
SEARCHMASTER

INTELLIGENT SEARCHLIGHT



TECHNICAL MANUAL

Version 1.81 | 29.09.2022



SEARCHMASTER

INTELLIGENT SEARCHLIGHT

PREFACE

The SEARCHMASTER is a lifesaving, intelligent searchlight with unique features and increases onboard safety.

The Searchlight increases safety onboard with a fast and accurate rescue via automatic AIS emergency signal, perfect for tracking other vessels, objects or PAB/SART signal by using the AIS data combined with GPS, Compass, and Radar information.

NOTE! When a PAB/SART signal is detected the SEARCHMASTER will automatically start tracking the signal with the light beam.

The SEARCHMASTER is capable of tracking on a position, which means that the searchlight will automatically maintain a heading when your vessel is moving

The SEARCHMASTER is fully automatic and does not require any personnel and therefore provides you with an extra set of hands onboard.

The SEARCHMASTER can also be used in manual mode and be controlled by personnel during operations.

The SEARCHMASTER has an integrated pitch/roll sensor for tracking in high seas (360° in horizontal light beam rotation and +/- 40° vertical light beam movement and compared to other searchlights on the market the SEARCHMASTER has the best and most stable light focus on all selected targets

The SEARCHMASTER can be offered in double – and triple systems to provide tracking on multiple targets in the water

The SEARCHMASTER Searchlight can be used on all vessels and in various segments.

Currently available in two models:

Searchlight SL170 w/170 Watt

Searchlight SL340 w/340 Watt

The searchlight must be tested minimum once a week to ensure that everything works optimally

Legal disclaimer

Our SEARCHMASTER products are offered to you conditioned upon your acceptance and without modifications of our sales - and delivery conditions.

SEARCHMASTER ApS will not be held responsible for loss, injuries or damages arising from unauthorized installation, poorly maintenance, incorrect or inappropriate use and technical interventions made without our written consent and in compliance with our regulations.

Please find the latest version of the Technical Manual at our website www.searchmaster.dk

Table of content

1 TECHNICAL SPECIFICATIONS	6
SPECIFICATIONS	6
2 TECHNICAL MANUAL	7
TECHNICAL MANUAL	7
2.1 MANUAL	7
2.2 AUTO (TRACKING)	7
2.3 REMOTE	7
2.4 PAB / SART	7
2.5 KEYBOARD FUNCTIONS	7
2.6 DISPLAY FUNCTIONS	8
2.7 POSITION & HEADING INFO	8
2.8 NAVIGATION DISPLAY	8
2.9 NAVIGATION DISPLAY	9
2.10 DISCLAIMER AND ERROR CODES	10
2.11 DECLARATION OF CONFORMITY	11
3 INSTALLATION	12
3.1 INSTALLATION START	12
3.2 BEFORE MOUNTING	12
3.3 PARTS	12
3.4 CONNECTION ILLUSTRATION	13
3.5 CONNECTION DIAGRAM	14
3.6 CONTROLLER PORTS	15
DUPLEX	15
PC USB PORT	15
SLRX / TX	15
INPUT	15
NMEA 1-4	15
OUTPUT	15
LOG	15
CONFIGURATION	16
3.7 CALIBRATION	16
3.8 SETTINGS MENU	17
4 COC & RISK ASSESMENT	18
RISK ASSESMENT ACCORDING TO EN ISO12100	18
4.1 LIMITATIONS OF THE MACHINE	18
4.2	18
4.3	18
4.4	18
4.5 IDENTIFICATION OF DANGER SOURCES	18
5.3 CONTACT INFORMATION	19
5.4 TECHNICAL SUPPORT	19
5.8 SALES	19
6 TERMS OF SALE AND DELIVERY	20
7.1 ABBREVIATIONS	22



SPECIFICATIONS

Voltage

18 - 32 volt DC

Electrical effect

170 watt / 340 watt

Light effect

SL170: 18.000 lumen / 1 LUX - 700 m

SL340: 36.000 lumen / 1 LUX - 1000 m

Interface

Power cable 24 Volt, max 20 m of 4 x 2.5 mm² wire shielded

Controller cable, max 20 m of 0,75 mm² wire - 2 x 2 twisted pair, shielded

Operating temperature

-25° to +55° celsius

Pitch/Roll

+/- 40° stabilized

Input

NMEA HDT, GGA, TTM and AIS VDO

Uptput

1 Data - and 1 alarm

Minimum light beam width

Width: 6° - Light beam accuracy: Better than 3° - within 1 second

Magnetic Safety Distance

0,95 meter

Vibration test 2-100 Hz

Approved

International Standard

IEC 60945: Ed. 4

- Category 1 Scope B & C

Ingress Protection Marking

IP 66 Dust and spray sealed

International Association of Classification Societies

ACS E10: Rev. 7

Country of origin

Denmark

Rights

Patented and Trademark protected

SL170

Dimensions: ø24 x 40 cm

Weight: 14,3 kg.

Lumen: 18.000 L

Light beam: 700 m / 1 LUX

SL340

Dimensions: ø24 x 60 cm

Weight: 19,4 kg.

Lumen: 36.000 L

Light beam: 1000 m / 1 LUX

CONTROLLER

Dimensions: 33 x 18 x 18 cm

Weight: 2,3 kg.

TECHNICAL MANUAL

2.1 Manual

In Manual mode the searchlight will only move when the user moves the joystick, except for pitch and roll which is still automated

2.2 Auto (Tracking)

In Auto mode the searchlight will hold a position, selected on the target display. If a ship or object is selected, the SEARCHMASTER will maintain the target lock regardless of target and vessel movement, using AIS, GPS, compass and radar data. This also applies to ship pitch and roll.

2.3 Remote

In Remote mode the SEARCHMASTER Searchlight will follow the cursor on the radar screen. When a radar target is selected, the searchlight will follow that target, as if the target were selected on the SEARCHMASTER controller.

2.4 PAB / SART

If a PAB / SART signal is detected, the SEARCHMASTER will automatically activate the searchlight, and locate the signal using the light beam.

A PAB / SART alarm will overrule all other modes until another target is selected by the user or the searchlight is switched off.

2.5 Keyboard functions

The keypad on the SEARCHMASTER Intelligent Searchlight is indicated by 4 buttons and a multi-movement joystick.



Dimmer adjusts the screen brightness. When the button is pressed continuous, the brightness will dim to the lowest possible brightness. If the button is still pressed when the lowest brightness is reached, the dimmer effect will be reversed and the brightness will again be increased until the highest brightness is reached, after which the dimmer effect will be reversed yet again.



Manual / Auto / Remote switches between Manual, Auto and Remote mode as described in **2.1 Manual**, **2.2 Auto (Tracking)** and **2.3 Remote** by pressing the button to switch between the three modes.



SearchLight button turns the searchlight on and off by pressing the button. If pushed while tracking a **MOB/PAB/SART** alarm it will release the lock on that target and allow other targets to be tracked.



Enter button is used to confirm your choice by pressing the button, and for canceling of audible alarms.



The joystick can be used to move the searchlight in **MANUAL** mode
In **AUTO** mode the user moves the cursor on the display and can choose a target on the target display.
By pressing the joystick the searchlight will then follow the target automatically.
The distance is adjusted directly by the joystick.

To manually adjust the lamp focus, press and hold the joystick.
After 2 seconds the joystick can be moved right or left to adjust the lamp focus, while pressed down.
Move the joystick right to get a narrow beam, and move the joystick left to get a wider beam

2.6 Display functions

The on-screen keys on the SEARCHMASTER Searchlight is the functions accessible on the display.



The scan mode can be selected by pressing **SCAN ON** with the joystick cursor. When pressing **SCAN ON** the SEARCHMASTER will start a scanning pattern within a range of **40°** of the current lamp heading. By pressing **SCAN ON** again, the scanning pattern range will increase to **90°** of the current lamp heading. By pressing **SCAN ON** a third time the scanning pattern will increase the arc to **180°** of the current lamp heading. To turn off the scan mode, press **SCAN OFF** with the joystick cursor.



The **LAMP ON** button and **LAMP OFF** button activates and deactivates the searchlight. The **PAB / SART** alarm will override this function and automatically turn on the searchlight, if turned off.



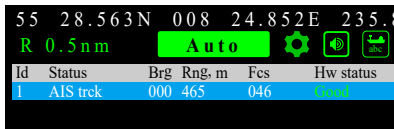
The **Dimmer** buttons allow the user to adjust the brightness level in the display. The brightness adjustment stops when max or min. is reached. The adjustment is stepless.



The **Range** buttons are used to adjust the range shown on the controller display. Min. and max. range are 0.25nm. and 2.00nm. When adjusting the range, the interval doubles: 0.25nm - 0.50nm - 1.00nm - 2.00nm. When tracking a target, the range will automatically change if the target range increases out of the present range area.

2.7 Position & Heading info

55 28.563N 008 24.852E 235.8 is the position of the vessel with the SEARCHMASTER Searchlight installed.



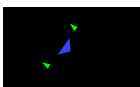
R 0.5nm stands for **Range 0.5 nautical miles** and is the present ranges shown in the controller display, as described in **2.6 Display functions**

AUTO is to show the present searchlight mode. This can also show **MANUAL** or **REMOTE** as described in **2.1 Manual, 2.2 Auto (Tracking)** and **2.3 Remote**

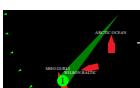
The speaker icon is to disabl the alarm when the ship is in harbour.

The ship icon is to activate or deactivate target names

2.8 Navigation display



The **Target Display** is displayed as small lines, with a north indicator. The indicator will always point to the north, based on the data received from the **GPS**.



The **Target Selector** is indicated as a cone with a circle at the end. The ring is the selected position where the user wants the searchlight to move to. The 1 indicates which searchlight the user is moving

2.9 Navigation display



The **Selector** icon is moved by the joystick and is placed over the button, radar target or selection box the user want to select.



The **Lifesaver** icon is displayed on the target display when a **PAB / SART** alarm is detected. This will display the position of the alarm while the lamp is turned on and will point to the position with the light beam if the position is within the SEARCHMASTER's operating range.



The SEARCHMASTER controller loading screen contains the SEARCHMASTER logo, a loading bar and lamp serial number. The serial number is unique to every searchlight and is shown in the bottom left corner of the loading screen.

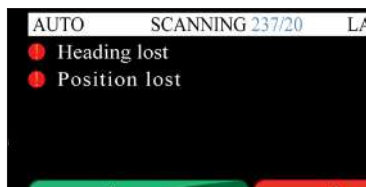
When contacting us about SEARCHMASTER, please provide the serial number.

The serial number will be shown on the controller screen every time the controller starts.

2.10 Disclaimer and Error codes

Disclaimer

Dealing with an error of any kind can lead to damaging the equipment. Please do not try to repair or dismantle the searchlight, controller or other components regarding the SEARCHMASTER searchlight. If in any doubt, please contact SEARCHMASTER ApS by phone or email for consulting, before any action is taken.



If heading or position is lost, due to an error in the system or connection, a message is displayed between the buttons and position information on the controller display and are indicated by a red dot with a yellow exclamation mark.

If the cause can't be pinpointed, please contact SeaMaster ApS for consultation. Contact information can be found on page 18.

If a **MOB / PAB / SART** alarm is detected, a text will appear under the error messages as well as the lifesaver icon on the target display (look on page 15), visually alerting other crew members that an alarm has been detected.

Disclaimer and Error Codes

Dealing with an error of any kind can lead to damaging the equipment. Please do not try to repair or dismantle the searchlight, controller or other components regarding the SEARCHMASTER searchlight. If in any doubt, please contact SEARCHMASTER ApS by phone or email for consulting, before any action is taken.

⚠️ IMPORTANT NOTE!

The error codes is continuously revised and may be replaced with a newer version without notice. The latest version of this manual can be downloaded from our website www.SEARCHMASTER.dk:

In order to protect and optimize hardware, overheating temp. is controlled to **70° celcius**.

GOOD	No errors detected	
EL	Error, Elevation	The searchlight can not elevate due to an error on the motor or motorbelt. Check motor and belt. Contact SEARCHMASTER ApS for consulting or spareparts.
AZ	Error, Azimuth	The azimuth has encountered a error and is not working properly. Check motor and belt. Contact SEARCHMASTER ApS for consulting or spareparts.
FC	Error, Focus	The focus has encountered a error and is not working properly. Check motor and belt. Contact SEARCHMASTER ApS for consulting or spareparts.
DL	Daylight Sensor Error	The daylight sensor is defective. Contact SEARCHMASTER ApS for consulting.
TM	Temperature	The searchlight temperature is to high. Contact SEARCHMASTER ApS for consulting.
NO LAMP	Lamp Error	The SEARCHMASTER Searchlight is missing communication due to an cable error. Check cable and cable connections. Contact SEARCHMASTER ApS for consulting or spareparts.

Declaration of Conformity

SEARCHMASTER
INTELLIGENT SEARCHLIGHT

Certificate owner	SEARCHMASTER ApS Vesterhavsgade 133, DK-6700 Esbjerg, Denmark
Product	SEARCHMASTER Intelligent Searchlight
Models	SL170 - 170 Watt Searchlight SL340 - 340 Watt Searchlight
Classification approvals	IEC 60945 - Edition 4 IEC 60068-2-1/2:2007 IEC 60068-2-30:2005 IEC 60068-2-6:2007 IEC 60529:2013 IEC 61000-4-2:2007 IEC 61000-4-3:2006 + A1:2007 + A2:2010 IEC 61000-4-6:2013 IEC 61000-4-4:2012 IEC 61000-4-5:2014 CISPR 16-2-3:2010 CISPR 16-2-1:2014
Compass safe distance	Test report no.: 118-33438-1 / IEC 60945:2002
Approved by	Force Technology - Report no.: 118-33438-1
Test Report	Force Technology Report can be obtained by sending an email to: info@searchmaster.dk
Responsibility	This declaration of conformity is issued under the sole responsibility of the manufacturer.

Note: The product has been produced and thoroughly tested by SEARCHMASTER ApS, Vesterhavsgade 133, DK-6700 Esbjerg.

All employees involved in the production of the SEARCHMASTER searchlight, have undergone a thorough training that complies with both internal and external rules.

The certificate was issued on 20.08.2021

Owner
Søren Mogensen
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VAT no. 40914315
www.searchmaster.dk



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Installation process and use of the recommended SEARCHMASTER components are applicable.

3.1 Installation start

The Searchlight must be installed on a platform designed for SEARCHMASTER searchlight to avoid accidental damage to the product.

When the SEARCHMASTER Searchlight and controller are installed in their respective locations, the correct cables are routed between the searchlight and the controller according to the diagram in the manual (page 13).

The cables are mounted in the controller according to the instructions in the diagram in the manual (page 13).

When installing the cables in the SEARCHMASTER Searchlight, the cables must be routed through the 2 cable glands at the bottom and then mounted in the searchlight as shown in the diagram in the manual (page 13).

3.2 Before mounting

Always perform a final check of all bolts, cable glands, screws and that ventilation plugs are properly tightened after the SEARCHMASTER Searchlight is installed.

When the SEARCHMASTER Searchlight is installed on the designed platform, the delivered rubber gasket must be mounted between the searchlight and the ship.

3.3 Parts

NOTE! Use only the supplied bolts to secure the SEARCHMASTER Searchlight. If other bolts are necessary authorized SEARCHMASTER personnel must be consulted.

If it is necessary to deviate from the recommended installation process, authorized SEARCHMASTER personnel must be consulted.

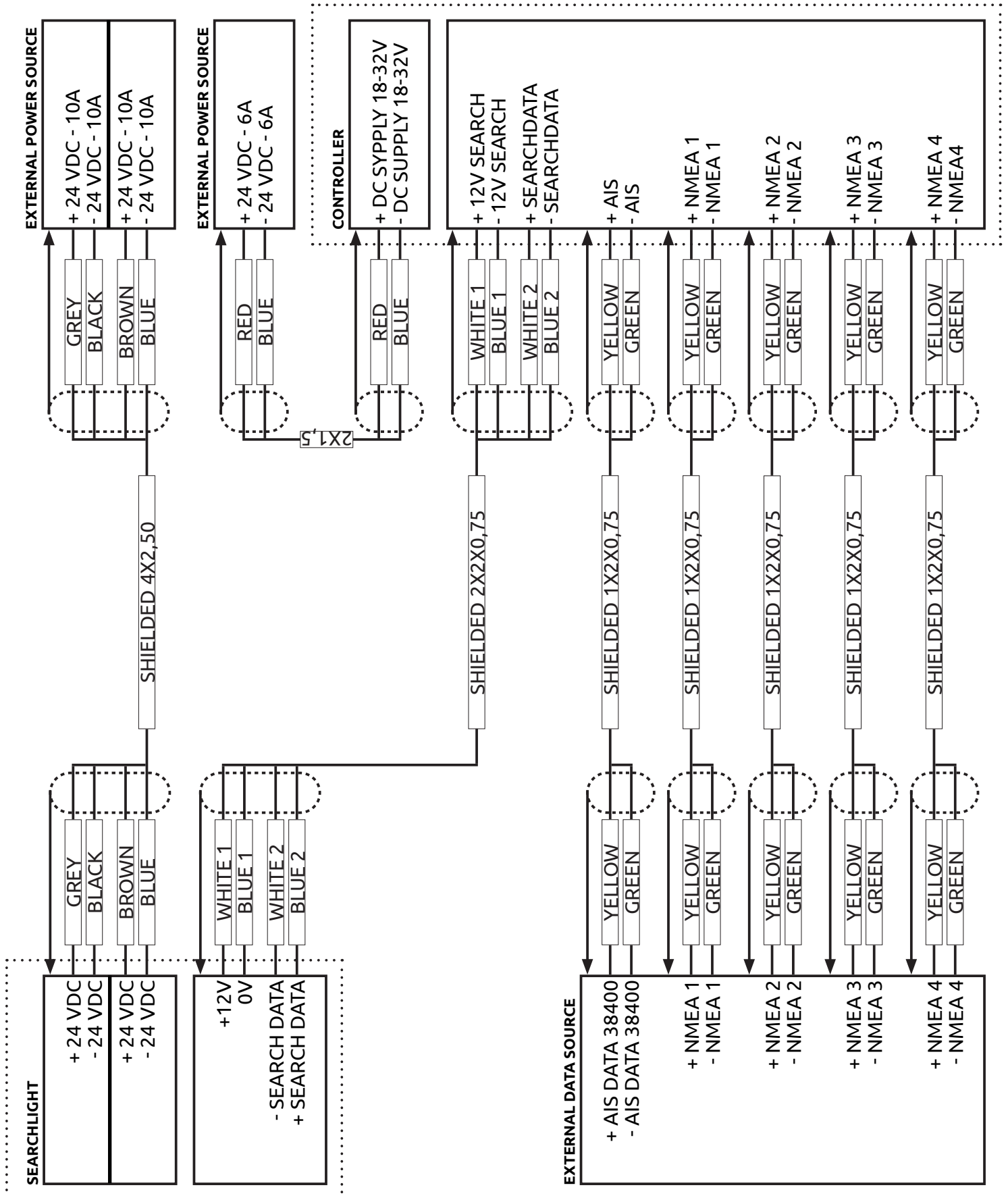
All cables must be marked during wiring.

3.4 Connection illustration



3.5 Connection diagram

Different data sources can be connected on NMEA 1-4 eg. radar, GPS, compass data etc.



3.6 Controller ports

Port	Baud	RX / TX	Sentences	Interface
SLRX / TX	115200	RX / TX	Searchlight	RS485
AIS	38400	RX	AIS, VDO, VDM	RS422
NMEA	4800	RX	HDT	RS422
Radar	4800	RX	TTM	RS422
REM	4800	RX	RSD	RS422
Position	4800	RX	GGA	RS422

DUPLEX

PC USB PORT

This port is only used for debugging.

SLRX / TX

SLRX / TX is used for connection between the controller and the Searchlight. Without this connection there is no way to control the searchlight.

INPUT

NMEA 1-4

AIS is receive only and accepts the **AIS** data of other ships and own ship.
GPS position is needed for the SEARCHMASTER to track on the **AIS** positions.
The accepted string formats to get data are **AIVDM** and **AIVDO**.

NMEA port is receive only and accepts different **NMEA 0183** data such a **GPHDT**, **HEHDT**, **GPRMC** and **GPGGA** for positioning and heading.

RARSD and **RATTM** from radar

RATLL is reserved for further use.

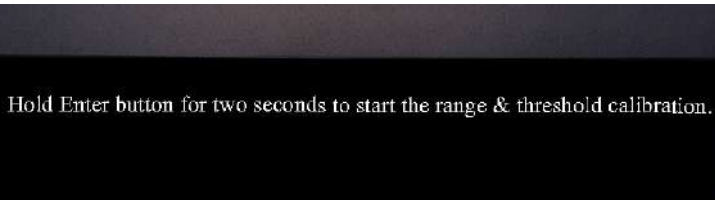
OUTPUT

LOG

Reserved for further use.

CONFIGURATION

3.7 Calibration



In the controller start up process, it is possible to enter **Range and threshold calibration. (Joystick calibration)** Follow the guide in the display.

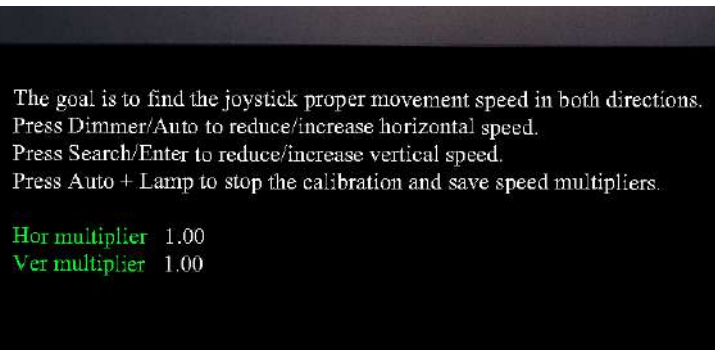
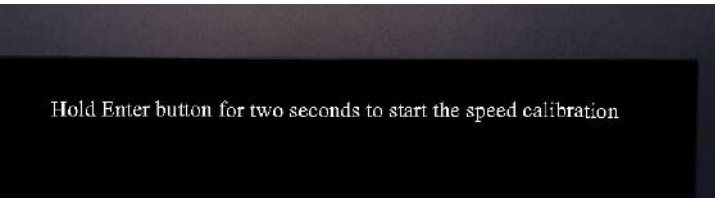
When calibrating the Thr: setting it is important just to apply so much pressure to the joystick that you are at the edge of the "dead zone" (The zone where the joystick do not register any movement.)

if the joystick is not calibrated properly, it may drift a bit.

All controllers are calibrated from the factory.



In the controller start up process, it is also possible to enter Speed calibration of the joystick. Enter the settings by following the instructions on the display.



The following paragraph is only to inform about the settings menu. The setting values is entered during installation and should **NOT** be edited by other that trained personel.

3.8 Settings Menu

To access the settings menu, press the mechanical **DIMMER** and **ENTER** buttons at the same time or press the **GEAR** icon in the top right corner of the display.

The settings menu is then shown as a pop-up box. From the top and down you have the possibility to enter the values that are necessary for the SEARCHMASTER to be calibrated correctly.

At the bottom you will find a diagram of the different measurements that are required. Normally it will be trained personel that will do the calibrating when the SEARCHMASTER is installed on the vessel.

Lamp Settings	
Lamp ID 01	Lamp Serial 020905180905
[A] GPS offset from port side	70
[B] GPS offset from stern	0
[C] Lamp offset from bow	0
[D] Lamp offset from port side	0
[E] Lamp elevation over water	4
[F] Vessel length overall	0
[G] Vessel width	0
Bearing correction angle	1800

The different measurements are as follows

[A] GPS offset from port side

Number of meters that the GPS receiver is placed from the port side of the vessel.

[B] GPS offset from stern

Number of meters that the GPS receiver is placed from the stern of the vessel.

[C] Lamp offset from bow

Number of meters that the lamp is placed from the bow of the vessel.

[D] Lamp offset from port side

Number of meters that the lamp is placed from the port side of the vessel.

[E] Lamp elevation over water

Number of meters that the lamp is placed over the waterline.

[F] Vessel length overall

The total length of the vessel from stern to bow.

[G] Vessel width

The total width of the vessel from port side to starboard side.

Bearing correction angle

Is used to adjust the lamp to absolute 0° during the installation.

When selecting a value box, in the setup menu, a number pad will appear. Use the number pad to enter the values for GPS offset, Lamp offset etc.

The number pad contains the following:

7	8	9	Can
4	5	6	
1	2	3	Ok
0	<<		

0 - 9 Is used to enter the values.

C Is used to clear the value box from any numbers.

<< Is used to move the cursor backwards in the value box without deleting an existing value.

Save Will save the entered value in the chosen box. When pressing Save the number pad will disappear again.

The calibration is necessary to give a correct alignment of the lamp, especially at short distances.

RISK ASSESMENT ACCORDING TO EN ISO12100

4.1 Limitations of the machine

SEARCHMASTER Searchlight complies with the IEC60945 standard.

4.2

SEARCHMASTER Searchlight can work in manual, auto and remote and in all there are no options for intervention.

4.3

The searchlight is for industrial use on ships and it is expected that the operator or technician has the expected abilities to operate the searchlight and also has health corresponding to health insurance certificate.

4.4

It is recommended that the searchlight be inspected every 3 years by authorized personnel to detect any wear on motors and belts.

4.5 Identification of danger sources



Danger source 1:

Warning label affixed to searchlight with international danger symbol. Avoid looking directly into the light as you may be blinded.

Danger source 2:

Risk of the searchlight motor stopping unintentionally. The software has a built-in warning in the controller, which shows where the error is located. Arrange for service as soon as possible, by authorized personnel. The searchlight can be used until service is performed, but with risk of further damage. Check error codes in manual.



Danger source 3:

The searchlight contains electronic parts that must be scrapped separately. When the searchlight is dismantled to be scrapped, the electronic parts must be scrapped in accordance with the applicable environmental regulations or sent back to the manufacturer.

Danger source 4:

Risk of incorrect installation. When installing, the enclosed materials must be used to ensure that the searchlight complies with IP66 and the installation must be carried out by an authorized person. Installation instructions are described in the manual. Authorized personnel are defined as SEARCHMASTER employees or other personnel trained by SEARCHMASTER employees.

Danger source 5:

Power supply fails briefly or software error / unintentional loop in the program. If this happens the Watch Dog timer is activated and will reboot the controller and searchlight, respectively.

Danger source 6:

Risk of reduced light effect due to dirty glass with salt or bird excrement. A physical check is recommended daily.

Danger source 7:

Risk of icing in certain geographical areas. The ice melts when using the searchlight.

5.3 Contact information

Outside office hours please contact Søren Mogensen +45 4033 4411

Office hours

Monday - Thursday 07.30-15.30

Friday 07.30-15.00

Phone +45 7512 0444

5.4 Technical support

Søren Mogensen

+45 4033 4411

sm@searchmaster.dk

5.8 Sales

Heidi Enemark

+45 3160 0194

sales@searchmaster.dk

SEARCHMASTER

INTELLIGENT SEARCHLIGHT

TERMS OF SALE AND DELIVERY Most recently updated on 8 November 2021

1.	Duty to inform
1.1.	The customer must provide SEARCHMASTER ApS with the necessary and correct information for the implementation of the services. Any expenses incurred as a result of the customer's incorrect information or failure to provide information must be covered by the customer. Similarly, the customer is responsible for defects or weaknesses in the customer's other equipment.
2.	Legality
2.1.	SEARCHMASTER ApS is responsible for the legality of the products sold, whereas the customer is responsible for the legality of working on the customer's equipment.
3.	Offers
3.1.	Only written offers are binding for SEARCHMASTER ApS.
3.2.	SEARCHMASTER ApS reserves the right to revise any forwarded offers/order confirmations if – regardless of the reason – execution turns out to be unreasonably burdensome.
3.3.	All offers shall lapse 30 days after they have been made.
4.	Connection
4.1.	Unless otherwise stipulated in the order confirmation, the customer is in charge of mechanical assembly according to the instructions of SEARCHMASTER ApS.
5.	Defects
5.1.	If the customer documents, that products delivered are defective, SEARCHMASTER ApS undertakes at its own choice to replace the products at SEARCHMASTER ApS' domicile, repair the products at SEARCHMASTER ApS' domicile, or refund the purchase price provided the products are returned to SEARCHMASTER ApS' domicile.
5.2.	The customer carries the risk of the accidental destruction of the products during a possible return transport in connection with the exercising of such remedies for breach and shall therefore cover all transport and freight costs involved.
5.3.	Every right lapses if the customer does not provide a written notice of Claims within eight days from the time when the defect in question is or ought to have been discovered by the customer.
5.4.	SEARCHMASTER ApS' liability for defects lapses one year after deliver.
6.	Product liability
6.1.	SEARCHMASTER ApS undertakes product liability according to current legislation and the following limitations:
6.1.1	SEARCHMASTER ApS is not liable for damage to products made by the customer or products including such products.
6.1.2	SEARCHMASTER ApS is not liable for operating loss, loss of profit, costs of recreating lost data on data carriers, or other types of indirect loss as a consequence of documented product liability.
6.1.3	The amount of the product liability cannot exceed the cover of the product liability insurance of SEARCHMASTER ApS of DKK 4,000,000. To the extent that product liability is imposed on SEARCHMASTER ApS towards a third party, the customer is obliged to indemnify
6.1.4	SEARCHMASTER ApS to the extent that third party liability exceeds the liability limitation in item 6.1.3.
6.1.5	The customer is obliged to accept legal action against the customer before the same court/arbitration court which processes claims for compensation against SEARCHMASTER ApS from a third party because of articles delivered to the customer.
7.	Anticipated breach
7.1	Regardless of other stipulations, SEARCHMASTER ApS is entitled to cancel orders and the consequent obligations, if it is clear from the circumstances, that the customer will not be fulfilling his obligations.
7.2	In such cases, SEARCHMASTER ApS must immediately inform the customer in writing.

8.	Delay
8.1	If a time or period of delivery has been agreed, it will appear from the offer and possibly from the order confirmation.
8.2	Delay of more than three months from the original time of delivery entitles the customer to cancel the agreement by informing SEARCHMASTER ApS in writing. SEARCHMASTER ApS does not undertake any additional responsibility in connection with delay, and the customer does not have any other remedies for breach. Thus SEARCHMASTER ApS is not liable for any loss – direct or indirect – in connection with deliveries that are late or missing.
8.3	If the delay is due to the customer's circumstances, SEARCHMASTER ApS is entitled to an extension of deadline to an extent, which is reasonable according to the circumstances. This applies regardless of when the reason for the delay occurs.
9.	Technical information about product information, etc.
9.1	Any information about weight, dimensions, capacity and technical plants are to be considered guidelines and are only binding to the extent that specific reference to them has been made in the offer or the order confirmation.
9.2	SEARCHMASTER ApS reserves the right to change design, etc., without prior notice. Such changes will not entitle the customer to cancel the purchase unless the customer can prove that a specific design, execution, etc. was a condition for the purchase. Changes made and consequent cancellation of the purchase will not entitle the customer to any compensation.
9.3	For equipment which because of its nature requires special documentation with a view to mounting, connection, operation or maintenance, SEARCHMASTER ApS will free of charge provide the customer with such documentation no later than when the products are delivered. SEARCHMASTER ApS reserves the right to demand that such documentation is treated as confidential.
9.4	All drawings and technical documents regarding the products, which are handed over to the customer before or after the conclusion of the agreement, remain the property of SEARCHMASTER ApS. Such material must not without written permission from SEARCHMASTER ApS be used by the customer, or be copied, reproduced, disclosed to a third party, or in any other way be brought to the knowledge of a third party.
10.	10. Force majeure
10.1	Force majeure leads to exemption from responsibility if it prevents the fulfilment of the agreement or makes fulfilment unreasonably burdensome. This includes events which are beyond the control of a party and which are by nature extraordinary, for example war, fire, seizure, restrictions, unrest, shortage of means of transport, shortage of goods, and defects and delays regarding deliveries from sub-suppliers caused by extraordinary circumstances.
11.	Liability
11.1	SEARCHMASTER ApS is not liable for consequential damage, direct or indirect loss, lost earnings, operating loss, etc.
11.2	The liability to pay compensation of SEARCHMASTER ApS is under all circumstances limited to DKK 1.000.000 for each order. Product liability excepted.
12.	Property right
12.1	SEARCHMASTER ApS has the property right to the goods/products delivered until the article has been paid for.
13.	Terms of delivery
13.1	Delivery EXW according to Incoterms 2020.
14.	Prices
14.1	All prices are exclusive of VAT and excise duties.
15.	Payment
15.1	Unless otherwise agreed, payment is to be made cash on delivery. Default interest of 1 per cent per month, or fraction thereof, will be added, in the event of non-payment from the due date.
15.1	The customer is not entitled to set off against claims from other legal relationships.
16.	Venue and governing law
16.1	Any dispute between the parties arising from or in connection with a purchase order governed by these Terms and Conditions shall be settled in accordance with Danish Law. The parties agree that The Courts of Esbjerg shall be the exclusive forum for any dispute arising under these terms or this order.
16.2	Consolidated Act no. 1224 of November 21 2014 regarding the International Sale of Products does not apply to the legal relationship between the parties
17.	Interpretation
17.1	In the event of doubt regarding interpretation, the Danish version of the terms of sale and delivery shall at any time prevail over other versions.

7.1 Abbreviations

This technical manual uses abbreviations. This table explains what the different abbreviations mean.

AIS:	AUTOMATIC IDENTIFICATION SYSTEM
GPS:	GLOBAL POSITIONING SYSTEM
SART:	SEARCH AND RESCUE TRANSPONDER
PAB:	PERSONAL AIS BEACON
MOB:	MAN OVER BOARD
HDG:	HEADING
DEG:	DEGREES
RNG:	RANGE
M:	METER
N:	NORTH
E:	EAST
SRCH:	SEARCH
NM:	NAUTICAL MILES
PCT:	PERCENT

SEARCHMASTER Searchlight
is developed and produced by
SEARCHMASTER ApS
in Esbjerg, Denmark.

SEARCHMASTER
INTELLIGENT SEARCHLIGHT

