



User's guide



Connection of the A4101 instrument to the DDS2000 application

Application :

- ☞ Transmission and archiving of data measured by the A4101 device
- ☞ Transmission of a route created in the DDS2000 application to the A4101 device

Characteristics :

- ☞ Communication of the program with the device via a standard RS232 interface
- ☞ Automatic search for a device connected to the serial port

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Connection of the A4101 instrument to the DDS2000 application

The vibration analyser Adash 4101 is completely compatible with all features of the DDS 2000 system. This instrument is the basic type using of it is assumed for DDS 2000. The Adash 4101 measuring instrument and the DDS 2000 system have been developed parallel and create fundamentals of vibration diagnostic system delivered by the Adash company.

Connecting the instrument to PC

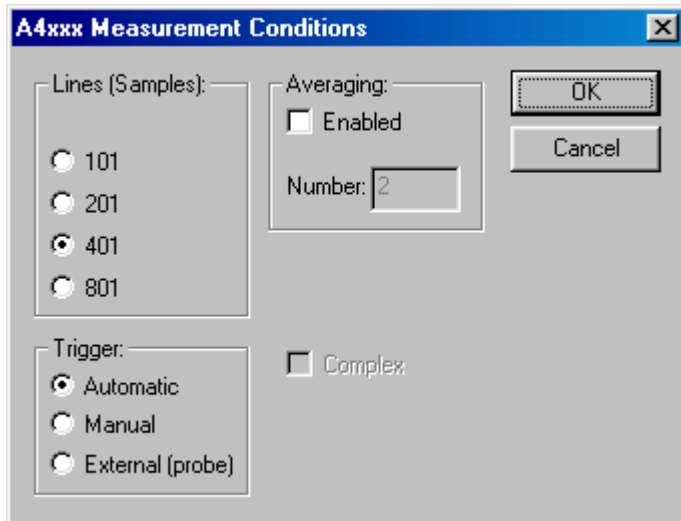
In the instrument set a serial communication cable is delivered that serves to transfer data between the computer and the measurement instrument. Connect the cable into any PC serial port that is not used by operating system. Connect the cable into the instrument by the connector signed RS232.

Route - term definition

Route is a set of machines on which we want to provide a measurement. The **Machine** term definition is explained in the **Tree** and **Edit DDS tree** chapters. Each machine contains measurement places and each measurement place contains data cells. The route is thus a structured list. First look at a route is a list of machines. Each of these machines can be open similarly as a DDS tree branch. After opening a list of measurement places is displayed (see definitions in the **Edit DDS tree** chapter). Each measurement place has data cells connected, that represent a real measurements (see the **Data cells** chapter).

Measurement conditions

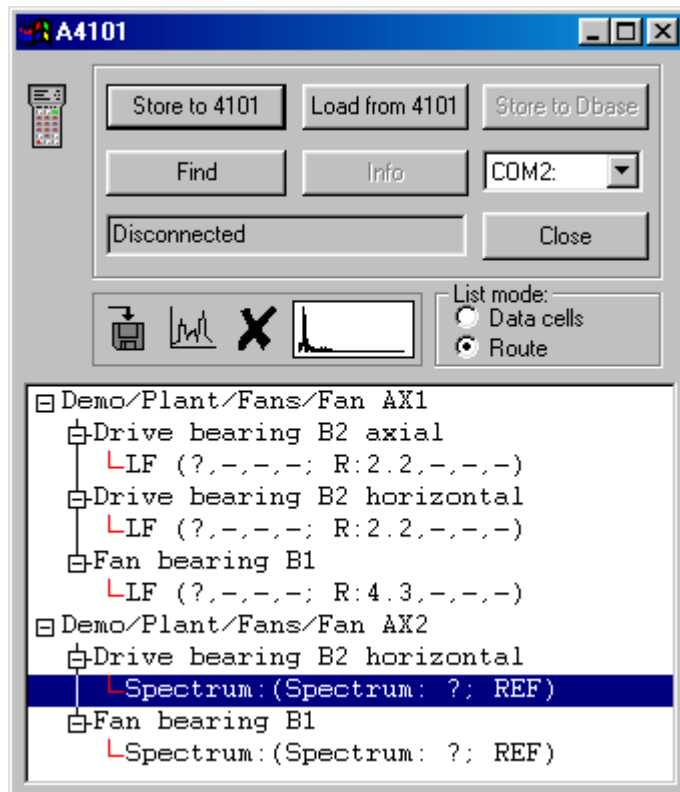
In case of measurement of spectra or time waveforms it is possible to specify some measurement conditions (in other measurements this conditions are defined by type and subtype). The **Meas. conditions** button in the data cell editor can invoke the measurement conditions dialog. In the **A4xx Measurement Conditions** dialog we can set number of spectrum lines (number of time waveform samples) trigger method and in case of spectra we can in addition select also averaging.



Creating a route

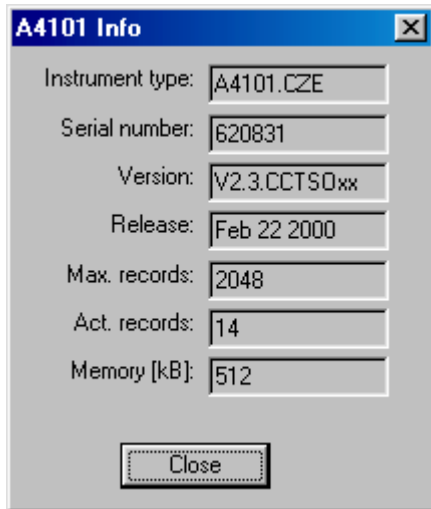
In main menu select the **Tools/ Connect instrument/ A4101** command. An empty **A4101** communication window appears. Grasp in the window with a DDS tree required branch by mouse and place it to the list in the **A4101** window. In the list the set of all connected machines appears. By mouse double click or by the Enter key any machine can be open to the shape in which the list of all measurement places and data cells is displayed. The display is very similar to the well-known display of the DDS tree. Also used symbols are very similar. If you need to remove any element use the **Delete** key.

Displayed **List** can be switched between two displaying modes. It is **Route** (automatically used as default) and **Data cells**, when the list is not structured and contains set of data cells with full path description (it is usually necessary to wide the window as the full paths are not right side limited).



Transferring the route from DDS to instrument

In the A4101 window there is a text field in which the condition of the communication with the instrument is displayed. When the route is created, the **Disconnected** condition usually is displayed. Press the **Find** button. If the connection works correctly (do not forget that the instrument must be in main menu), the **Connection Found** text appears. If there are troubles with the connection, check the serial port first (usually COM2:, because COM1: is usually occupied by mouse). By pressing the Info button the information about the instrument appears, its type, software version, memory condition etc.



After the **Store to 4101** button is pressed the route definition is transferred into the instrument and this is prepared to measure.

Transferring the route from instrument to DDS

Open the communication window the same way as in route creating (**Tools/ Connect instrument/ A4101**). By the **Find** button create the connection (do not forget the instrument has to be in main menu). Press the **Load from 4101** button and all data will be transferred to the PC memory. In this time the data are not stored into database yet. At single measurements the measured static values are displayed or information about correctly provided measurement is placed (e.g. Spectrum OK). For detailed look at the measured data use the right mouse button on required item. In following information window all information are displayed about the instrument settings and measured values. If everything is OK, press the **Store to database** button and all data (excluding the data out or route) are stored to database by which the procedure is completed.

Graphic representation of route items features.

Above the route elements list graphic symbol appears which informs about currently active route element features.



- route measurements (refers to an existing database element),



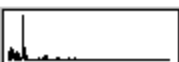
- off route element (manually created place, database element should be referred),



- the measurement has been/ has not been provided,



- measurement type (static, spectrum. Time waveform),



- a quick look at the data.

Storing off route data

If there has been created new measurement places in the instrument during measurement, such places apparently have not defined relation to database elements. Thus it is necessary store the data to existing database element. Grasp the off route record by mouse and place into a tree into a data cell of the same type. You can also place it at any tree element and the corresponding data cell of required is automatically created.

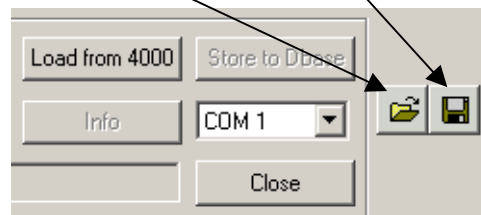
Storing route data in an other place

In practice can a situation happen, when you measure on a different instrument than that is in the route. This may be caused by mistake or by the situation that a machine is running that should not run. The only solution is to measure data, but with using a different machine in route. After return from the route certainly the data cannot be stored to tree elements that are related in the route. Data have to be stored the same way as in the paragraph above. The rest of the route can be stored automatically in one time. Do not forget before the automatically storing delete the item you have stored manually.

Cooperation with A4000BDL

A4000BDL (an abbreviation for A4000 Binary Downloader) is a standalone application that allows uploading route into A4xxx instrument and downloading back measured data (see also **A4000BDL user's guide** for more info). The route mentioned is either way created by DDS software, more exactly by its A4000 BDL module. DDS software also uses (– imports) measured data downloaded by A4000BDL application. Again, the DDS A4000 BDL module does the work. The DDS A4000 BDL module as well as A4000BDL application is licensed extra – the permission to use it is written in HASP hardlock. Please, contact Adash for more information about software licensing policy and current prices.

When you have DDS A4000 BDL module licensed you can find two more buttons in the DDS A4000 instrument interface. They are the **BDL Import** and **BDL Export** buttons.



BDL Export – generates the route file. You need the correct route dragged in the communication window to be able to export BDL route file. See chapter **A4000 Route Creation** to learn how to do it. When you click the **BDL Export** button, the Windows standard **Save As** dialog appears. New route file with extension of .a4r is created in the destination directory after entering the file name and clicking the **Save** button. You can pick this file and send it by e-mail or put it anywhere on the net to share it with A4000BDL application user.

BDL Import – imports the data file with extension *.a4x. It is supposed that the A4000BDL application user provides you with measured data file. The **Store to Database** button becomes enabled if the file contains new data. Click the **Store to Database** button to transfer measured data to the DDS tree. The route data are transferred to correct place regardless to the data file name.