MIRION Connect AMERICAS 26

Annual Users' Conference

ADVANCING RADIATION SAFETY. EMPOWERING PROGRESS.

M Resort, Henderson, NV | June 15 – June 18

MIRION TECHNOLOGIES

Advancing Radiation Safety.
Empowering Progress.

MASS2™ RMS Software

Hands-On Demo and Capability Showcase

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Mirion Connect | Annual Users' Conference 2026

Henderson, NV

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Scan QR code to log your attendance for today's (Thursday, June 18th) breakout session

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Agenda

Agenda

- *Overview*
- *Applications*
- *MASS2™ Training*
- *Demonstration / Hands-On*
- *Survey and Q&A*

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Overview

MASS2™ Overview

Purpose

- *Central tool to configure, monitor, and maintain radiation monitoring systems*
- *User-friendly software platform that gives operators and technicians full visibility and control of RAMSYS radiation monitoring systems.*

Key Functions

- *View and manage network of connected monitors or a single monitor*
- *Set alarm thresholds, parameters, and system settings*
- *Display real-time measurements and trends*
- *Perform diagnostics, verification, and maintenance*

Applications

MASS2™ Applications

- *Remote System Monitoring*
- *Centralized Configuration Management*
- *Setpoint & Alarm Control*
- *Remote Operation & Diagnostics*
- *Event Logging & Traceability*
- *Secure Access & User Control*

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MASS2™ Training

MASS2 Monitoring & Configuration

- *Network Topology Display*
- *Real-time Measurement and Status Reporting*
  - *Measurement value, unit, alarm threshold*
  - *Unit/channel status (fault, alarm, operating mode, trend)*
  - *Acquisition information*
  - *Digital/analog I/O status*
  - *Relay status*
- *Historical Trend Graphical Display*
- *Spectrum Display*
- *Application Software and Parameter Set Downloading*
- *Parameterization*
  - *Topology, network*
  - *Unit, screen, self test limits*
  - *Buzzer, light, LED and relay, analog I/O*
  - *Extended channels, algorithm parameters, trip points*
  - *Measurement board, captor characteristics, acquisition*
  - *Manufacturer's configuration parameters*

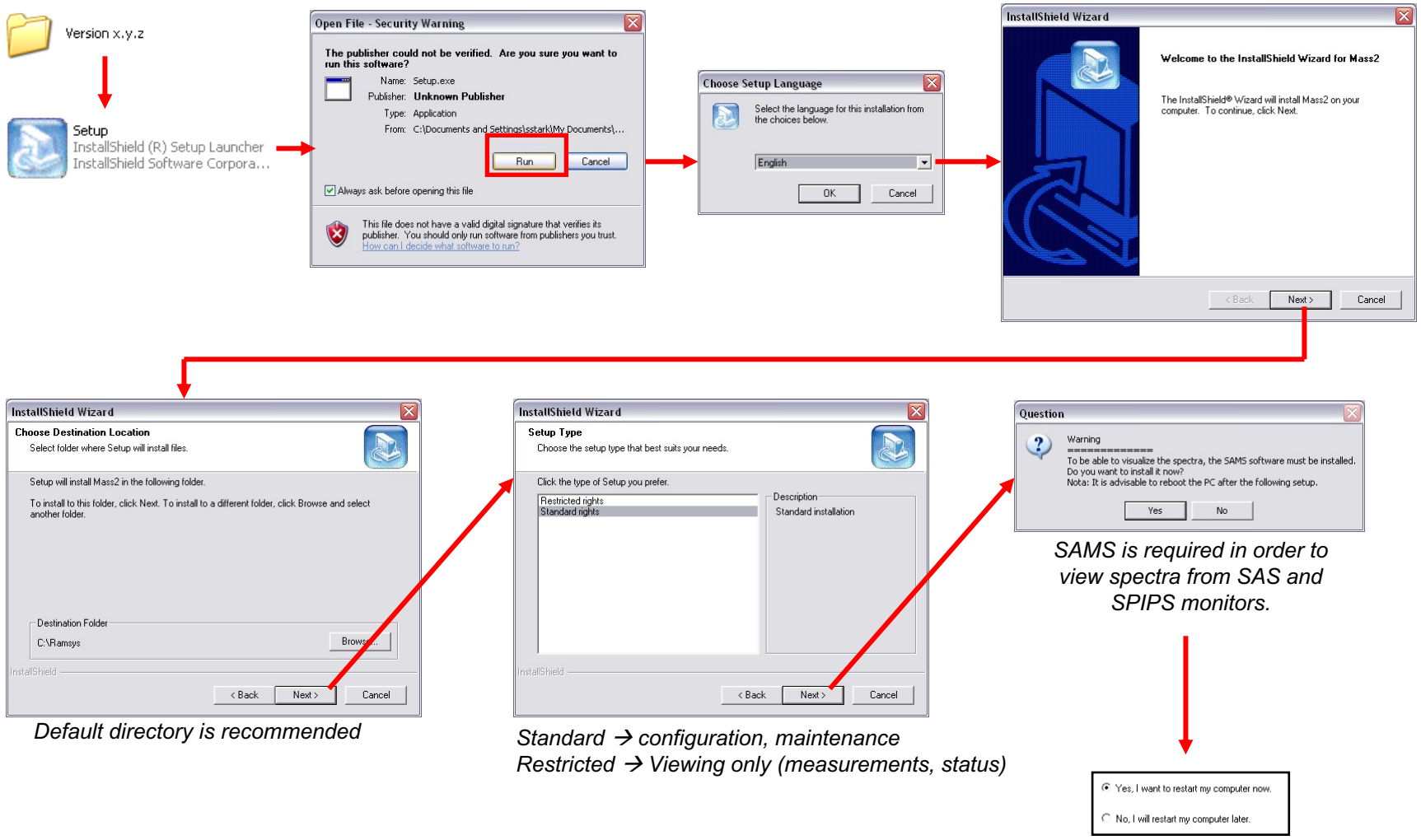
MASS2 Maintenance

- *Security*
  - *4 user security levels with password protection*
- *RAMSYS Devices Parameter Change*
  - **Create/download parameter sets**
  - **Parameter updating after detector change**
  - **Trip points modification**
  - **Algorithm parameters modification**
- *Test*
  - **External, electrical, optical (LPU/Si only)**
- *Calibration*
  - **Energy, efficiency, compensation ratio**
- *Historical Trend Graphical Display*
- *Spectrum Display*
- *Application Software and Parameter Set Downloading*
- *Parameterization*
  - *Topology, network*
  - *Unit, screen, self test limits*
  - *Buzzer, light, LED and relay, analog I/O*
  - *Extended channels, algorithm parameters, trip points*
  - *Measurement board, captor characteristics, acquisition*
  - *Manufacturer's configuration parameters*

MASS2 Diagnosis

- *Powerful Tools to Assist Diagnosis*
  - **Event summary with filtering**
  - **Detailed status display (unit, channel)**
  - **Detailed log file**
  - **Test commands (external, electrical, optical)**
  - **Acquisition information display**
  - **Measurement output emulation**
  - **Historical trend graphical display**
  - **Gamma spectrum display (for LPU/SAS and LPDU/SAS)**

MASS2 Installation -



Default directory is recommended

Standard → configuration, maintenance
Restricted → Viewing only (measurements, status)

SAMS is required in order to view spectra from SAS and SPIPS monitors.

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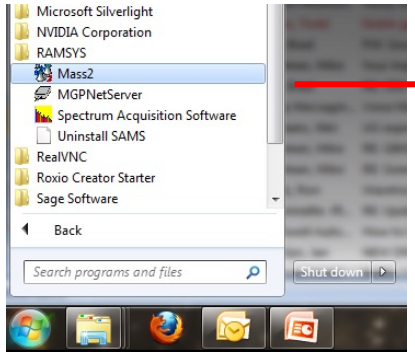
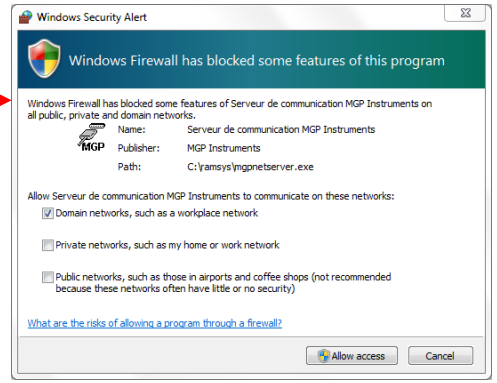
MASS2 First Startup -

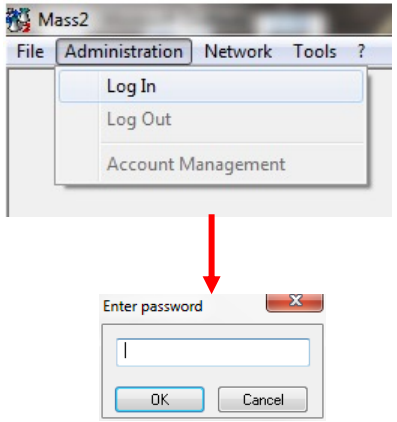
Launch MASS2 from Ramsys program list:

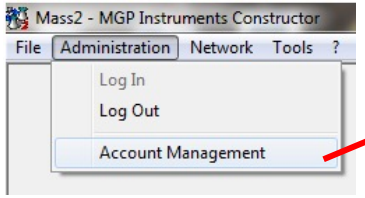


Allow network access for MGPNetServer:

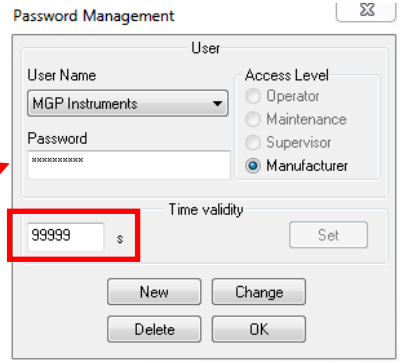


Log in:

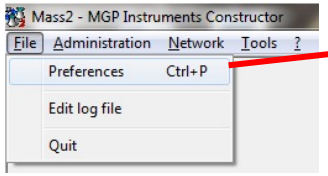




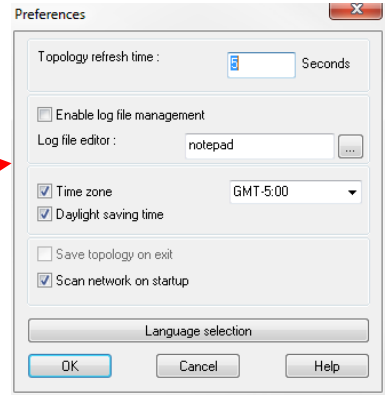
Go to account management



Enter a sufficient password duration (default is 60s) and press "Set"



Go to Preferences



Enable "Time zone" and "daylight saving time"; optionally, select "Scan network on startup"

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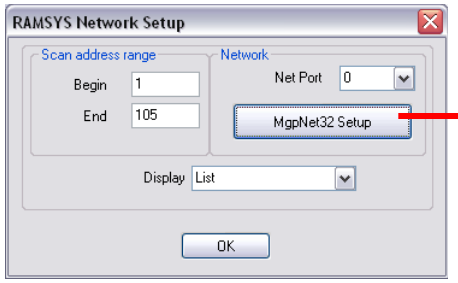
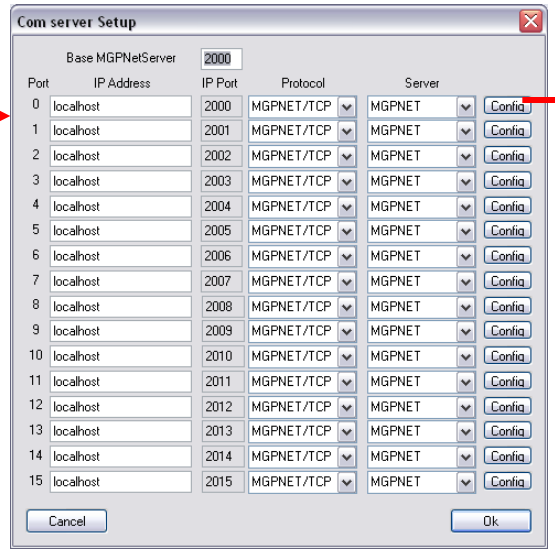
MASS2 Network Setup -

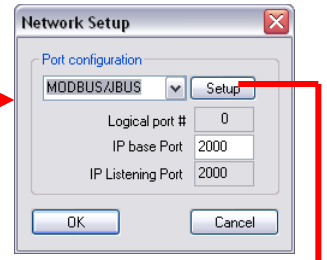


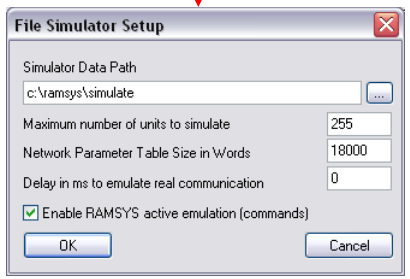
Choose a net port to be used for communication (default/typical is 0)

Note: this is not the PC COM port.

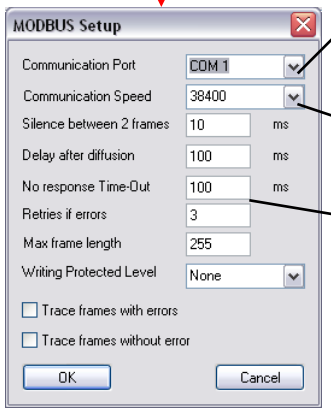


Press the "Config" button associated with the net port already selected





Default configuration is the simulator.



Choose the COM port of the PC which will be used to connect to the monitor

The baud rate must match the baud rate of the monitor being connected to (typical/default is 38400)

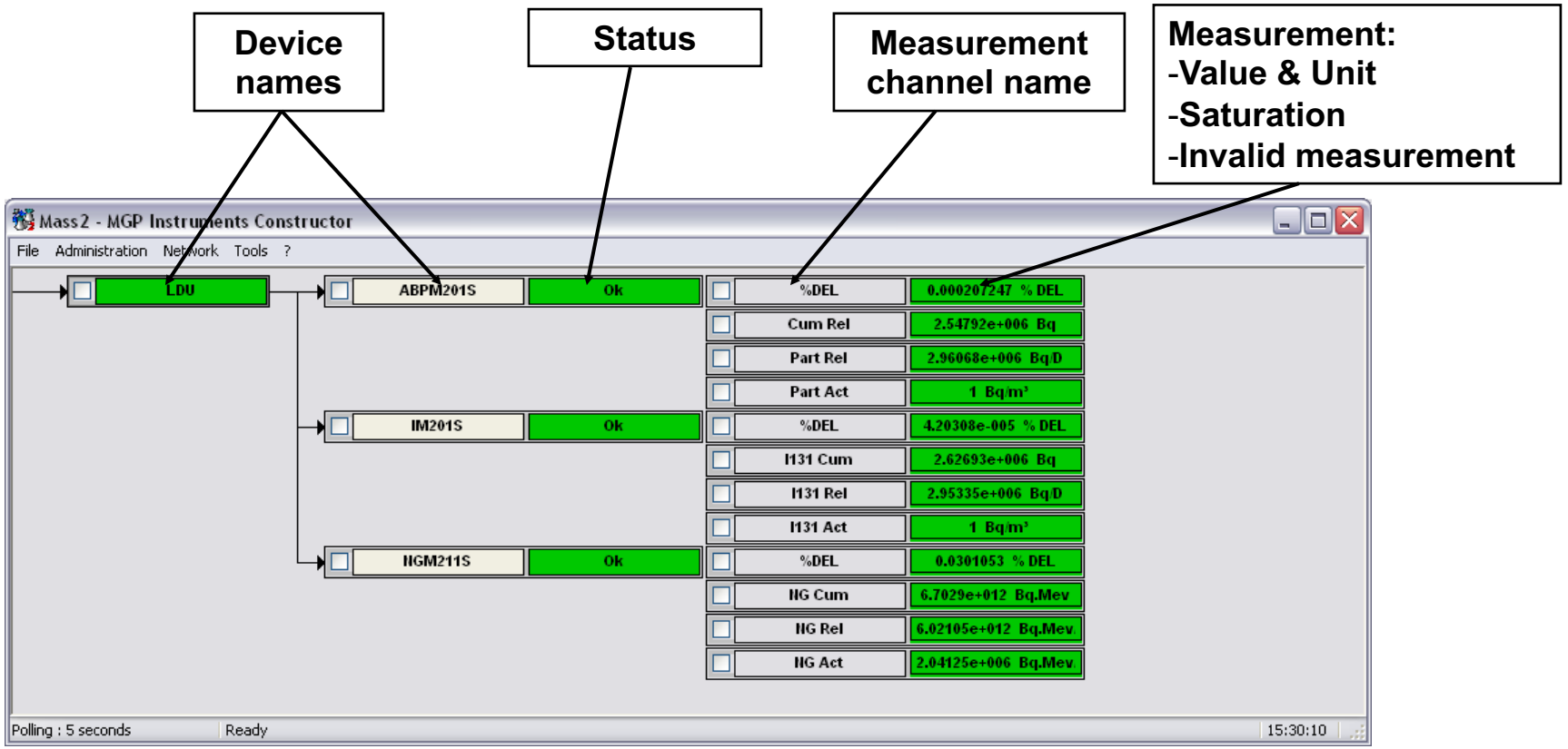
No- response time out may need to be increased if a protocol converter is used (e.g. RS232-USB)

Notes:

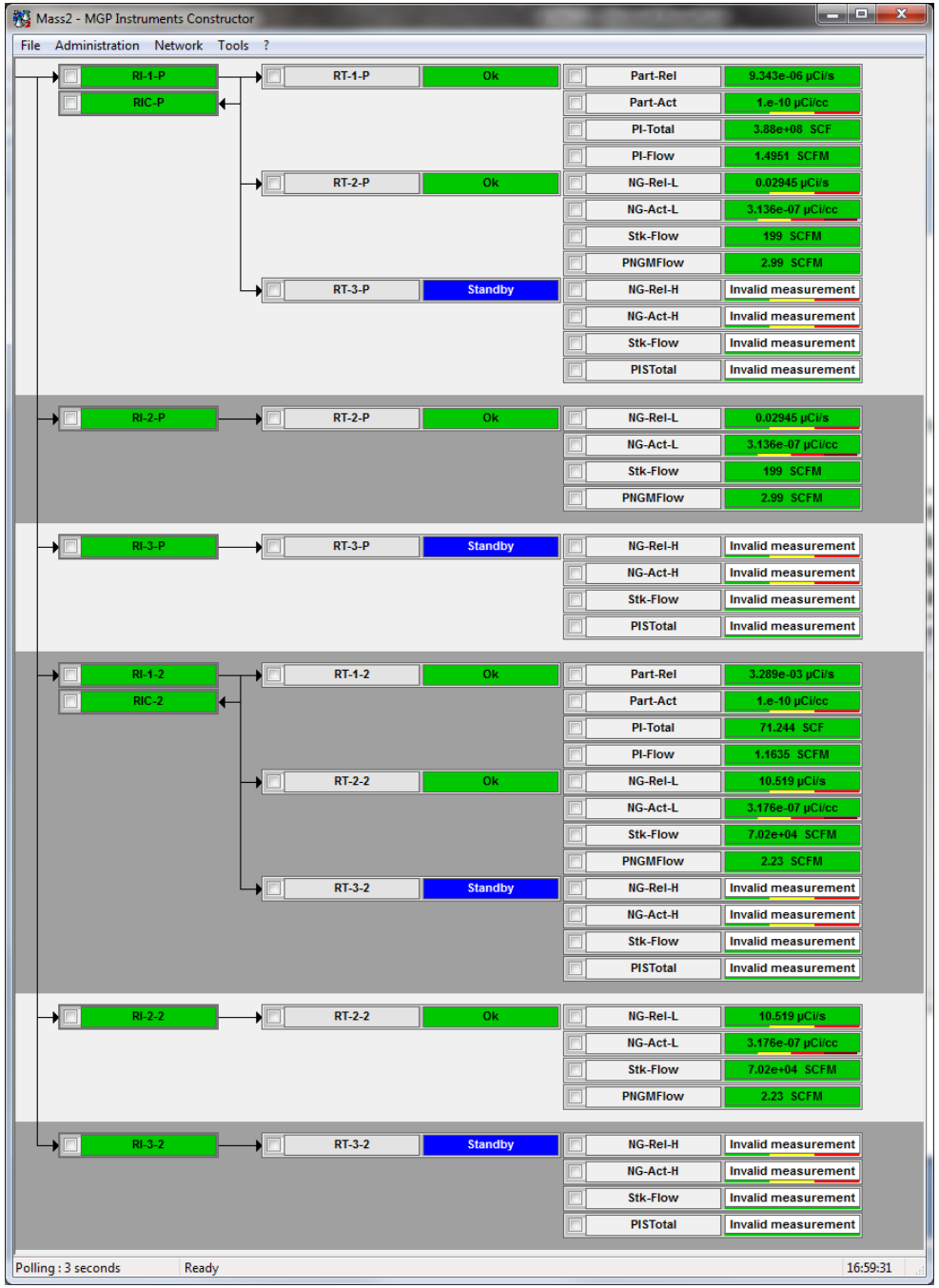
1. *Some antivirus and/or firewall software may need to be specially configured to allow MGPNetServer to communicate*
2. *On Windows Vista computers, replace "localhost" with 127.0.0.1*

MASS2 Main Interface -

- *A typical monitoring configuration (Particulate, Iodine, & Noble Gas channels with DU):*



MASS2
Main Interface -



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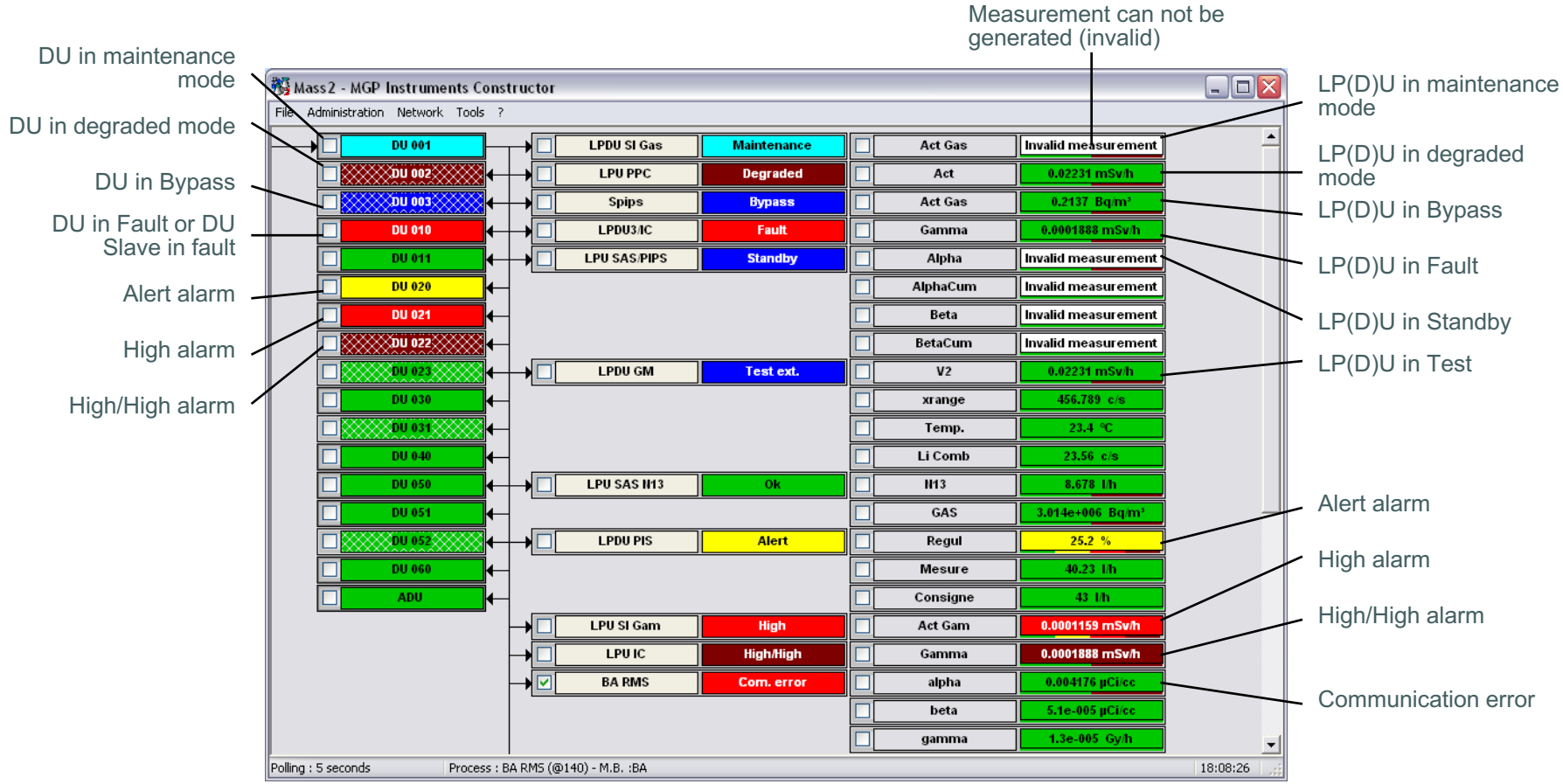
MASS2 Color scheme -



Note: the DU does not have Standby or External Test modes

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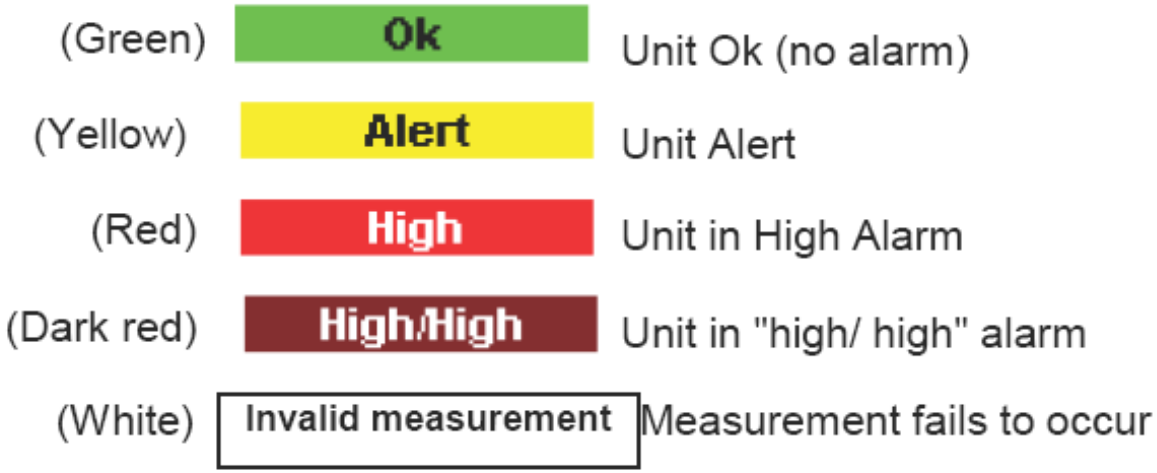
MASS2 Color scheme – Operating modes

DU	LPU	Comments	Color
Com. Error		Communication error	Red
Unit 1-DU	Maintenance	Maintenance mode	Light blue
UnitDU 1-DU	Degraded	Degraded mode	Dark red
UnitDU 1-DU	Bypass	Alarms, faults not displayed	Blue
Fault		fault	Red
Slave fault		Slave fault	Red
	Standby	LPU on standby	Blue
	Test	LPU inTest	Blue

MASS2 Color scheme – alarms



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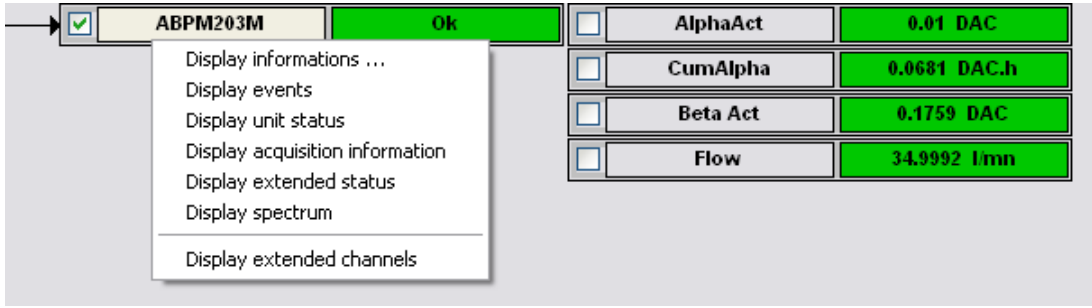
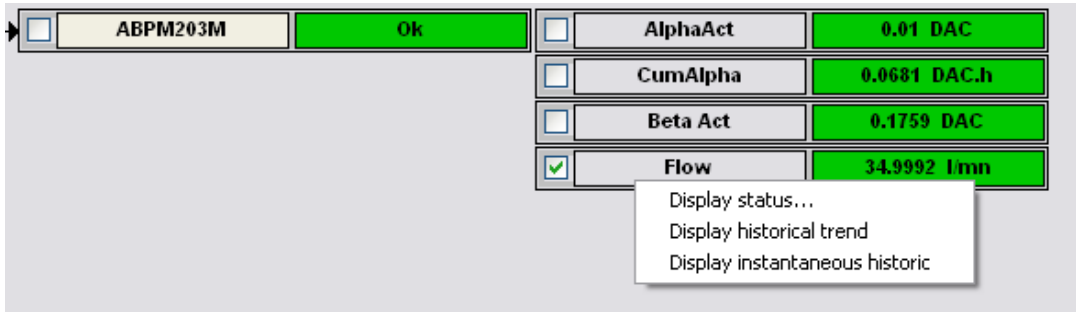
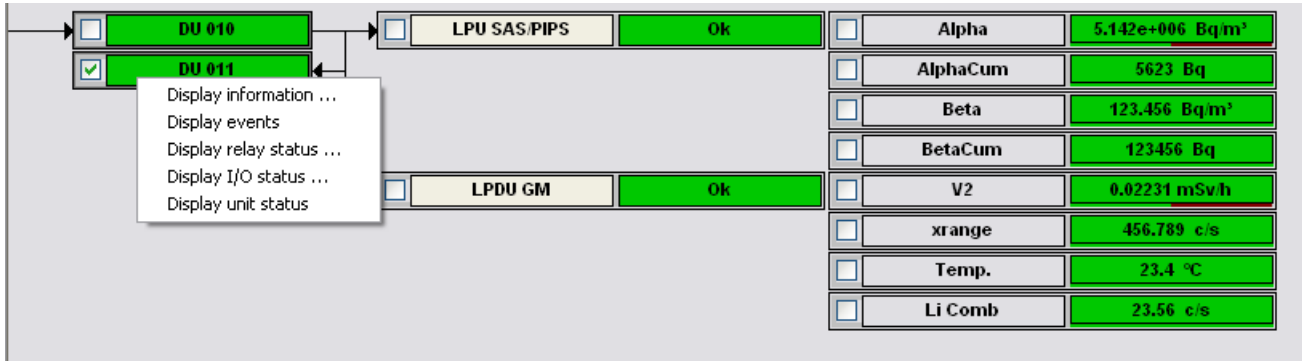
MASS2 – Menus – lowest access level

- *MASS Help*
- *Access Level Dialog*
- *Network Scanning*
- *Main Screen Management*
- *Display Information*







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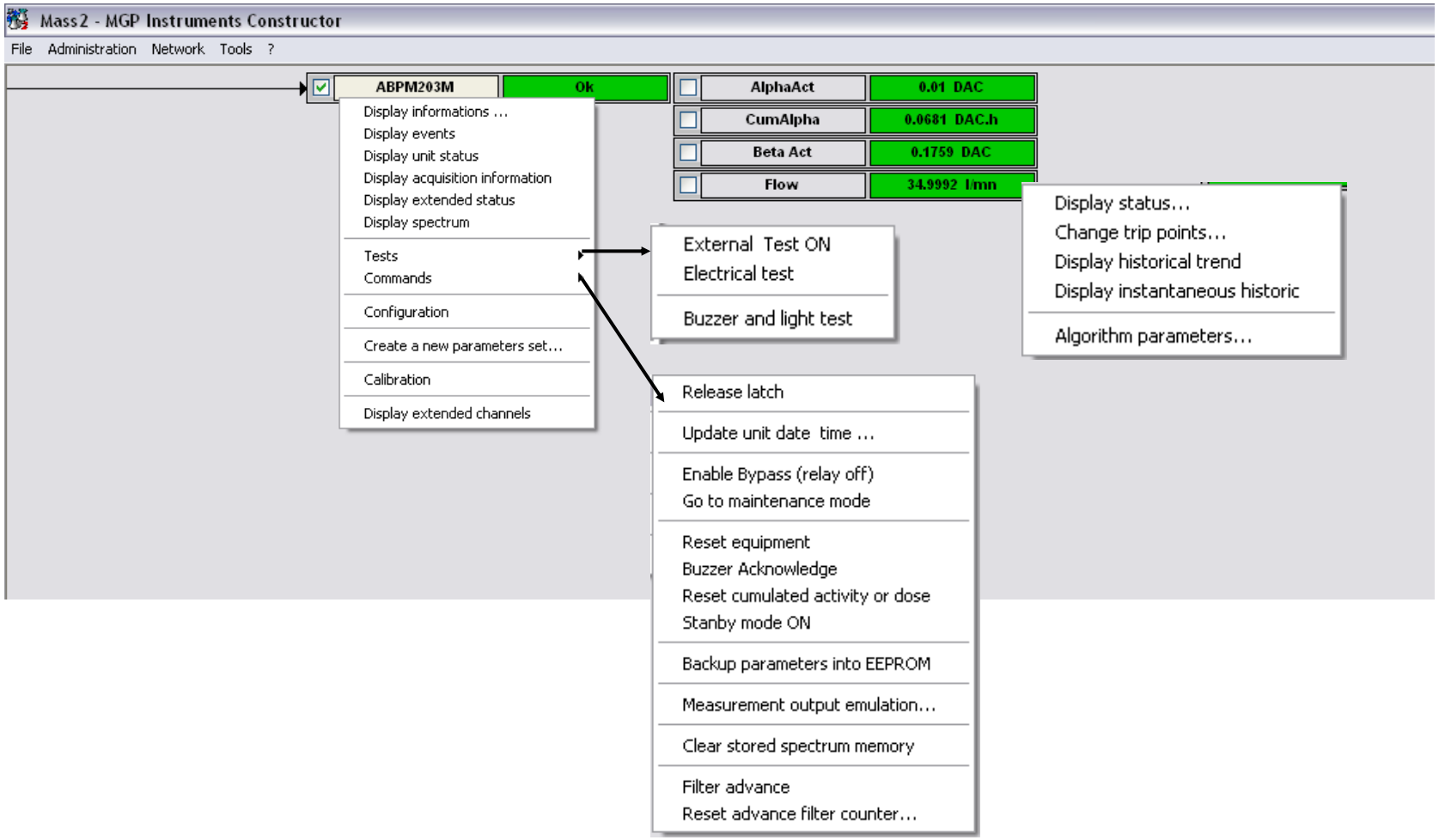
MASS2 – Menus – Intermediate Access Level

- *Supervisor – Maintenance plus:*
  - *Log file management (MASS2 log file – resides on the PC)*
  - *Program and parameter file downloading to monitor*
  - *Access to secondary measurement channels*
  - *Modify some filter advance parameters*
  - *Modify alarm behavior (relays, lights, buzzer)*
- *Operator: change alarm trip-points*
- *Maintenance:*
  - *Configuration*
  - *Calibration*
  - *Create New Parameters Set (can not download parameters to unit)*
  - *Commands*
    - *Clear histories & events*
    - *Buzzer management*
    - *Update unit date & time*
    - *Reset parameters fault*
    - *Go to maintenance/return to normal mode*
    - *Backup/restore parameters to/from FLASH/EEPROM*
    - *Reset unit*
    - *Put monitor in standby mode*
    - *Measurement output emulation*

MASS2 Main Interface – Manufacturer Access Level



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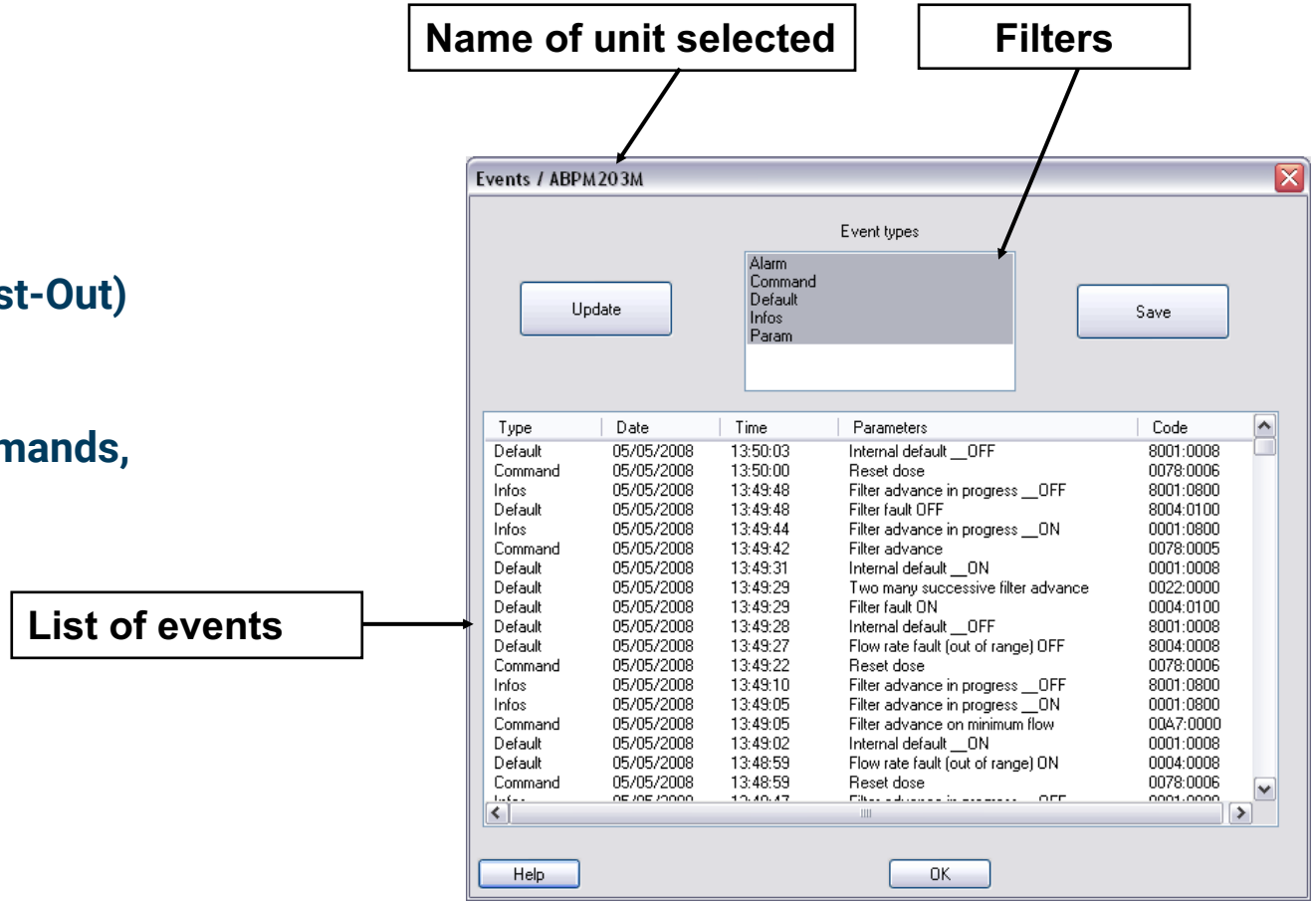
MASS2 – Event Summary

- **Refreshing: Manual**
- **349 Events, FIFO (First-In First-Out)**
- **Format: Date, Time, Event**
- **Filtering: Alarms, Fault, Commands, Parameters, All Events**



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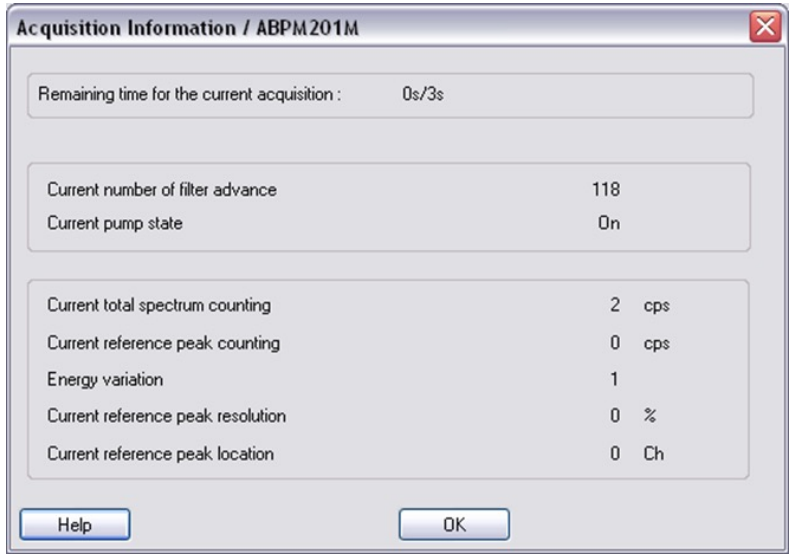
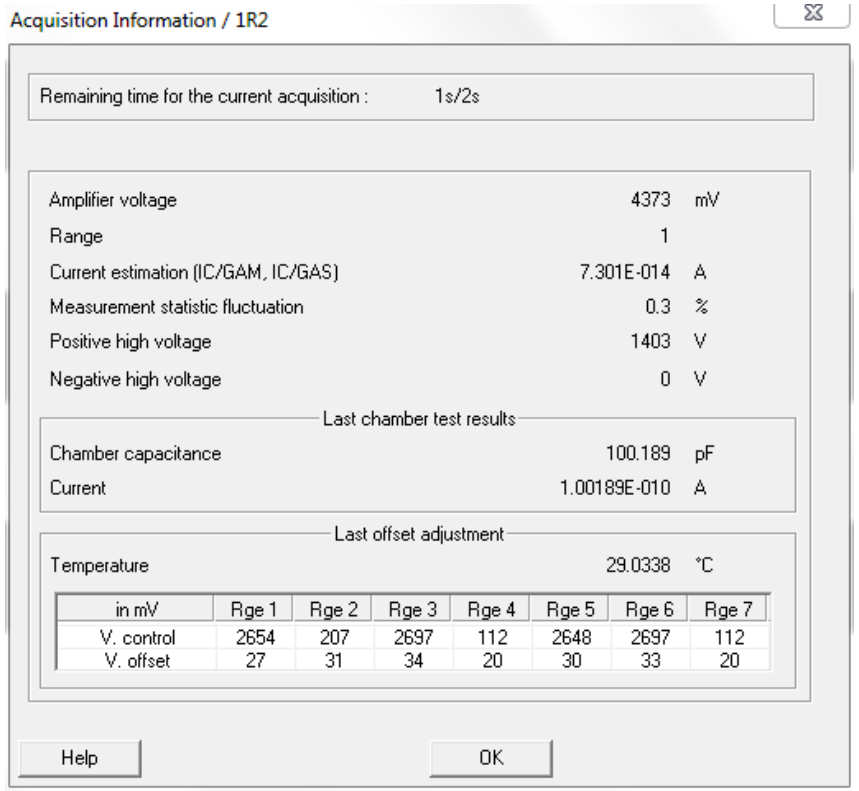
MASS2 – Acquisition Information

- *Display (LPU/LPDU) Acquisition Information*
  - **Current total spectrum counting**
  - **Current high voltage**
  - **Reference peak info (if applicable)**
  - **Number of filter advances (PIPS)**
  - **LPDU/IC: See image to the right**





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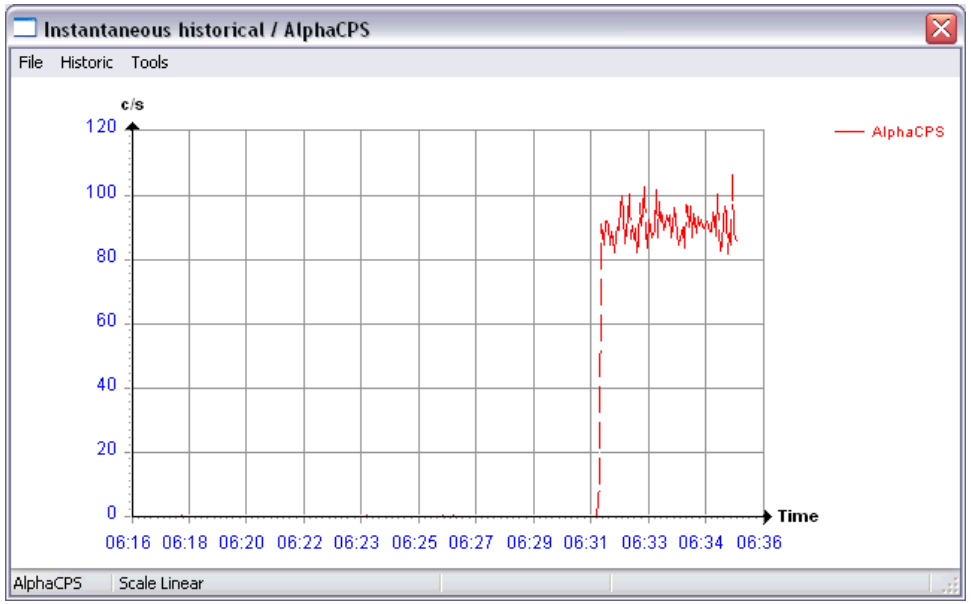
MASS2 – Historical Trends

- *Type of History:* *1-minute, 10-minute, 1-hour, 1-day, max.: 60 points each*
- *Information:* *Unit/Channel Name, Cursor Information*
- *Appearance:* *Threshold, Grid, Graphics Type, Scale*
- *Manipulation:* *Save, Load, Import, Export, Print, Window Integration*
- *Refreshing:* *Manual, Automatic*
- *Resolutions:*
  - *1 minute*
  - *10 minutes*
  - *1 hour*
  - *1 day*
  - *Real time*

60 points stored in LP(D)U



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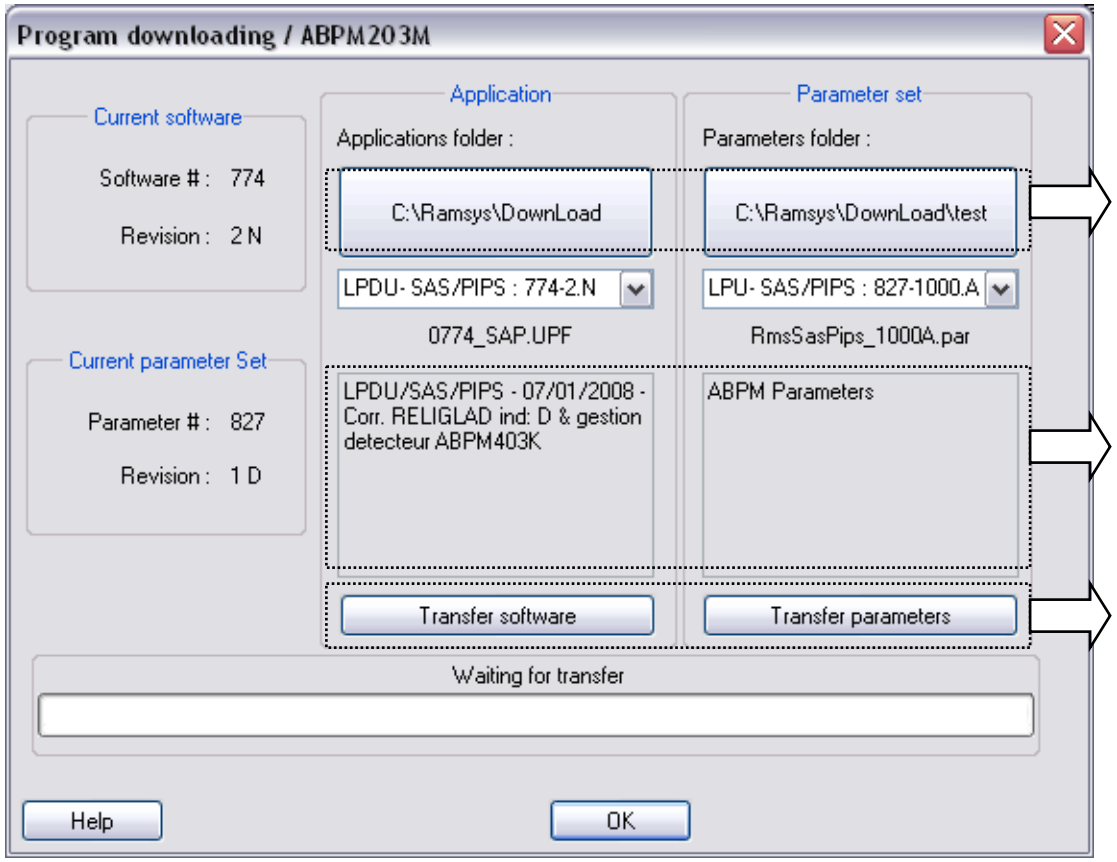
MASS2 – Program & Parameter Downloading

- Maintenance Mode Required
- Directories
- Re-scanning Suggested
- Backup Parameters to FLASH/EEPROM



Click to navigate to the file location on the PC (or attached device)

Displays information about the application program or parameter file

Click to begin transfer

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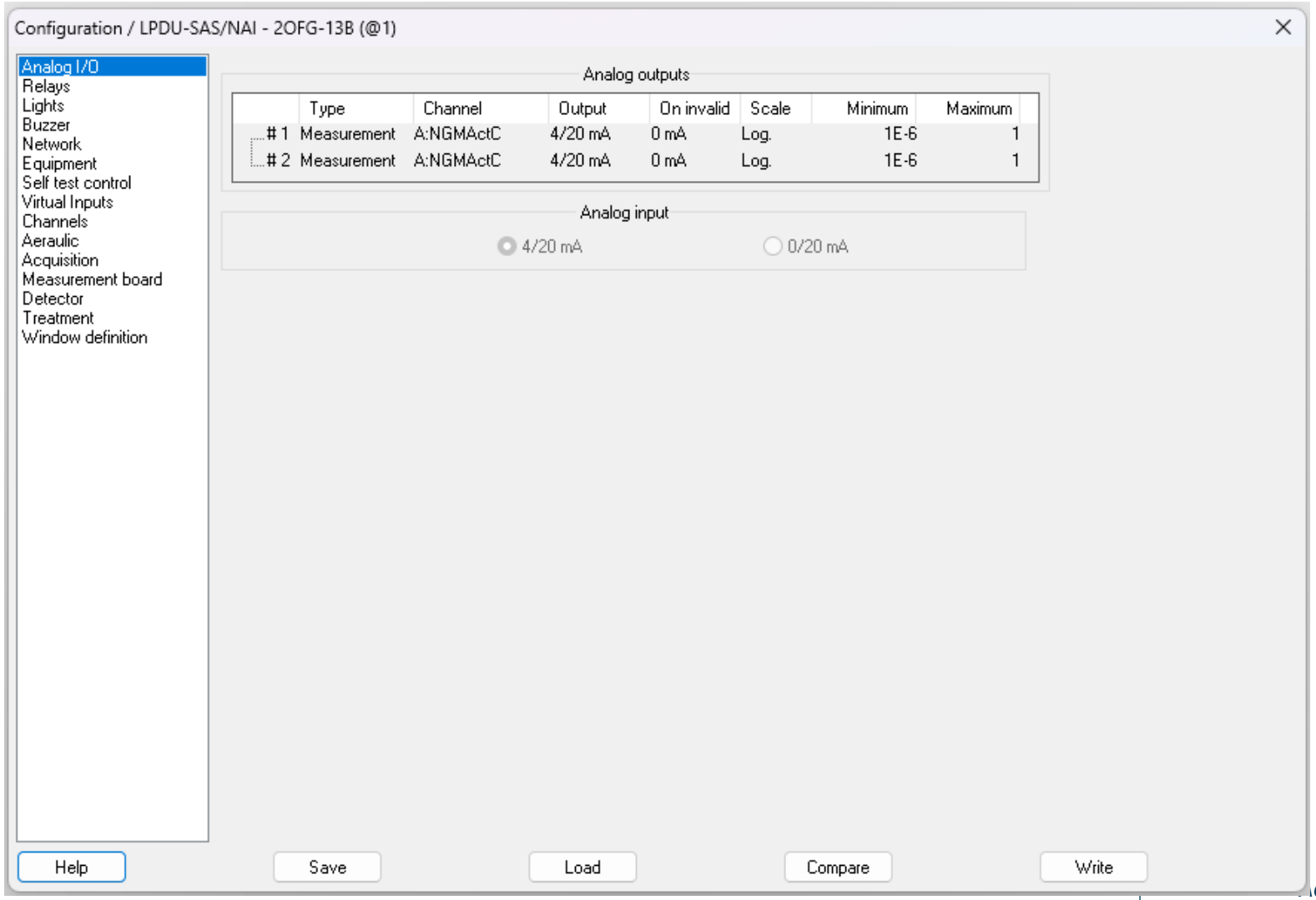
MASS2 – LPDU – Analog I/O Configuration



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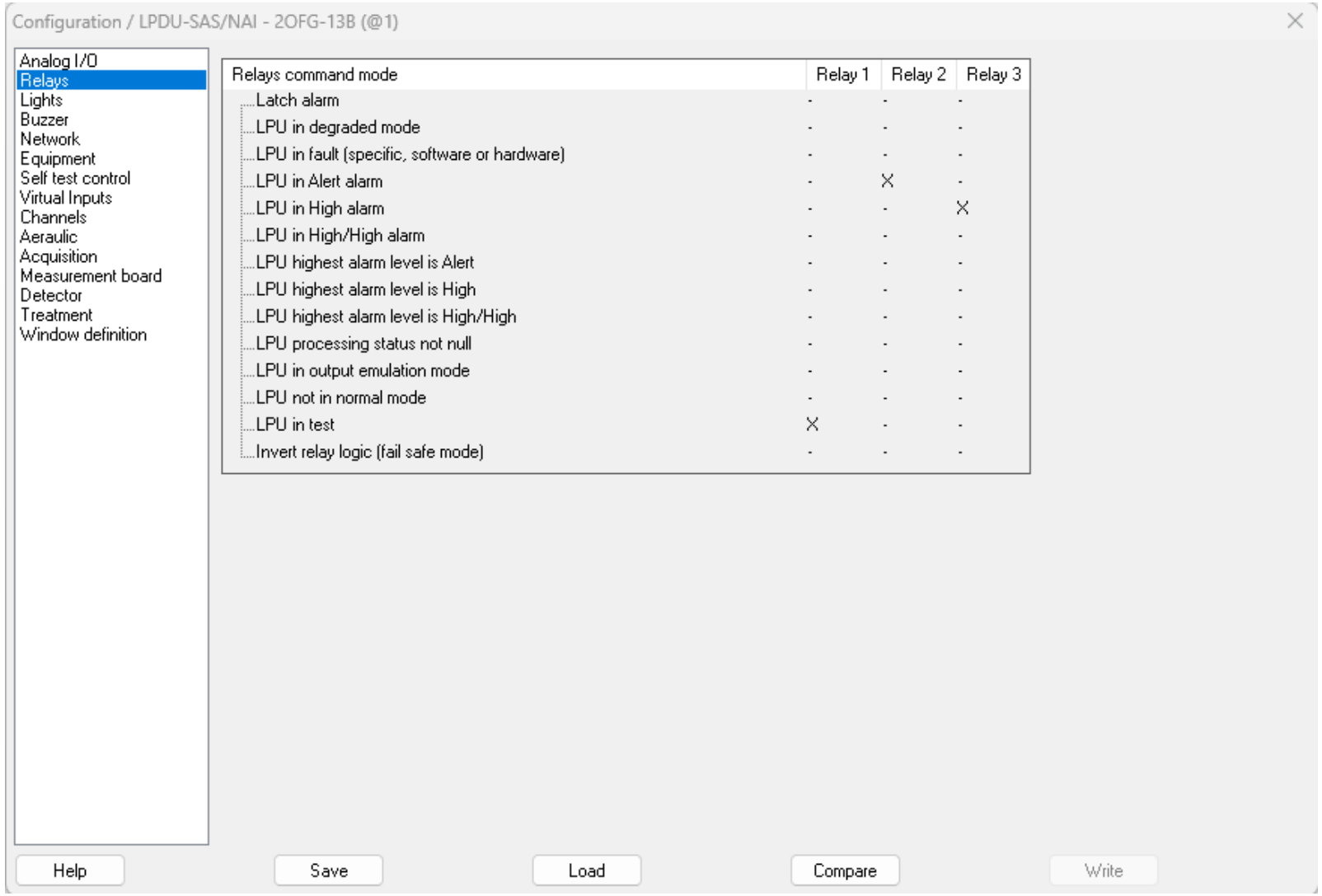
MASS2 - LPDU

Relay Configuration



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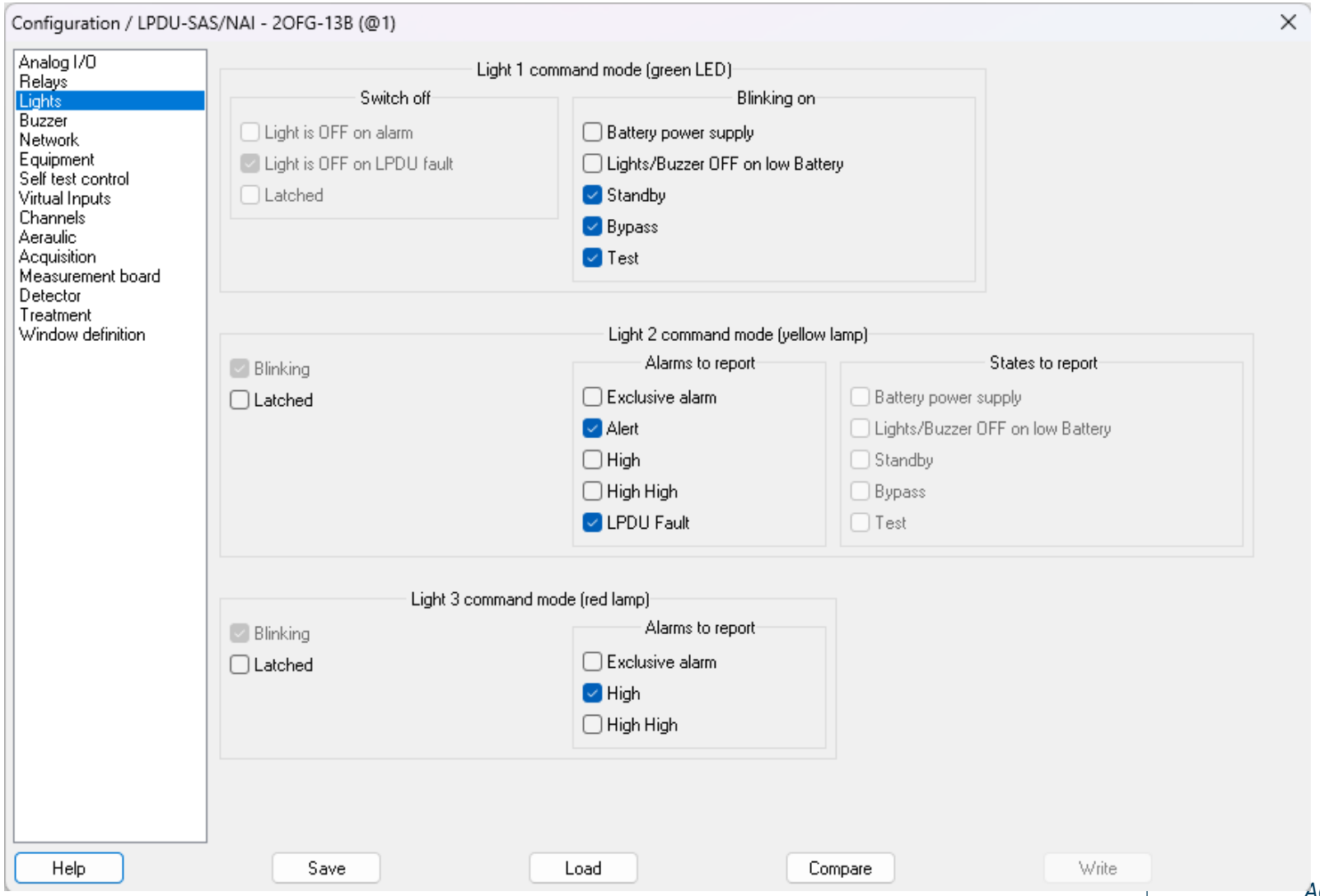
MASS2 - LPDU

Lights Configuration



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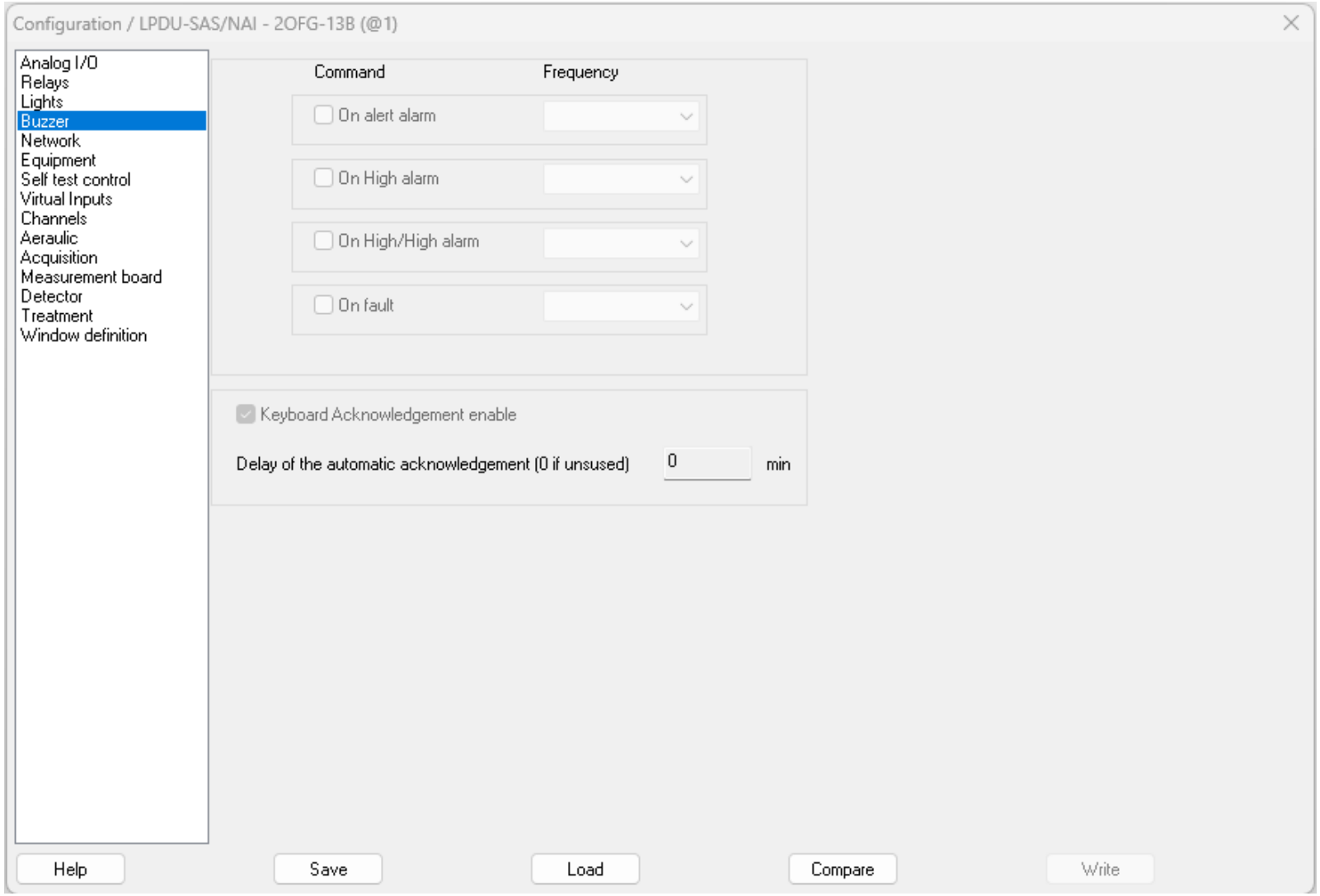
MASS2 - LPDU

Buzzer Configuration



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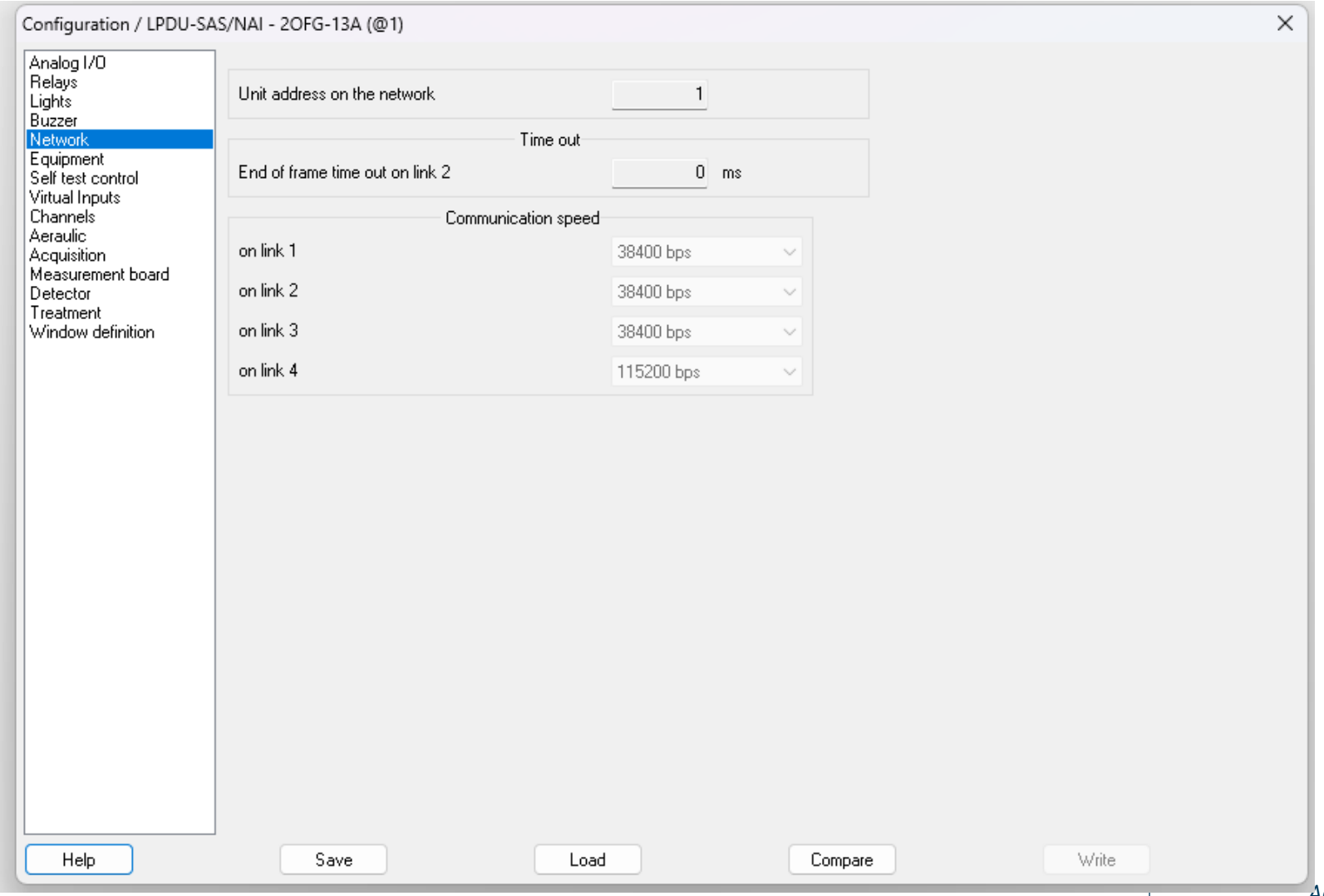
MASS2 - LPDU

Network Configuration



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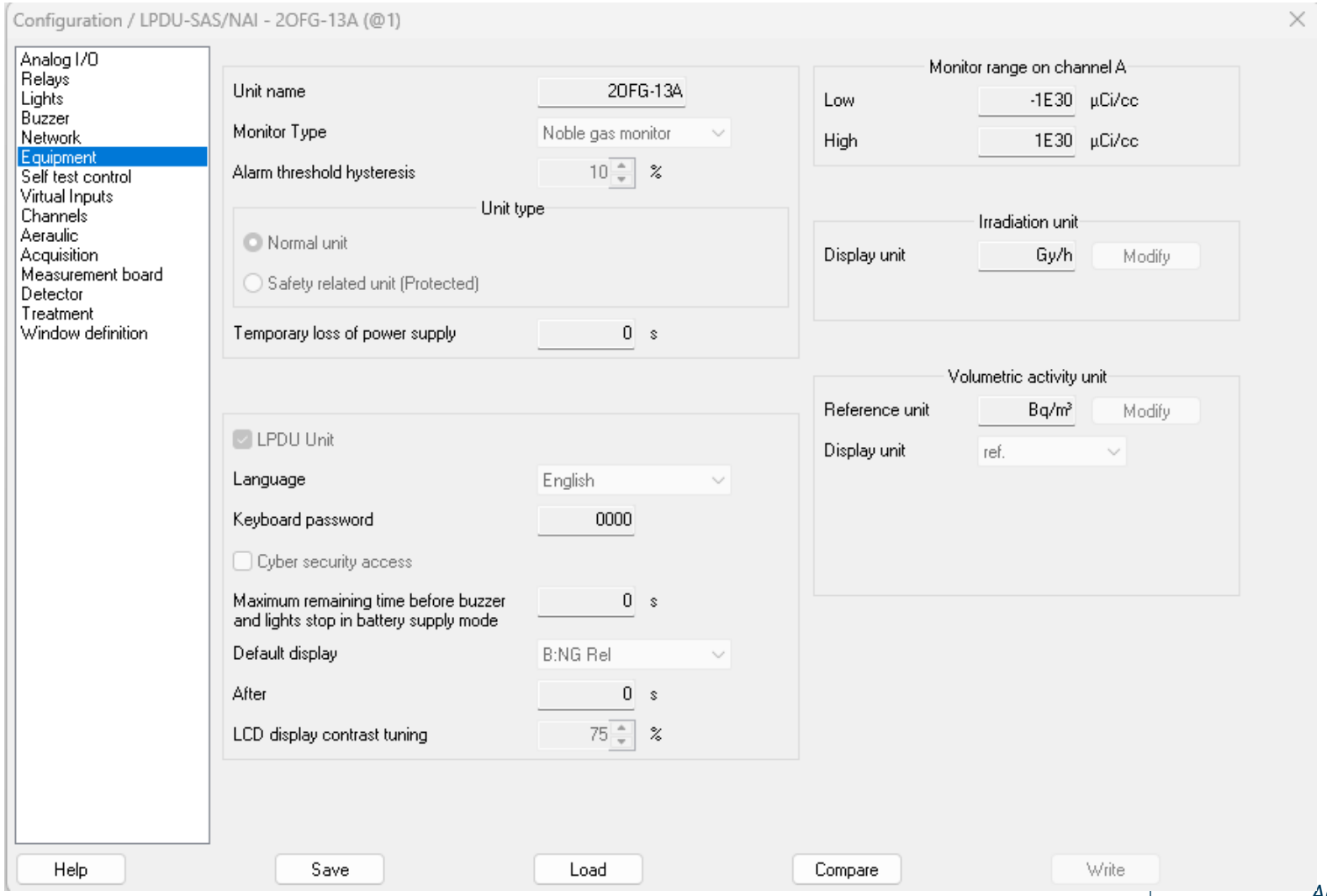
MASS2 - LPDU

Equipment Configuration



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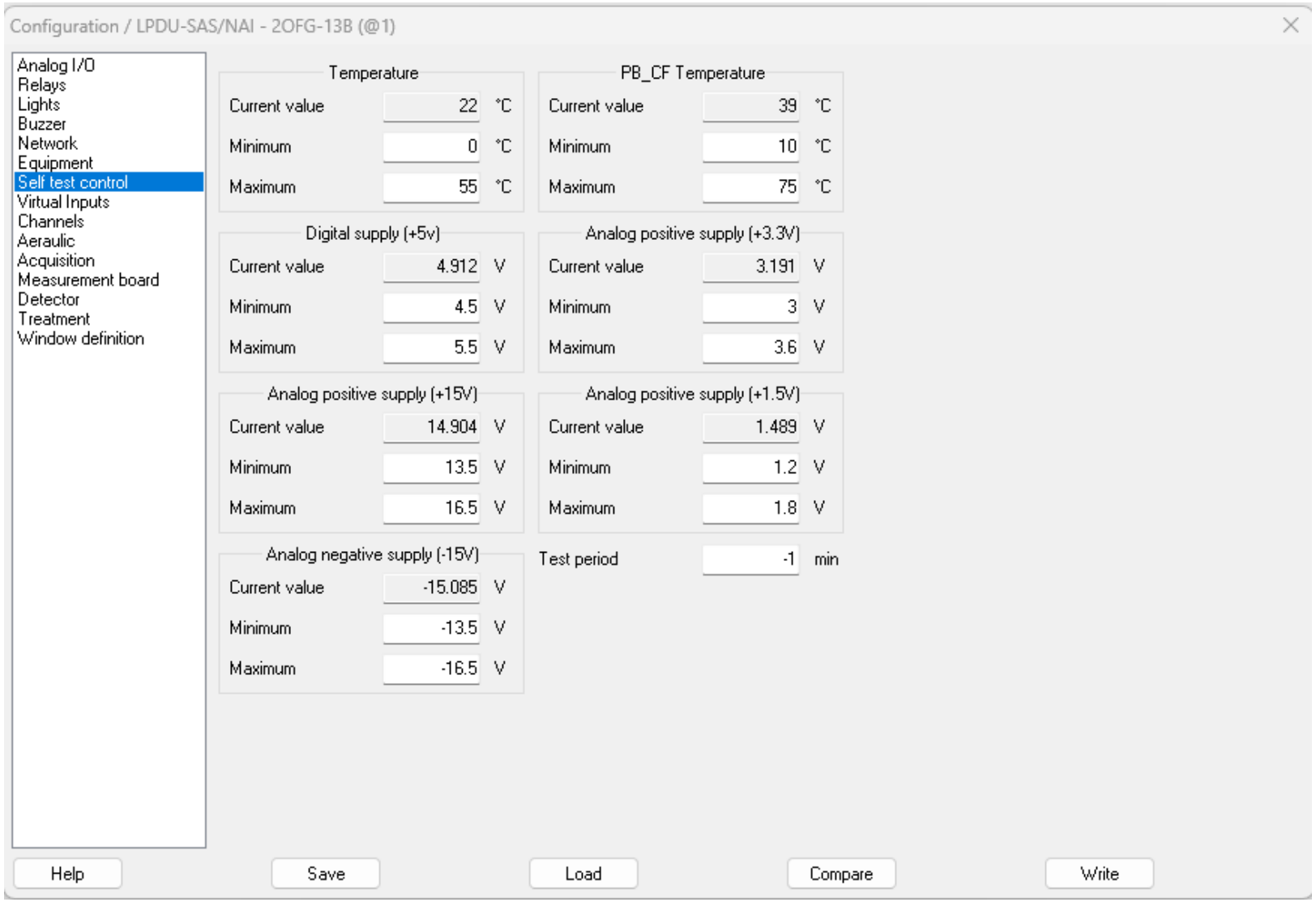
MASS2 - LPDU

Self-test criteria



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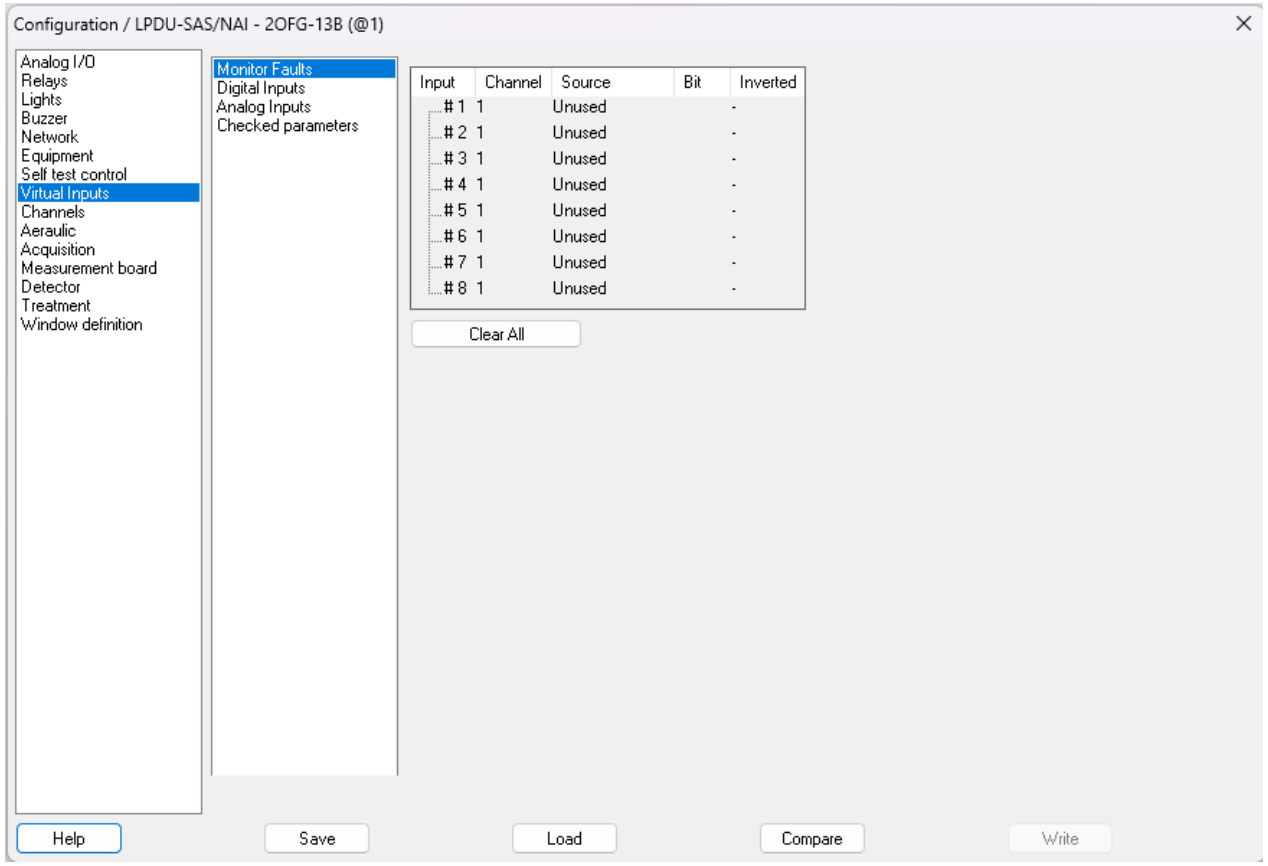
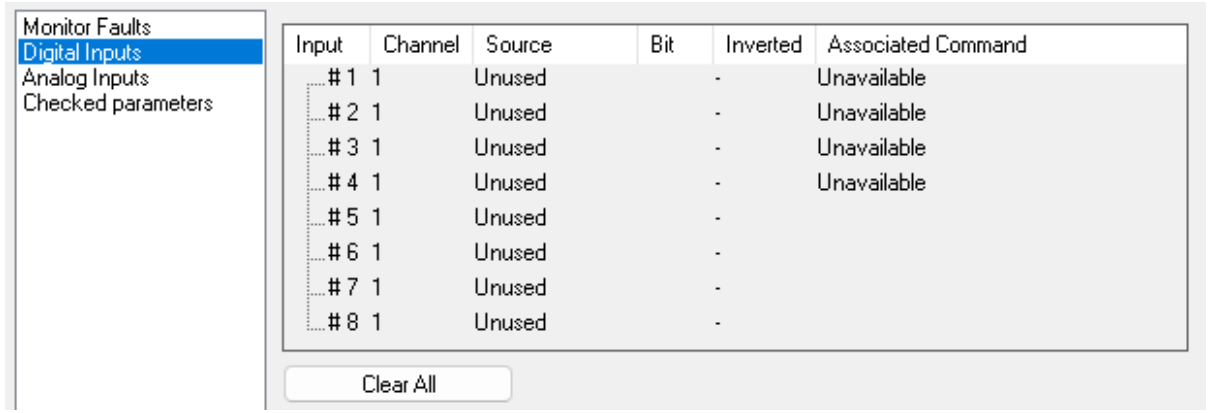
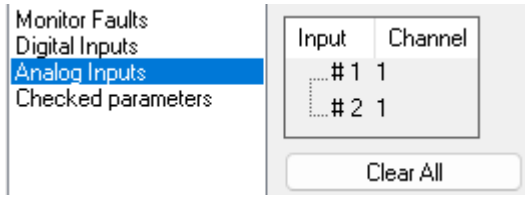
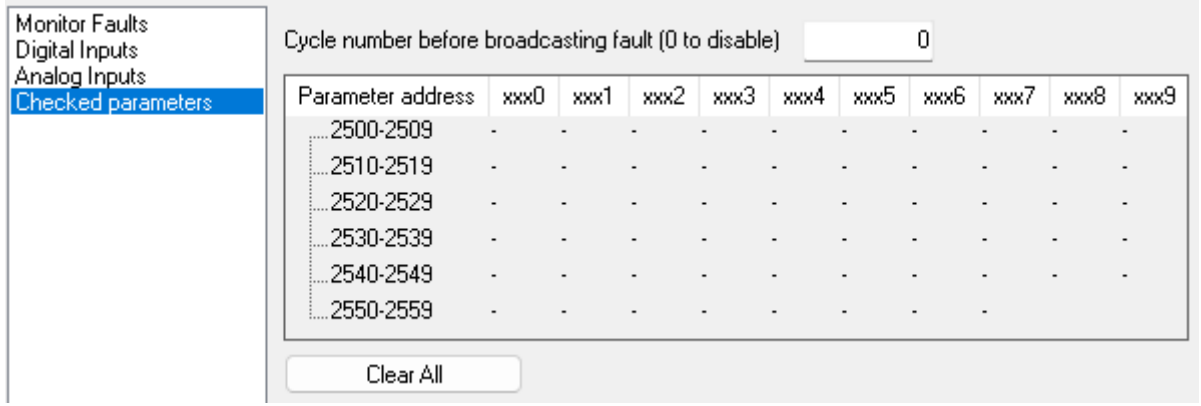
MASS2 - LPDU

Virtual Inputs









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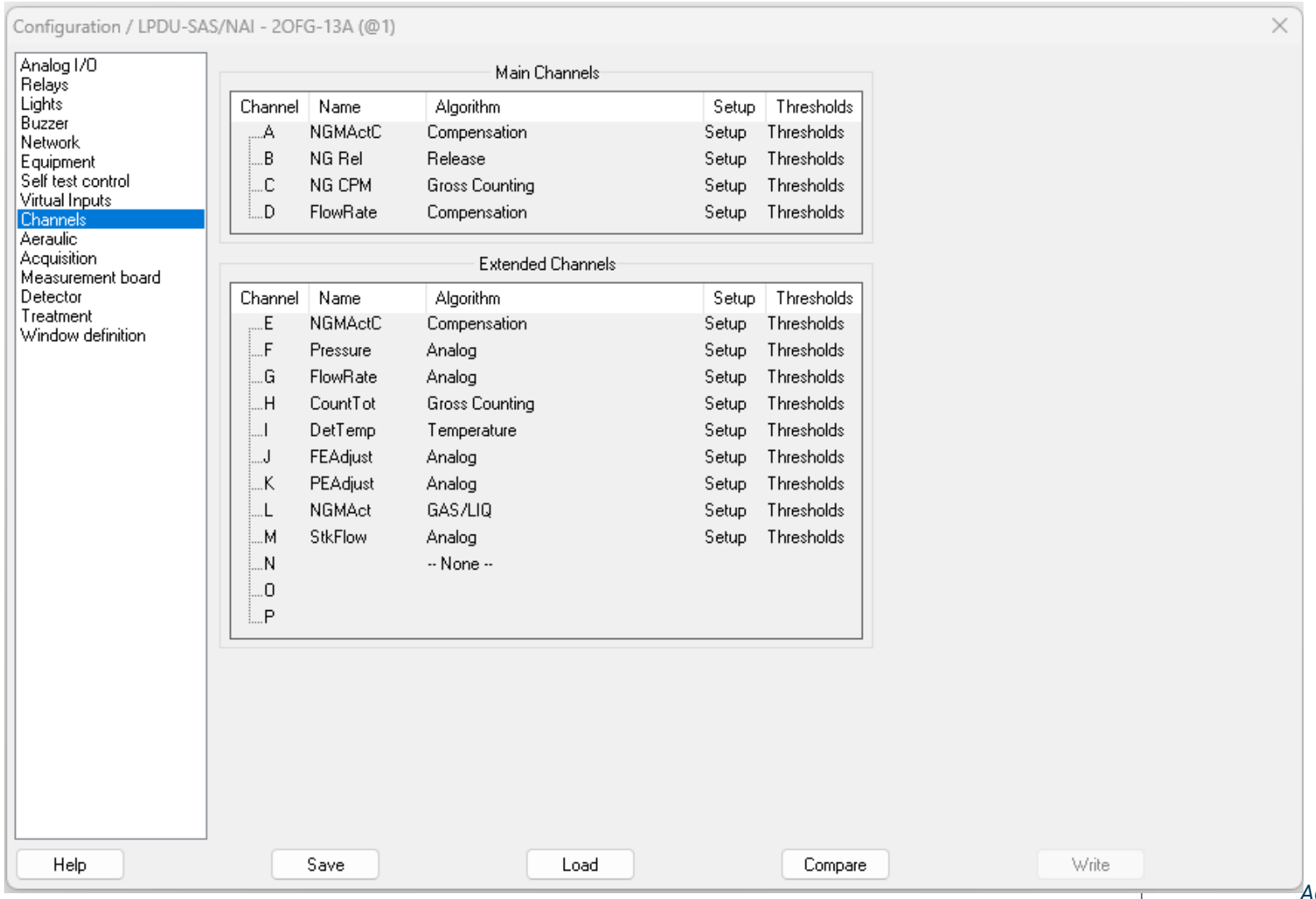
MASS2 – LPDU

Measurement Channel Configuration



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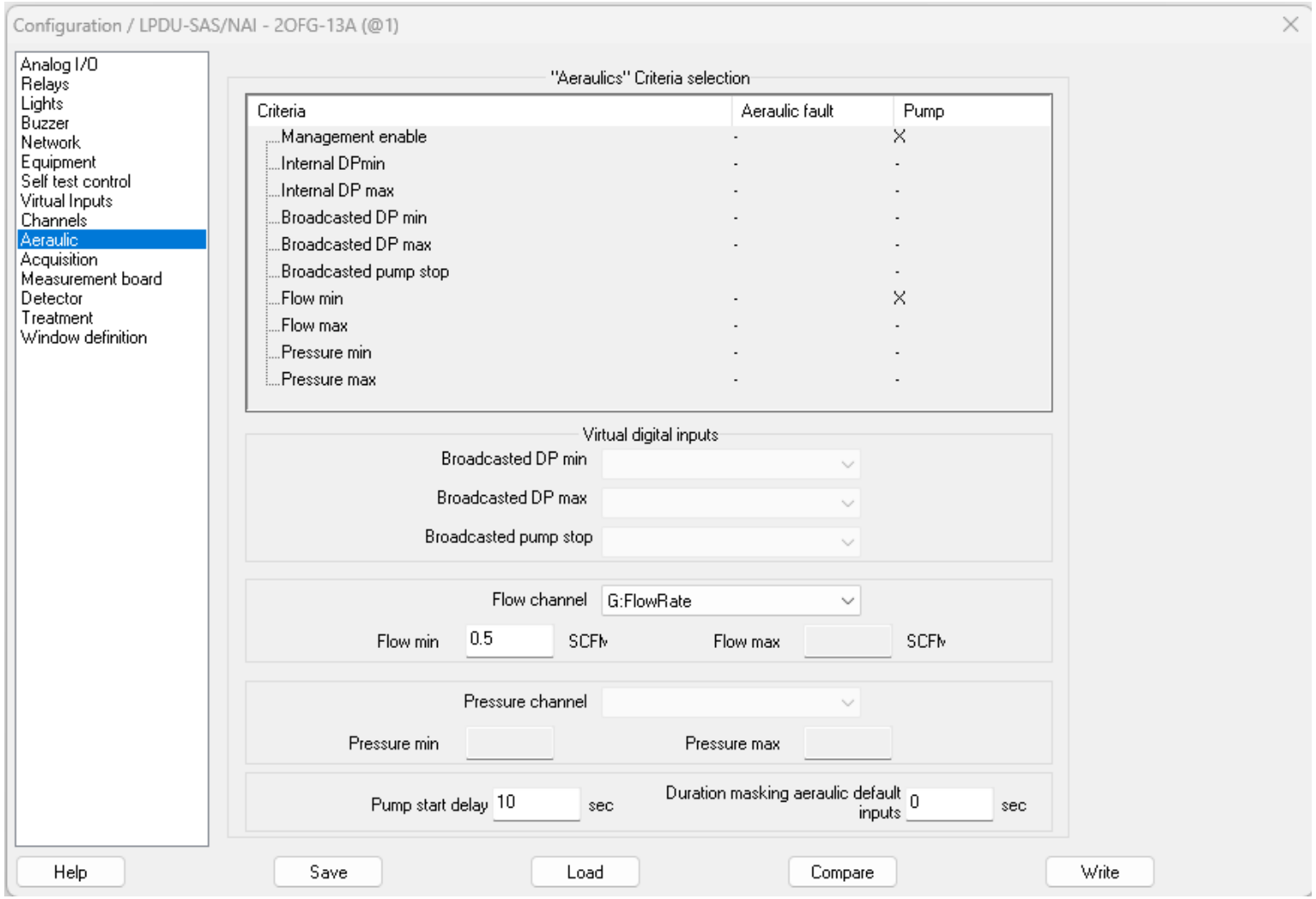
MASS2 - LPDU

Aeraulics



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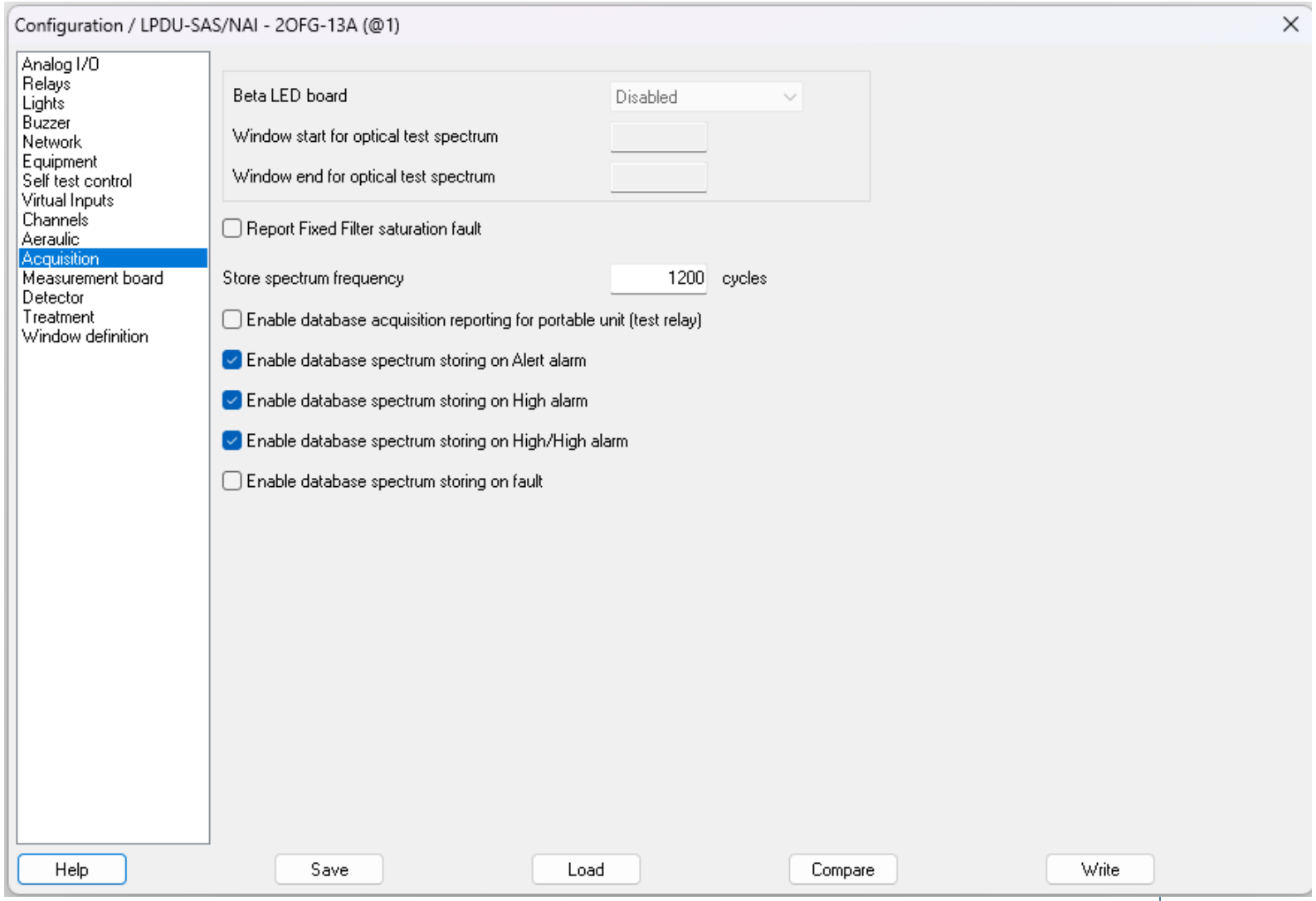
MASS2 - LPDU

Acquisition



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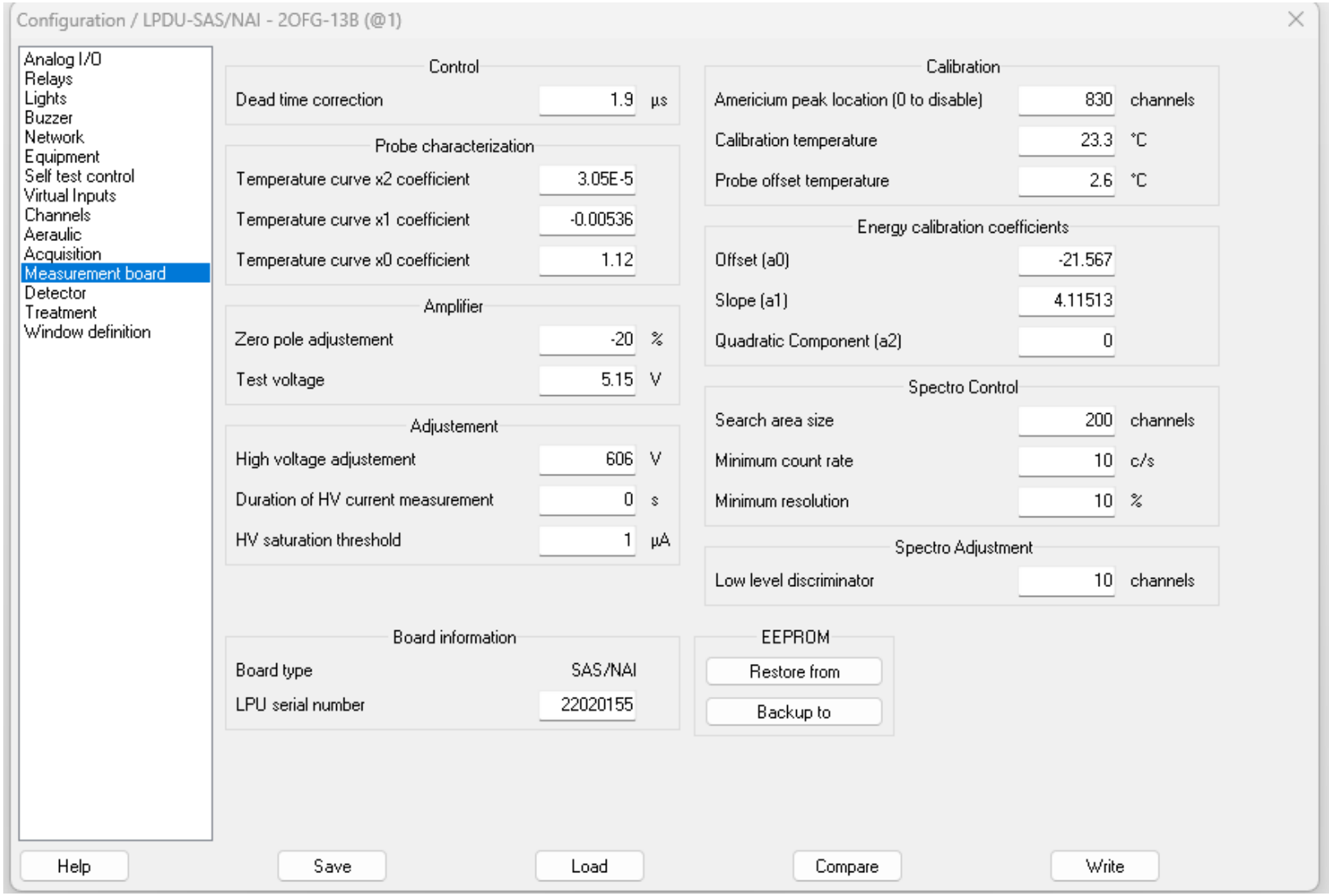
MASS2 - LPDU

Measurement board

- *Many values in this section vary with each unit.*
- *Be cautious in changing values*



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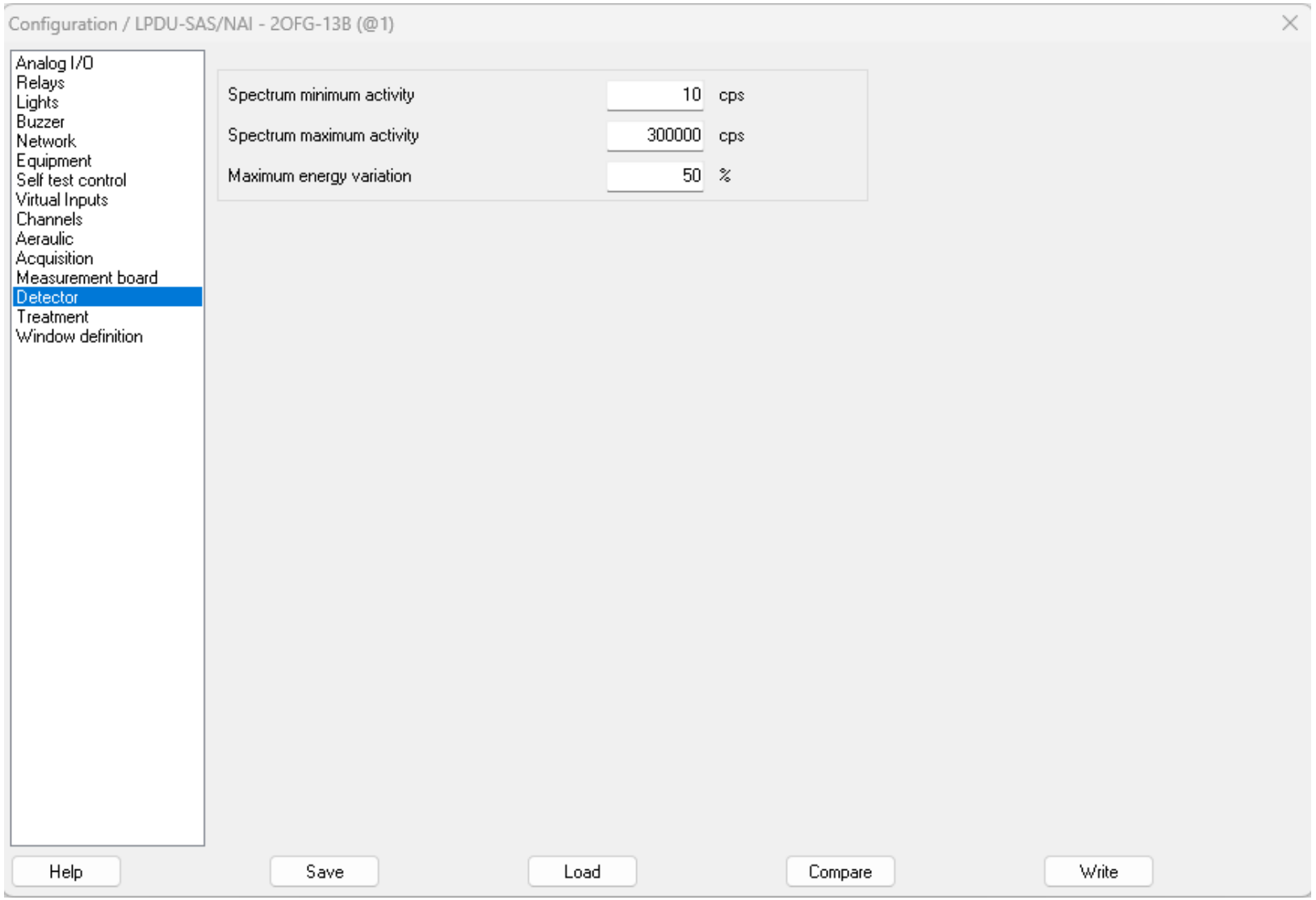
MASS2 - LPDU

Detector



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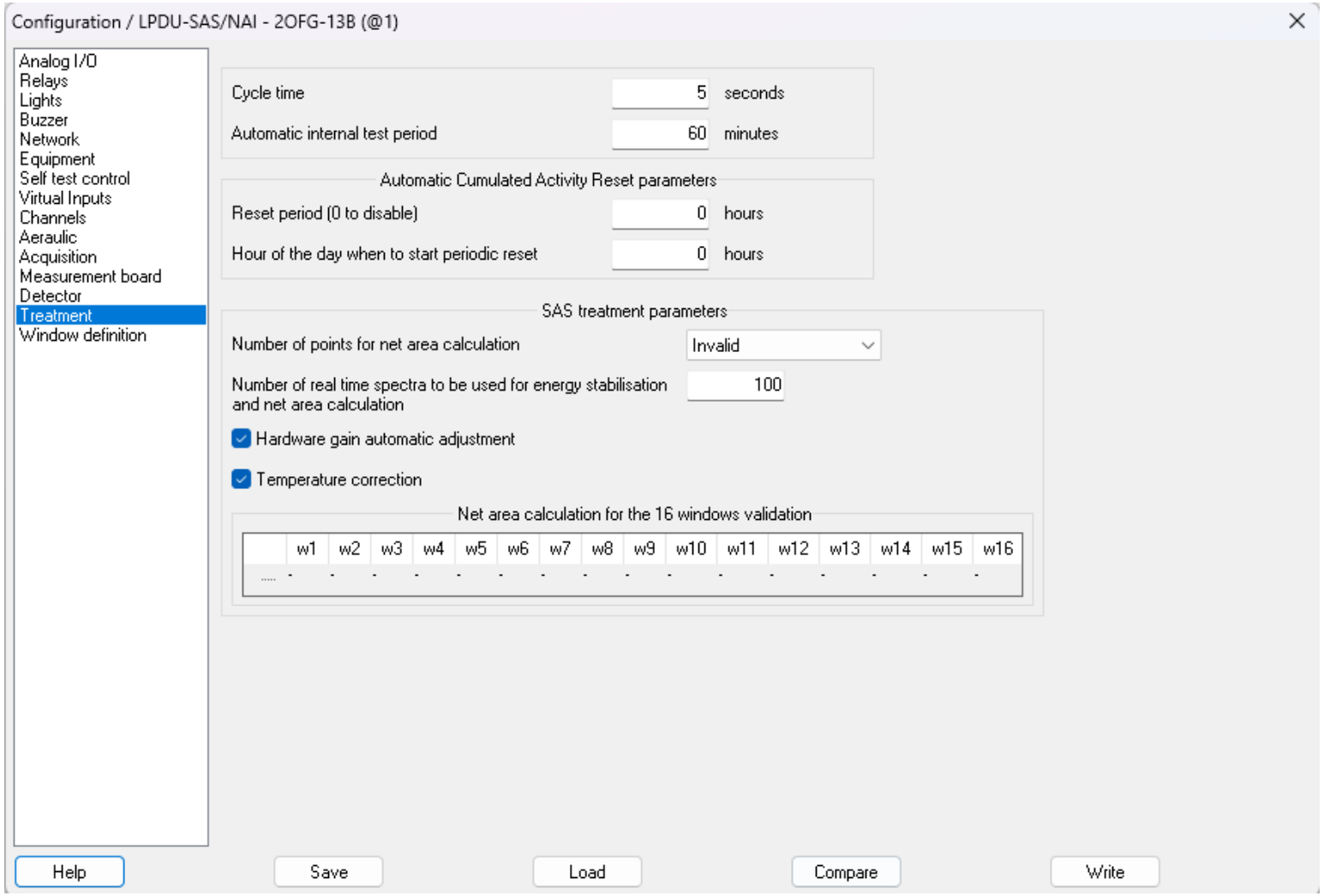
Treatment



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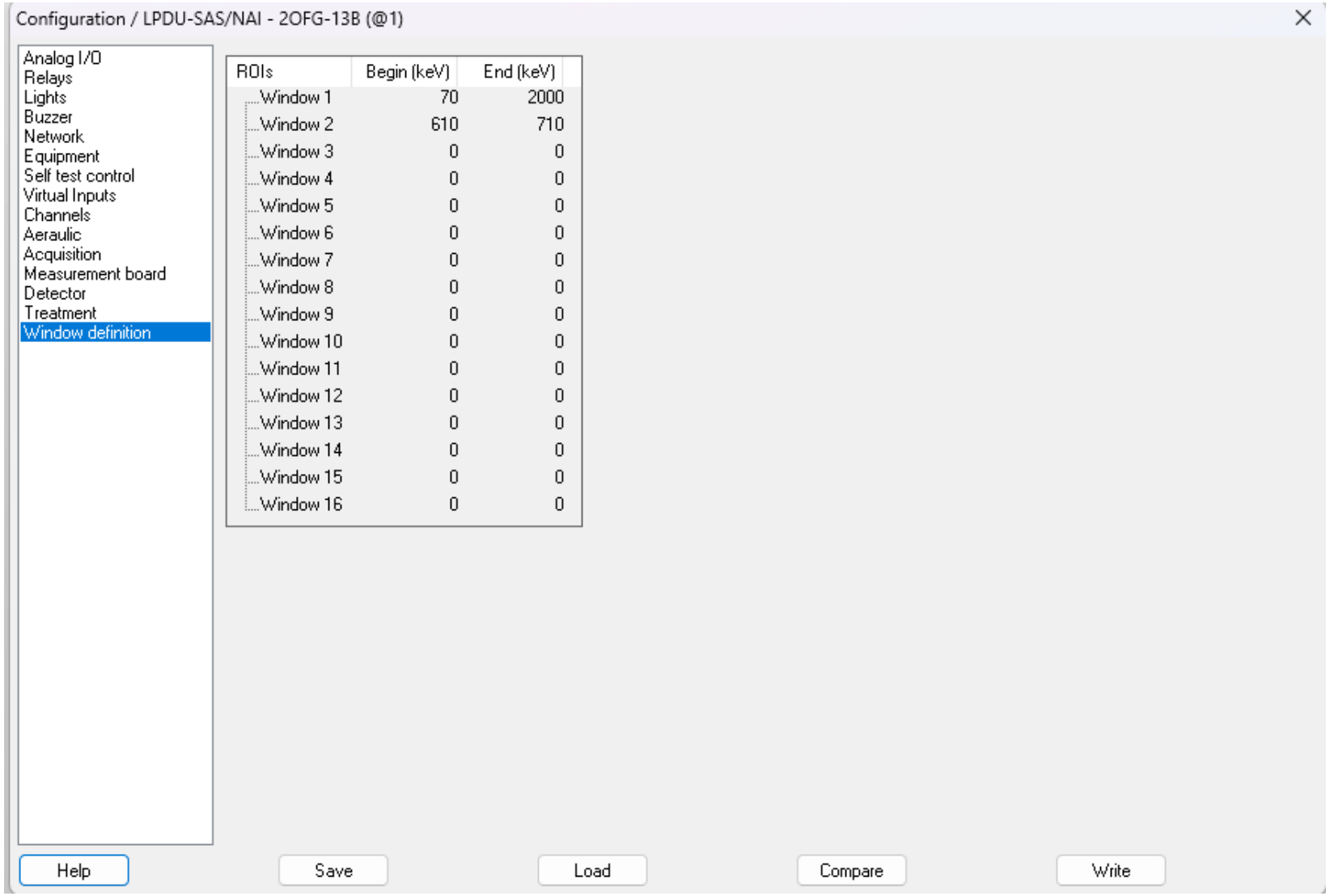
Window Definition



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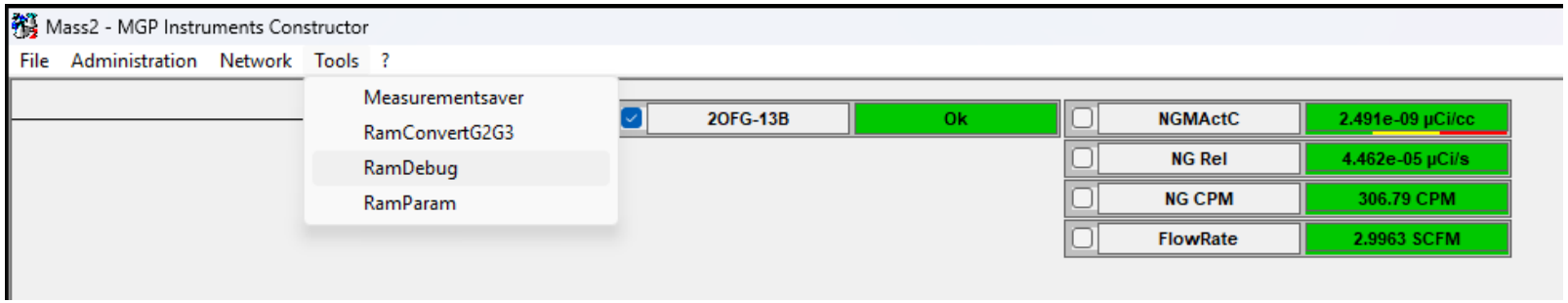
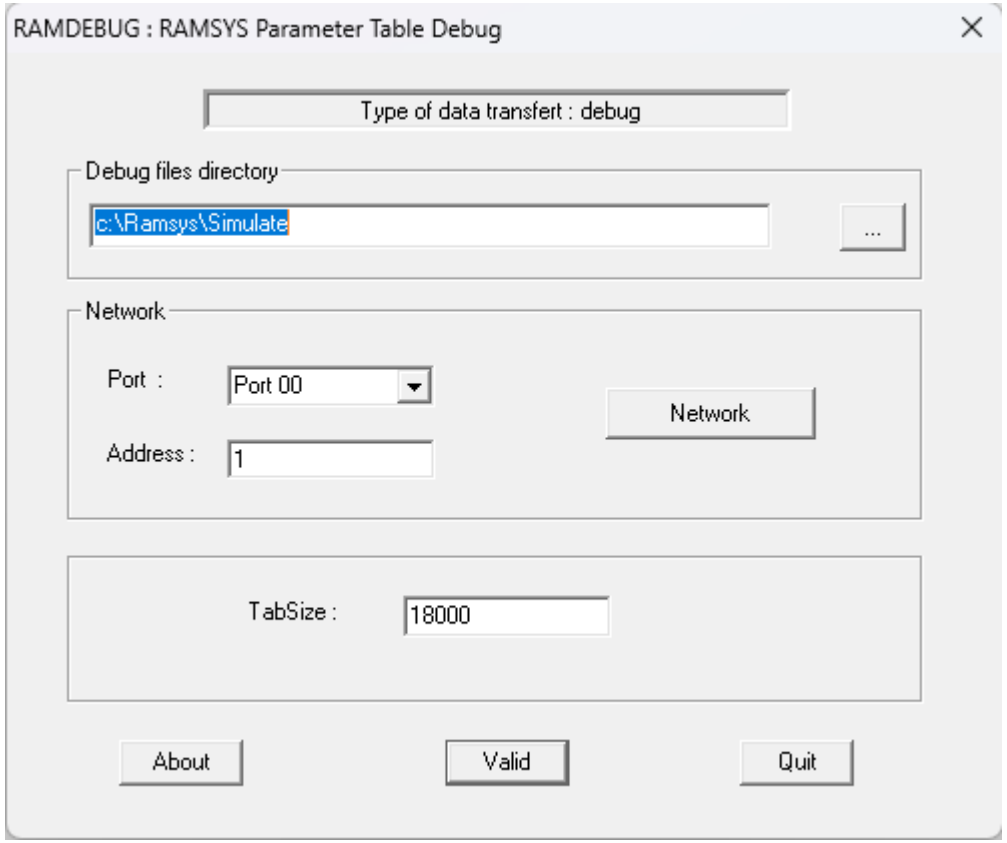
Mod File Creation





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Demonstration / Hands-On

Survey and Q&A

Survey for:

MASS2™ RMS Software: Hands-On Demo & Capability Showcase

Please take a moment to fill out a short survey on this session.

Thank you