



Automotive  
Energy & Power Analysis  
Aerospace & Defense  
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General Test & Measurement

## **CAN Output Plug-In**

DEWESoft 7



Re-inventing Data Acquisition



# CAN Output Plug-In

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## Training

DEWETRON offers training at various offices around the world several times each year. DEWETRON headquarters in Austria have a very large and professional conference and seminar center, where training classes are conducted on a regular basis starting with sensors and signal conditioning, A/D technology and software operation. For more information about training services, please

visit:<http://www.dewetron.com/support/training>

Dewetron Inc. in the USA also has a dedicated training facility connected to its headquarters, located in Rhode Island. For more information about training services in the US, please

visit:<http://www.dewamerica.com/support/training>

## Calibration

Every instrument needs to be calibrated at regular intervals. The standard norm across nearly every industry is annual calibration. Before your DEWETRON data acquisition system is delivered, it is calibrated at our DEWETRON headquarter. Each of this system is delivered with a certificate of compliance with our published specifications. Detailed calibration reports from our calibration system are available for purchase with each order. We retain them for at least one year, so calibration reports can be purchased for up to one year after your system was delivered.

## Support

DEWETRON has a team of people ready to assist you if you have any questions or any technical difficulties regarding the system. For any support please contact your local distributor first or DEWETRON directly.

For Asia and Europe, please contact:

DEWETRON Ges.m.b.H.

Parkring 4

A-8074 Graz-Grumbach

AUSTRIA

Tel.: +43 316 3070

Fax: +43 316 307090

Email: [support@dewetron.com](mailto:support@dewetron.com)

Web: <http://www.dewetron.com>

The telephone hotline is available

Monday to Friday between

08:00 and 17:00 CET (GMT +1:00)

For the Americas, please contact:

DEWETRON, Inc.

10 High Street, Suite K

Wakefield, RI 02879

U.S.A.

Tel.: +1 401 284 3750

Toll-free: +1 877 431 5166

Fax: +1 401 284 3755

Email: [support@dewamerica.com](mailto:support@dewamerica.com)

Web: <http://www.dewamerica.com>

The telephone hotline is available

Monday to Friday between

08:00 and 17:00 GST (GMT -5:00)

## Service/repairs

The Team of DEWETRON also performs any kinds of repairs to your system to assure a safe and proper operation in future. For information regarding service and repairs please contact your local distributor first or DEWETRON directly.

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## **Warranty Information**

A copy of the specific warranty terms applicable to your DEWETRON product and replacement parts can be obtained from your local sales and service office.

## **Restricted Rights Legend**

Use austrian law for duplication or disclosure.

DEWETRON GesmbH

Parkring 4

A-8074 Graz-Grambach / Austria

## **Printing History**

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## Safety symbols in the manual

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*Indicates hazardous voltages.*

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**WARNING**     *Calls attention to a procedure, practice, or condition that could cause bodily injury or death.*

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**CAUTION**     *Calls attention to a procedure, practice, or condition that could possibly cause damage to equipment or permanent loss of data.*

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### **WARNINGS**

*The following general safety precautions must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the product. DEWETRON Elektronische Messgeraete Ges.m.b.H. assumes no liability for the customer's failure to comply with these requirements.*

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**All accessories shown in this document are available as option and will not be shipped as standard parts.**



*For safety reasons max. 50 V may be applied to the BNC input-connectors! Refer to the regulation of maximum allowable touch potential.*

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## **Your safety is our primary concern! Please be safe!**

### **General safety and hazard warnings for all DEWETRON systems**

- Use this system under the terms of the specifications only to avoid any possible danger.
- Maintenance will be executed by qualified staff only.
- During the use of the system, it might be possible to access another parts of a more comprehensive system. Please read and follow the safety instructions provided in the manuals of all other components regarding warning and security advices for using the system.
- With this product, only use the power cable delivered or defined for the host country.
- DO NOT connect or disconnect sensors, probes or test leads, as these parts are connected to a voltage supply unit.
- The system is grounded via a protective conductor in the power supply cord. To avoid electric shocks, the protective conductor has to be connected with the ground of the power network. Before connecting the input or output connectors of the system, make sure that there is a proper grounding to guarantee potential free usage. For countries, in which there is no proper grounding, please refer to your local legally safety regulations for safety use.  
DC systems: Every DC system has a grounding connected to the chassis (yellow/green safety banana plug).
- Please note the characteristics and indicators on the system to avoid fire or electric shocks. Before connecting the system, please carefully read the corresponding specifications in the product manual.
- The inputs are not, unless otherwise noted (CATx identification), for connecting to the main circuit of category II, III and IV.
- The power cord separates the system from the power supply. Do not block the power cord, since it has to be accessible for the users.
- DO NOT use the system if equipment covers or shields are removed.
- If you assume the system is damaged, get it examined by authorised personnel only.
- Any use in wet rooms, outdoors or in adverse environmental condition is not allowed! Adverse environmental conditions are:
  - Moisture or high humidity
  - Dust, flammable gases, fumes or dissolver
  - Thunderstorm or thunderstorm conditions (except assembly PNA)
  - Electrostatic fields, et cetera.
- The measurement category can be adjusted depending on module configuration.
- Any direct voltage output is protected with a fuse against short cut and reverse-polarity, but is NOT galvanically isolated (except it is explicit marked on the system).
- The system must be connected and operated to an earthed wall socket at the AC mains power supply only (except for DC systems).
- Any other use than described above may damage your system and is attended with dangers like shortcut, fire or electric shocks.
- The whole system must not be changed, rebuilt or opened (except for changing DAQ, DAQP, PAD modules).

- If you assume a more riskless use is not provided anymore, the system has to be rendered inoperative and should be protected against inadvertent operation. It is assumed that a more riskless operation is not possible anymore, if
  - the system is damaged obviously or causes strange noises.
  - the system does not work anymore.
  - the system has been exposed to long storage in adverse environmental.
  - the system has been exposed to heavy shipment strain.
- DO NOT touch any exposed connectors or components if they are live wired. The use of metal bare wires is not allowed. There is a risk of short cut and fire hazard!
- Warranty void if damages caused by disregarding this manual. For consequential damages NO liability will be assumed!
- Warranty void if damages to property or persons caused by improper use or disregarding the safety instructions.
- Unauthorized changing or rebuilding the system is prohibited due to safety and permission reasons (CE). Exception: changing modules like DAQ, DAQP or PAD.
- The assembly of the system is equivalent to protection class I. For power supply, only the correct power socket of the public power supply must be used, except the system is DC powered.
- Be careful with voltages >25 VAC or >35 VDC! These voltages are already high enough in order to get a perilous electric shock by touching the wiring.
- The product heats during operation. Make sure there is adequate ventilation. Ventilation slots must not be covered!
- Only fuses of the specified type and nominal current may be used. The use of patched fuses is prohibited.
- Prevent using metal bare wires! Risk of short cut and fire hazard!
- DO NOT use the system before, during or shortly after a thunderstorm (risk of lightning and high energy overvoltage). An advanced range of application under certain conditions is allowed with therefore designed products only. For details please refer to the specifications.
- Make sure that your hands, shoes, clothes, the floor, the system or measuring leads, integrated circuits and so on, are dry.
- DO NOT use the system in rooms with flammable gases, fumes or dust or in adverse environmental conditions.
- Avoid operation in the immediate vicinity of:
  - high magnetic or electromagnetic fields
  - transmitting antennas or high-frequency generatorsFor exact values please refer to enclosed specifications.
- Use measurement leads or measurement accessories aligned to the specification of the system only. Fire hazard in case of overload!
- Do not switch on the system after transporting it from a cold into a warm room and vice versa. The thereby created condensation may damage your system. Acclimatise the system unpowered to room temperature.
- Do not disassemble the system! There is a high risk of getting a perilous electric shock. Capacitors still might be charged, even the system has been removed from the power supply.
- The electrical installations and equipments in industrial facilities must be observed by the security regulations and insurance institutions



- The use of the measuring system in schools and other training facilities must be observed by skilled personnel.
- The measuring systems are not designed for use at humans and animals.
- Please contact a professional if you have doubts about the method of operation, safety or the connection of the system.
- Please be careful with the product. Shocks, hits and dropping it from already lower level may damage your system. For exact values please refer to enclosed specifications.
- Please also consider the detailed technical reference manual as well as the security advices of the connected systems.

This product has left the factory in safety-related flawless and proper condition. In order to maintain this condition and guarantee safety use, the user has to consider the security advices and warnings in this manual.

EN 61326-3-1:2008

IEC 61326-1 applies to this part of IEC 61326 but is limited to systems and equipment for industrial applications intended to perform safety functions as defined in IEC 61508 with SIL 1-3.

The electromagnetic environments encompassed by this product family standard are industrial, both indoor and outdoor, as described for industrial locations in IEC 61000-6-2 or defined in 3.7 of IEC 61326-1. Equipment and systems intended for use in other electromagnetic environments, for example, in the process industry or in environments with potentially explosive atmospheres, are excluded from the scope of this product family standard, IEC 61326-3-1.

Devices and systems according to IEC 61508 or IEC 61511 which are considered as “operationally well-validated”, are excluded from the scope of IEC 61326-3-1.

Fire-alarm and safety-alarm systems, intended for protection of buildings, are excluded from the scope of IEC 61326-3-1.

## CAUTION

- The system BIOS is protected by password. Any change in the BIOS may cause a system crash. When the system is booting, do not press ESC-button on keyboard. This may clear the BIOS settings and cause system faults.
- Any change in the file structure as deleting or adding files or directories might cause a system crash.
- Before installing software updates contact DEWETRON or your local distributor. Use only software packages which are released by DEWETRON. Further informations are also available in the internet (<http://www.dewetron.com>).
- After power off the system wait at least 10 seconds before switching the system on again. Otherwise the system may not boot correct. This prolongs also the life of all system components.

## Windows updates and antivirus/security software

Before installing Windows software updates consult with DEWETRON for compatibility guidance. Please also keep in mind that the use of any antivirus or other security software may slow down your system and may cause data loss.

## Problematic network stacks

Often intrusive IT software or network processes can interfere with the primary function of the DEWETRON system: to record data. Therefore we recommend strongly against the installation of IT/MIS software and running their processes on any DEWETRON data acquisition system, and cannot guarantee the performance of our systems if they are so configured.

## Environmental Considerations



Information about the environmental impact of the product.

### Product End-of-Life Handling

Observe the following guidelines when recycling a DEWETRON system:

### System and Components Recycling

Production of these components required the extraction and use of natural resources. The substances contained in the system could be harmful to your health and to the environment if the system is improperly handled at it's end of life! Please recycle this product in an appropriate way to avoid an unnecessary pollution of the environment and to keep natural resources.

This symbol indicates that this system complies with the European Union's requirements according to Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). Please find further informations about recycling on the DEWETRON web site [www.dewetron.com](http://www.dewetron.com)

### Restriction of Hazardous Substances

This product has been classified as Monitoring and Control equipment, and is outside the scope of the 2002/95/EC RoHS Directive. This product is known to contain lead.

# CAN Output Plug-In

## General Information

The Dewetron CAN Out Plug-In outputs data of specific DEWESoft channels during data acquisition.

Current plug-in Version: 1.2 [14.10.2010]

Minimum DEWESoft version: 7.0

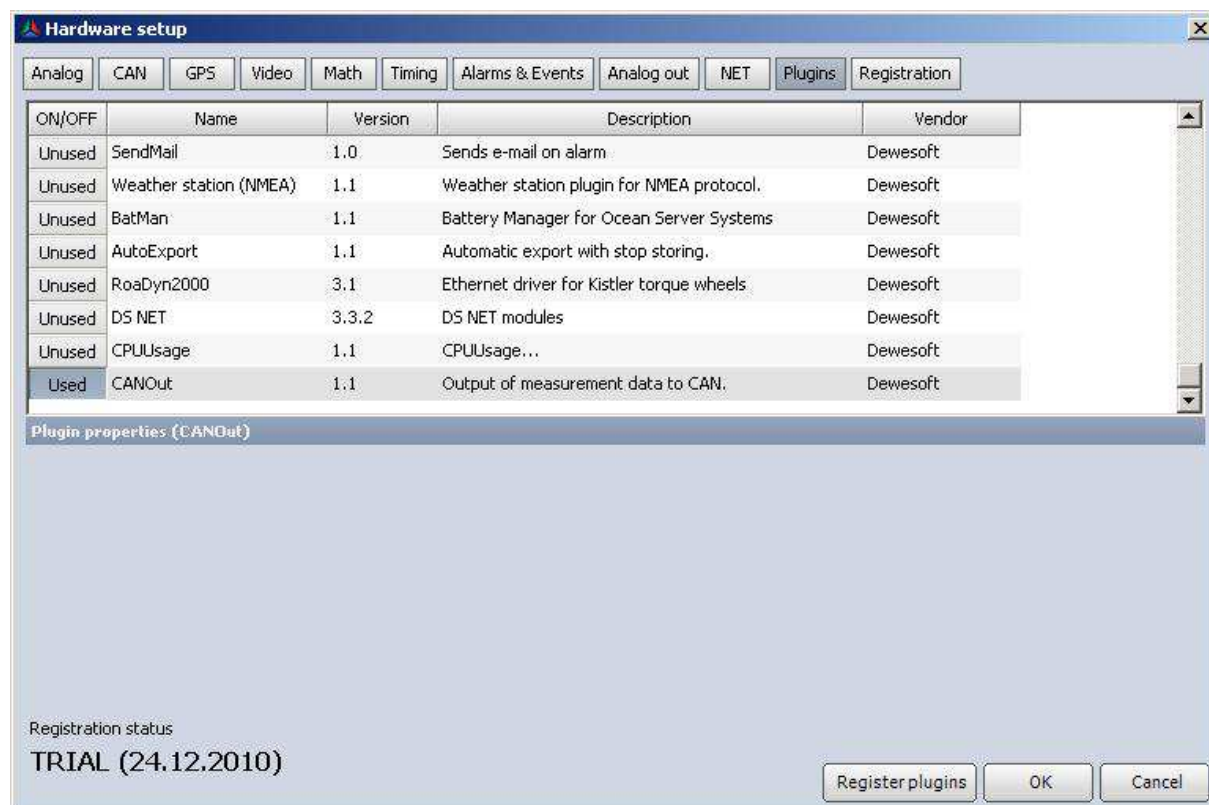
## Installation

The CAN Out Plug-in consist of just one file:  
CANOut.dll

The file must be copied into the DEWESoft Add-ons folder usually found under  
D:\DEWESoft7\Bin\V7\_0\Addons

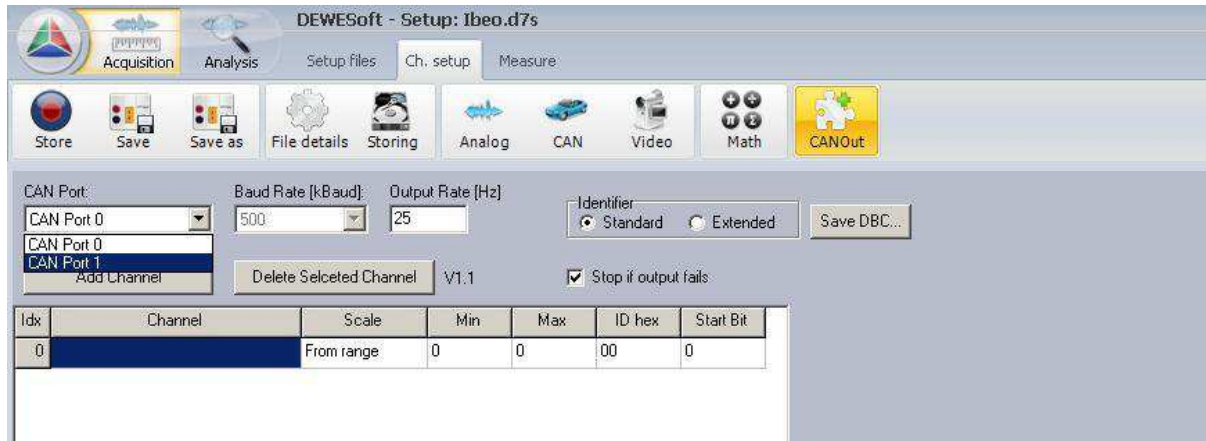
After the file has been copied, restart DEWESoft to finalize the plug-in installation.  
Once installed, the plug-in can be activated/deactivated from within DEWESoft  
(System ->Hardware Setup -> Plug-ins).

Starting from Windows 7 you have to click on „Register Plugins“ for activation. Then restart DEWESoft.



## Plug-In Interface

If the plug-in is installed and activated as described above, its setup-frame will appear embedded at the Ribbon of the Setup-screen in Acquisition Mode as shown in the figure below.



For configuration of the plug-in the following settings can be applied. As shown in above, the CAN ports supporting output of data will be listed in the corresponding combo box. Right next to it, the baud rate which is currently applied to the selected port will be shown. The baud rate cannot be changed here, but in DEWESoft's CAN section. Next to the Baud rate the output rate in Hz can be set. The maximum allowed rate is 25 Hz. If the entered value is out of the allowed range, the corrected value will be shown in red letters next to the input field.

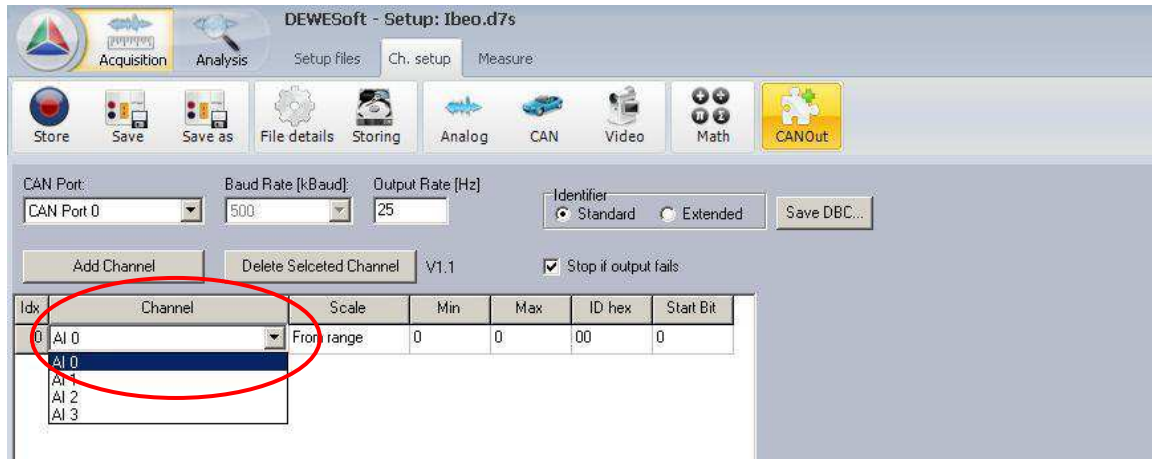
---

**NOTE:** Be aware of the fact that, independent of the out rate set, there will be a certain delay between the acquisition and the output of data, even if the data is coming from the CAN bus.

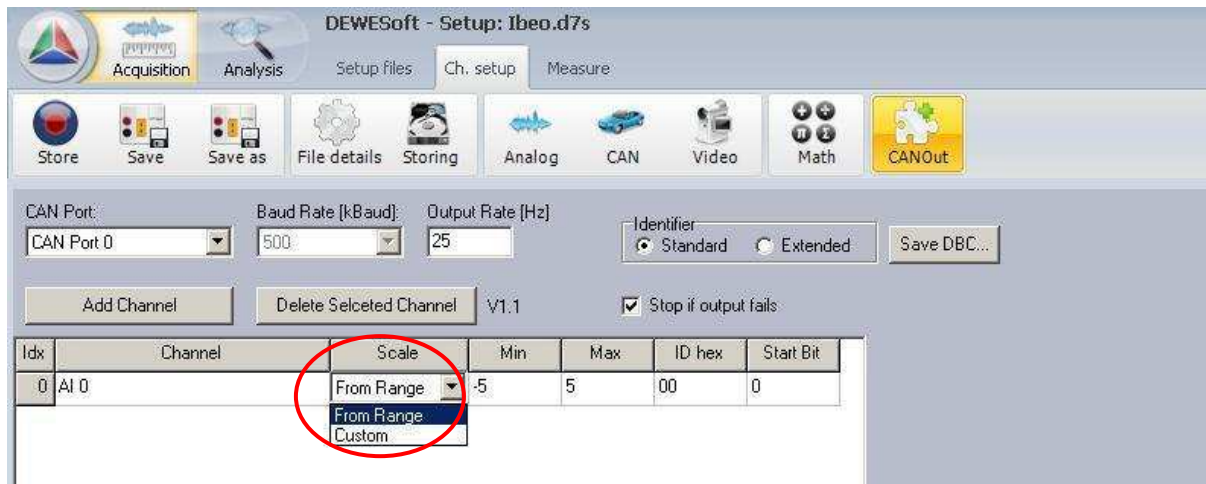
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If the check box "Stop if output fails" is checked, no more data will be output in case of problems on sending data to the CAN port. Initially the channel list below will have one single line. Additional lines for additional output channels can be added by clicking the "Add Channel" button. The "Delete Selected Channel" will delete the line which is currently selected. As shown in the Figure below the channels to output can be selected of a list of all channels which are set to "used" in the Channel setup.

# CAN Output Plug-In

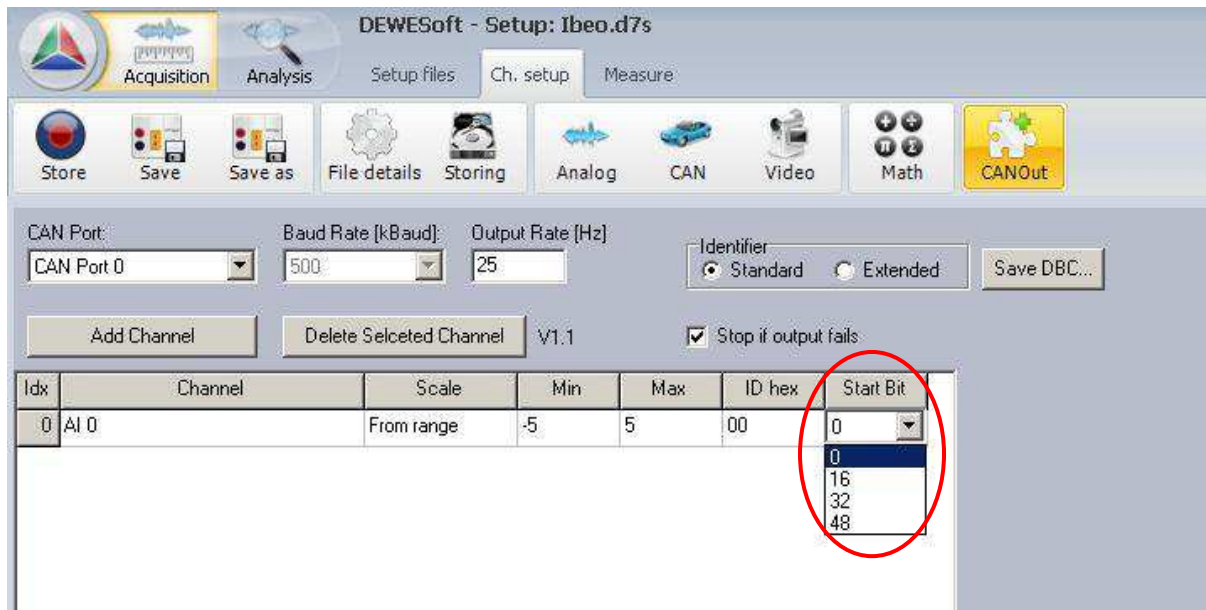


In the next column the type of scaling can be set. By default it is set to “From Range” meaning that the values will be scaled to the range which is set for the channel. By means of the next two columns this scaling can be set manually.



The entry of the next column defines the identifier in hexadecimal notation. The last column provides a combo box for specifying the start bit. This can be 0, 16, 32 or 48 because the output values are always scaled to 16 bits. This means that each identifier can contain 4 signals. It is the user’s task to avoid that equal ranges of one identifier are applied twice.


# CAN Output Plug-In



The settings applied to the plug-in will be stored together with the measurement setup. Using the radio buttons “Identifier” the user can choose between standard and extended identifiers. This is important for the generation of a CAN data base file (.dbc). Such a file can be generated by the button “Save DBC...”. This dbc-file could be read from the listening device which will read the messages.

## Contact

[sales@dewetron.com](mailto:sales@dewetron.com)

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Parkring 4

A-8074 Graz-Grambach

+43 (316) 3070