



**The ODBC Database plugin  
PRINTED MANUAL**

# ODBC Database plugin

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## 1 Introduction

The module allows exporting data to any ODBC-compatible database. ODBC interface unifies access for these databases, and our software can quickly execute the INSERT SQL query for the selected database. But the user does not need to know SQL. The configuration is fully dialog-driven.

The module has the following possibilities:

- Data export to most popular databases MS SQL, Oracle, PostgreSQL, MySQL, Interbase, and many others.
- The plugin can also export data to Excel or CSV files like a database.
- The plugin can convert data types to a column's data type (for example, from a string to a date, a number to a string).
- The plugin can also execute UPDATE queries if it is selected.

## 2 System requirements

The following requirements must be met for "ODBC Database" to be installed:

**Operating system:** Windows 2000 SP4 and above, including both x86 and x64 workstations and servers. The latest service pack for the corresponding OS is required.

**Free disk space:** Not less than 5 MB of free disk space is recommended.

**Special access requirements:** You should log on as a user with Administrator rights in order to install this module.

The main application (core) must be installed, for example, Advanced Serial Data Logger.

## 3 Installing ODBC Database

1. Close the main application (for example, Advanced Serial Data Logger) if it is running;
2. Copy the program to your hard drive;
3. Run the module installation file with a double click on the file name in Windows Explorer;
4. Follow the instructions of the installation software. Usually, it is enough just to click the "Next" button several times;
5. Start the main application. The name of the module will appear on the "Modules" tab of the "Settings" window if it is successfully installed.

If the module is compatible with the program, its name and version will be displayed in the module list. You can see examples of installed modules on fig.1-2. Some types of modules require additional configuration. To do it, just select a module from the list and click the "Setup" button next to the list. The configuration of the module is described below.

You can see some types of modules on the "Log file" tab. To configure such a module, you should select it from the "File type" list and click the "Advanced" button.

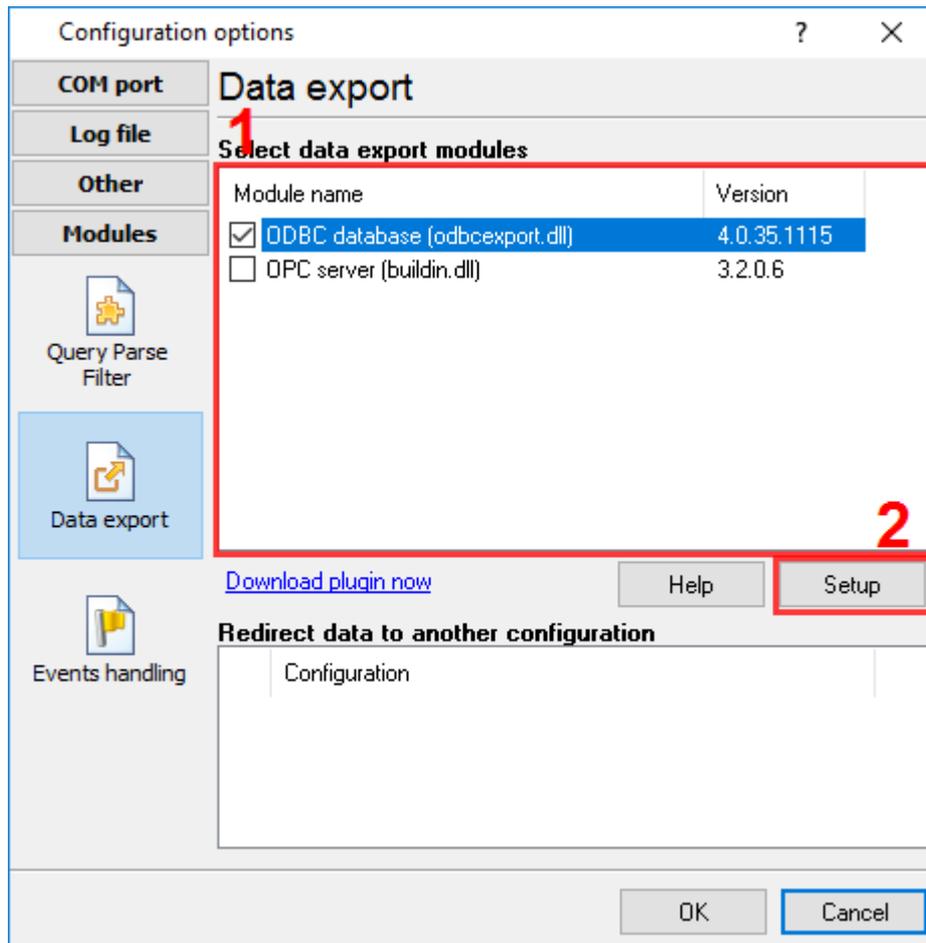


Fig. 1. Example of installed module

## 4 Glossary

**Main program** - it is the main executable of the application, for example, Advanced Serial Data Logger and asdlog.exe. It allows you to create several configurations with different settings and use different plugins.

**Plugin** - it is the additional plugin module for the main program. The plugin module extends the functionality of the main program.

**Parser** - it is the plugin module that processes the data flow, singling out data packets from it, and then variables from data packets. These variables are used in data export modules after that.

**Core** - see "Main program."

## 5 ODBC database plugin

### 5.1 Getting started

The module is configured in a special dialog box. To open the module settings dialog box, you should do the following:

1. Start the main program if it is not running yet;
2. Select Options -> Settings... in the main menu or click the  button on the toolbar;
3. Open the Modules tab in the settings;
4. Select the "ODBC database" module from the list of publishing modules on this tab. If there is no such module, go to "Installation" section and make sure you have done everything correctly to install the module;
5. Click the Setup button.

Using our step-by-step instruction you can easily configure exporting of your data to a database:

1. [Database selection and connection settings](#).
2. [Errors handling](#).
3. [Binding](#).
4. Check a database's connection. After you configured all settings, click the "OK" button, what for incoming data, and the program will try to connect to the configured database and insert data. In case of any problem, the program displays an error message in the main window. Then you can diagnose the problem, open the settings again, and fix the problem.

### 5.2 Database connection

#### 5.2.1 Data source (DSN)

##### What is DSN?

According to Microsoft documentation, it means "The name that applications use to request a connection to an ODBC data source." In other words, it is a symbolic name that represents the ODBC connection. It hides the connection details like database name, directory, database driver, UserID, password, etc. So when making a connection to the ODBC, you don't have to remember the database name, where it resides, etc.

##### DSN types

- **System DSN** - This is the DSN used through out the system, no matter which user logs in. Meaning, all users on the system can see this DSN and use it (as long as they know the user ID and password). The connection parameters are stored in the registry.
- **User DSN** - This is a DSN created for a specific user. Only the user who created the DSN can see this and use it. Like System DSN, the information is stored in the registry.
- **File DSN** - In both cases above, DSN details are stored in the system registry. Instead of storing the DSN details in the registry, you can store it in a file. The file is a simple text file with the ".dsn" extension. Although it sounds simple, you need to know the parameters that make up a DSN.

## Creating file DSNs

Shown below is a generic file DSN for an MS Access database.

----- file.dsn -----

[ODBC]

DRIVER=Microsoft Access Driver (\*.mdb)

ReadOnly=0

UserCommitSync=Yes

Threads=3

SafeTransactions=0

PageTimeout=5

MaxScanRows=8

MaxBufferSize=512

ImplicitCommitSync=Yes

FIL=MS Access

DriverId=25

### 5.2.2 Database connection settings

For interaction with databases, the program uses ODBC technology. It means that the program can work only with databases (DB) with an ODBC driver. These drivers exist for all popular databases such as Oracle, MS SQL Server, MS Access, MS Excel, MySQL, and PostgreSQL. But this list is not full. You may find more info on Microsoft's website or your database provider website.

You should complete the following steps to configure a database connection with your database:

1. **It is necessary to make sure that your computer has ODBC drivers installed.** For that, click the "Setup" button (fig. 1). The window "ODBC data source administrators" will appear (fig. 2). If this manager does not appear, you do not have administrator rights on your computer, or Microsoft Data Access Components (MDAC) are not installed. In the last case, you may download it from [Microsoft's site](#).

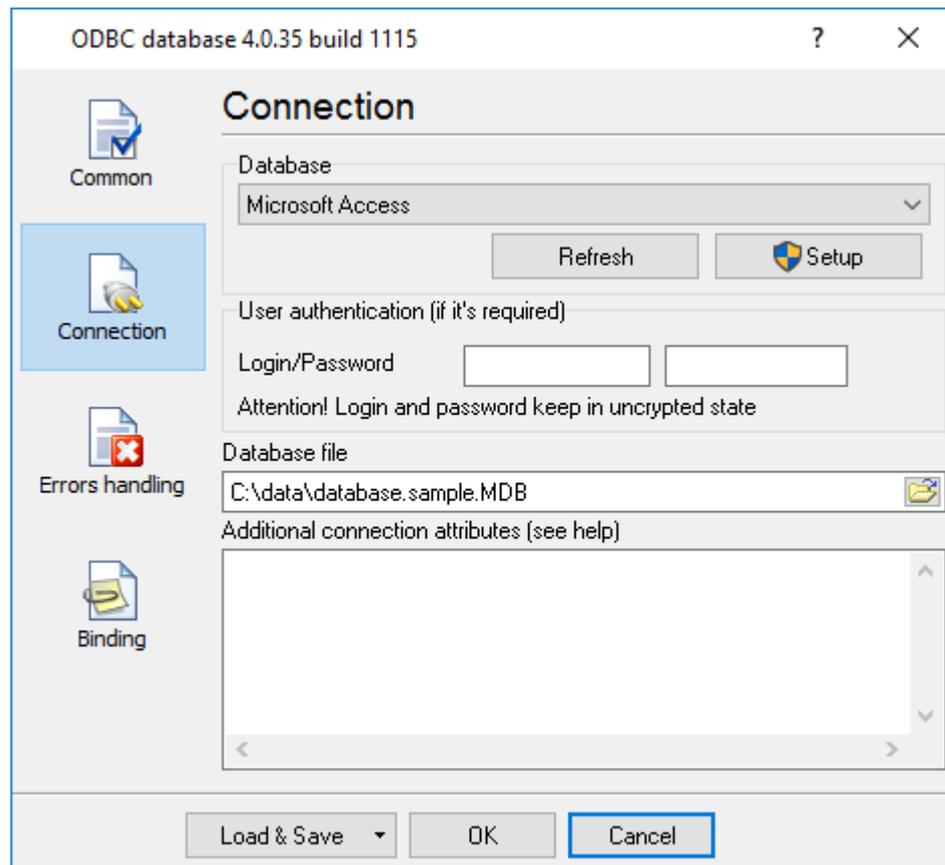


Fig. 1. Connection setting

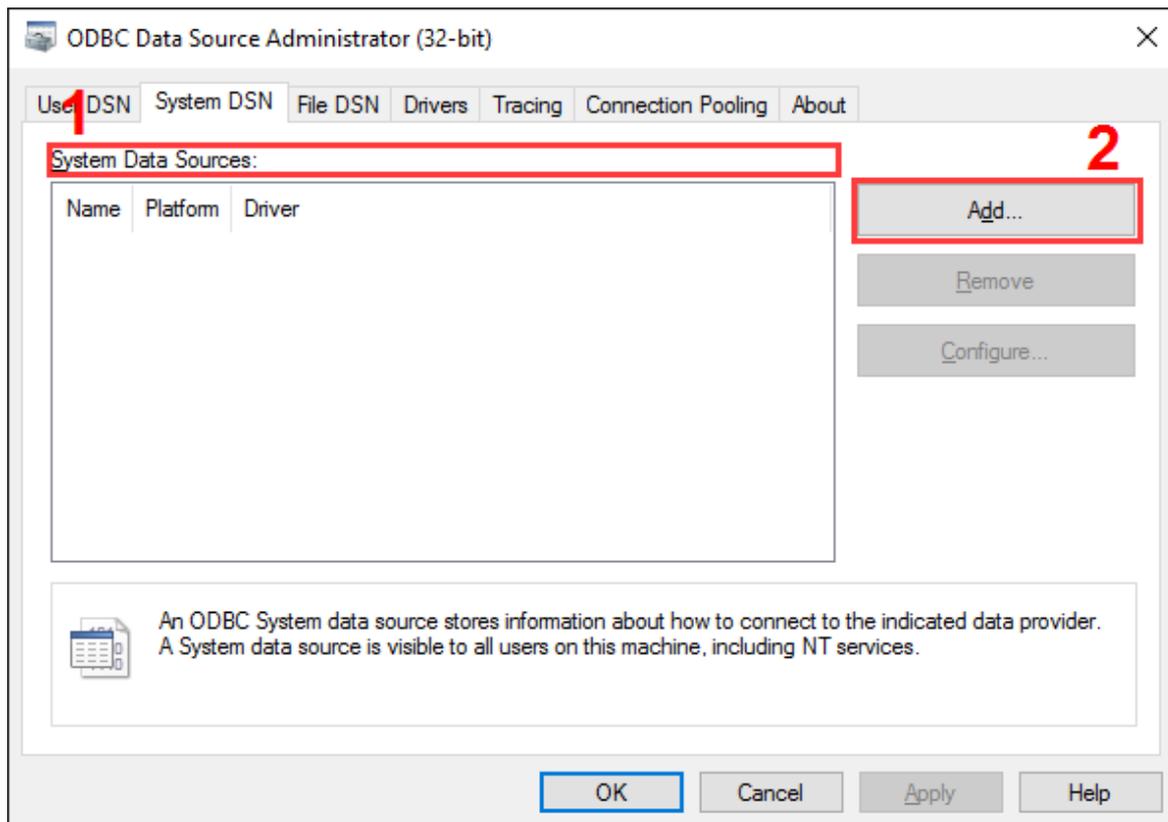


Fig. 2. Data source administrator window.

- 2. It is necessary to select a data source.** You should create or change the existing user or system data source (fig. 2). For that, you should go to the "Users DSN" or "System DSN" tab, click the "Add" button, and follow the instructions. If the program works in the Windows service mode, you should create the **system data source** on the "System DSN" tab. After new data source creation, click the "Refresh" button in the ODBC plugin window. The created data source name will appear in the "Database" drop-down list. You should select your ODBC data source from that list (fig. 1).
  3. If necessary, configure the login and password to connect to your database.
- Attention!** The program saves the password at an unencrypted state.
4. If your database is a desktop database (such as a Microsoft Access database), you should specify a database file name in the "Database file" field (fig. 1).
  5. You may define optional ODBC connection attributes in the corresponding field (fig. 1). All ODBC drivers support the following connection attributes:

```
[DSN=<data-source-name>]
[FILEDSN=<data-source-name.dsn>]
[UID=<value>]
[PWD=<value>]
[DBQ=<value>]
[ISOLATIONLEVEL=<value>]
```

- **DSN** - it is the name of a data source. You selected it in the "Database" field.
- **FILEDSN** - it is a DSN file name with the ".dsn" extension that contains connection attributes. These data sources files are called file data sources.
- **UID** - The user ID or login. The same value you may define in the "Login" field.
- **PWD** - The connection password. It can be empty. The same value you may define in the "Password" field.
- **DBQ** - The local database file name (for example, for MS Access). You should specify the full path to a database file.

An ODBC driver may allow specifying custom driver-specific connection attributes in the "Connection attributes" field. You can specify these attributes using the same format as described above.

```
[<Attribute>=<value>]
```

Usually, most attributes can be configured in the ODBC Data Source manager when you create a new data source. If a configuration dialog for your ODBC driver omits some additional parameters, please, refer to the following chapters for additional attributes.

**Note 1.** The character case is important in connection attribute name and values.

**Example 1:**

The following example shows attributes for the "MS Access 97 Database" data source, where a database file is located at "D:\incom.mdb."

```
DBQ=D:\incom.mdb
```

**Example 2:**

The following example shows attributes that set the login and server for the "Payroll" data source and the Oracle system database.

```
DSN=Payroll  
UID=/  
SERVER=moola
```

## 5.2.3 Desktop databases specific

### 5.2.3.1 All databases

The following keywords are supported in the connection string for all drivers:

- **DSN** - it is the name of a data source. You selected it in the "Database" field.
- **UID** - The user ID or login. The same value you may define in the "Login" field.
- **PWD** - The connection password. It can be empty. The same value you may define in the "Password" field.

### 5.2.3.2 dBASE

- **COLLATINGSEQUENCE** - The sequence in which the fields are sorted. The sequence can be ASCII (the default) or International. This option corresponds to the "Collating Sequence" option in the driver's setup dialog in the ODBC manager.
- **DEFAULTDIR** - The path specification to the directory.
- **DELETED** For the dBASE driver specifies whether or not rows that have been marked as deleted can be retrieved or positioned on. If set to 1, deleted rows are not displayed; if set to 0, deleted rows are treated the same as non-deleted rows (ODBC manager - Show Deleted Rows).
- **DESCRIPTION** - A description of the data in the data source (ODBC manager - Description).
- **DRIVER** - The path specification to the driver DLL.
- **DRIVERID** An integer ID for the driver: 21 (dBASE III), 277 (dBASE IV), 533 (dBASE 5.0)
- **FIL** - File type dBase III, dBase IV, or dBase 5.
- **PAGETIMEOUT** - Specifies the period of time, in tenths of a second, that a page (if not used) remains in the buffer before being removed. The default is 600 tenths of a second (60 seconds). Note that this option applies to all data sources that use the ODBC driver (ODBC manager - Page Timeout).
- **READONLY** - Specify TRUE to make a file read-only (ODBC manager - Read Only).
- **STATISTICS** - For the dBASE driver, determines whether table size statistics are approximated. Note that this option applies to all data sources that use the ODBC driver (ODBC manager - Approximate Row Count).
- **THREADS** - The number of background threads for the engine to use. This value is 3 and cannot be changed (ODBC manager - Threads).

### 5.2.3.3 Paradox

- **COLLATINGSEQUENCE** - The sequence in which the fields are sorted. The sequence can be ASCII (the default) or International. This option corresponds to the "Collating Sequence" option in the driver's setup dialog in the ODBC manager.
- **DBQ** - The name of the database file. This parameter sets the same option as the "Database" field in the configuration window.
- **DEFAULTDIR** - The path specification to the directory.
- **DESCRIPTION** - A description of the data in the data source (ODBC manager - Description).
- **DRIVER** - The path specification to the driver DLL.
- **DRIVERID** - An integer ID for the driver: 26 (Paradox 3.x), 282 (Paradox 4.x), 538 (Paradox 5.x)
- **EXCLUSIVE** - Determines whether the database will be opened in exclusive mode (accessed by only one user at a time) or shared mode (accessed by more than one user at a time). It can be TRUE (exclusive mode) or FALSE (shared mode) (ODBC manager - Exclusive).
- **FIL** - File type Paradox 3.x, Paradox 4.x, or Paradox 5.x
- **FILETYPE** - The file type for the Text driver (Text).
- **PAGETIMEOUT** - Specifies the period of time, in tenths of a second, that a page (if not used) remains in the buffer before being removed. The default is 600 tenths of a second (60 seconds). Note that this option applies to all data sources that use the ODBC driver (ODBC manager - Page Timeout).
- **PARADOXNETPATH** - The full path of the directory containing a Paradox lock database, because it contains either the PDOXUSRS.net file (in Paradox 4.x) or the PARADOX.net file (in Paradox 5.x). If the directory does not contain one of these files, the Paradox driver creates one. For information about these files, see the Paradox documentation. Before a network directory can be selected, a Paradox user name must be entered (ODBC manager - Select Network Directory).
- **PARADOXNETSTYLE** - For the Paradox driver, the network access style to use when accessing Paradox data: either "3.x" for Paradox 3.x or "4.x" for Paradox 4.x or 5.x. Can be set to "3.x" or

"4.x" if the version is Paradox 4.x or 5.x; if the version is Paradox 3.x, the style must be "3.x" (ODBC manager - Net Style).

- **PARADOXUSERNAME** - For the Paradox driver, the Paradox user name (ODBC manager - User Name).
- **PWD** - The password. It is an optional keyword and will never be written to the file by the driver. It is used in a call to SQLDriverConnect against password-secured Paradox files. The password used will be valid whenever a table is opened. If no password is passed in the connection string, no password is established for that table. If tables have different passwords, more than one cannot be opened in the same session, nor can the tables be joined.
- **READONLY** - TRUE to make a file read-only (ODBC manager - Read Only).
- **THREADS** - The number of background threads for the engine to use. This value is 3, and cannot be changed (ODBC manager - Threads).

#### 5.2.3.4 Excel

- **DBQ** - The full path to an Excel file. This parameter sets the same option as the "Database" field in the configuration window.
- **DEFAULTDIR** - The path specification to the directory. This parameter sets the same option as Select Directory or Select Workbook in the setup dialog box in the ODBC manager.
- **DESCRIPTION** - A description of the data in the data source (ODBC manager - Description).
- **DRIVER** - The path specification to the driver DLL.
- **DRIVERID** - An integer ID for the driver: 534 (Microsoft Excel 3.0), 278 (Microsoft Excel 4.0), 22 (Microsoft Excel 5.0/7.0), 790 (Microsoft Excel 97 and later).
- **FIL** - File type - Excel 3.0, Excel 4.0, Excel 5.0, Excel 7.0, or Excel 97.
- **FIRSTROWHASNAMES** - Indicates whether the cells of the first row of the range contain the column names for the table (1) or not (0).
- **MAXSCANROWS** - The number of rows to be scanned when setting a column's data type based upon existing data. A number from 1 to 16 can be entered for the rows to scan. The value defaults to 8; if it is set to 0, all rows are scanned. (A number outside the limit will return an error.) (ODBC manager - Rows to Scan).
- **READONLY** - TRUE to make a file read-only (ODBC manager - Read Only).
- **THREADS** - The number of background threads for the engine to use. For the Microsoft Access driver, this value defaults to 3, but can be changed. For the dBASE, Microsoft Excel driver, this value is 3, and cannot be changed (ODBC manager - Threads).

#### 5.2.3.5 Text files

- **CHARACTERSET** - For the Text driver, OEM or ANSI.
- **COLNAMEHEADER** - For the Text driver, indicates whether the first record of data will specify the column names. Either TRUE or FALSE.
- **DEFAULTDIR** - The path specification to the directory.
- **DESCRIPTION** - A description of the data in the data source. This sets the same option as Description in the ODBC driver's setup dialog in the ODBC manager.
- **DRIVER** - The path specification to the driver DLL.
- **DRIVERID** - An integer ID for the driver: 27 (Text).
- **EXTENSIONS** - Lists the file name extensions of the Text files on the data source (ODBC manager - Extensions List).
- **FIL** - File type Text.
- **FILETYPE** - File type for the Text driver (Text).

- **FORMAT** - For the Text driver, it can be FIXEDLENGTH, TABDELIMITED, CSVDELIMITED (by a comma), or DELIMITED (by the special character specified in the parentheses). The special character is one character in length and can be in character, decimal, or hexadecimal format.
- **MAXSCANROWS** - The number of rows to be scanned when setting a column's data type based upon existing data. For the Text driver, you can enter a number from 1 to 32767 for the number of rows to scan; however, the value will always default to 25. (A number outside the limit will return an error) (ODBC manager - Rows to Scan).
- **READONLY** - TRUE to make a file read-only (ODBC manager - Read Only).

#### 5.2.4 Oracle-specific

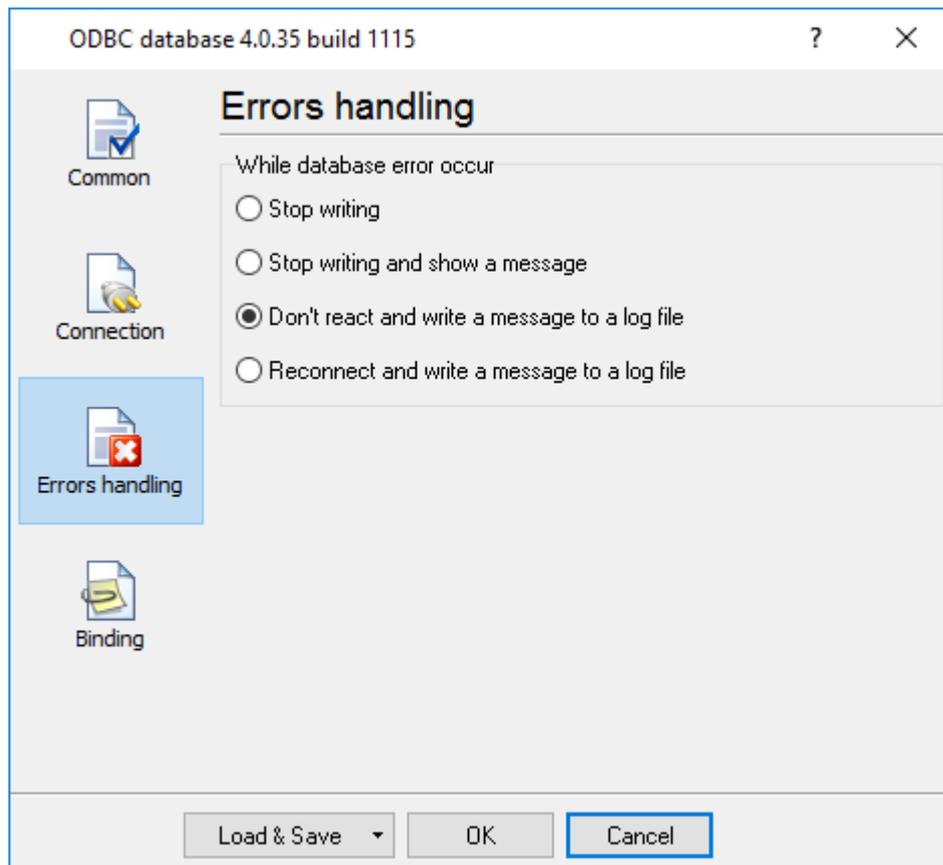
- **PWD** - The password for the Oracle Server that you want to access. This driver supports limitations that Oracle places on passwords.
- **SERVER** - The connect string for the Oracle Server that you want to access.
- **UID** - The Oracle Server user name. Depending on your system, this attribute might not be optional - that is, certain databases and tables might require this attribute for security purposes. Use "/" to use Oracle's operating system authentication.
- **BUFFERSIZE** The optimal buffer size used when fetching columns.
- The driver optimizes fetching so that one fetch from the Oracle Server returns enough rows to fill a buffer of this size. Larger values tend to increase performance if you fetch a lot of data.
- **StdDayOfWeek** - Enforces the ODBC standard for the DAYOFWEEK scalar. By default, this is turned on, but users who need the localized version can change the behavior to use whatever Oracle returns.
- **GuessTheColDef** - Specifies whether or not the driver should return a non-zero value for the cbColDef argument of SQLDescribeCol. Applies only to columns where there is no Oracle-defined scale, such as computed numeric columns and columns defined as NUMBER without precision or scale.

#### 5.2.5 FoxPro-specific

- **BackgroundFetch** - "Yes" or "No."
- **Collate** - "Machine" or another collating sequence.
- **Exclusive** - "Yes" or "No."
- **SourceDB** - A fully qualified path to a directory containing zero or more free tables, or the absolute path and file name for a database.
- **SourceType** - "DBC" or "DBF."

### 5.3 Errors handling

When the module is performing its tasks, some errors may occur in the interaction with the database. It can be such errors as breaking the uniqueness while data are recorded into a table (PRIMARY KEY), breaking the data integrity limitation (FOREIGN KEY), losing the database's connection, etc. You can set the behavior of the module when such errors occur. The parameters of this group are set on the "Errors handling" tab (fig. 3).



Pic.3 Errors handling

There are three ways the module can react when an error occurs:

1. **Stop writing** – if an error occurs, the program generates a message and enables the internal "Temporary disabled" option; it stops publishing data until the module is reconfigured. The program will ignore all data after that moment until you restarted the program.
2. **Stop writing and show a message** – if an error occurs, the program generates a message, enables the internal "Temporary disabled" option, and displays a dialog box on the screen. The program will ignore all data after that moment until you clicked the "Yes" button in the dialog box.
3. **Don't react and write a message to the log** – if an error occurs, the program generates a message and continues its work according to its configuration.
4. **Reconnect and write a message to the log** – this option is similar to the previous one, except that the module will disconnect from the database and try to reconnect to it when the module is called next time. This option is useful if the database's connection is not stable.

## 5.4 Binding

We suppose that you know how to create a table in your database. Most databases have tools and utilities to do it visually.

You may create a table with your structure and the necessary column set. Our plugin may use only some of them. Please, note, unused columns should be marked as optional in your database.

You should create a table according to the ANSI SQL92 standard that puts some limits on field names in the table. You can use **only** Latin characters (a-z, A-Z), numbers, and underline mark ( \_ ) in column names. All other characters are inadmissible and their use can lead to error. Also, you cannot use some reserved words of the SQL dialect such as NUMBER, DATE, TIME, STRING, SELECT, SUM, MIN, MAX, and [others](#).

## Automatic importing a table structure

Please, execute the following steps to configure the binding of your table columns and parser variables.

1. **Importing a table structure.** Click the "Import" button (fig. 4). If you configured a connection with your database correctly, a new dialog window would appear with all tables in your database (fig. 5). You should select the necessary table in the list and click the "OK" button. If a database requires to add a table name before column names or a database owner name before a table name, select the corresponding option.

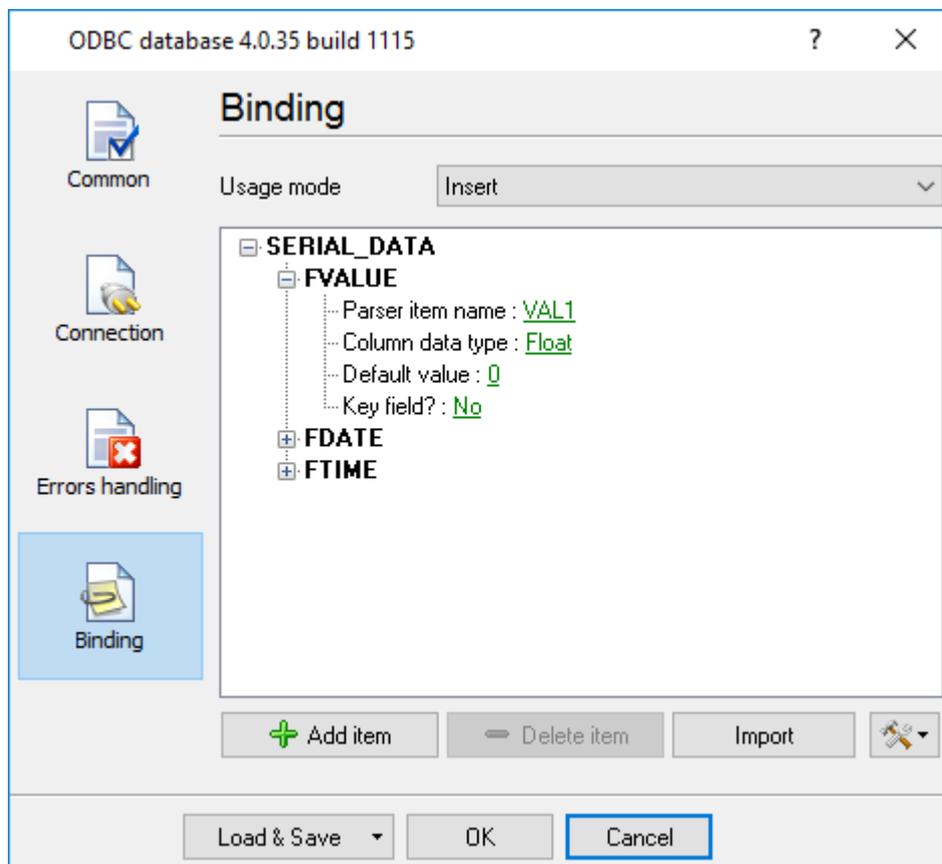


Fig. 4. Binding settings

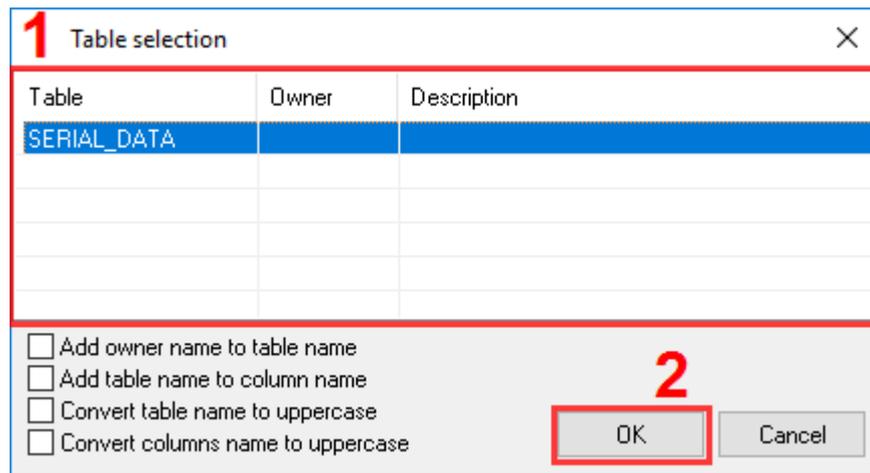


Fig. 5. Database table selection.

2. After you have imported a table structure, you should configure the binding for all imported columns or delete unused columns from the binding. The table structure is presented in the tree view. The root node is the table name. Child nodes are columns. You should configure the following options for each column:

**Parser item name.** It is the parser's variable name. You may select it from a list. Or you may manually type a name if you defined it in scripts or filter plugins.

**Column data type.** It determines the column data type. This data type should match the data type of a parser's variable value. The ODBC plugin can convert data between similar data types. For example, the parser extracts integer values, and the database column has the "Float" data type.

**Default value.** The default value to be used if the variable with the specified name does not exist in a data packet or its value is null.

**Key field.** It is a read-only parameter and indicates that a value for this column is required. Usually, you cannot delete these columns from the binding. The one exception is a column with a default value defined in the database. For example, the "autoincrement" primary key.

### How to build a table structure manually

You may define a table structure by adding all items manually. Click the "Add item" button, and the program will ask you about the table name (only once) and the column name. After this, you may define the parameter above for each added column.

## 5.5 ODBC limitations

### Table Name Limitations

- Table names can contain any valid characters (for example, spaces). If table names contain any characters except letters, numbers, and underscores, the name must be delimited by enclosing it in backquotes (`).`)

- When the Microsoft Excel driver is used, and a table name is not qualified by a database reference, the default database is implied. If a name in Microsoft Excel includes the "!" character, it will automatically be translated to the "\$" character instead.
- The Microsoft Excel table name that references <filename> is supported for Microsoft Excel 3.0 and 4.0 files. The Microsoft Excel table name that references <workbook-name> is supported for Microsoft Excel 5.0, 7.0, or 97 files.
- When the dBASE driver is used, characters with an ASCII value greater than 127 are converted to underscores.
- When the Microsoft Access driver is used, the table name is limited to 64 characters.
- When the dBASE, Microsoft Excel 3.0 or 4.0, Paradox, or Text driver is used, special MS-DOS keywords CON, AUX, LPT1, and LPT2 should not be used as table names.

### Column Name Limitations

- Column names can contain any valid characters (for example, spaces). If column names contain any characters except letters, numbers, and underscores, the name must be delimited by enclosing it in backquotes (`).`)
- When the Microsoft Access or Microsoft Excel driver is used, column names are limited to 64 characters, and longer names generate an error. When the Paradox driver is used, the maximum column name size is 25 characters. When the Text driver is used, the maximum column name size is 64 characters, and longer names are truncated.
- When the dBASE driver is used, characters with an ASCII value greater than 127 are converted to underscores.
- When the Microsoft Excel driver is used, if column names are present, they must be in the first row. A name that in Microsoft Excel would use the "!" character must be enclosed in backquotes (`).`)
- The "!" character is converted to the "\$" character, because the "!" character is not legal in an ODBC name, even when the name is enclosed in backquotes. All other valid Microsoft Excel characters (except the pipe character (|)) can be used in a column name, including spaces. A delimited identifier must be used for a Microsoft Excel column name to include a space. Unspecified column names will be replaced with driver-generated names, for example, "Col1" for the first column.
- The pipe character (|) cannot be used in a column name, whether the name is enclosed in backquotes or not.
- When the Text driver is used, the driver provides a default name if a column name is not specified. For example, the driver calls the first column F1, the second column F2, and so on.

### Reserved Word Limitations

Do not use the reserved words listed in the SQL grammar in the "[Reserved words](#)" chapter of this manual (or the shorthand form of these reserved words) as identifiers (that is, table or column names), unless you surround the word in backquotes (`).`)

### Identifiers Limitations

- If an identifier contains a space or a special symbol, the identifier must be enclosed in backquotes. A valid name is a string of no more than 64 characters, of which the first character must not be a space. Valid names cannot include control characters or the following special characters: ` | # \* ? [ ] . ! \$ .`
- Do not use the reserved words listed in the SQL grammar in the "[Reserved words](#)" chapter of this manual (or the shorthand form of these reserved words) as identifiers (that is, table or column names) unless you surround the word in backquotes (`).`)

## 5.6 Reserved words

-A  
ADD  
ALL  
Alphanumeric  
ALTER  
AND  
ANY  
Application  
AS  
ASC  
Assistant  
AUTOINCREMENT  
Avg

-B  
BETWEEN  
BINARY  
BIT  
BOOLEAN  
BY  
BYTE

-C  
CHAR, CHARACTER  
COLUMN  
CompactDatabase  
CONSTRAINT  
Container  
Count  
COUNTER  
CREATE  
CreateDatabase  
CreateField  
CreateGroup  
CreateIndex  
CreateObject  
CreateProperty  
CreateRelation  
CreateTableDef  
CreateUser  
CreateWorkspace  
CURRENCY  
CurrentUser

-D  
DATABASE  
DATE  
DATETIME  
DELETE  
DESC  
Description  
DISALLOW  
DISTINCT  
DISTINCTROW  
Document  
DOUBLE

DROP

-E

Echo  
Else  
End  
Eqv  
Error  
EXISTS  
Exit

-F

FALSE  
Field, Fields  
FillCache  
FLOAT, FLOAT4, FLOAT8  
FOREIGN  
Form, Forms  
FROM  
Full  
FUNCTION

-G

GENERAL  
GetObject  
GetOption  
GotoPage  
GROUP  
GROUP BY  
GUID

-H

HAVING

-I

Idle  
IEEEDOUBLE, IEEE SINGLE  
If  
IGNORE  
Imp  
IN  
INDEX  
Index, Indexes  
INNER  
INSERT  
InsertText  
INT, INTEGER, INTEGER1, INTEGER2, INTEGER4  
INTO  
IS

-J

JOIN

-K

KEY

-L

LastModified  
LEFT  
Level  
Like  
LOGICAL, LOGICAL1  
LONG, LONG BINARY, LONGTEXT

-M  
Macro  
Match  
Max, Min, Mod  
MEMO  
Module  
MONEY  
Move

-N  
NAME  
NewPassword  
NO  
Not  
Note  
NULL  
NUMBER, NUMERIC

-O  
Object  
OLEOBJECT  
OFF  
ON  
OpenRecordset  
OPTION  
OR  
ORDER  
Orientation  
Outer  
OWNERACCESS

-P  
Parameter  
PARAMETERS  
Partial  
PERCENT  
PIVOT  
PRIMARY  
PROCEDURE  
Property

-Q  
Queries  
Query  
Quit

-R  
REAL  
Recalc  
Recordset  
REFERENCES  
Refresh  
RefreshLink  
RegisterDatabase  
Relation  
Repaint  
RepairDatabase  
Report  
Reports  
Requery  
RIGHT

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-S  
SCREEN  
SECTION  
SELECT  
SET  
SetFocus  
SetOption  
SHORT  
SINGLE  
SMALLINT  
SOME  
SQL  
StDev, StDevP  
STRING  
Sum

-T  
TABLE  
TableDef, TableDefs  
TableID  
TEXT  
TIME, TIMESTAMP  
TOP  
TRANSFORM  
TRUE  
Type

-U  
UNION  
UNIQUE  
UPDATE  
USER

-V  
VALUE  
VALUES  
Var, VarP  
VARBINARY, VARCHAR

-W  
WHERE  
WITH  
Workspace

-X  
Xor

-Y  
Year  
YES  
YESNO

## 6 Troubles?

### 6.1 Possible problems

**No data for publication/exporting** - no data is passed for export. Solution: configure the parser and make sure that one or more variables are defined in the parser.

**Error on binding variable with name %s [%s]** - the error usually occurs if data does not correspond to the specified format. For example, the date and time format does not match source data.

**Unable to disconnect from the database [%s]** and **Unable to connect to a database [%s]** - it is impossible to connect or disconnect from the database. You should check the parameters of the database connection. The analysis of the additional information will help you locate the error.

**Database access error [%s]. Stop operations with the database?** - the message appears if an error occurs during an attempt to execute an SQL query if the second variant of reacting to errors is selected. The message implies the "Yes" or "No" answer. The analysis of the additional information will help you locate the error.

**Unable to verify your SQL script [%s]** - the message appears when an attempt to analyze your SQL query fails. Check if the syntax of your SQL query is correct.

**Tested successfully** - the message appears if your database connection is successfully tested. It requires no additional actions.

**Database isn't used** - the message appears if the module is temporarily disabled (the "Temporarily disabled" check box is selected) or the database name field is empty. Check the connection parameters.

**Database isn't selected** - the message appears if the database type is not selected. Check the connection parameters.

**Database: %s** - %s contains the database name. The message appears if the database connection is successful. Usually, you see it when you call the module for the first time. It requires no additional actions.

**Invalid data block length (columns=%d,length=%d)** - an internal application error. It means that the data sent by the parser is in an invalid format. Perhaps, you are using the module incompatible with the version of the Advanced Serial Data Logger kernel. Update the versions of both the kernel and the module.

**The time of connection is not due yet (%d,%d)** - the message appears during an attempt to connect to the database after the connection to it has been lost and the "Reconnect after" option is enabled. No additional actions are required.

**Invalid procedure call. Bad arguments** - an attempt to call the module using invalid parameters. Perhaps, you are using the module incompatible with the version of the Advanced Serial Data Logger kernel. Update the versions of both the kernel and the module.

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**Writing to the database is complete** - the message appears if your queue of SQL queries is successfully executed. It requires no additional actions.

**Writing to the database is complete with errors** - the message appears if the execution of your queue of SQL queries was interrupted by an error. It requires no additional actions.

**Your SQL is empty. Please, specify some SQL text first** - the message appears if you do not enter the text for your SQL query. Check if the options on the "SQL queue" tab are configured correctly.

**Invalid temporary path** - the path to the temporary file specified by you does not exist. Enter a new path in the "Temporary folder" field on the "Errors handling" tab.

%s, %d - will be replaced by additional information.