

Product Datasheet - Technical Specifications



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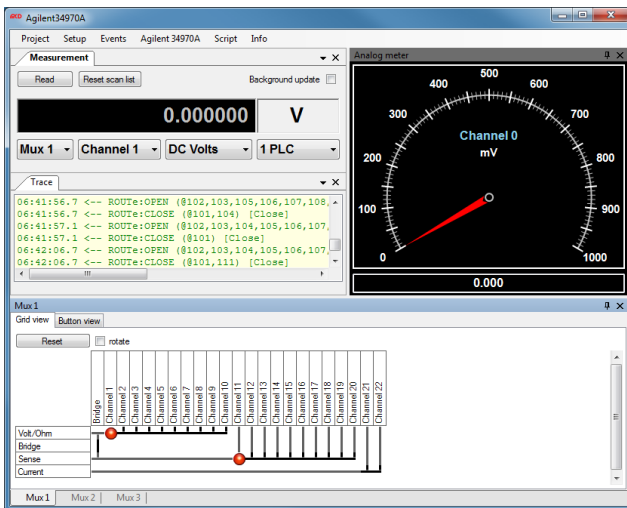
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Manual

Toolmonitor Multimeter



GET IN **touch**
WITH SENSITIVE TESTING

- Softline
- Modline
- Conline
- Boardline
- Avidline
- Pixline
- Application

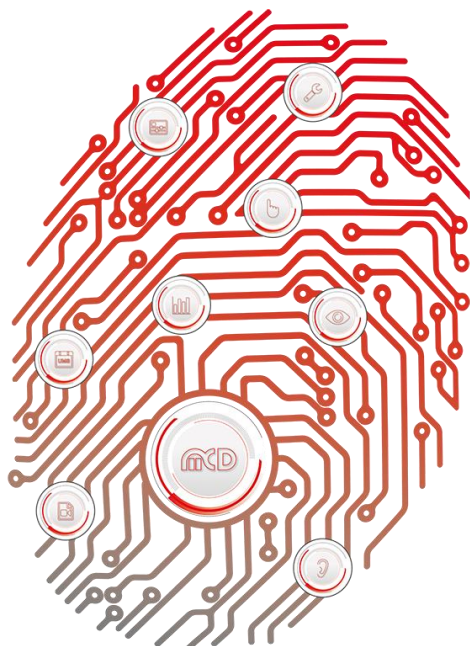


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1. General

This Toolmonitor enables the comfortable and easy control and operation of Agilent 3409A and 34401A multimeters. Using the Toolmonitor, the channel to be measured, including multiplexer, measuring variable and resolution, can be selected. Display can be digital or analog. Multiplexers can also be independently provided to the measuring variable, e.g. for signal distribution.

The program interface can be freely arranged to a large extent and adapted to the user requirements. Configurations created once can be saved in project files and reloaded as needed.

All measurements and settings can be automatically performed using an integrated script engine. The Toolmonitor can be fully remote - controlled using third - party software. COM/DCOM or a .Net – Assembly is used as interface. This way, the Toolmonitor can be integrated into a variety of applications (Microsoft Visual Studio® (C#, C++, Visual Basic), Microsoft Office® (e.g., Excel®), Open Office®, LabView®, MCD TestManager CE).

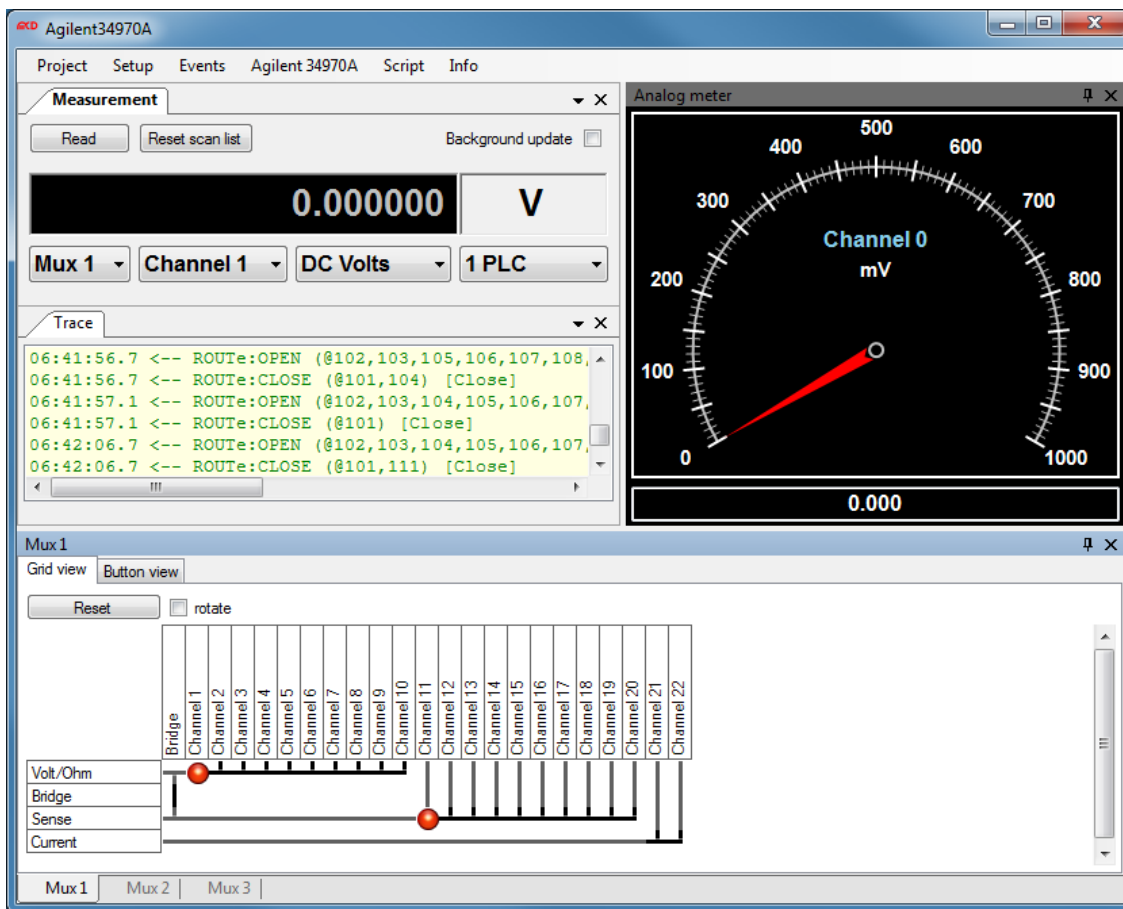


Figure 1: Toolmonitor Multimeter

Order number: # 118949

2. Installation

The following section describes the Toolmonitor installation.

2.1. System Requirements

Operating system: Windows 2000[®], Windows XP[®], Windows 7[®]

Architecture: 32bit or 64bit

.Net Framework: version 3.5 or newer

2.2. Installation Program

Call the provided installation program and follow the instructions on the screen to install the Toolmonitor. In the case of an update installation, an already installed version must be uninstalled first.

2.3. License

To protect the software against unauthorized use, some Toolmonitors must be licensed after the installation. A detailed licensing description can be found in chapter 3 in this document.

For demonstration and test purposes, the Toolmonitor can be operated for each 30 minutes without license. Some program functions are deactivated.

For bridging waiting time until activation (e.g. on the weekend), a temporary 24 - h license can be activated as well.

2.4. Uninstallation

Unstallation follows the usual path via: Windows → Control Panel → Programs and Functions.

3. License Protection

To protect the software against unauthorized use, some Toolmonitors must be licensed after the installation. Instructions for the activation of the different licenses can be found in the following.

3.1. Register

To activate the Toolmonitor, open the license administration dialog via the License -> Register menu item.



Figure 2: Accessing the Registration Dialog

1. The status of your current license is displayed in the current license dialog:

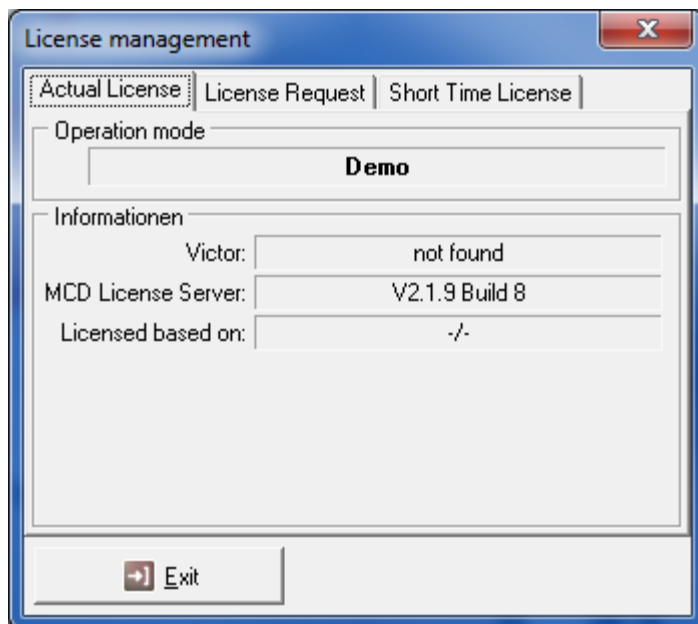


Figure 3: Accessing the License Status

2. To request a permanent license for your software, proceed as follows:

- Select the „request license“ tab.
- Enter the number of required licenses (for your PC) into the Number of Licenses field.
- Click on the “create request file” button.

Now, an additional window opens, asking you to save the MCD Licenser Request file (*.mlr).

Please save this file and send it via e - mail to the following address: info@mcd-elektronik.de

Please add an order or project number to make the allocation easier.

Next, you will receive an e - mail from MCD Elektronik with your license file (MCD License Key *.mlk) attached.

To complete licensing, save this file either under C:\Windows or in the directory, where your software executable (*.exe) was saved.

After you restart your software, the full scope of function will be available to you.

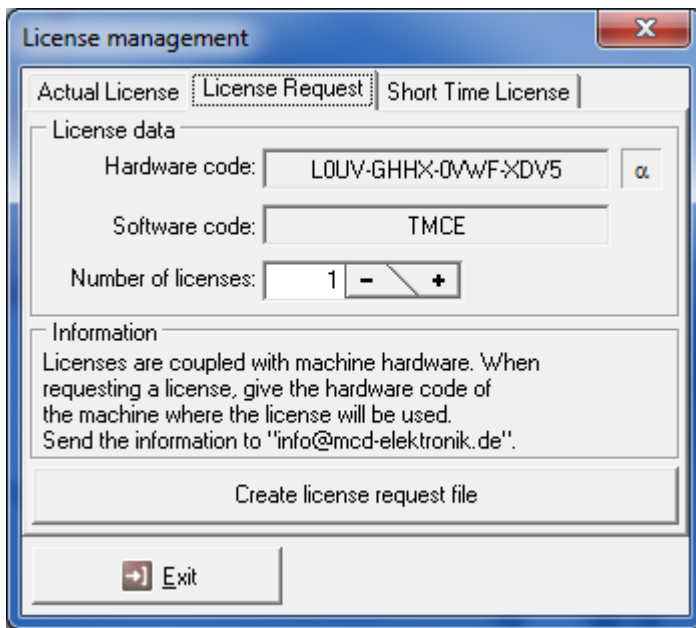


Figure 4: Requesting a Permanent License

3. To activate a temporary 24h license, select the temporary license tab. Next, enter the series of numbers from the left window into the right window. If you cannot read the numbers, click on the “new number” button to receive a new number. Once you enter the number correctly, you can activate the temporary license via the “activate license” button. Please be advised that the temporary license expires as soon as you exit the software. However, you can activate the temporary license as many times as you want.

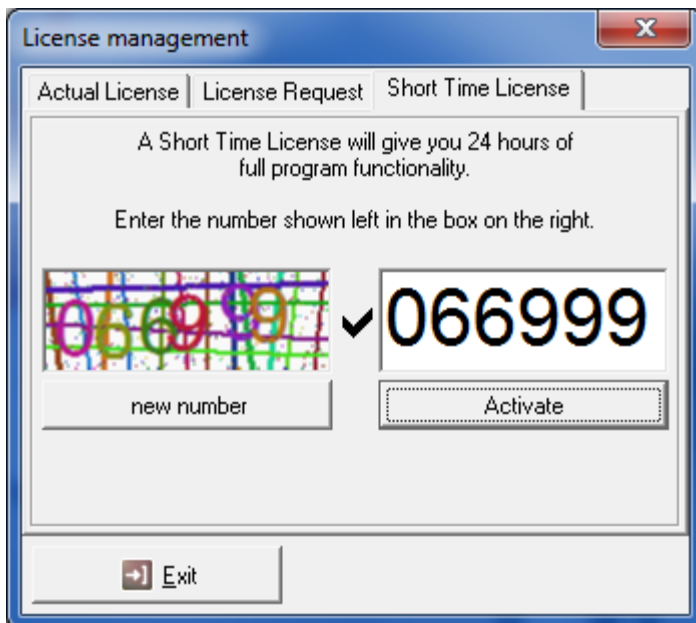


Figure 5: Requesting a Temporary License

4. Setup

Project-specific options and Toolmonitor registration as COM server are carried out via the Setup menu.



Figure 6: Setup - Menu

4.1. General

Here, general Toolmonitor settings can be adjusted.

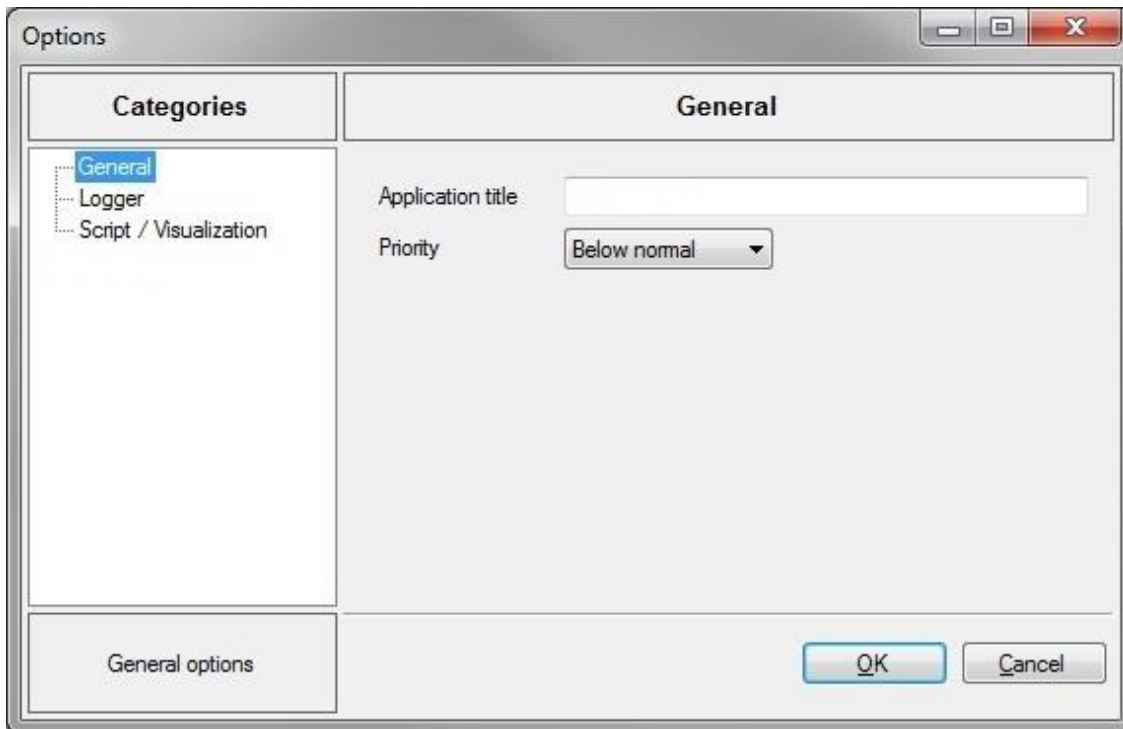


Figure 7: Adjusted Settings

Application Title

Here, the window title of the Toolmonitor can be adjusted.

Priority

Here, the basic priority of the Toolmonitor can be set. This value should only be changed if actually needed.

4.2. Logger

Here, the settings for logging in the Toolmonitor can be adjusted.

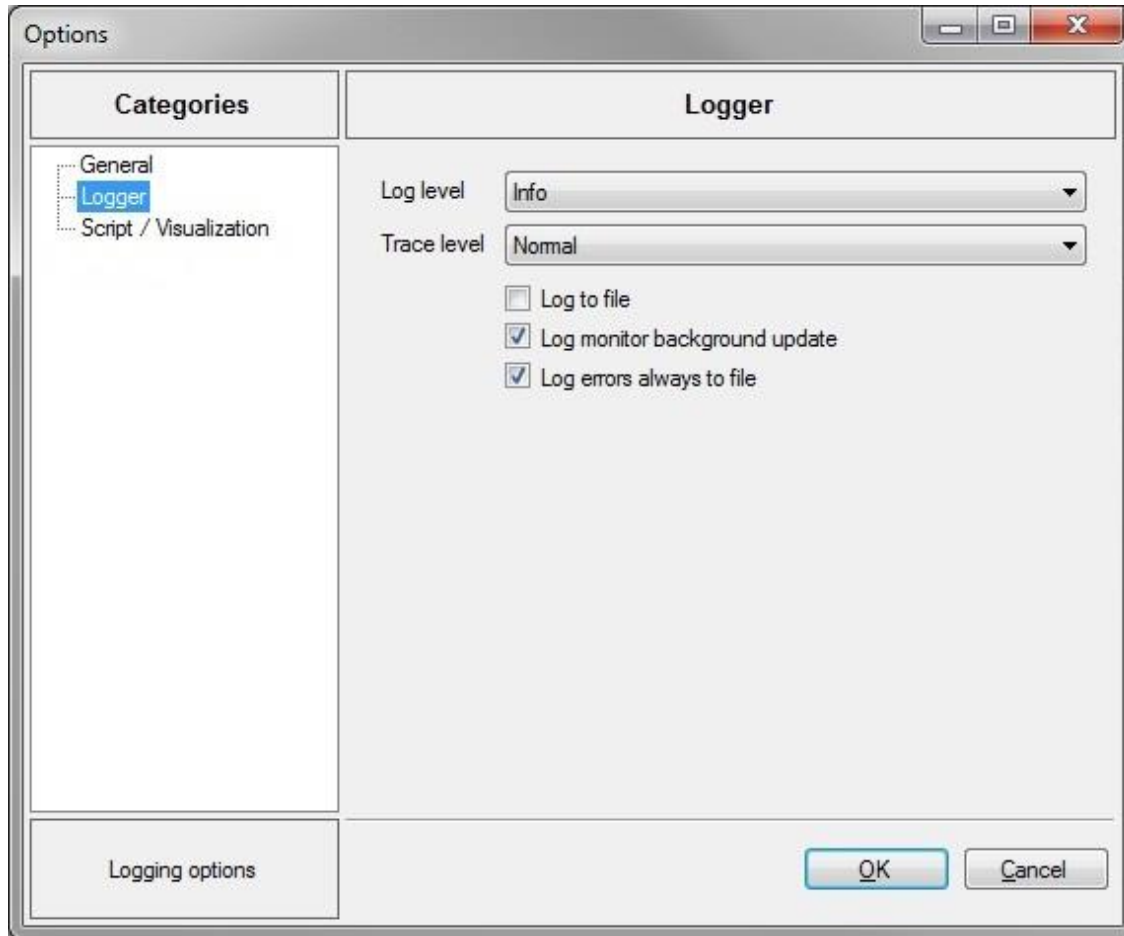


Figure 8: Logging Settings

Log Level

Here, the log level for general event messages, warnings, errors, etc. can be set. The following selections are supported:

- ExtendedDebug
- Debug
- Trace
- Info
- Warning
- ErrorTrace
- CriticalWarning
- Error

Trace Level

Here, the trace level for logging of sent or received messages can be set. The following selections are supported:

- Streaming
- Cyclic
- Normal

Log to File

If this option is activated, all event messages are stored in a file. The file name consists of the name of the Toolmonitor and a time stamp. The file is created in the same directory as the Toolmonitor.

Log Monitor Background Update

Event messages are normally always generated, even if the monitor for event message display is currently not active. If this is not desired, this function can be deactivated.

Log Errors Always to File

Error messages are normally always logged in an additional log file. If this is not desired, this function can be deactivated. This file name consists of the name of the Toolmonitor and the addition "Exception". The file is created in the same directory as the Toolmonitor.

4.3. Multimeter Type Options

Here, the multimeter type and the serial interface for communication with the multimeter can be adjusted and activated. The interface parameters are fixed and must be respectively adjusted on the multimeter.

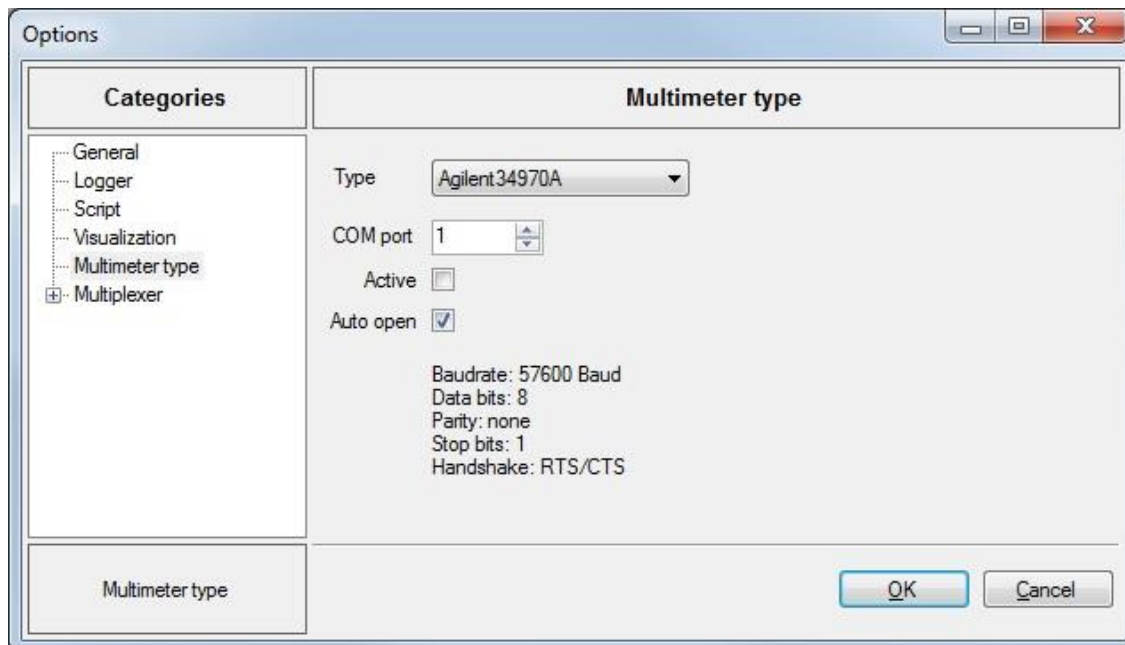


Figure 9: Interface Parameters

4.4. Multiplexer Options

Here, the type of the installed multiplexer can be set.

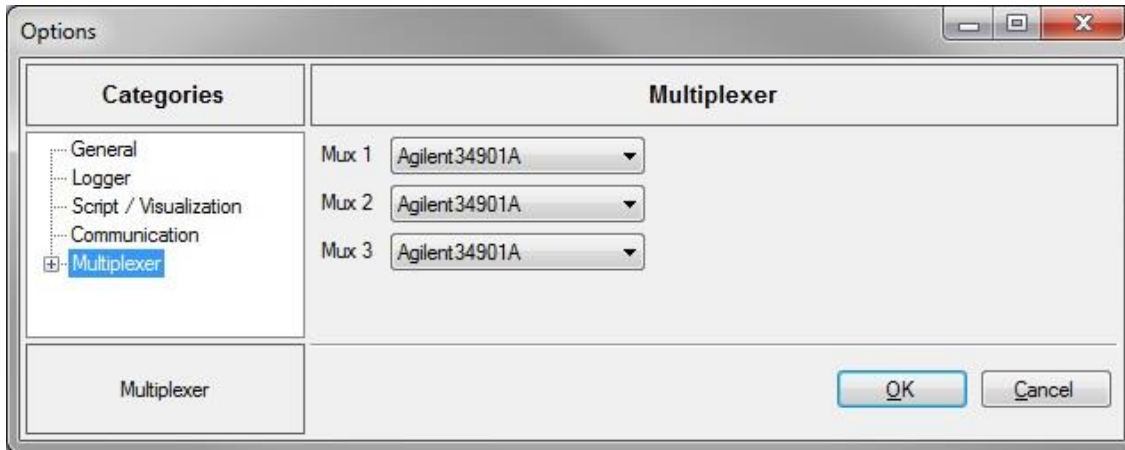


Figure 10: Types of Multiplexer

The names of multiplexers and channels can also be adjusted here. The "number of rows" defines the number of rows in the multiplexer display (button - view). If the value is "0", an optimum number of rows is automatically selected.

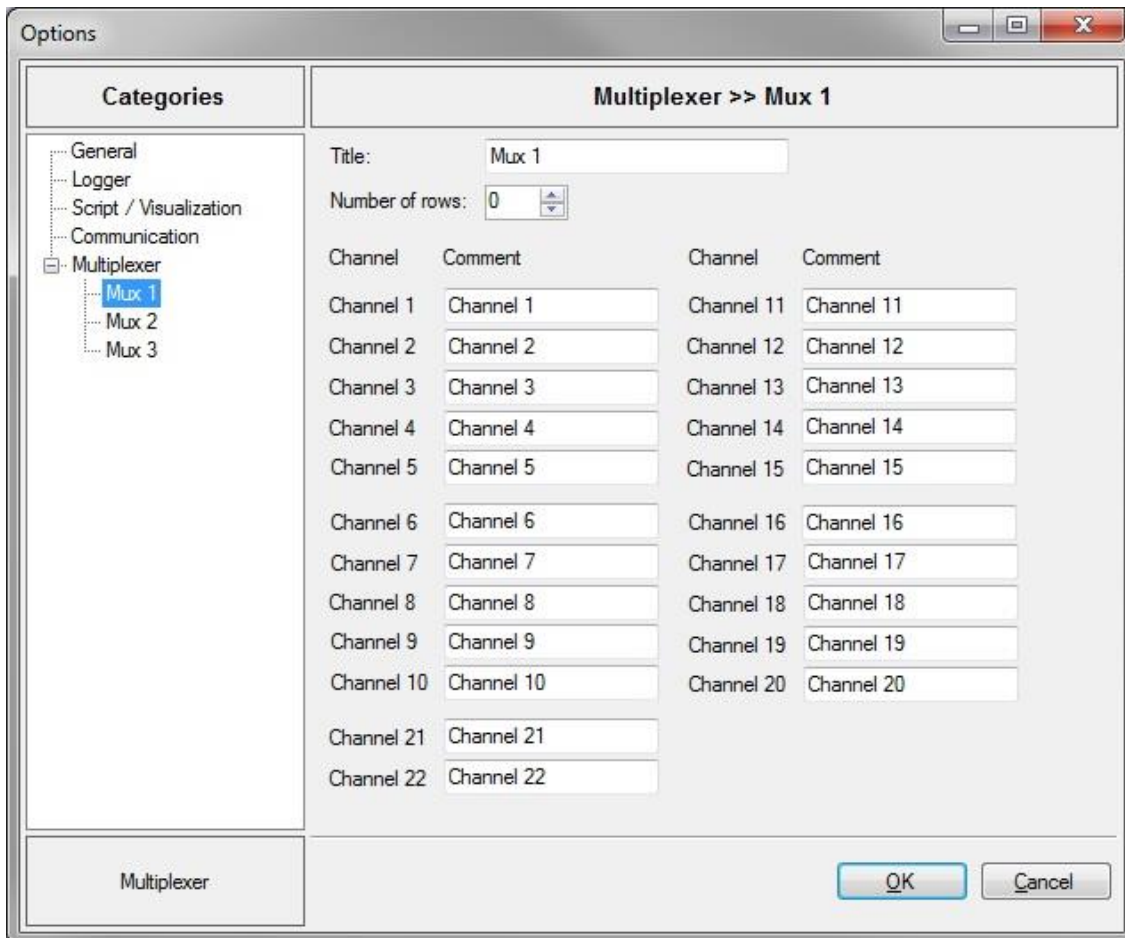


Figure 11: Channel Name Configuration

4.5. Register as COM server

Using this command, the Toolmonitor can be registered as COM server. This is required, when the Toolmonitor should be remote - controlled by a different program, such as the MCD TestManager.

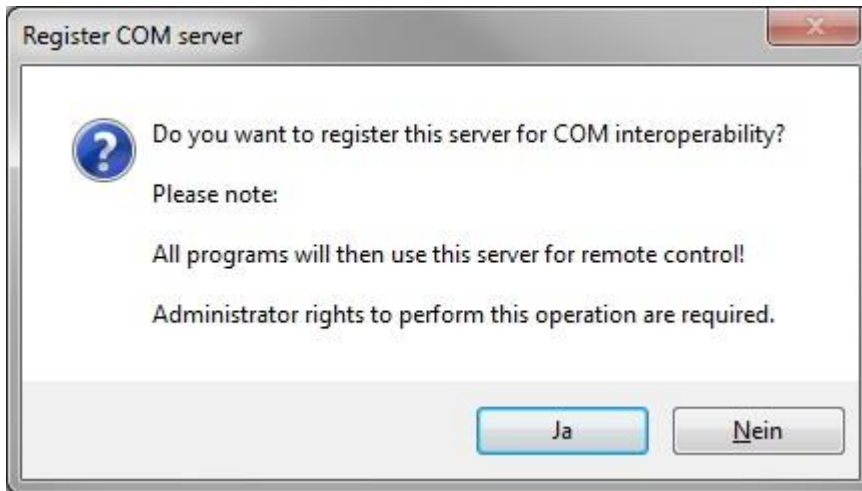


Figure 12: Register COM Server

5. Toolmonitor Multimeter Modules

5.1. Communication

Direct access to the communication interface is possible using this form. Here, the telegram traffic between Toolmonitor and multimeter can be monitored. Custom telegrams can be created, stored in a library, and sent for test and diagnostics purposes.

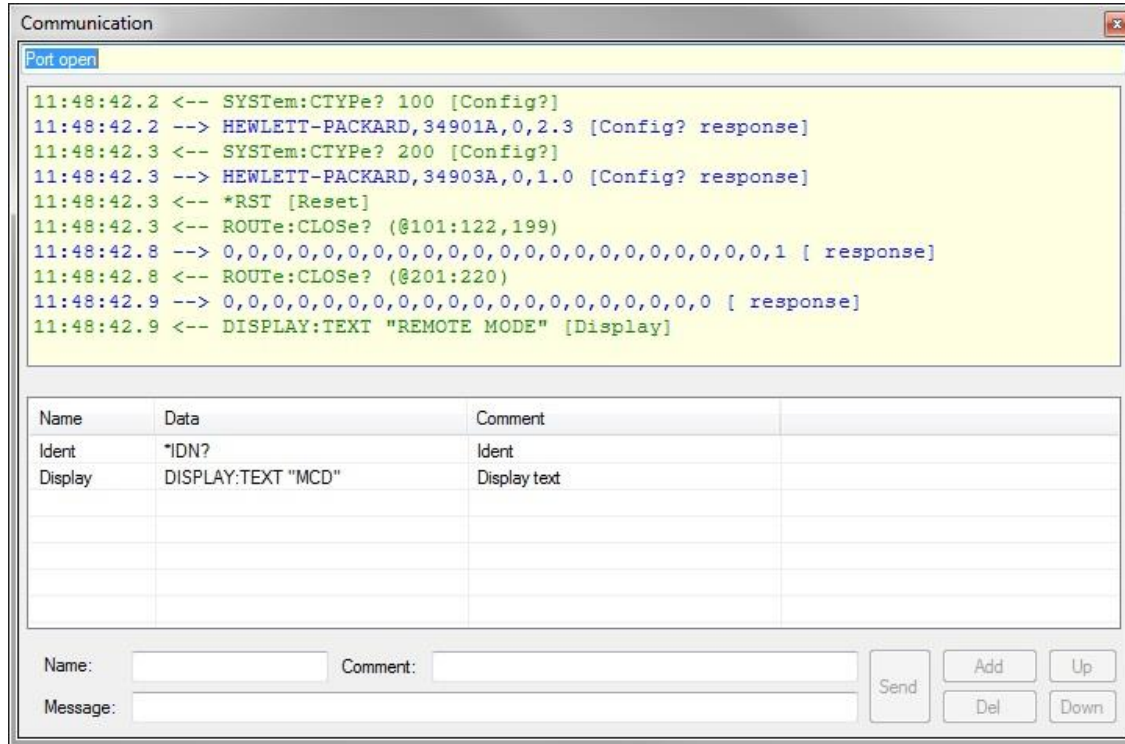


Figure 13: Communication Interface

5.2. Measurement

Measured value acquisition can be accessed via "measurement". The used multiplexer can be selected via the left selection box. Next to it, the channel can be selected, followed by measuring range and accuracy. A single measurement is triggered using the "Read" button. "Reset scan list" is used for resetting and releasing the multiplexer. Cyclic measured value readout can be triggered via "Background update". The multiplexer and channel names can be adjusted in the setup menu.

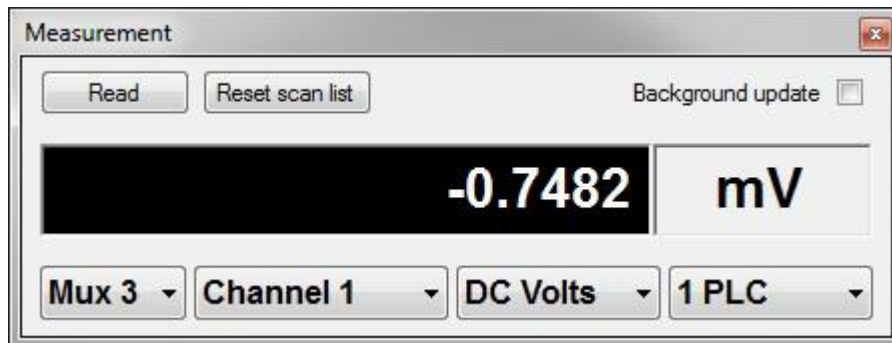


Figure 14: Measured Value Acquisition

5.3. Multiplexer

Direct access to the multiplexers is possible by using this form. The current condition of the multiplexer is displayed. Here, the individual relays of the multiplexer can also be adjusted manually. Different views are available depending on the multiplexer. The multiplexer and channel names can be adjusted in the setup menu.

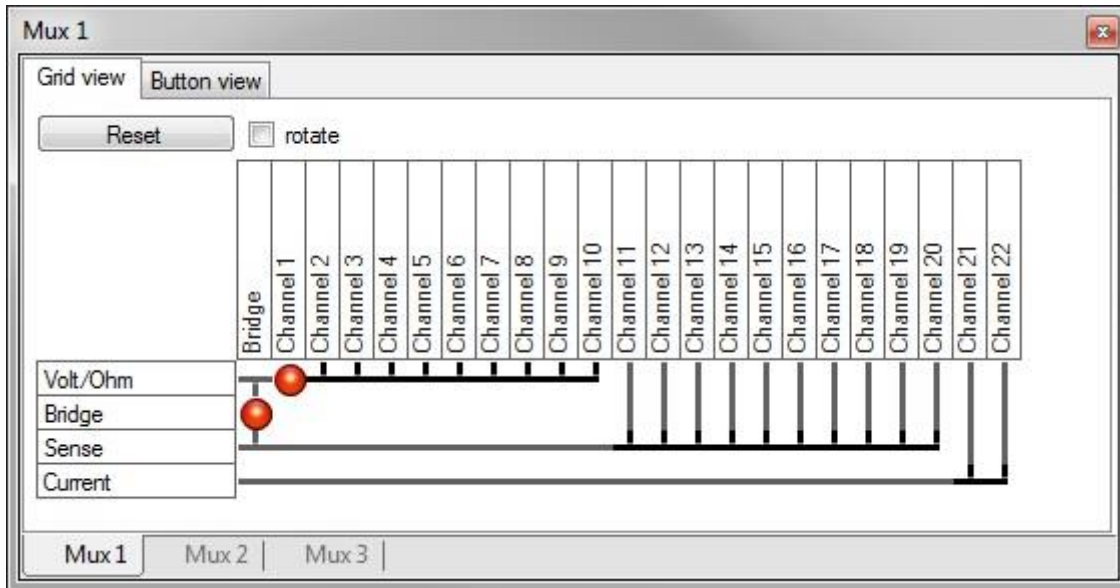


Figure 15: Multiplexer

5.4. Analog Meter

Using this menu, an analog display (similar to a dial gage) can be shown. This display always presents the last measured value. The measuring range (full deflection) can be selected via a context menu. An automatic selection can also be activated.

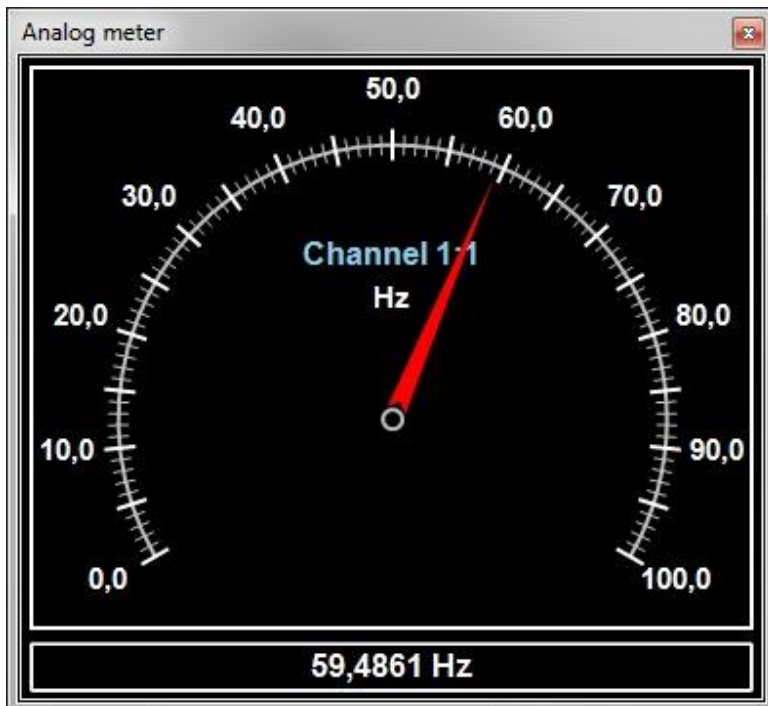


Figure 16: Analog Meter

5.5. Events

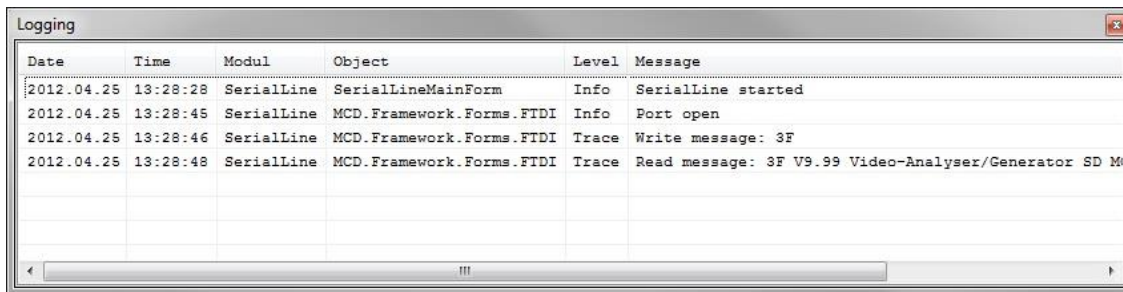
Here, the views for the log and trace messages can be accessed.



Figure 17: Events Menu

5.6. Logging

Using this menu, the log messages view for general events, warnings, errors, etc. is called up.

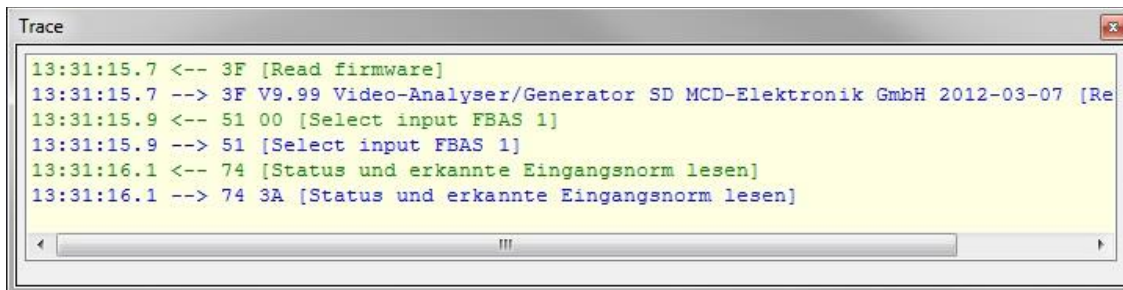


Date	Time	Modul	Object	Level	Message
2012.04.25	13:28:28	SerialLine	SerialLineMainForm	Info	SerialLine started
2012.04.25	13:28:45	SerialLine	MCD.Framework.Foirms.FTID	Info	Port open
2012.04.25	13:28:46	SerialLine	MCD.Framework.Foirms.FTID	Trace	Write message: 3F
2012.04.25	13:28:48	SerialLine	MCD.Framework.Foirms.FTID	Trace	Read message: 3F V9.99 Video-Analyser/Generator SD M

Figure 18: Log Monitor

5.7. Trace

Using this menu, the trace messages view (sent and received messages) is called up.



```
13:31:15.7 <-- 3F [Read firmware]
13:31:15.7 --> 3F V9.99 Video-Analyser/Generator SD MCD-Elektronik GmbH 2012-03-07 [Re
13:31:15.9 <-- 51 00 [Select input FBAS 1]
13:31:15.9 --> 51 [Select input FBAS 1]
13:31:16.1 <-- 74 [Status und erkannte Eingangsnorm lesen]
13:31:16.1 --> 74 3A [Status und erkannte Eingangsnorm lesen]
```

Figure 19: Trace