SPE «Tetra» Ltd

Intelligent monitoring system «Atlant»

Software TETRA_Reporter

Version 2.1

User manual

UA.AJAH 80001-04 34 01

CONTENTS

Introduction

This user manual (hereafter – the manual) is intended to provide the basic information needed to use the software «TETRA_Reporter» version 2.1.

«TETRA_Reporter» (hereafter – the software) is included in the intelligent monitoring system «Atlant» which is developed by «SPE «Tetra» Ltd [1].

The algorithm MD5 in this software is used to check software integrity and to protect from deliberate and undeliberate changes accordingly the requirements [2-4].

To read this manual before you start working with the software.

Manual provides information about operating with the software, to allow reading the internal archive from the memory of measuring devices (hereafter – the device), to generate the reports in .csv format, and to clean the memory of the Device.

During operation, the software requests the data from the Device, no execute any actions for modifying or processing it. The software doesn't impact on the metrological characteristics of the Device.

This Manual applies only to this software and doesn't replace the educational materials, reference literature, user manuals from developers of operation system (referred – OS) and other sources of information, demonstration of work with a graphic user interface of the operation system.

1.   Intended use

1.1.   The software is designed:

-    to read the internal archive of various Devices, developed SPE «Tetra» Ltd (DKS-96, DKG-03D «Garant», MKS-01D «Strizh», USR-03(-04), RGA-09M, RGA-09MSH) and support of data exchange by RS-422 (RS-485) and protocol DiBUS. Hereafter referred to as only such Devices;
-    to generate reports in .csv format;
-    to clean the archive memory of the Device.

2.   System and software requirements

There are some necessary configurations of a personal computer for application of the software:
-    RAM:
    ▪   128 MB for version OS Windows XP SP3/ Windows 7 and higher, OS Mac OS X;
    ▪   64 МБ for OS Linux.
-    storage space: 124 MB;
-    software Java Runtime Environment 1.6.0 and higher [6].
It is advised to use the software for operation with the spreadsheet program such as Microsoft Excel (from the Microsoft Office Package) or Calc (from OpenOffice Package) etc., allowing providing follow-up work with archive data.

3.   Software start

2.1.   It is supposed that the user read this user manual before starting to use the software and the Device.

3.1.   To start using the software, you should execute the actions are listed as follows:
-    to turn off a personal computer (referred – PC);
-    to plug in the Device to the PC, apply power to the Device, turn on PC;
-    to launch the software;
-    to select the serial port to which the Device is connected.

Connection Device to PC via USB-device requires the installation of an additional driver, which is supplied on CD-disk together with Device.

The sequence of steps for installing the driver is described in the user manual of the used Device.

To connect the Device to PC is advised to use the adapter from the supplied set of Device. The quality of data exchange with plugs of another manufacturer is not guaranteed.

3.2.   When you do the above description steps, you'll be able to start the reading process of an archive and forming of a report.

4.   Main window of software

4.1. Structure main window of software

The main window of the software (Figure 1) contains such parts:

1.   Menu Bar;
2.   Options «Data exchange settings»;
3.   Options «Polling device»;
4.   Panel «Connection status»;
5.   Options «Save archive in the folder».
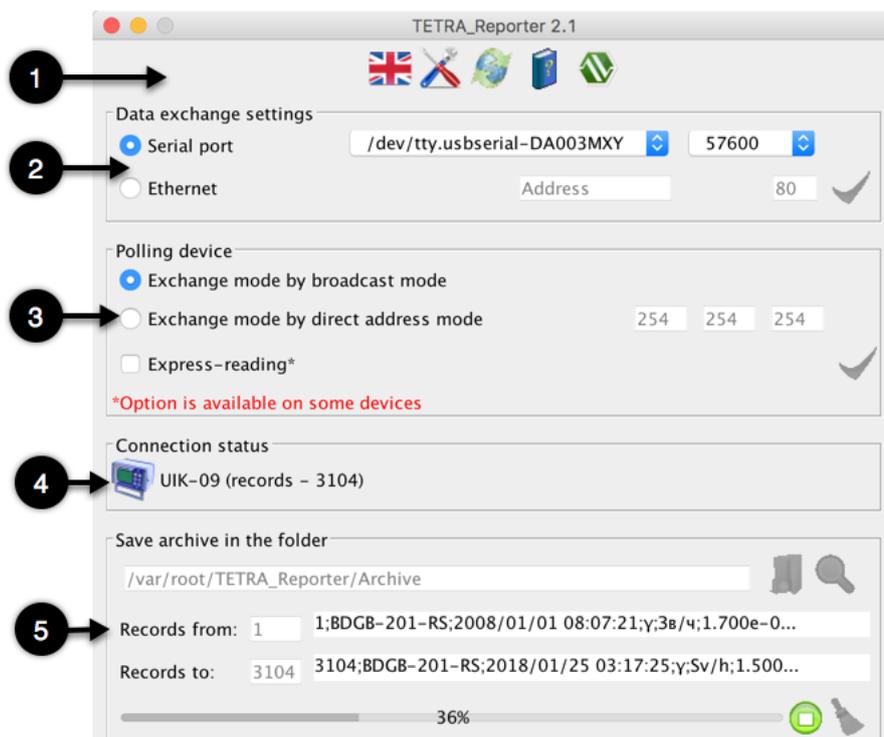
Figure 1. Main window of software

4.2. Menu bar

The menu bar (Figure 1, p. 1) contains of such options:

-    «Language». By clicking on the icon ![flags] the language of the software interface is changed. In this version, three languages are supported: Ukrainian, English and Russian. To restart software for changes to take effect. The Device interface language is selected in the Device, via changing of a dynamic parameter;

-    «Settings». By clicking on the icon ![settings] the dialogue window for setting time delays is opened:
     - wait receiver timeout, by default 300 ms;

- pause between sending while reading the parameters, by default 6 ms;
- pause between sending after the parameters have been read, by default 6 ms;
- maximum permissible amount of errors, by default 3;
- read parameters of device after first start, by default.

- «Check update». By clicking on the icon the user can automatically visit a website of company-manufacturer where there is a software update available, or notification window appears automatically «Updates are not required» if the updates are not available;

- «Manual». By clicking on the icon the user manual is opened;

- «About». By clicking on the icon the short note about the software with information company-manufacturer and version numbers of software parts is opened.

4.3.   Options «Data exchange settings»

Options «Data exchange settings» (Figure 1, p. 2) allows setting the channel of data exchange on the connected Device with PC, in other words, to select a communication interface and setting its additional parameters:

- flag this checkbox «Serial port» is meant that data exchange will be done via this communication interface. The additional parameters are indicated in the fields «Name» и «Baud rate» (baud).
- flag this checkbox «Ethernet» is meant that data exchange will be done via this communication interface. The additional parameters are indicated in the fields «Ethernet» – to indicate the name of IP-address in the field «Address» and number of a port in the field «Port».

The button («Apply») should be pressed to save the changes.

4.4.   Options «Polling device»

The options «Polling device» (Figure 1, p. 3) allows selecting one of the exchange modes with the Device. As a rule, the exchange mode is made by broadcast mode i.e. without indication-specific network address of the Device. The exchange mode by direct address is necessary in the case of connection to one Device from the system.

The option «Express-reading» allows downloading an inner archive of some Devices produced by «SPE «Tetra» Ltd (for example, DKS-96-18, USR-03(-04) etc.) in the speed mode. Pay attention that operation with this option is not supported by all types of devices.

The button («Apply») should be pressed to save the changes.

4.5.   Information panel «Connection status»

The information panel «Connection status» (Figure 1, p. 4) displays such type of information:

- a type of connected Device (quantity of records in the archive);
- about the existence of failures, interference in the data exchange.

4.6. Options «Save archive in the folder»

The options «Save archive in the folder» (Figure 1, p. 5) allows setting the parameters for reading and saving of measurement and status information.

There are such parameters as:

- field «Address». It contains a path indicating the folder in which the archive files will be saved. By pressing button «Overview», it opens the standard OS window where a user can indicate the defined folder to save the file. A file name is automatically formed such way: «Date (YYYY_MM_DD)_Time (HH_MM_SS)_Device name»;

- button («Overview»). It allows indicating a path to the folder in which the archive files will be saved. By pressing button «Overview», it opens the standard OS window where user can indicate the defined folder to save the file;

- button («Open»). By pressing the button, it opens the standard OS window where a user can choose the defined file with saved data to open it in a spreadsheet editor. The recommendations for the correct opening of a report with the .csv format are given in Annex A;

- field «Records from…». It allows indicating the serial number of an archive from which to start the process of reading from the Device;

- field «Records to…». It allows indicating the last serial number of the archive up to which inclusive data should be read;

- progress bar. By pressing the button «Read» it displays progress of a process reading from the Device;

- button («Read»). It allows starting the reading process from the archive of Device;

- button («Clear archive»). It allows deleting the records from archive of Device. By pressing the button, it opens the standard dialogue window to approve of the archive cleaning.

5.   Messages to the operator

The error messages can be displayed in such cases:

- **«Error while reading! Can't get data! Serial port error!»**. It'll appear when it has been chosen non-existent port, or port is busy of other software. To select an appropriate port, or to free port via one of the program is closed;
- **«Exchange error! It is impossible to read data. No answer».** The message will appear if there is not connection between Device and PC.
- **«There isn't an archive in this Device».** The message will appear if there isn't an inner archive in the connected Device.

Literature

1.   http://tetra.ua/soft/#technological

2.   ГОСТ Р 8.596-2002 ГСИ. Метрологическое обеспечение измерительных систем. Основные положения.

3.   МИ 3290-2010 ГСИ. Рекомендация по подготовке, оформлению и рассмотрению материалов испытаний средств измерений в целях утверждения типа.

4.   МИ 3286-2010 Рекомендация. Проверка защиты программного обеспечения и определение ее уровня при испытании средств измерений в целях утверждения типа.

5.   Description of DiBUS protocol.pdf. Available: http://tetra.ua/soft/#protocols

6.   Official Java site. Available: http://java.com/ru/download/index.jsp.

Brief information about the company

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Annex A
Recommendations for the correct opening of a report with the .csv format

To open the file with .csv format can be used the software for operation with the spreadsheet program such as Microsoft Excel (from the Microsoft Office Package) or Calc (from OpenOffice Package) etc.

This below example is shown how .csv file can be opened in Microsoft Excel.

A1. Launch Microsoft Excel, get to the Data tab and then choose From Text subtab.
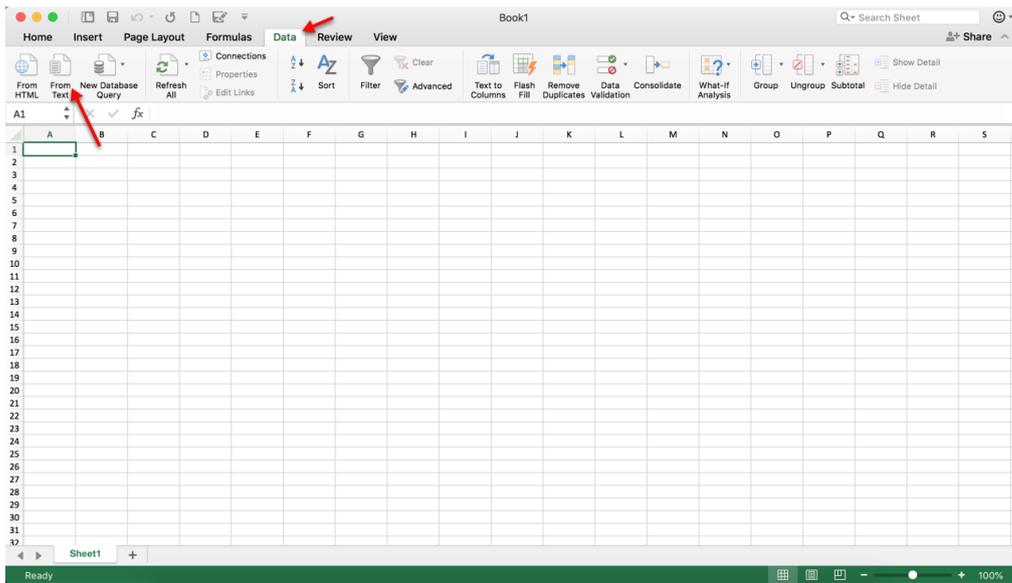
A2. To find the saved file on in the Import Text File dialog box, select a text file that you want to import and press the button «Get data».
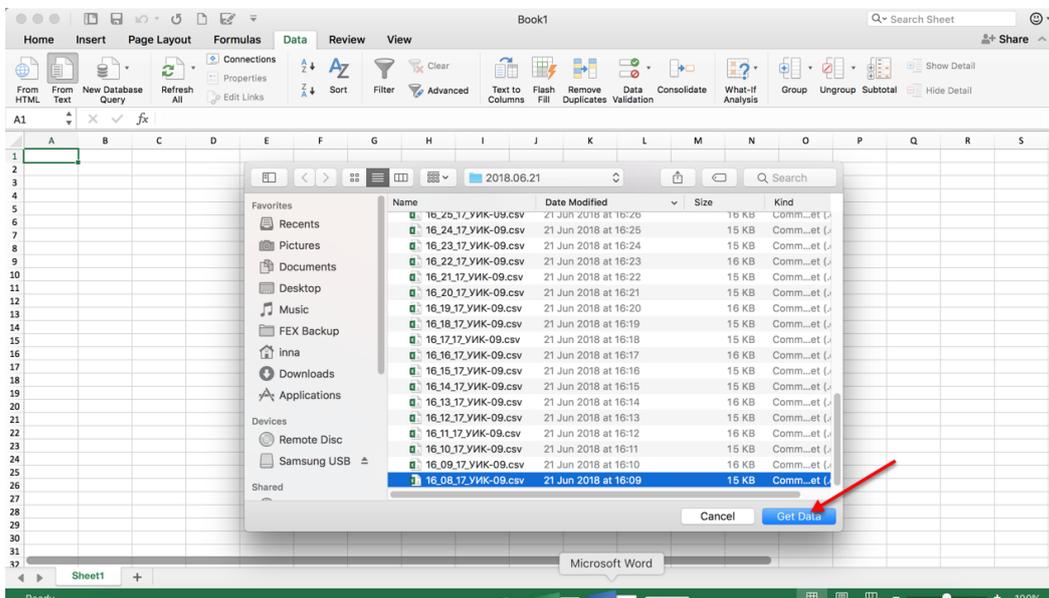
A3. The Text Import Wizard dialog will open. At the first step to select data type Delimited and then press the button Next
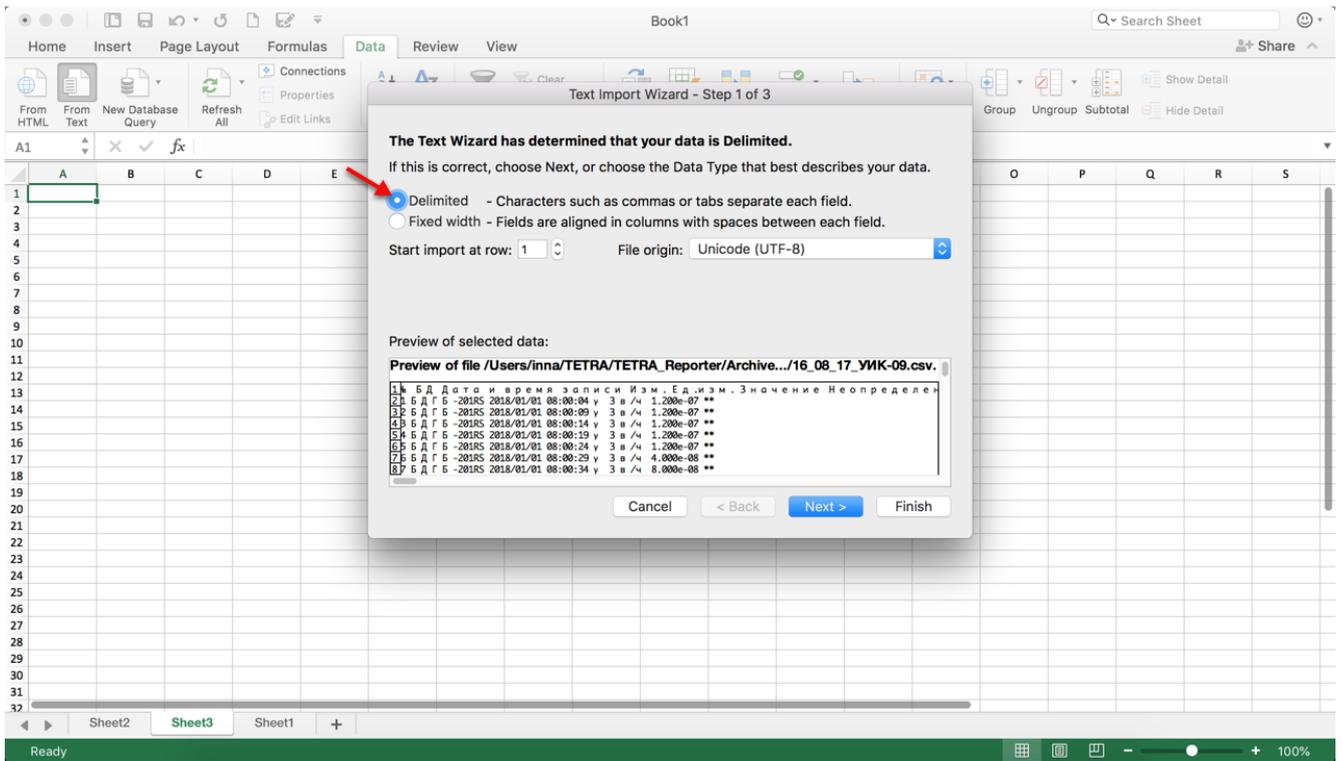
A4. At the second step to select the delimiters your data Tab and Semicolon and then press the button Next
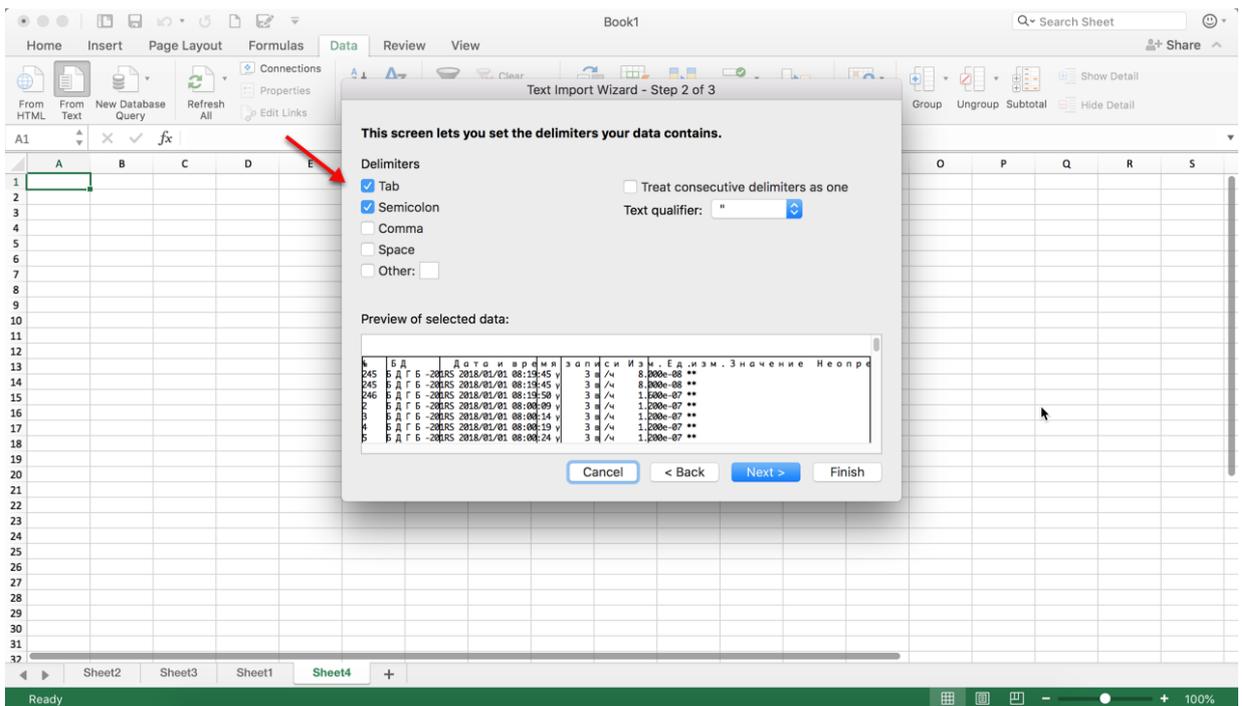
A6. At the third step – Column data format – don't take any actions. Press «Finish».

A7. At the last step to indicate «New sheet» in the window «Where do you want to put the data?».
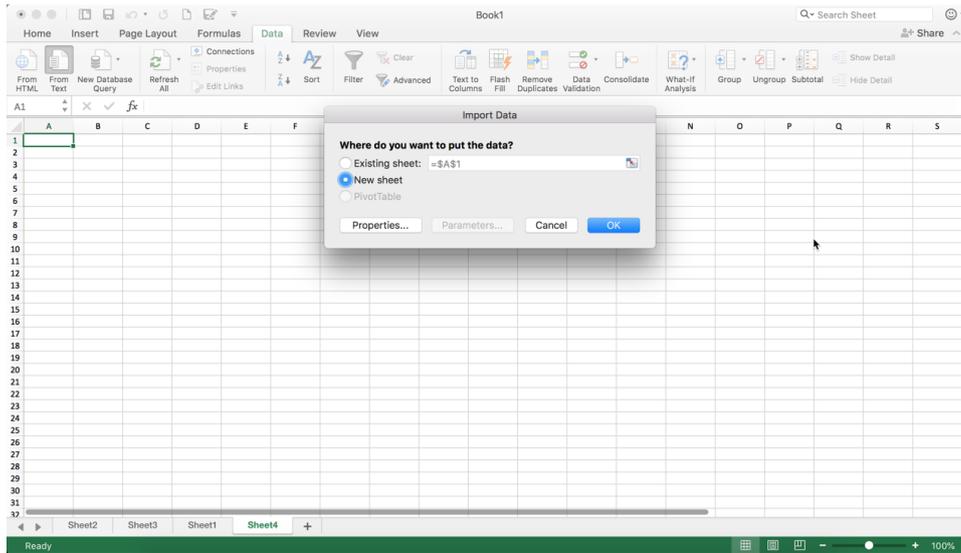
A8. At a result, you'll have the data separated by tabs, colons, semicolons which are suitable for further use.