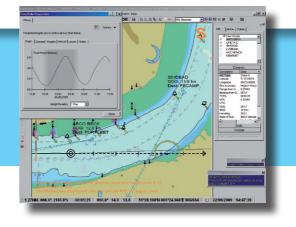
### **Navmaster ECS**

Based on the Navmaster full ECDIS software, Navmaster ECS is available for users that do not need to meet ECDIS carriage requirements, but want the benefits of digital navigation.

### Navmaster Computer Based Training (CBT)

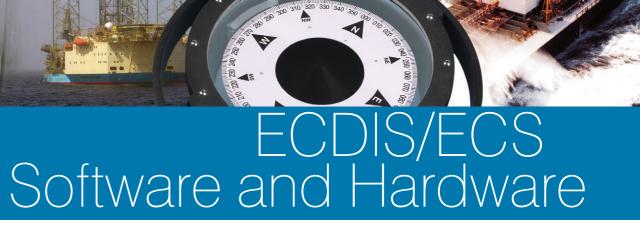
Onboard training CDs with examination. Type specific training certificates available from this system.





#### **Navmaster Training**

Software suitable for use in training schools. Train on full ECDIS software.



#### **Navmaster Office**

Navmaster software for office use. Can be used for many purposes including incident management and passage planning.

#### **Navmaster AIS**

Offering a graphical display of AIS targets on electronic charts. Used in many small and medium-sized ports around the world.





## Walker Equipment

#### 4020 Type Approved EM Speed Log System

Available for all hull materials in fixed or retractable sensor versions.







265.3

#### 7070 Type Approved EM Speed Log System

Available for all hull materials in fixed or retractable sensor versions.

### 5000 Wind/Weather combined systems

True wind option available.

### 7080 Type Approved Speed Log

Along with wind and weather system, traditional cup/vane or ultrasonic versions available.



#### 2050 Wind speed and direction system with NMEA output

True wind option available.

#### **MFD System**

Providing selectable data on indicators and ASO sensor connection options wind, weather, heading, etc.

## Walker Equipment

#### 2080 Wind speed and direction system ultrasonic system NMEA outputs

True wind option available.



#### **BNWAS/IWAS system**

Bridge navigation with alarm system BV CCS approved.

IWAS system recording wind speed and alarm system.



# Magnetic Compass Systems



#### MK2002S

Reduced height compass system according to current IMO legislation for vessels on restricted service or under 150 GRT. Approved by BV, CCS and Wheelmarked.

Available either in reflector or non-reflector versions, in white or grey.



#### **Transmitting Magnetic Compass System**

Providing heading information to receivers and off-course alarm available. Extra NMEA outputs if required.

#### **MK2000S**

Meets in full all IMO legislation for vessels over 150 GRT. Approved by BV, CCS and Wheelmarked.

Available either in reflector or non-reflector versions, in white or grey.

FW7703 Navigator Compass Binnacle.



#### **SR4 Magnetic Compass**

Approved by CCS, BV and Wheelmarked. Desk mount or overhead bracket mount with illumination is available.

FW7710

Dimmer Control for Navigator Compass.



# Magnetic Compass Systems



### FW7701

Navigator Compass Wellfit.





# Lilley & Gillie Marine Instruments



#### Clock, chronometer, barometers and barograph

- FW0100 Clock, quartz, 150mm (6") dia. dial, marine quality brass case, bulkhead mounting.
- F0046 Chronometer, Gillie Sestrel, guartz 90mm dial. wood box.
- FW0016 Barometer, aneroid, 150mm (6") dia. dial, mm & mb scale, marine quality brass case, black paint finish, bulkhead mounting.
- Barograph, type 207M with damped F0010 movement in wood case c/w 50 off 7 day charts.



#### Sextant and binoculars

Bells and Fog Gong

required).

F0030

F0031

- Sextant, type Lilley & Gillie 4 x 40 F0800 c/w carrying case and calibration certificate.
- F0037 Binoculars 7 x 50, waterproof, individual focusing, rubber armoured c/w soft padded case and straps.

### Electronic Services and Sales Network

As well as our own range of electronics (Lilley & Gillie, Walker and Chernikeeff), Lilley & Gillie are the UK sales and service agents for the Yokogawa Denshikiki (Hokushin) range of gyro compasses, autopilots and EM logs. Through our UK network of engineers we are able to carry out routine service and repairs on any of this equipment in UK ports.

Australia AMI Sales Tel No: +61 8 9331 0000 Email: service@amisales.com.au Website: www.amisales.com.au

Belgium Radio Holland Belgium N.V. Tel No: +32 3 320 9960 Email: service@radioholland.be Website: www.radioholland.be

Brazil

SMCP - South Marine Charts & Publica-Email: sales1@abe-inzenjering.hr Denmark

Iver C Weilbach & Co A/S Tel No: +45 33343560 Email: Nautical@weilbach.dk

France

Sambron

Germany

CMC Electronics Inc. Tel No: 514-748-3000 (ext. 4800) Website: www.cmcelectronics.ca

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Email: info@shipcomponent.com Eversailing Marine Safety Technology

Co. Ltd. (Southern China) Guangzhou Tel No: +86 20 2208 5500 Email: hzy@eversailing.com

Seven Seas Electronic Company Ltd Shanghai Tel No: +862 158916060 Email: mail@sevensea.com.cn

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Email: zhangyb@eastoneint.com.cn Bogerd Martin (Shanghai)

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Shanghai 3D Marintec Co Ltd Shanohai Tel No: +86 21 5465 9382

Email: sales@3d-marintec.com Via Marine Co Ltd. Shangha

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Jason (Shanghai) Co Ltd Shanghai Tel No: +86 21 6337 5966

Email: chinasales@jason.com.sg Beijing Highlander Digital Technology Co. Ltd.

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Compagnie General Telemar Spa Tel No: + 390 6 3221800 Email: tech@cgtelemar.com

Bell, brass, 300mm dia., c/w certificate

Bell, brass, 200mm dia., c/w bracket,

beater c/w certificate and engraving (if

and engraving (if required).

and engraving (if required).

FW3000 Zinc plated steel 410mm fog gong and

Korea **OPM Korea** Tel No: +82-70-4254-1352 Email: hch8765@megapass.net

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Haanh Co. Ltd Tel No: +84 313 599 611 Email: haanhcoltd@vnn.vn

Samaser Corporation Tel No: +848 394 000 73 Email: i nfo@samaser.com.vn



Manufacturer of magnetic compasses, TMC's and nautical instruments. Adjusting, testing and repair of magnetic compasses by certificated compass adjusters.



Manufacture of type approved navigation and data instrumentation for commercial vessels.



Chernikeeff

Manufacture of military grade instrumentation systems for naval and paramilitary vessels.



High quality commercial equipment for the leisure market.

UK sales and service of Yokogawa gyros, autopilots and logs.



Distribution of lighting products including navigation lights, navigation light switch panels and searchlights.

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### LILLEY & GILLIE

Directing International Shipping since 1812