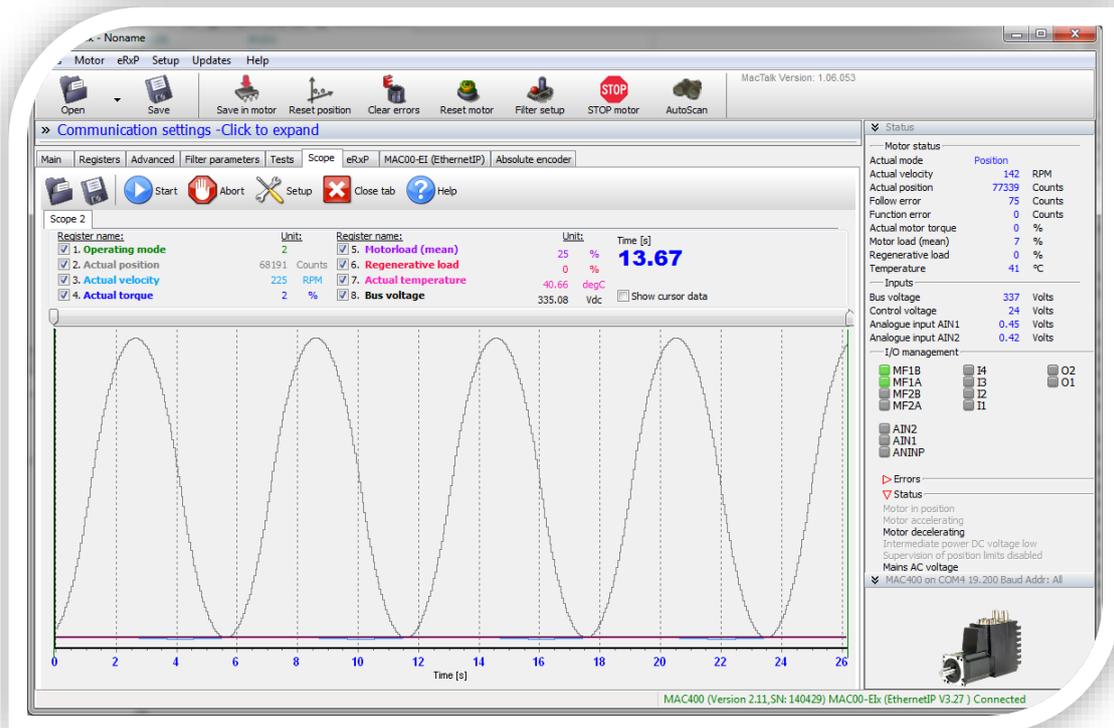


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## Scope function



With the scope function it is possible to sample register value in the motor for a long period of time. Tracking different events in the motor is very useful in both development of new products but also for error tracing in running machinery.

The scope function offers a lot of different trigger methods and up to 8 channels for up to 181 Years of sampling. The function is embedded in MacTalk and works for all Mac400-3000 –motors.

The scope function works, by arming the trigger function in the motor when the trigger condition has been met the motor samples data for the time duration configured and data can then be uploaded to MacTalk. The previously the scope feature was controlled by MacTalk with this system the scope feature is controlled in the motor and only configuration, initialization and finally data uploading is done from MacTalk.

### Setup

For setting up all the necessary parameters press the “Setup” –button and the Setup –screen appears.

### Start

To start the trigger press the “Start” –button and the motor will arm the trigger for the sampling. The screen shows the text “Waiting for trigger...”

At this point the motor is armed and waiting for the trigger condition to occur. MacTalk can be disconnected and later re-connected to the motor for uploading data if the system has triggered and data has been sampled.

MacTalk can be used for other purposes while the trigger is armed.

Important!

If the 24V supply is removed from the motor the motor is not automatically re-triggered and sampled data is lost.

## Abort



The trigger or sampling process can be aborted at any time by pressing the “Abort” –button.

## Save scope session



When a session has been uploaded it is possible to save the data into 3 different formats, **.bmp** for a bitmap image, **.scope** for a MacTalk format and **.csv** for comma separated format. The .csv file format can be imported in a spreadsheet tool for further data analyzation.

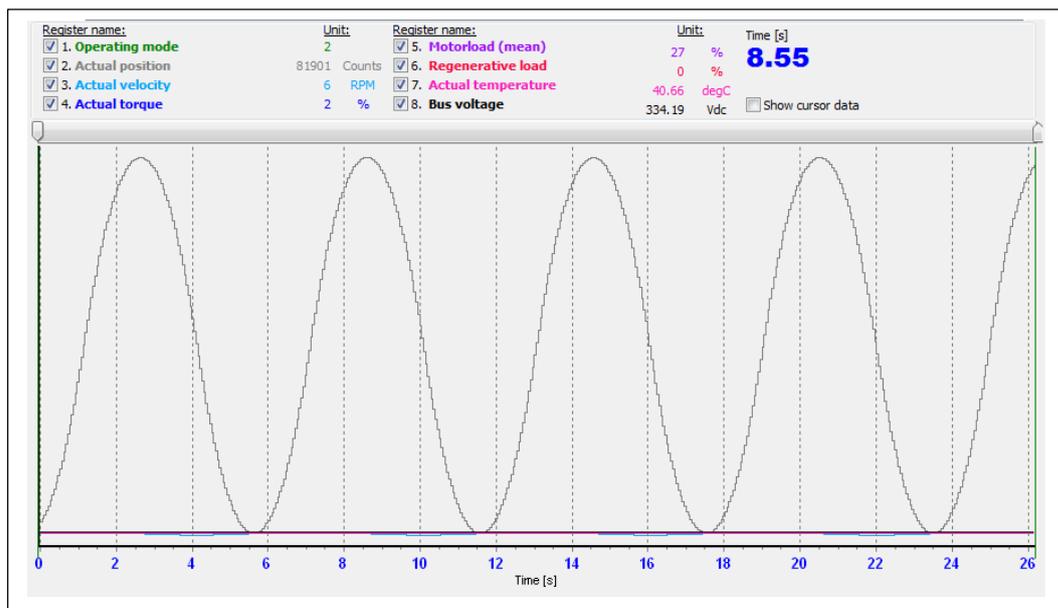
## Open saved scope session



Earlier saved scope sessions can be opened, this feature only supports opening the .scopedata –file format.

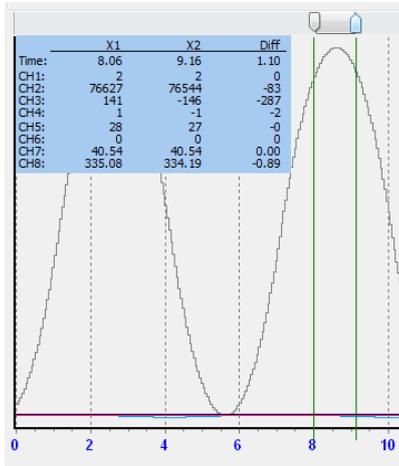
## Value tracking

When data has been uploaded the mouse can be moved to across the time –axis and data points are updated in the register section. In the figure below the actual data values for the sample point (time = 8.55) can be seen, Operating mode = 2, Actual position = 81901 counts, Actual velocity = 6 RPM, Actual Torque = 2 etc.



A more complex tracing tool can be used by checking the “Show cursor data” –checkbox and get the cursor box.

The 2 cursors are dragged from the left and right side of the scope screen to narrow down a section and displaying the values and the differences between the values for all the channels.



### Zoom

By holding down the left mouse button while dragging the mouse to the right the area is zoomed in.

Left clicking and defining the area again by dragging the cursor to the left the area is un-zoomed-

### Pan

Holding down the right mouse button and dragging the mouse will pan the entire scope image.

### Changing register units

The unit used for each register value can be changed by clicking on them. This will change the scaling as well,