

Monitoring and Control Technology



Superyacht Electronics

# Monitoring System Refit

- + **Expandable system**
- + **Minimal installation requirements**
- + **Type approved products**
- + **Customer specific visualization**
- + **Reduced service expenses by remote maintenance**
- + **Increased comfort and usability**



## Refit Package

# Monitoring System Refit

Refitting the ship electronics offers the opportunity to bring the electronics systems up to date and to profit from numerous advantages.

The reasons for a refit may result from a desire for more comfort and better ease of operation. Current display technology has improved greatly over the last few years, leading to an enormous increase in readability and visibility in bright conditions.

This provides monitoring systems with the ability to much better envision the available information and ultimately increases the operational safety of the entire vessel.

Last but not least a refit is an increase in the ship's value that may significantly outweigh the necessary investment.

## Your Benefits

- ✚ **Expandable system**
- ✚ **Minimal installation requirements**
- ✚ **Type approved products**
- ✚ **Customer specific visualization**
- ✚ **Reduced service expenses by remote maintenance**
- ✚ **Increased comfort and usability**





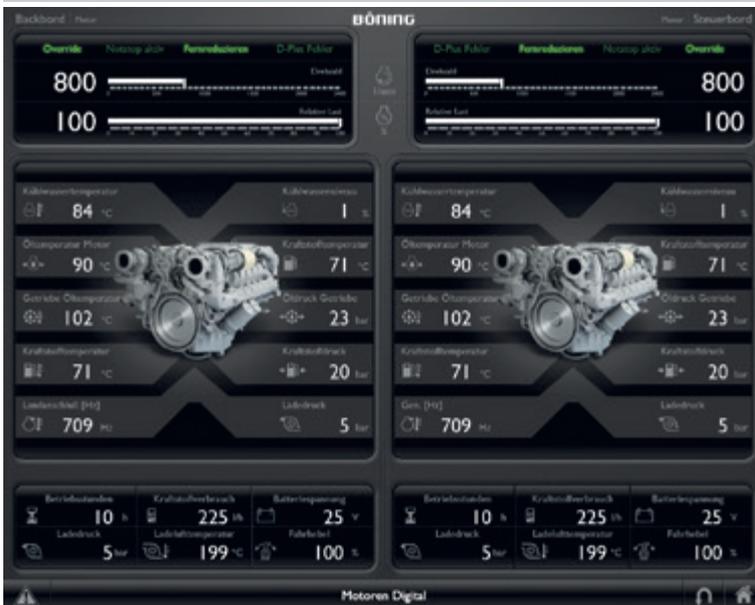
### Main Engines

This screen provides information about the engine's condition. The data is displayed in gauges and as numerical indicators.



### Navigation Overview

The navigation overview gives you basic conning data and important infos on the ship providing a general overview over its "readiness to sail". One glance will tell you whether or not it is safe to set sail.



### Main Engines Details

Here, engine data is laid out in more specific detail, giving you in-depth information on the engine's condition.



### Bilges / Pumps

Bilge levels and pump status are shown on this screen. Additionally, the most important doors and hatches are indicated.



## 10" Multifunctional Touchscreen Graphical Interface

### Visualization

The visualization software on AHD 1310 G and iPad covers all the data of your ship. It is available in any language you desire. On-screen text can be set to every european language plus russian and chinese as well. The fully customizable screens are controlled via touch commands or optional remote control with trackball or rotary knob.

Remote Control AHD-DC RS







2000 rpm 35 bar 8.0 bar BÖNING 8.0 bar 35 rpm 2000 rpm  
RNG 1250 NH 43 % 6/21/2015 14:42:06

Time	Point	Name	Value	AlarmType
6/21/2015 14:32:14	3.33.6	Dirty Oil Tank	90 %	warning max
6/21/2015 14:30:18	1.2.34	P-Gear Lube oil Port	79.0 bar	alarm min
6/21/2015 14:18:25	3.20.17	Underfrequency Genset Port	min	alarm min
6/21/2015 14:12:50	3.21.17	Underfrequency Genset Sbid	min	alarm min
6/21/2015 14:00:40	3.2.34	P-Gear Lube oil Sbid	79.0 bar	alarm min
6/21/2015 13:50:17	3.3.34	Engine Room Port Bilge Level - High	min	alarm max
6/21/2015 13:50:17	3.3.25	Engine Room Sbid Bilge Level - High	min	alarm max
6/21/2015 13:50:17	3.3.26	Garage Pfd Bilge Level - High	min	alarm max
6/21/2015 13:50:17	3.3.27	Garage Port Bilge Level - High	min	alarm max
6/21/2015 13:50:17	3.3.28	Garage Sbid Bilge Level - High	min	alarm max
6/21/2015 13:50:17	3.3.31	Aft Thruster Room Bilge Level - High	min	alarm max
6/21/2015 13:50:24	3.4.4	Engine Room Ventilation Fan Port Aft - Fault	min	alarm min
6/21/2015 13:50:24	3.4.8	Engine Room Ventilation Fan Sbid Aft - Fault	min	alarm min
6/21/2015 13:50:17	3.3.26	Garage Pfd Bilge Level - High	min	alarm max
6/21/2015 13:50:17	3.3.28	Garage Pfd Bilge Level - High	min	alarm max

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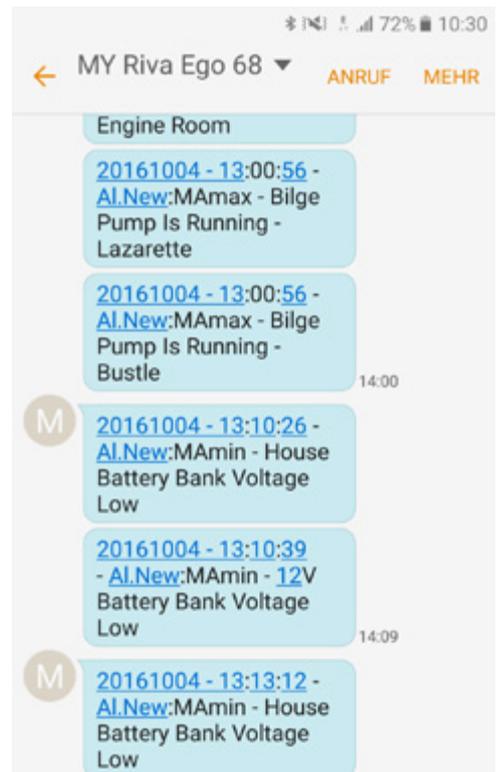
### Alarms

Listing the latest alarms in chronological order with detailed information.



## Short Alarm Messages

The fastest way to know what is going on. Via GSM kit, SMS alarm messages are sent directly to your phone. This small kit tremendously increases security when the ship is harbored or anchored close to shore and in reception range of a GSM signal.





## Remote Access

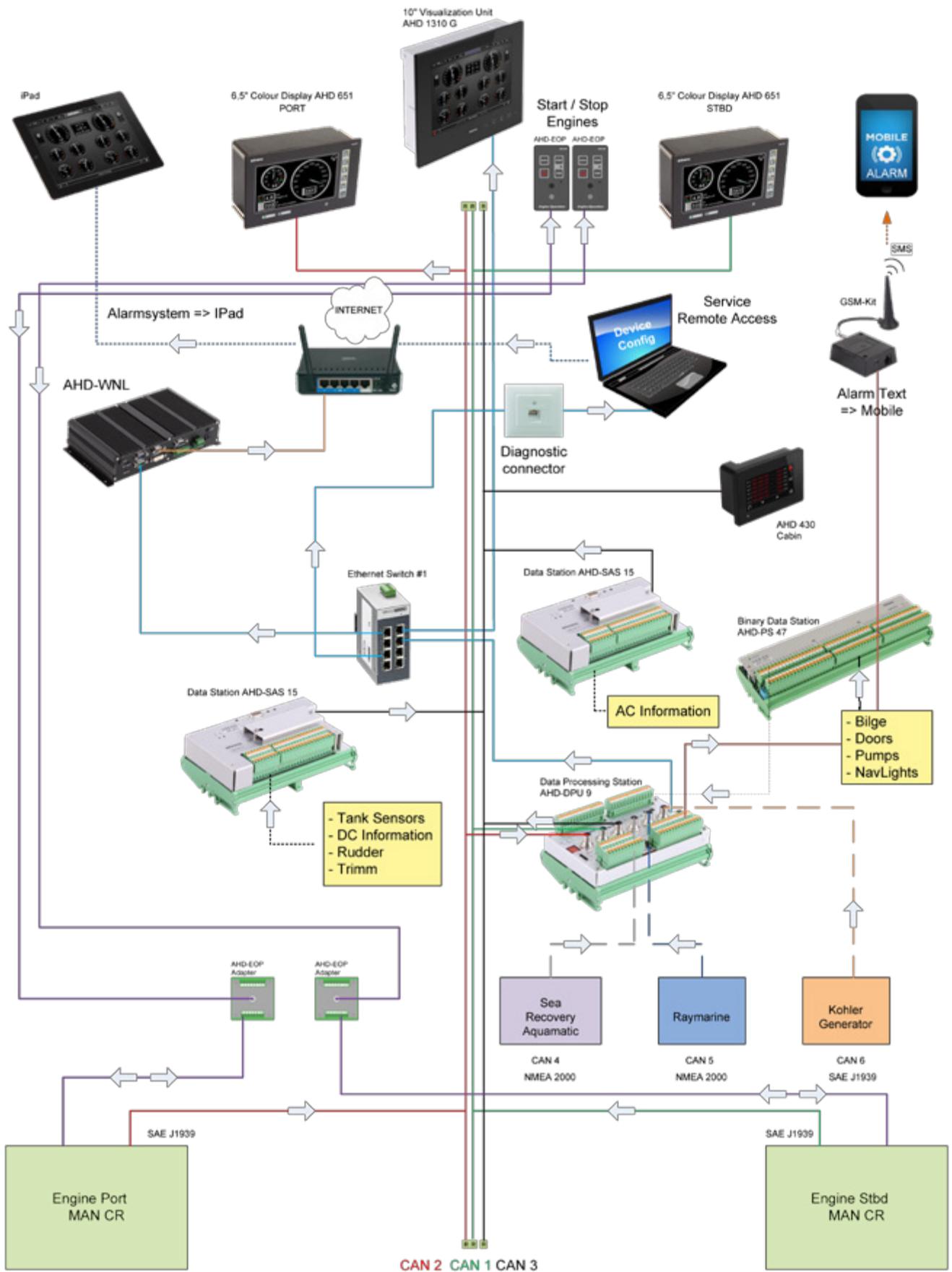
# Mobile Monitoring

### Access via iPad or iPhone

Data and alarm and status messages are transmitted to your mobile devices in real time.

#### AHD-IAMCS

AHD-IAMCS provides the identical visualization as AHD 1310 G to monitor your ship's data on your iPad or iPhone anywhere on board or even at home.



## Refit Package

# System Description

### System Structure

This allround refit package consists of a processor unit, one industry standard PC for maritime use, three data stations and several display units. On the bridge console, engine controls are modernized with the transponder technology control panel AHD-EOP.

#### Data Processing Unit AHD-DPU 9

The Data Processing Station AHD-DPU 9 accepts various data protocols, such as main engine parameters, information from the fire alarm system, GPS data, etc. It includes 6 CAN buses, 28 serial inputs, and one LAN (Ethernet network) connection. Various data sources can be connected via these inputs.

#### Data Stations AHD-SAS 15 and AHD-PS 47

The data station AHD-SAS 15 processes 15 analog or binary sensor inputs. Analog sensor types can be resistance, voltage or NiCrNi. AHD-PS 47 features 47 binary inputs and two serial outputs. It is serially connected to the processor unit AHD-DPU 9.

#### Displays AHD 651 and AHD 1310 G

Color displays in this system come in two sizes, 6.5" for engine data only and 10" displaying engine and ship data. Other display sizes are available, from 7" to 24" with and without touchscreen functionality, with glass front or with foil-coated aluminum front. All displays are connected to the processor unit via CAN bus. Please see the dedicated brochure "Displays and panel PCs" for all available options.

#### Ethernet/LAN Server AHD-WNL

The Ethernet/LAN Server AHD-WNL enables access to your ship's data from all around the world. It receives the monitored data from the processor unit AHD-DPU 9 via Ethernet. To be able to transmit these parameters from the ship, the AHD-WNL server is connected to the local router on board, which provides the Internet connection and Wifi. By means of the latter, ship data can be read on any iPad® or iPhone® on board.



#### AHD 430

A very valuable option is the 4.3" display unit AHD 430. Installation in one or more cabins below deck can be useful to keep an eye on the boat's status when the helm is unmanned and to acknowledge non-critical alarms.

### Functional Description

The processor unit AHD-DPU 9 picks up data from the MAN Common Rail engines, Aquamatic system, Kohler generator as well as Raymarine data and feeds them onto the CAN bus system.

The Binary Data Station AHD-PS 47 captures the status information (open/shut) of doors, bilge and pumps as well as navlights. Every channel is configured to be either status message or alarm requiring acknowledgement by a crew member. Remaining inputs can be used for additional status or alarm messages.

Data and alarm and status messages are transmitted to e.g. your local office PC or a mobile device via AHD-WNL. During a critical alarm state, such as a bilge or fire alarm, you can act quickly, even if no one is on board. Timely alerting can considerably reduce any damage that may occur.

Since GPS data is also transmitted, the vessel's current location can be determined anytime.

### Expansion Options

This refit package can be expanded with the following monitoring and control refit packages:

- ✚ CCTV
- ✚ Signal Horn
- ✚ Searchlight
- ✚ Navigation Lights
- ✚ Fire and Gas Detection
- ✚ Air Conditioning
- ✚ Lighting
- ✚ Generators
- ✚ Battery Chargers
- ✚ Hydraulics
- ✚ Thrusters
- ✚ Trim Tabs
- ✚ Radar and ECDIS
- ✚ Wipers
- ✚ Blowers

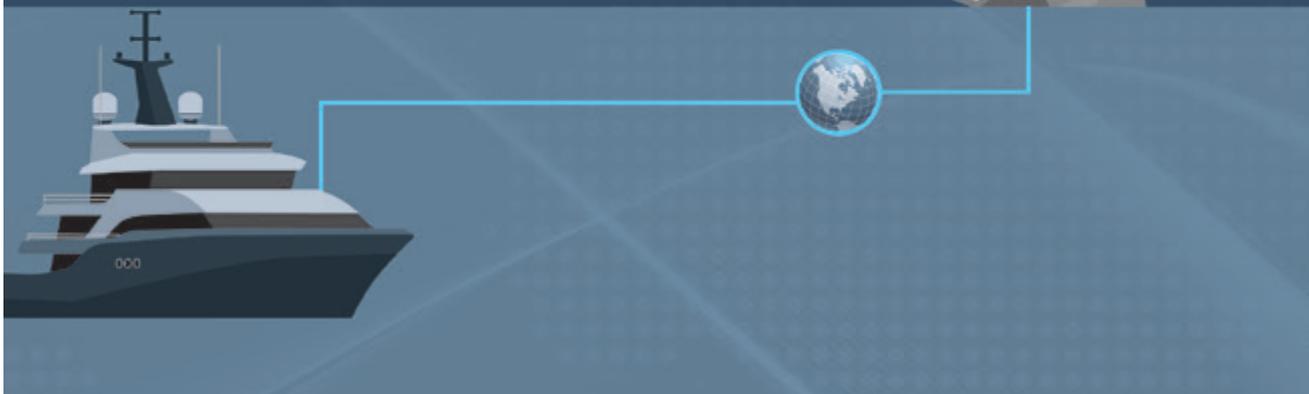


### Commissioning and Service

When the refit is complete, our service technicians will provide you with an introduction to the system.

### Remote Maintenance

The remote connection provides help of a Bönig engineer from our headquarters. In case the customer requires additional features, changes of the system configuration or general troubleshooting, the engineer can log on to the system and perform maintenance without traveling.



## Contact Information



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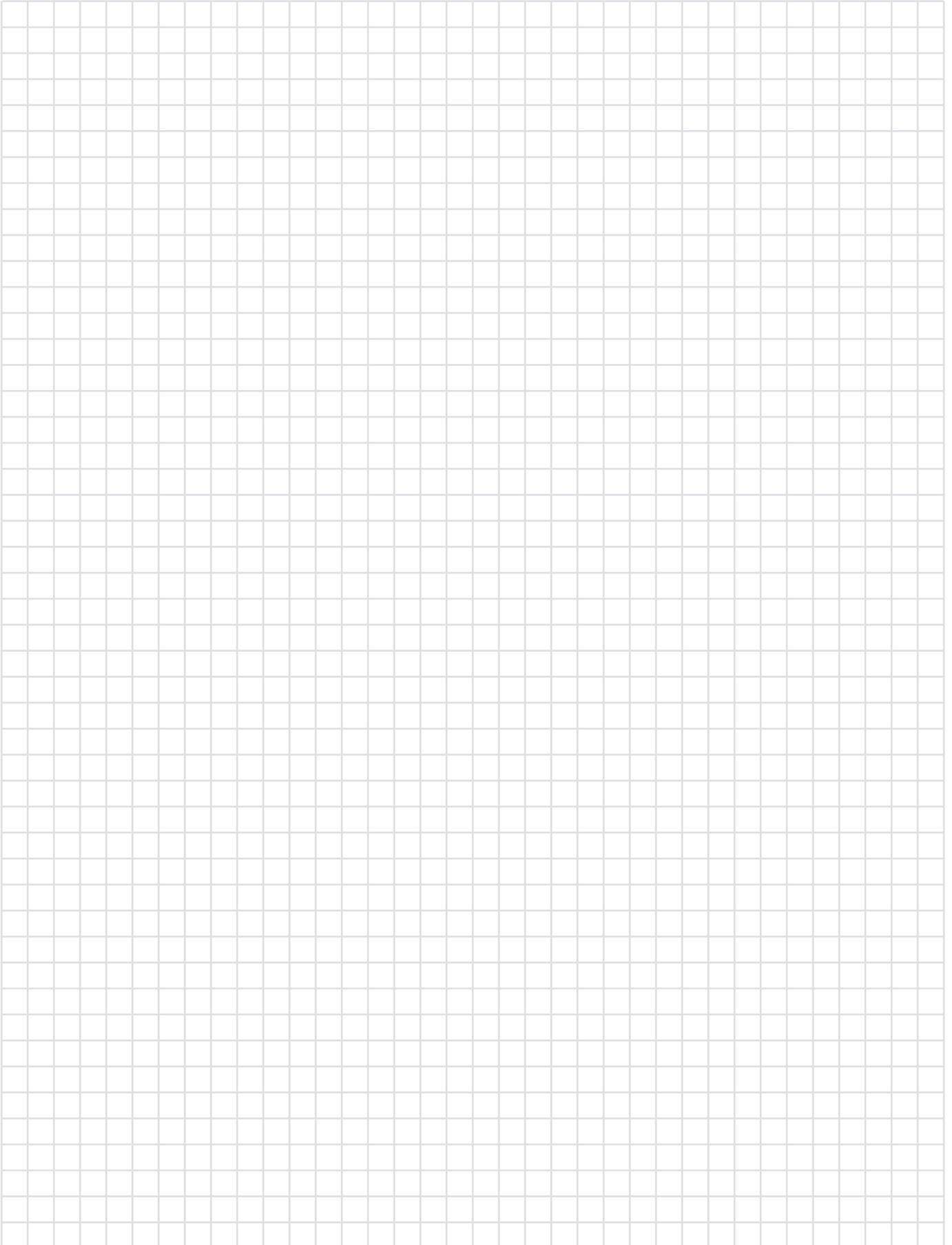
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## Notes





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