AxxonSoft

POS–Intellect Software Package

Administrator's Guide

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Video Surveillance and Security Solutions

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1 Introduction

1.1 The purpose and structure of the Guide

POS-Intellect: The Administrator's Guide is a reference manual to support the administration of the POS-Intellect software package.

1.2 The purpose of the POS-Intellect system

The POS-Intellect software package is designed for monitoring cashier operations in retail outlets and has the following functionality:

1. simultaneous viewing of the video image, the receipt contents and the POS-terminal events in real time;
2. simultaneous recording of the video image, the receipt contents and the POS-terminal events;
3. creating user queries allowing to search the video archive by receipt contents and by system events;
4. integration with common POS-terminals.
5. Possibility to create, view and process general and itemized on the POS-terminal events in «Report System»Web-report subsystem.

Note. «Report System» subsystem is an optional component of Intellect software package and is delivered separately.

2 Hardware requirements

2.1 Computer requirements

The POS-Intellect software package requires the same computer configuration as the *Intellect (base)* software package; see the *Intellect Software Package: The Administrator's Guide* document.

2.2 Operating system requirements

The POS-Intellect software package requires the same operating system configuration as the *Intellect (base)* software package; see the *Intellect Software Package: The Administrator's Guide* document.

2.3 Video camera requirements

The POS-Intellect software package requires the same video cameras as the *Intellect (base)* software package; see the *Intellect Software Package: The Administrator's Guide* document.

3 Personnel skills requirements

The POS-Intellect software package requires the same personnel skills as the *Intellect (base)* software package; see the *Intellect Software Package: The Administrator's Guide* document.

4 General description of the *POS-Intellect* software package

POS-Intellect includes the following software modules:

1. the basic version of the Intellect software package – Intellect (base);
2. POS-operations module.

The POS-operations module has the following functionality:

1. simultaneous viewing of the video image, the receipt contents and the POS-terminal events in real time;
2. simultaneous recording of the video image, the receipt contents and the POS-terminal events;
3. creating user queries allowing to search the video archive by receipt contents and by system events;
4. the module provides user interfaces for the following functional modules:
   4.1. **Monitor** module (video and titles display), represented by the **Monitor** window;
   4.2. **Titles search** module (searching the video database by titles), represented by the **Titles search** window;
   4.3. **Receipts search** module (searching the receipts by event), represented by the **Receipts search** window.

The following databases are used in *POS-Intellect*:

1. internal database of the server – contains the system settings and the data on registered events;
2. titles database – contains the data from POS-terminals;
3. receipts database – contains the data from POS-terminals.
   Database has MS SQL format. A list of MS SQL Server versions, supported in the Intellect software is given in Table 6.3.8.1-1.

Table 6.3.8.1-1 Types of MS SQL Server supported versions

MS SQL Server version	Supported edition
MS SQL Server 2005 - see. http://www.microsoft.com	Express Edition
	Workgroup Edition
	Standard Edition
	Enterprise Edition

Note! MS SQL Server 2000 and MS SQL Server 2008 database are not supported in the POS-Intellect software. While using these databases, technical support is not provided.

The **POS-operations** module uses the **Titles database** module, which is installed by default with the Intellect (base) platform. The Titles database module overlays the video image received from the surveillance camera with the receipt contents. The result of this operation is included in the titles database (using the Titles database module) and the receipts database (using the POS-terminal module), and is displayed in the **Monitor** window.

The Titles search module allows searching the titles database, and the Receipts search module allows searching the receipts database. The titles and receipts databases are stored in the folder specified during the MS SQL Server setup, see the information at **http://www.microsoft.com**.

The video archive is stored in the folder specified during the Intellect (base) software setup; see the *Intellect Software Package: The Administrator's Guide* document.

The POS-Intellect software functionality is specified in the **intellect.sec** key file of the *Intellect (base)* software platform; see the *Intellect Software Package: The Administrator's Guide* document.

5 Installation of the *POS-Intellect* system

5.1 Delivery set description

The POS-Intellect software is delivered in the form of an installation CD (Figure 5.1—1).



Figure 5.1—1 The POS-Intellect installation CD

The CD contains the installation utility and all software components required for installing the POS-Intellect system onto the computer.

You must have administrator rights on that computer to install POS-Intellect.

5.2 The installation

To install POS-Intellect, the Intellect (base) software should already be installed on the computer. See the *Intellect Software Package: The Administrator's Guide* document for the Intellect (base) installation procedure.

To install POS-Intellect, do the following:

1. Launch the *POS-Intellect* installation program. Insert the POS-Intellect installation CD into the CD/DVD drive and run the **Setup.exe** file.
2. The dialog box of the POS-Intellect installation welcome window appears. Click **Next** after the examination (Figure 5.2—1).

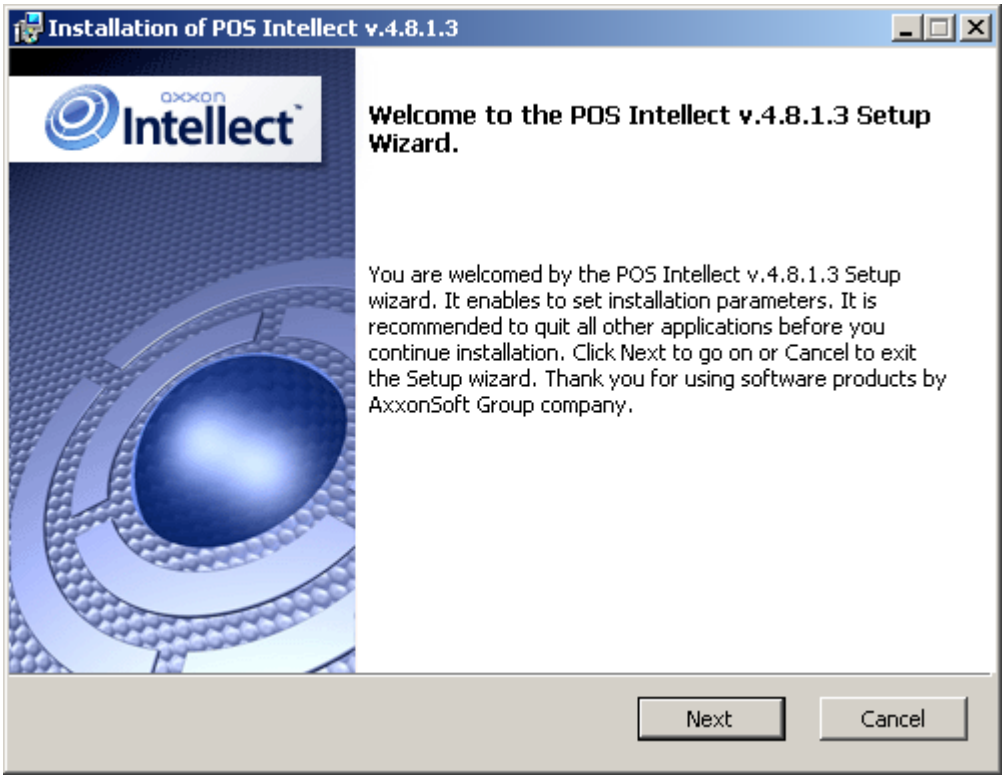


Figure 5.2—1 The welcome window of installation wizard

3. Read the license agreement. Set the switch into **I accept the terms of the License agreement** position and click **Next** (these actions mean that you accept the given license agreement)(Figure 5.2—2)



Figure 5.2—2 License agreement dialog box

4. Select database server for POS Intellect operating and method of authentication on it then click **Next** (Figure 5.2—3)

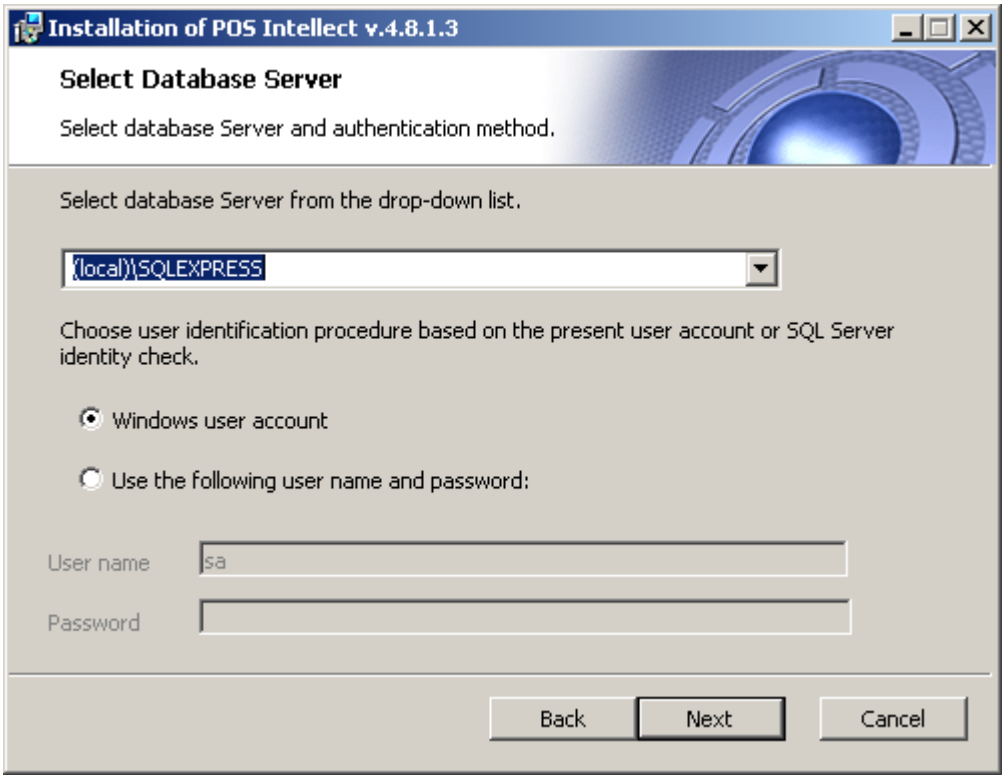


Figure 5.2—3 Database server selection

5. Click **Install** to start the installation process (Figure 5.2—4, Figure 5.2—5).

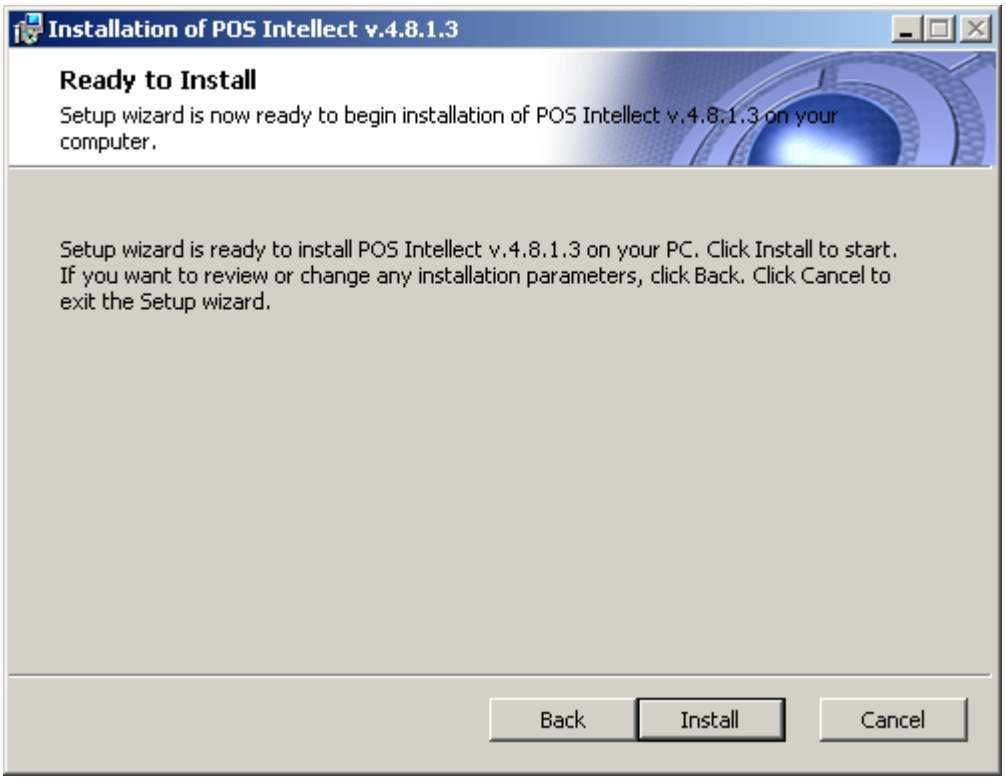


Figure 5.2—4 “Ready to install” window

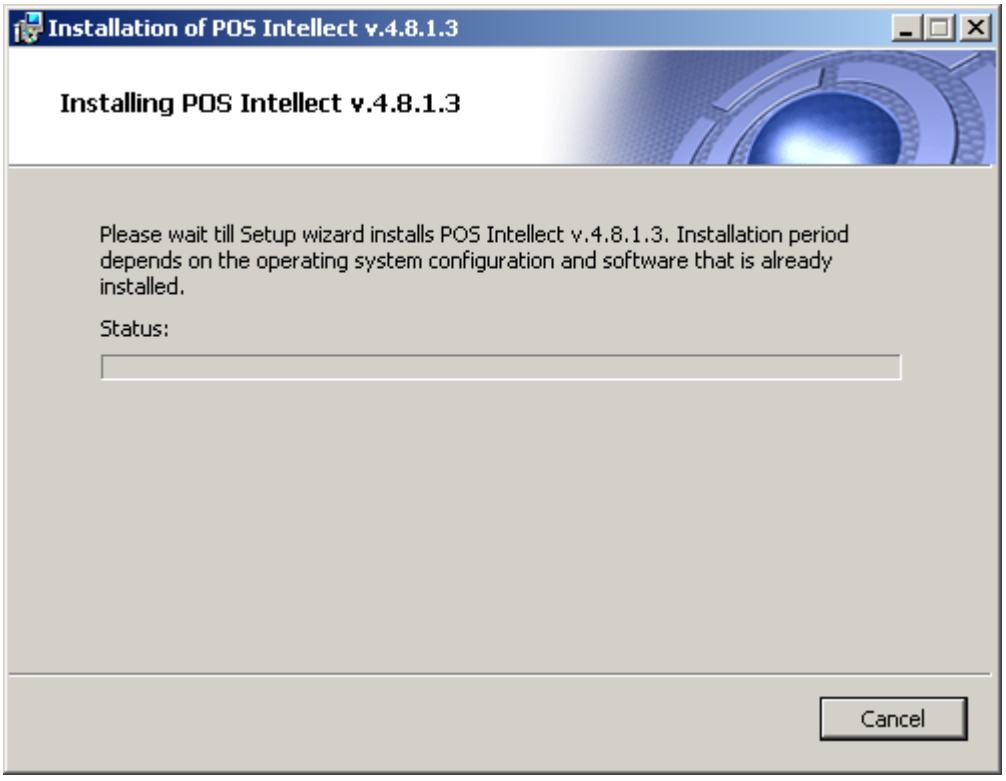


Figure 5.2—5 "Installing POS-Intellect" dialog box

6. Wait until the installation completes, then click **Finish** (Figure 5.2—6)

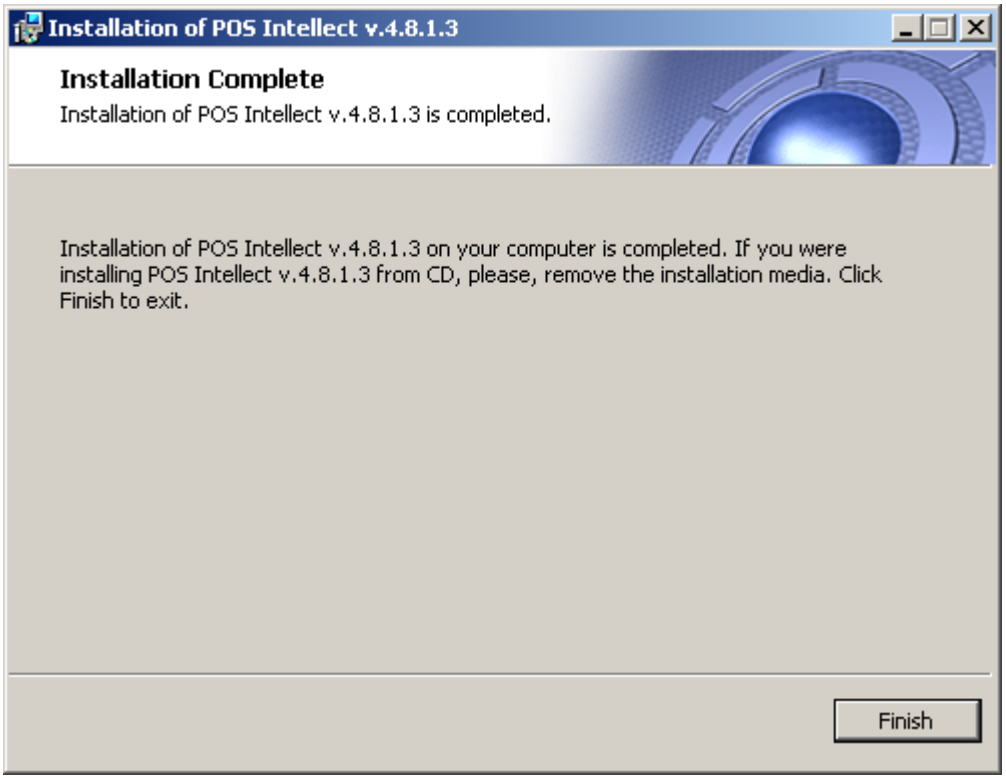


Figure 5.2—6 POS-Intellect installation complete

The POS-Intellect installation is now complete.

5.3 The repairing

To repair the POS-Intellect software package, do the following:

1. Launch the *POS-Intellect* installation wizard. Insert the POS-Intellect installation CD into the CD/DVD drive and run the **Setup.exe** file.
2. The dialog box of action type selection appears. Select **Repair** and click **Next** (Figure 5.3—1)

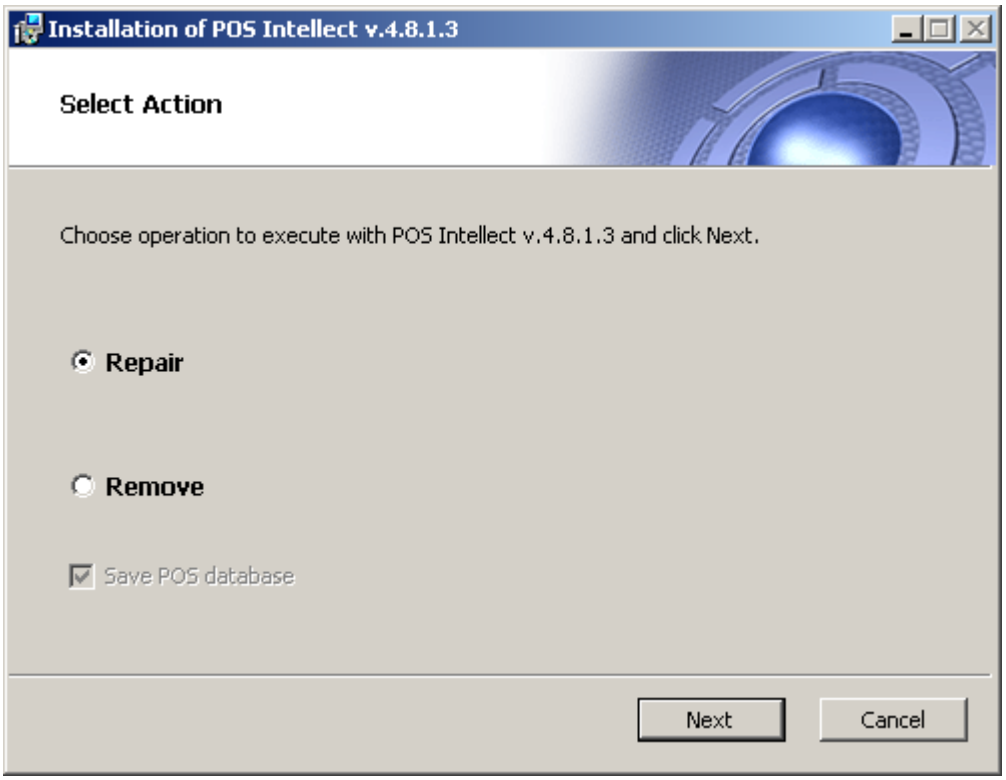


Figure 5.3—1 Window of installation procedure selection

3. Wait until the POS-Intellect software repair is completed, then click **Finish** (Figure 5.3—2, Figure 5.3—3).

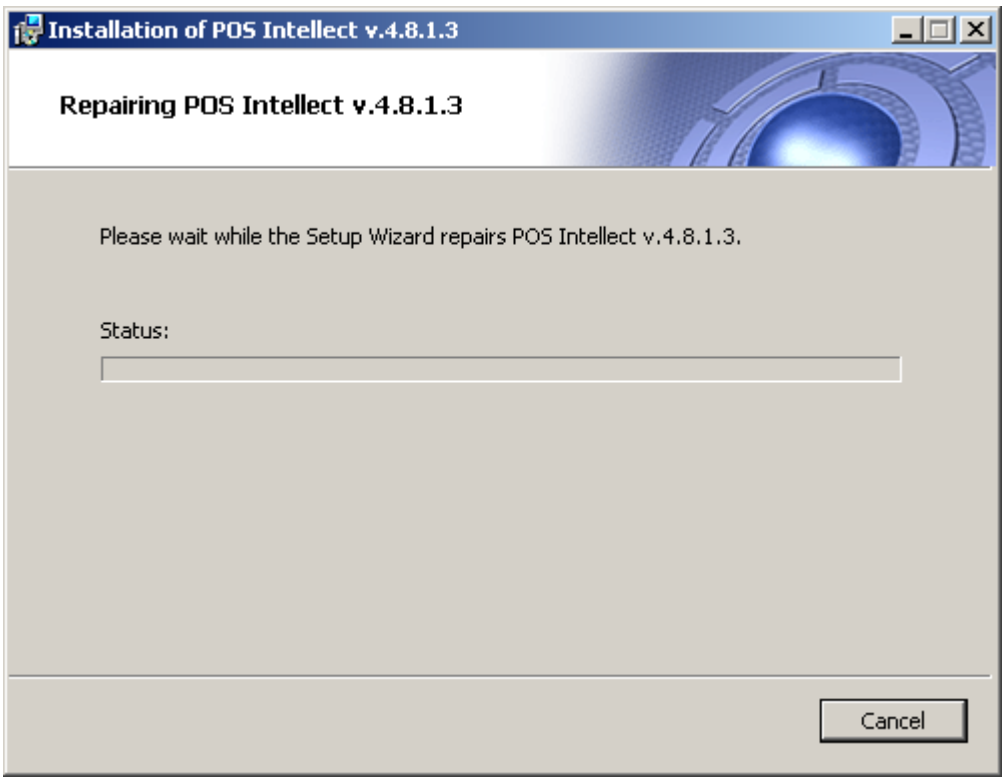


Figure 5.3—2 Repairing POS-Intellect

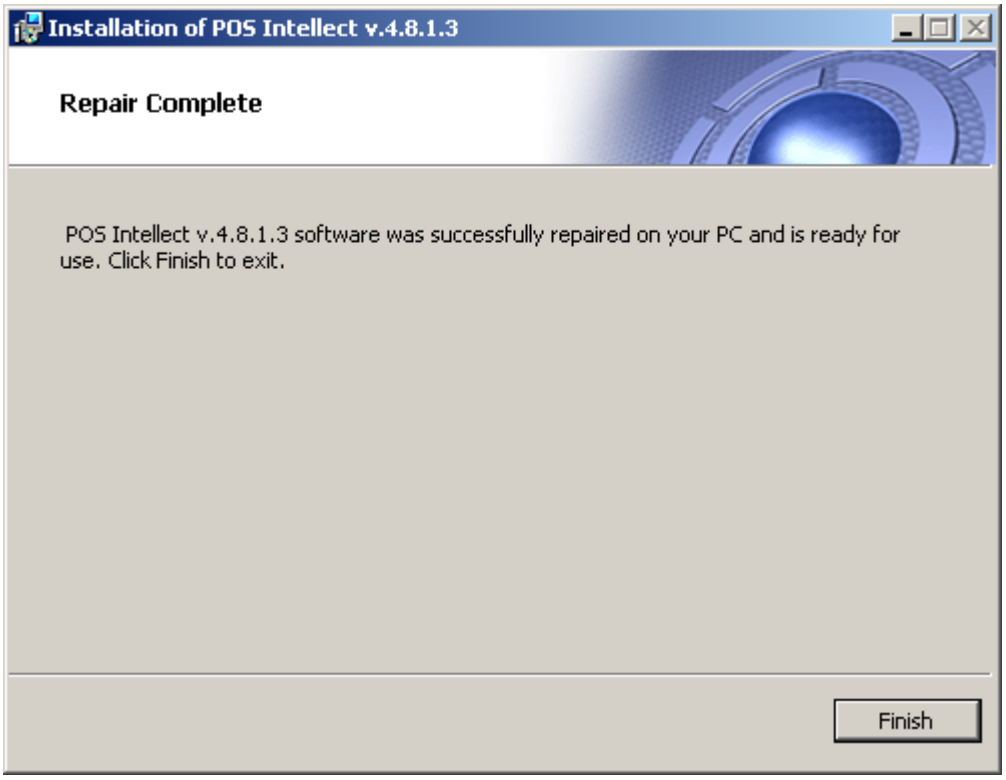


Figure 5.3—3 POS-Intellect repair complete

The POS-Intellect repair is now complete.

5.4 The removal

To remove the POS-Intellect system, do the following:

1. Launch the *POS-Intellect* installation wizard. Insert the POS-Intellect installation CD into the CD/DVD drive and run the **Setup.exe** file.
2. The dialog box of installation type appears. Select **Remove** and click **Next** (Figure 5.4—1))

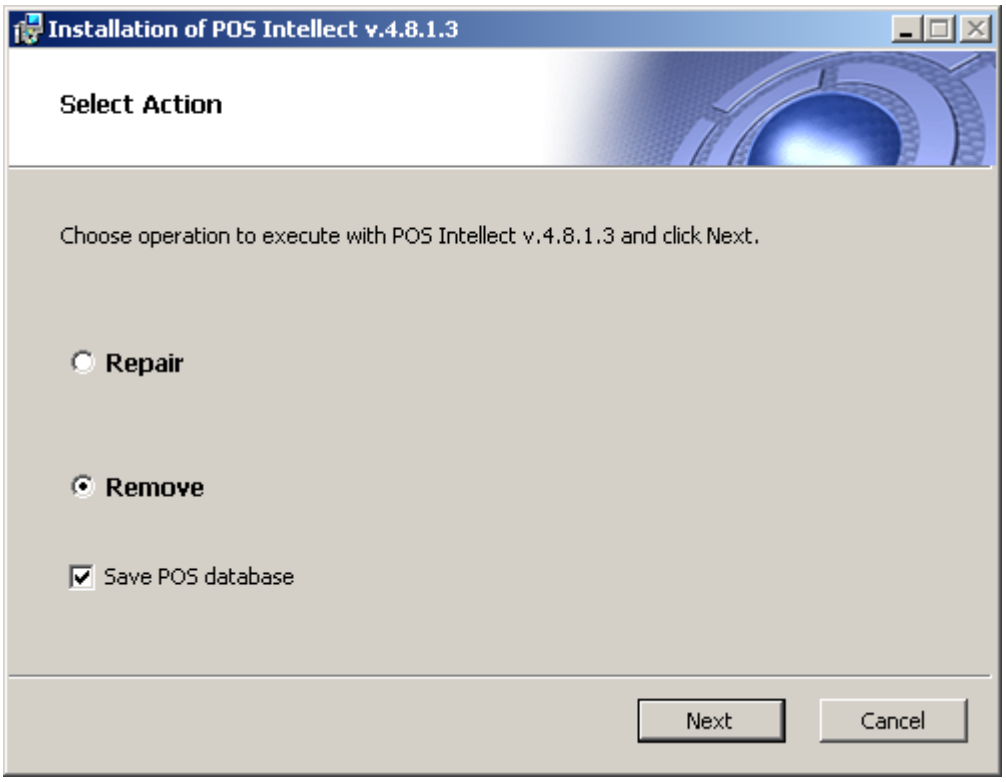


Figure 5.4—1 Window of installation procedure selection

*Note. To save receipt database set **Save POS database** check box (*Figure 5.4—1*)*

3. Wait until the POS-Intellect software removal is completed, then click **Finish** (Figure 5.4—2, Figure 5.4—3).

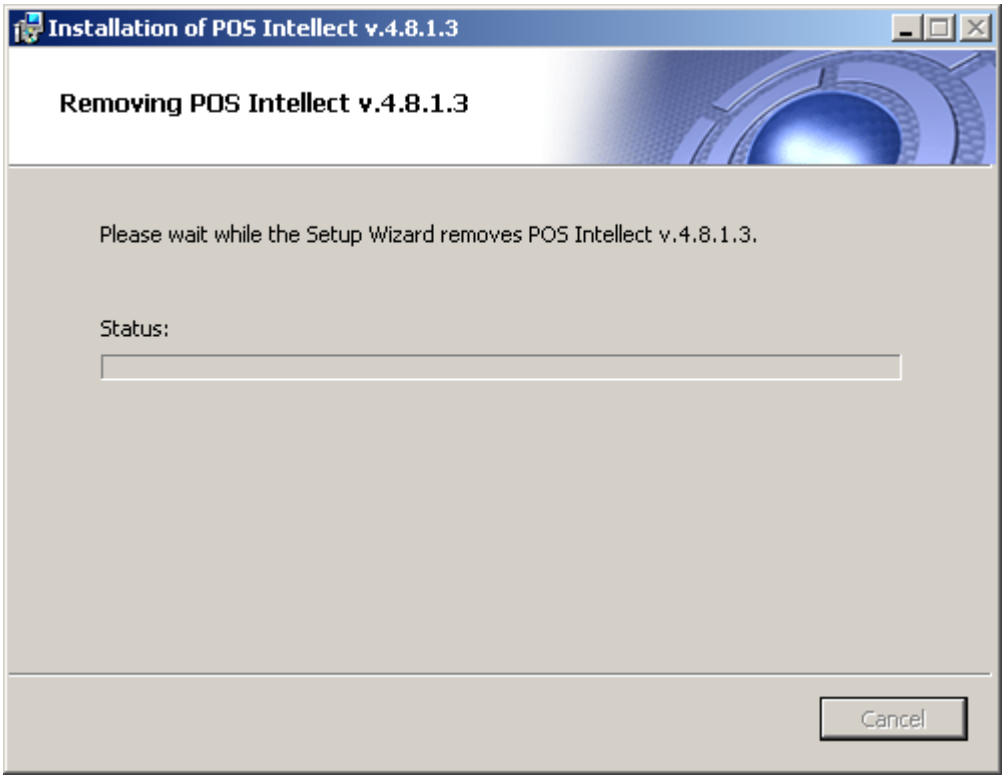


Figure 5.4—2 Removing POS-Intellect

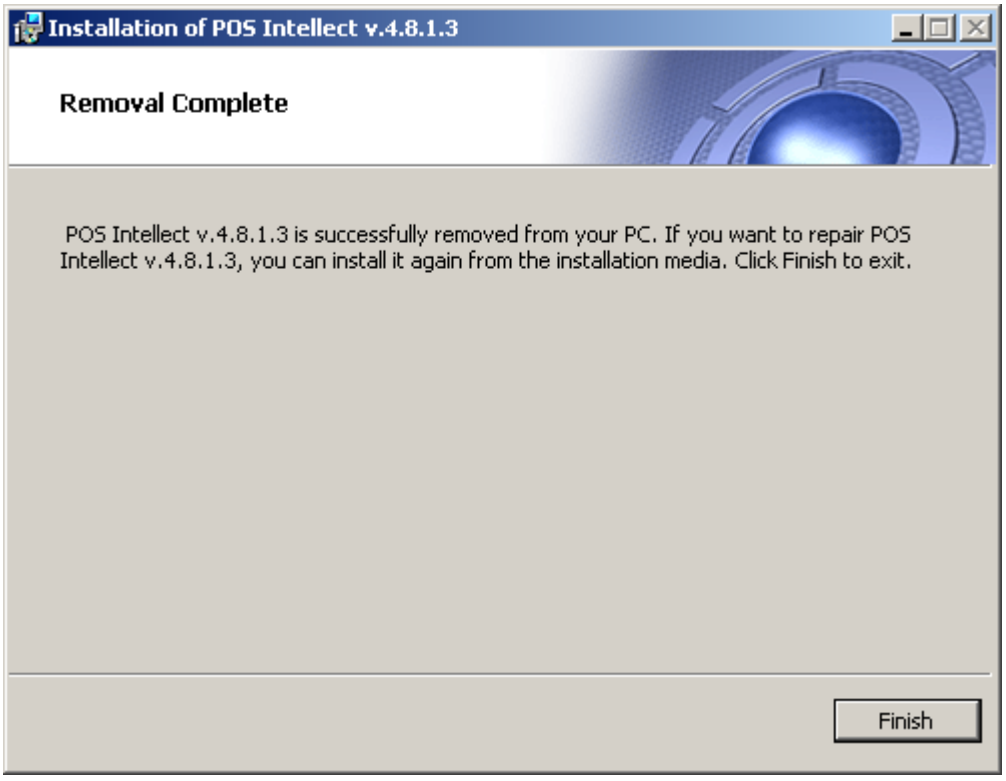


Figure 5.4—3 POS-Intellect removal complete

The POS-Intellect removal is now complete.

6 POS-Intellect configuration and setup

6.1 POS-Intellect configuration and setup procedure

Configuring the POS-Intellect software package includes the following stages:

1. Create and set up the **Titles database** objects for the cameras whose video image should be overlaid with titles
2. Create and set up the **POS-Terminal** object
3. Create and set up the **Titles search** object
4. Create and set up the **Receipts search** object
5. Create and set up the **Shop** system object (used when reports are formed in «Report System» Web-report subsystem).

Note. It's necessary to set up «Report System» subsystem (see «"Report System" Web-report subsystem. User guide»).

6.2 The Titles database object setup

6.2.1 The Titles database object setup procedure

The **Titles database** object is a child of the **Camera** object; it handles the titles database and overlays the video image coming from the camera, with the contents of the receipts.

The **Titles database** object setup includes the following steps:

1. Choose a **Camera** object and create a **Titles database** object as its child
2. Specify the boundaries of the titles display area
3. Specify the titles font
4. Specify the word highlighting rules

Attention! Set the value «1» of «DecodeUtf8» register key for proper titles displaying in case of incoming packets are sent to the POS-terminal in UTF-8 code. The key is located in «HKEY_LOCAL_MACHINE\SOFTWARE\ITV\INTELLECT\POS» register section.

6.2.2 Creating the Titles database object

To create the **Titles database** object, do the following:

1. Select a **Camera** object in the **Hardware** tab of the **System Settings** window (Figure 6.2—1).

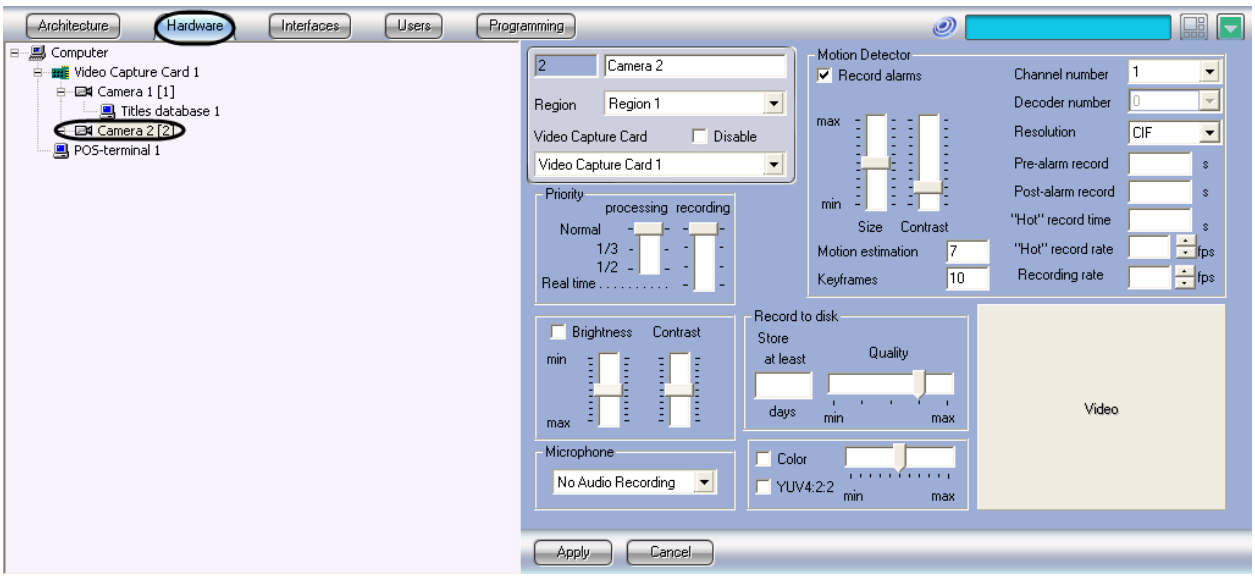


Figure 6.2—1 Camera selection

2. Right-click the chosen **Camera** object and select **Create object**, then **Titles database** in the drop-down menu that opens (Figure 6.2—2).

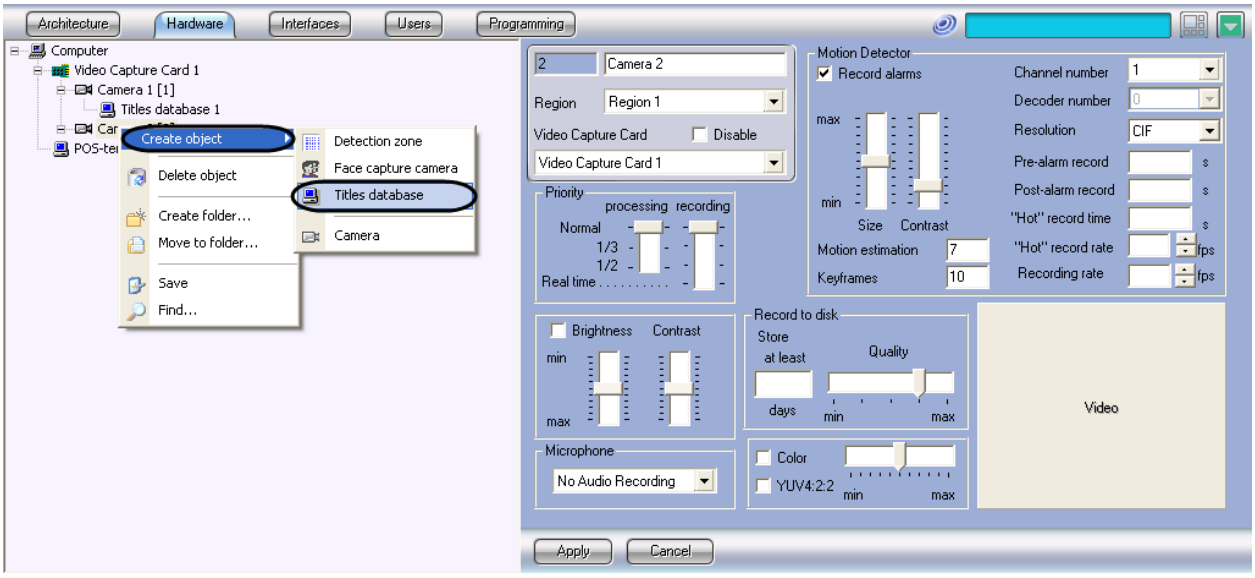


Figure 6.2—2 The Camera object drop-down menu

3. Specify the number of the **Titles database** object to be created and click **Apply** (Figure 6.2—3).

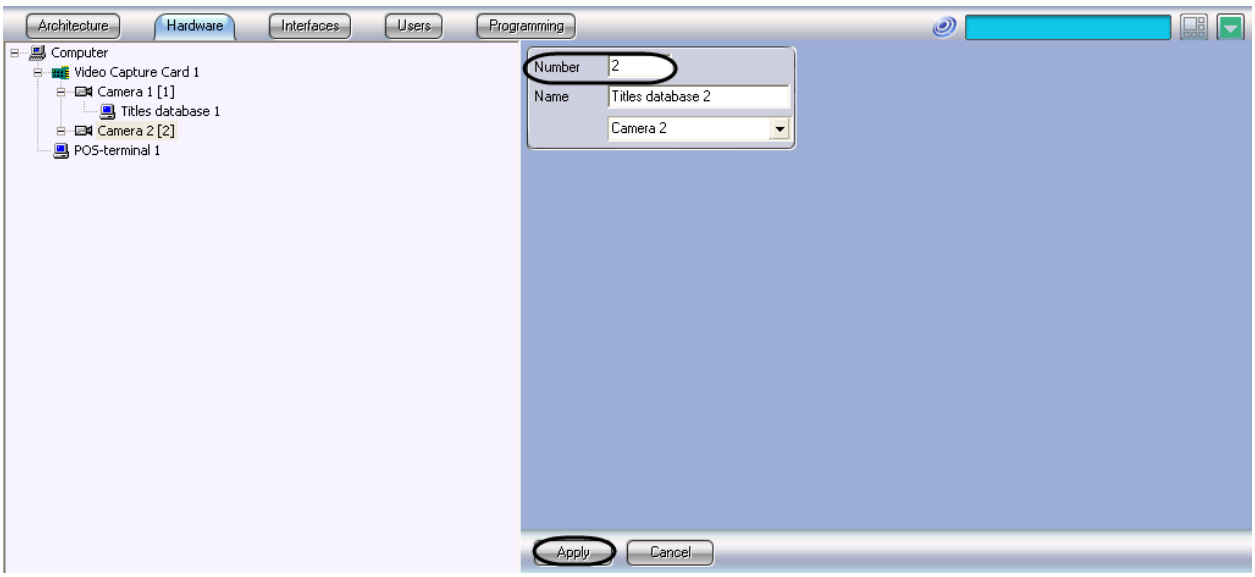


Figure 6.2—3 Specifying the Titles database number

4. Repeat steps 1 to 3 for all the required **Camera** and **Titles database** objects.

The **Titles database** object has been created.

Note. We recommend creating no more than 12-16 Titles database objects on one computer to ensure fail-free system operation. MS SQL software should be installed on the same computer as the Titles database objects.

6.2.3 Specifying the boundaries of the titles area

The titles are displayed in a rectangular area over the video image received from the camera. To specify the titles boundaries, do the following:

1. Enter the coordinates of the upper left corner of the area in the following fields: **X** is the left indent relative to the left border of the video image; **Y** is the vertical indent relative to the upper border of the video image; see Figure 6.2—4.

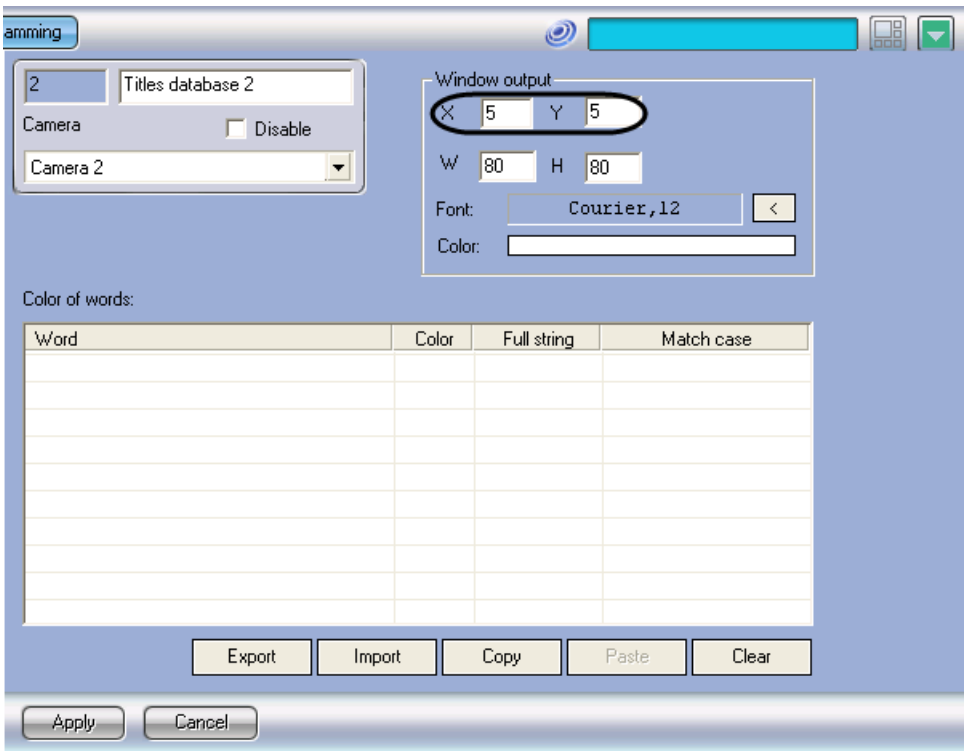


Figure 6.2—4 The coordinates of the upper left corner of the titles area

2. Specify the size of the titles area: **W** is the width of the area, **H** is the height of the area; see Figure 6.2—5.

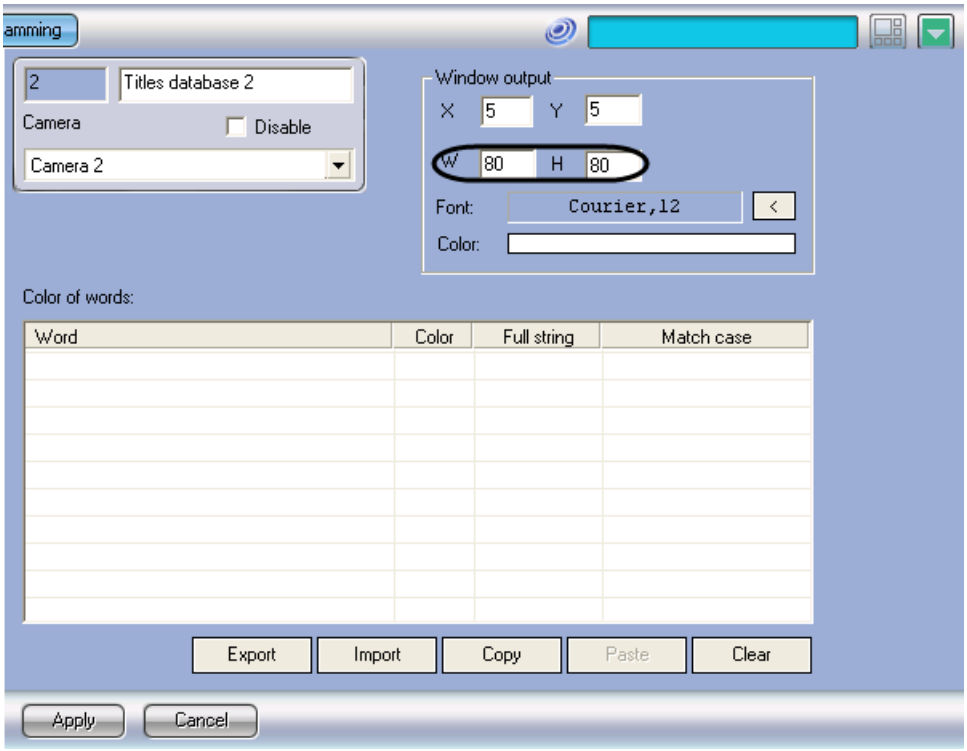


Figure 6.2—5 Specifying the titles area size

3. Click **Apply** (Figure 6.2—6).

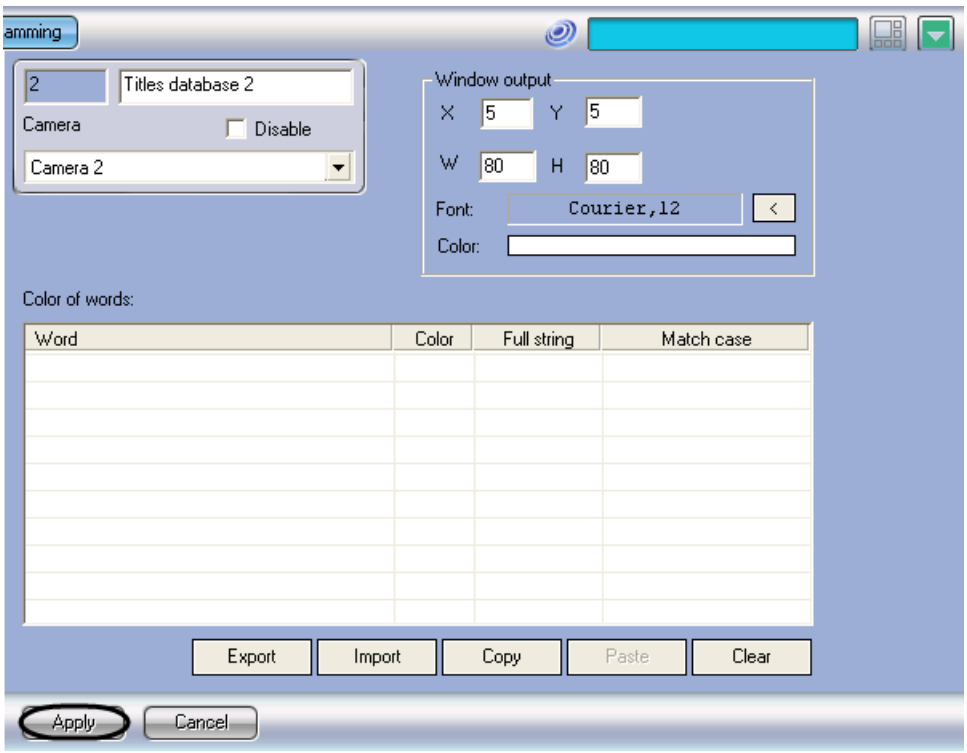


Figure 6.2—6 Saving the changes

The boundaries of the titles area are now set.

6.2.4 Specifying the titles font

The titles are displayed using a certain font. To specify the font to be used for displaying titles, do the following:

1. Click the < button (Figure 6.2—7).

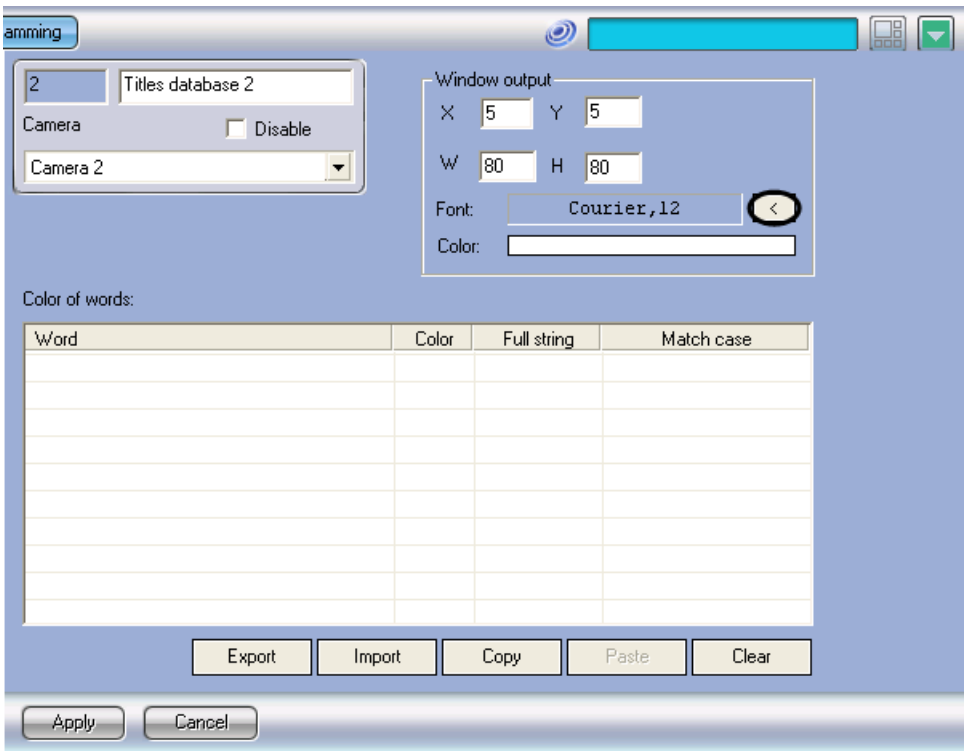


Figure 6.2—7 Opening the font selection dialog box

2. Specify the font and its parameters in the standard Windows font selection dialog box and click **OK** (Figure 6.2—8).

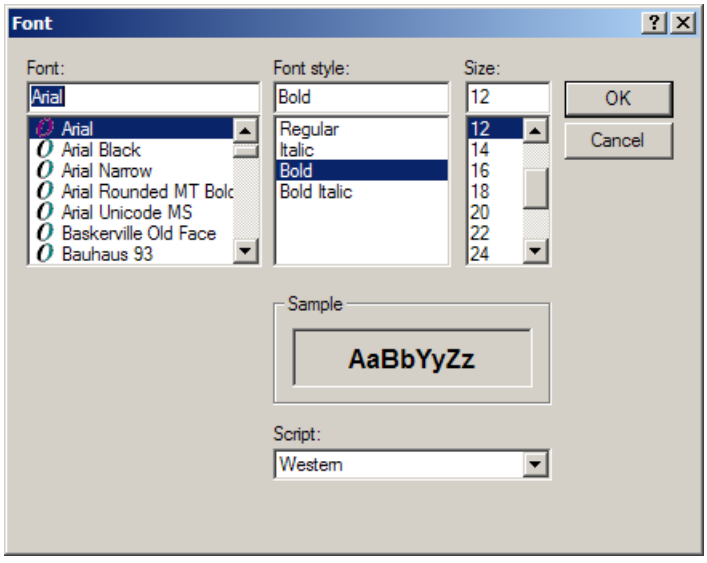


Figure 6.2—8 The standard Windows font selection dialog box

3. Double-click the **Color** field (Figure 6.2—9).

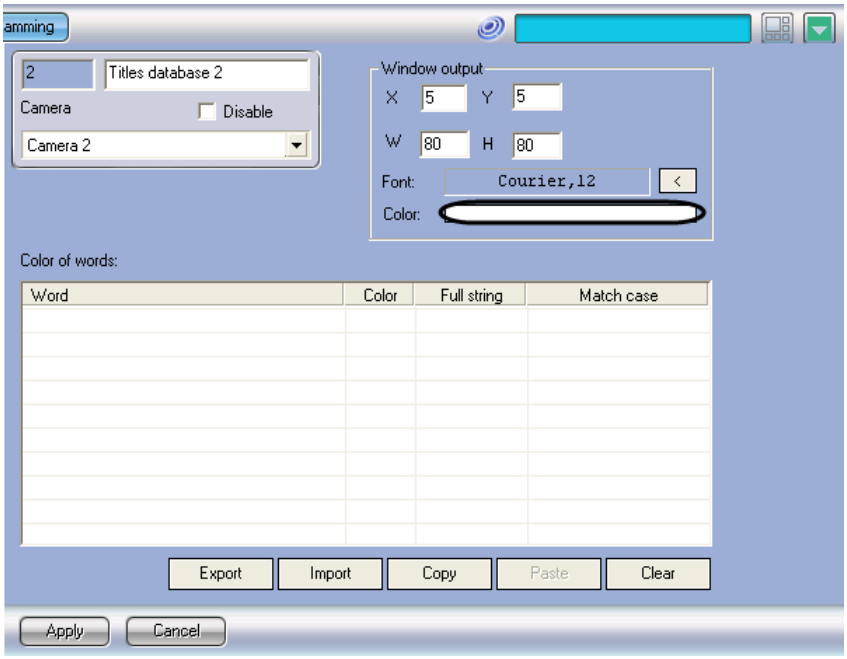


Figure 6.2—9 Opening the color selection dialog box

4. Select a color in the standard Windows color selection dialog box and click **OK** (Figure 6.2—10).

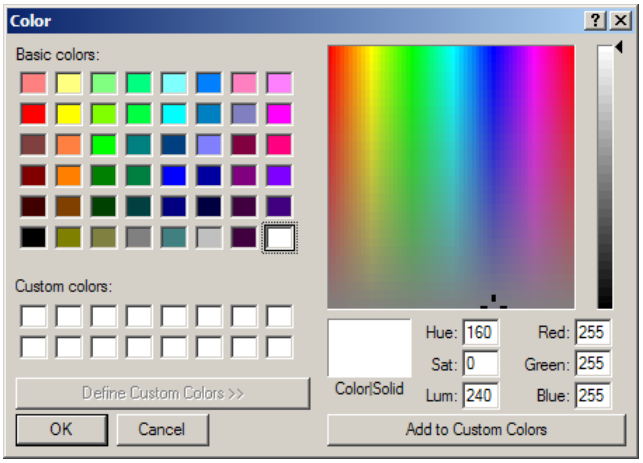


Figure 6.2—10 The standard Windows color selection dialog box

5. Click **Apply** (Figure 6.2—11).

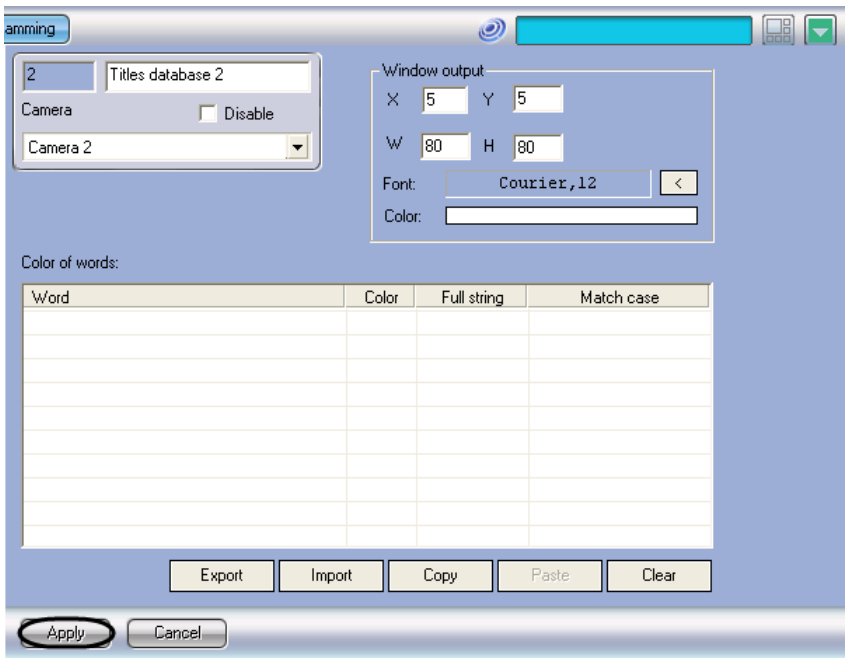


Figure 6.2—11 Saving the changes

The titles font is now set.

6.2.5 Specifying the word highlighting rules

Certain words can be set to be highlighted when displayed in the titles. To set the word highlighting rules, do the following:

1. Right-click anywhere in the **Word highlighting** list, then click **Add** in the drop-down menu that opens (Figure 6.2—12).

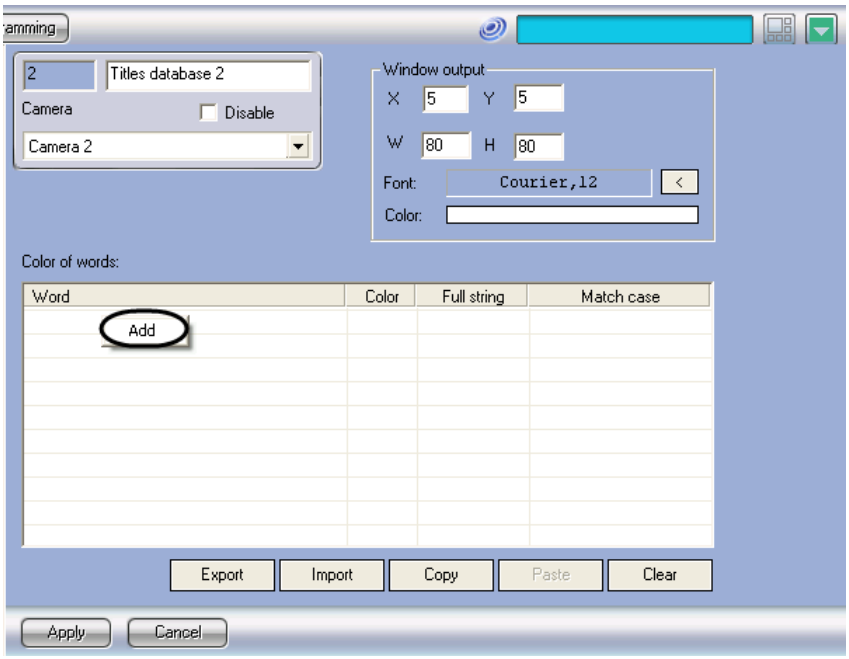


Figure 6.2—12 Creating a new rule

2. Enter a word in the dialog box that opens and click **OK**; the word will be added to the **Word highlighting** table (Figure 6.2—13, Figure 6.2—14).

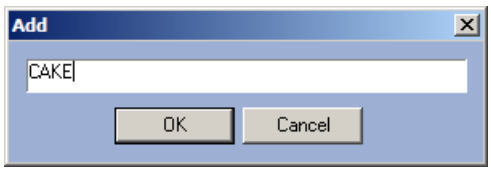


Figure 6.2—13 Entering the word to be highlighted

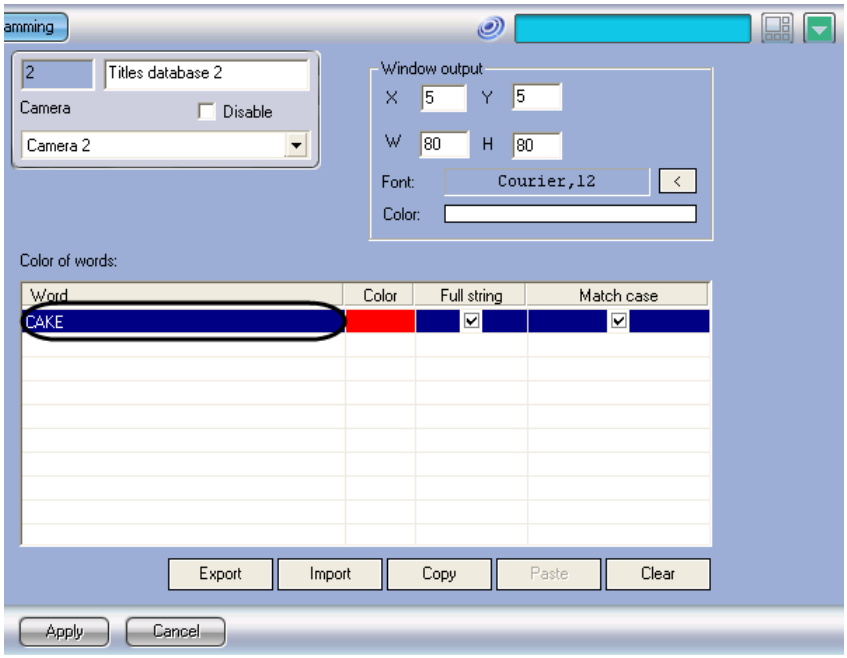


Figure 6.2—14 Adding the new rule to the Word highlighting table

3. Double-click the **Color** field next to the word to select the color to be used to highlight this word. Select a color in the standard Windows color selection dialog box and click **OK** (Figure 6.2—15).

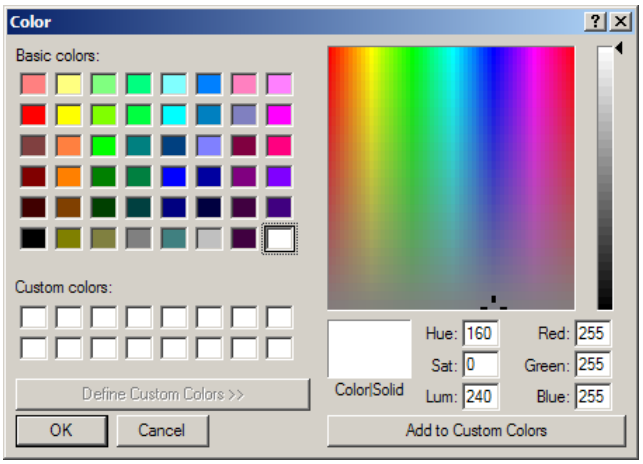


Figure 6.2—15 The standard Windows color selection dialog box

4. Check the **Full string** checkbox, if you want the whole line of text to be highlighted, not just one word (Figure 6.2—16).

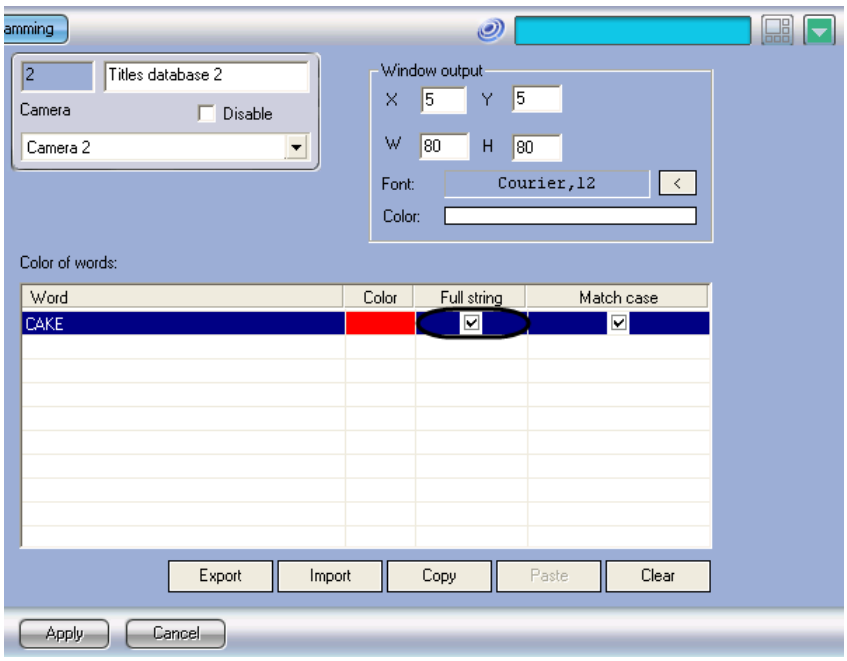


Figure 6.2—16 Highlighting the whole text line

5. Check the **Match case** checkbox to make the text search case-sensitive (Figure 6.2—17).

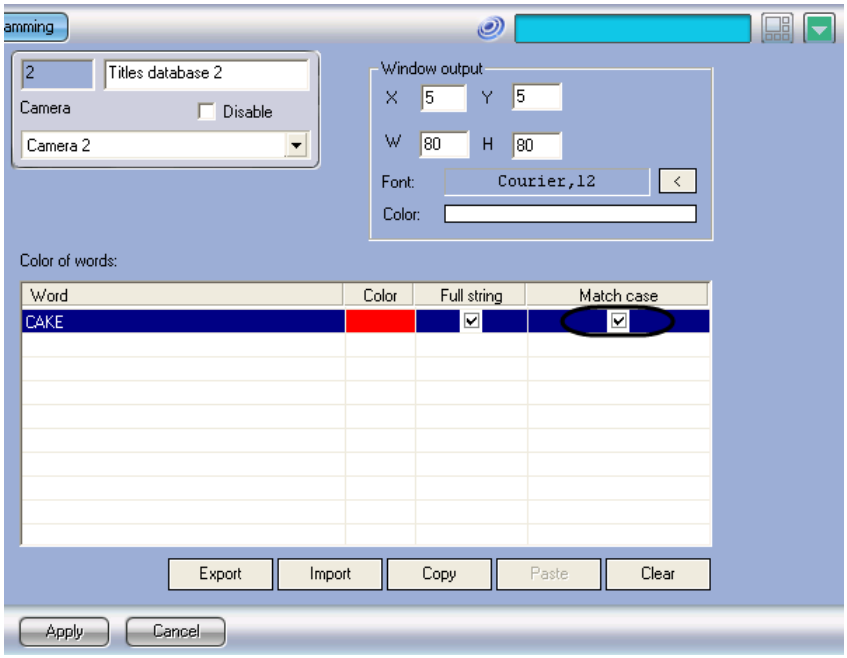


Figure 6.2—17 Enabling the case-sensitive search

6. Repeat steps 1 to 5 for all words to be highlighted.
   Note. To modify the words in the table, right-click a word to open the contextual menu .Click Clear button if the Word highlighting table is to be cleared.

7. Click **Apply** (Figure 6.2—18).

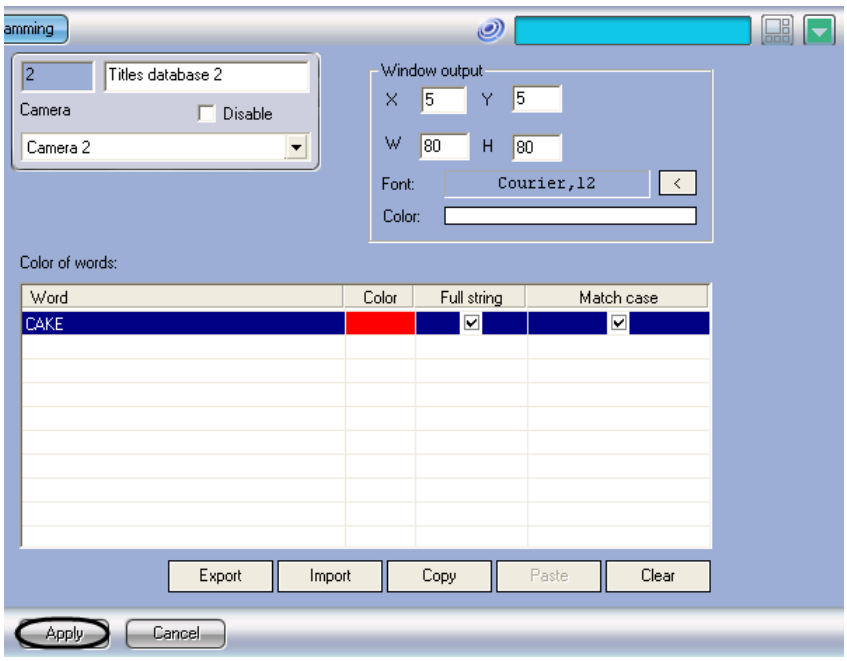


Figure 6.2—18 Saving the changes

The word highlighting rules are now set.

Note.

Buttons Copy and Paste may be used for convenient moving all the settings from one Titles database object to another one.

The Word highlighting table can be saved to file or loaded from file. The Export and Import buttons are used for saving and loading the table.

6.3 The POS-terminal object setup

6.3.1 The POS-terminal object setup procedure

The **POS-terminal** object is the main object of the POS Intellect software package; it processes the data received from the real-world POS-terminals.

To create and set up the **POS-terminal** object, use the **Hardware** tab in the **System Settings** window (Figure 6.3—1).

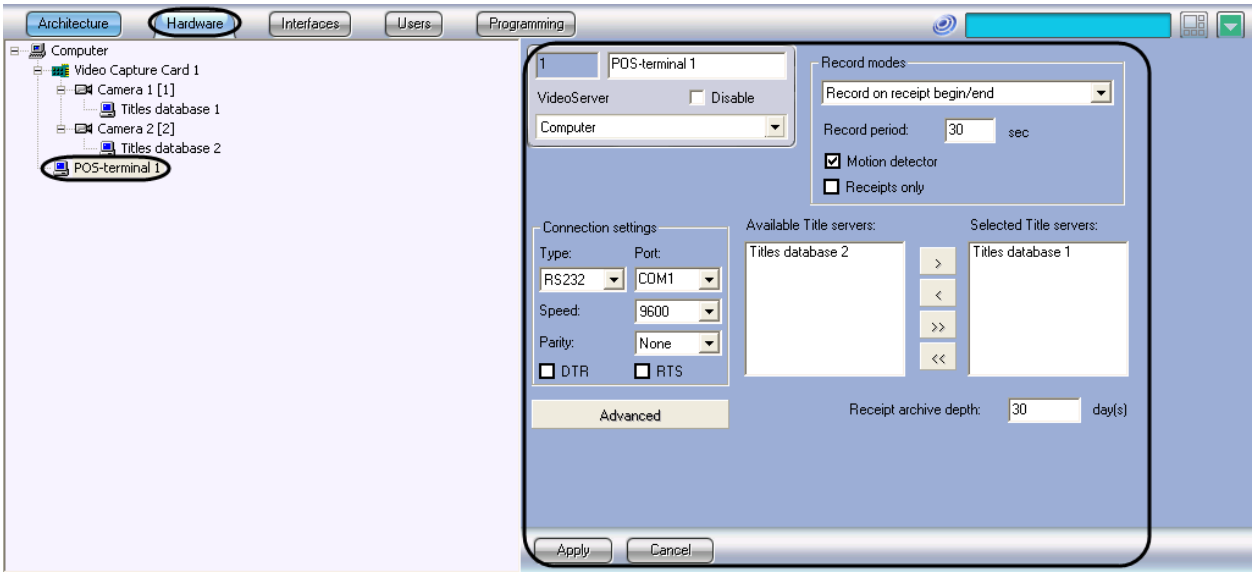


Figure 6.3—1 The POS-terminal object setup

Note. We recommend creating no more than 12-16 POS-terminal objects on one computer to ensure fail-free system operation. MS SQL software should be installed on the same computer as the POS-terminal objects.

The **POS-terminal** object setup includes the following steps:

1. Select the type of POS-terminal and set the connection parameters
2. Select the titles databases
3. Specify the receipt processing rules
4. Specify the video recording parameters
5. Specify the receipts archive size
6. Specify the text events rules (optional)
7. Set up the parser (optional)

6.3.2 Selecting the type of POS-terminal and setting the connection parameters

To start using a POS-terminal, select its type and set up the connection. To select the type of POS-terminal and set the connection parameters, do the following:

1. Click the **Advanced** button (Figure 6.3—2).

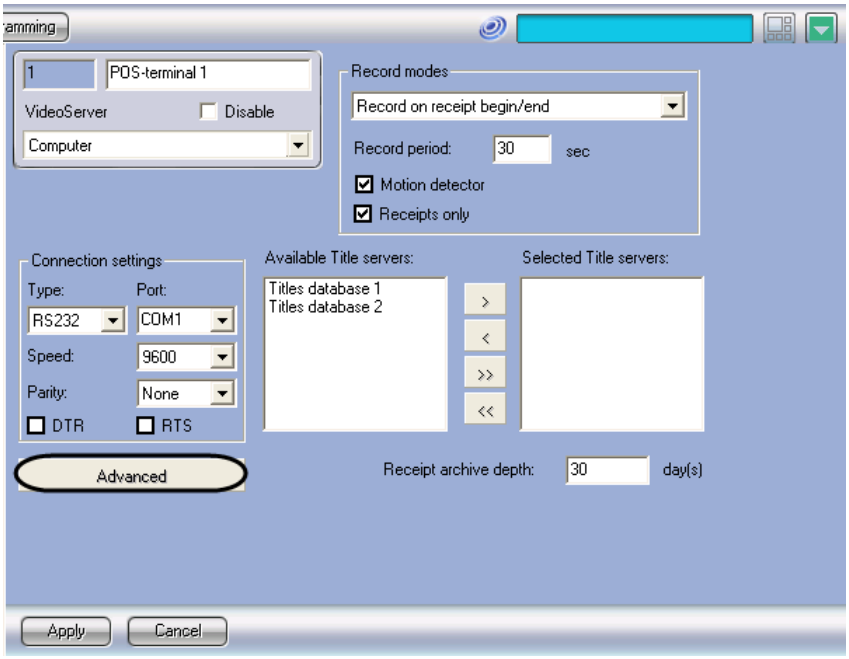


Figure 6.3—2 Opening the advanced settings of the POS-terminal object

2. In the dialog box that opens, select the POS-terminal in the **Supported POS terminals** drop-down list and click **OK** (Figure 6.3—3).

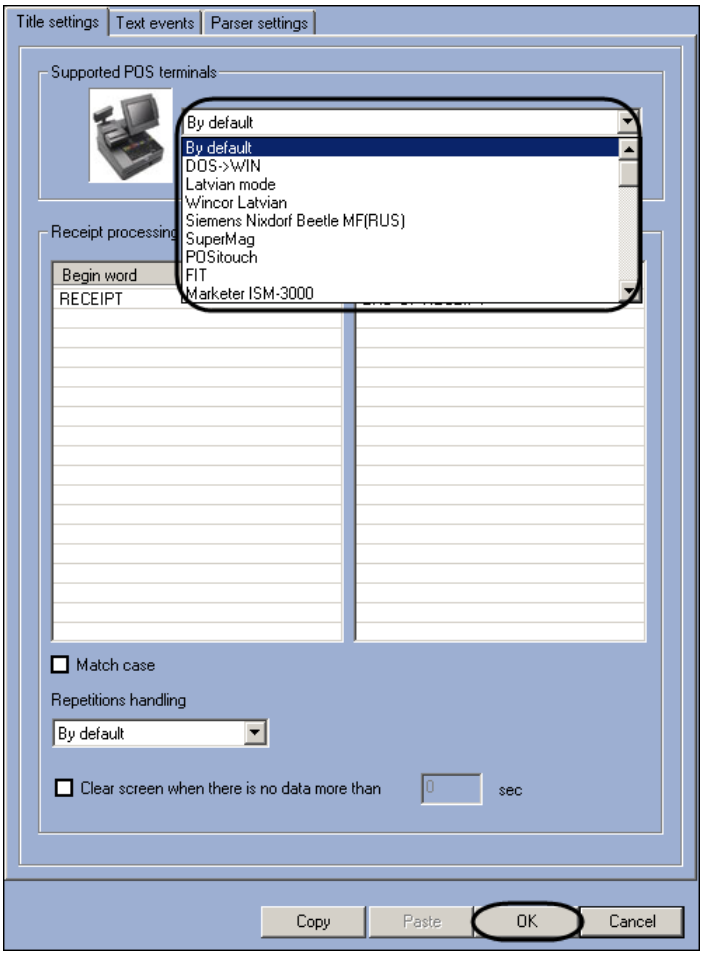


Figure 6.3—3 Selecting the POS-terminal type

3. Specify the parameters in the **Connection settings** group (Figure 6.3—4).

Note. .If a Serial-USB (Serial-Ethernet) adapter is used to connect the POS-terminal, select RS232 in the Type field (see the Auxiliary communication devices section).

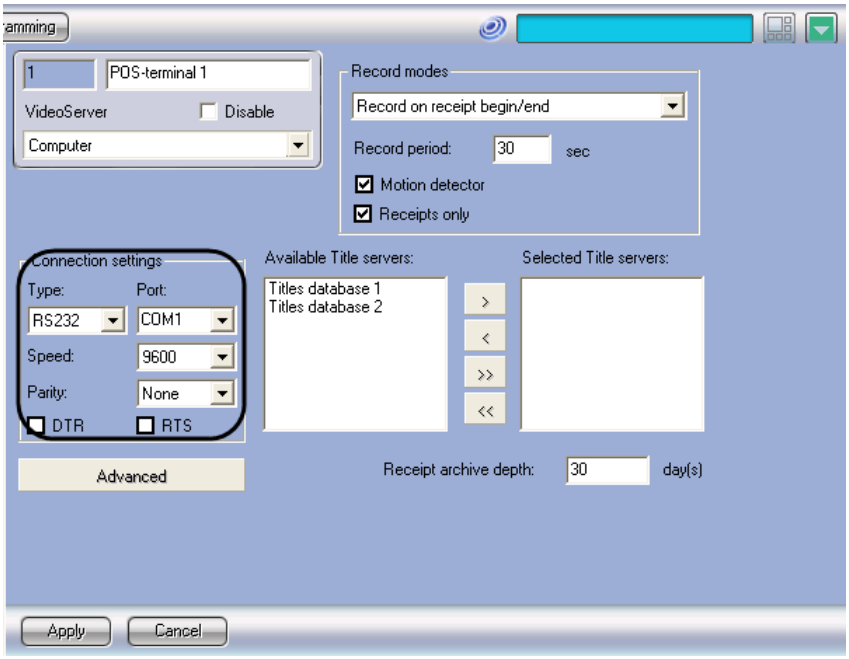


Figure 6.3—4 Connection settings

Note. To test the connection, use the HyperTerminal utility included in Windows (see the Testing the connection between the POS-server and the POS-terminal section).

4. Click **Apply** (Figure 6.3—5).

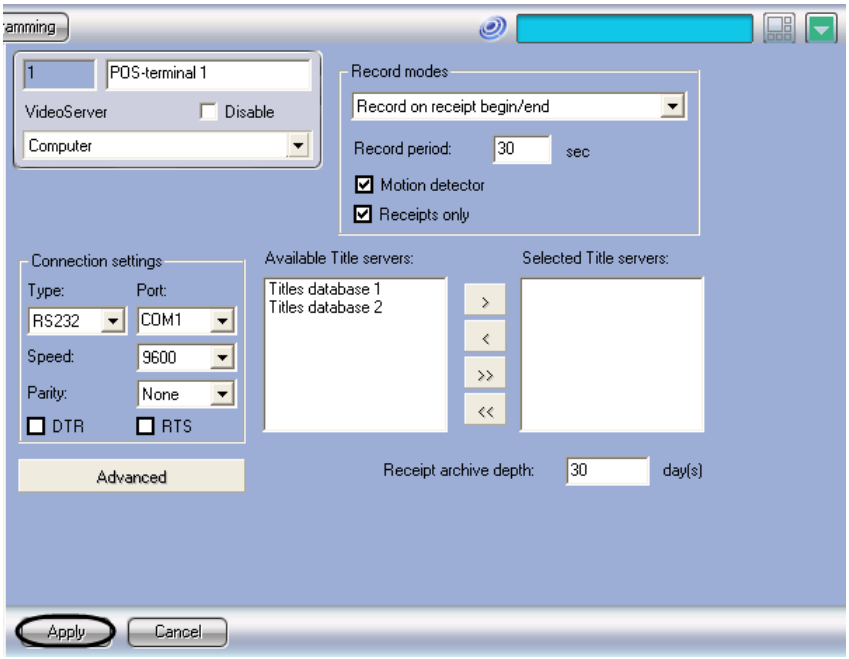


Figure 6.3—5 Saving the changes

The type of POS-terminal and its connection parameters are now set.

Warning! To enable re-connection to the POS-server in case of connection failure (including regular connection failures) set the line EnablePing parameter to 1 in the HKEY_LOCAL_MACHINE\SOFTWARE\ITV\Intellect\POS branch of the Windows registry.

Note. Handling the Windows registry is described in the Intellect Software Package: The Administrator's Guide document.

6.3.3 Selecting the titles databases

Select the titles databases, where the processed data should be taken from. To select the titles databases, do the following:

1. Select the desired elements in the **Available titles databases** list (Figure 6.3—6).

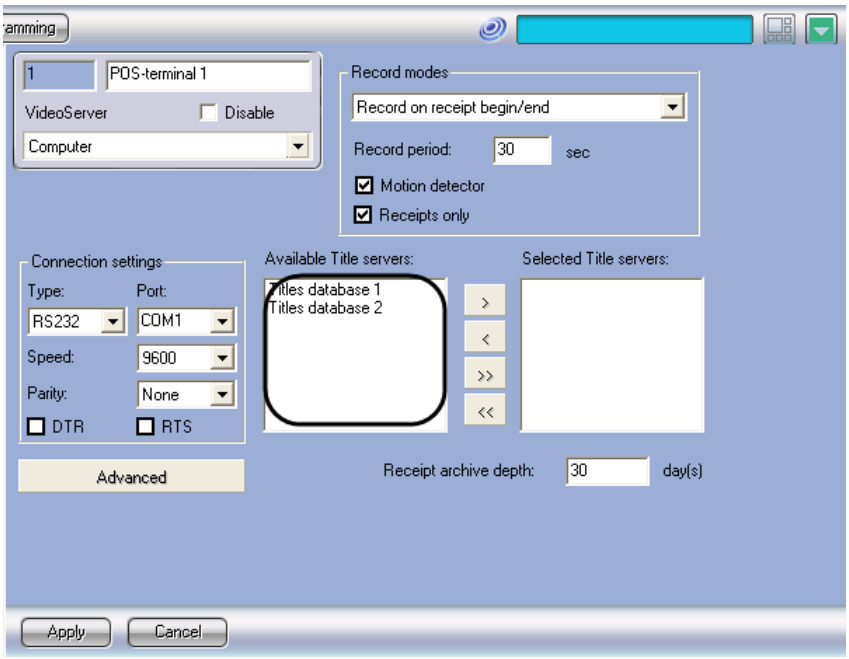


Figure 6.3—6 The list of available titles databases

2. Click the > button to move the selected titles databases, or the >> button to move all titles databases from the list of available titles databases to the **Selected titles databases** list (Figure 6.3—7).

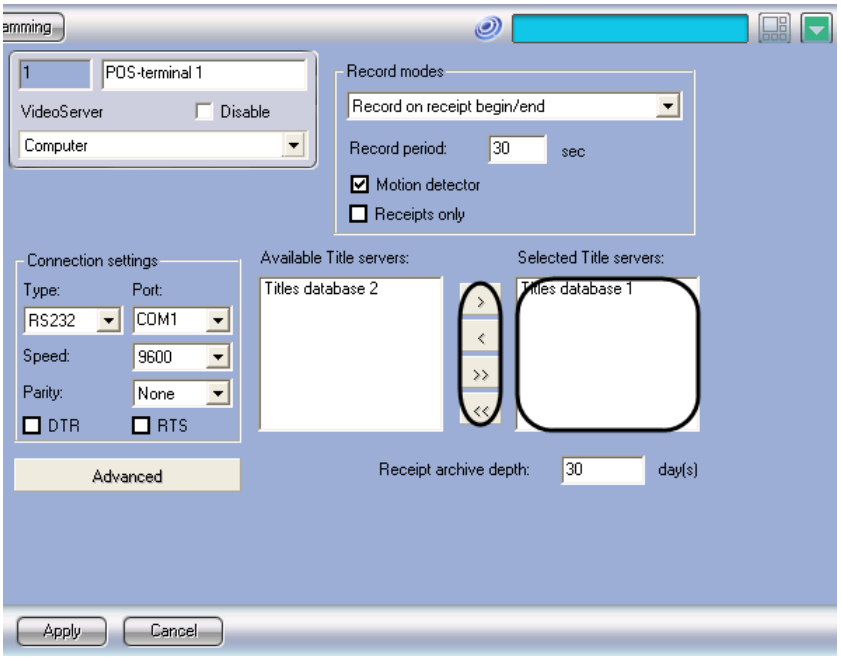


Figure 6.3—7 Selecting the titles databases

Note. Alternatively, the < *and* << *buttons are used to remove the selected or all titles databases from the Selected titles databases list.*

3. Click **Apply** (Figure 6.3—8).

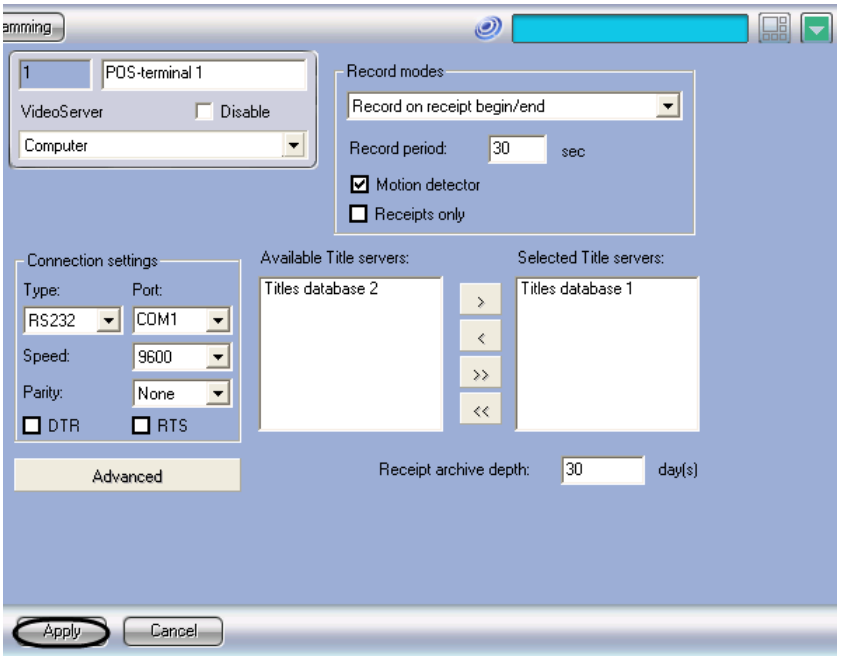


Figure 6.3—8 Saving the changes

The titles databases are now selected.

6.3.4 Specifying the receipt processing rules

The receipt processing rules define the beginning and end of a receipt. To specify the rules, do the following:

1. Click the **Advanced** button (Figure 6.3—9).

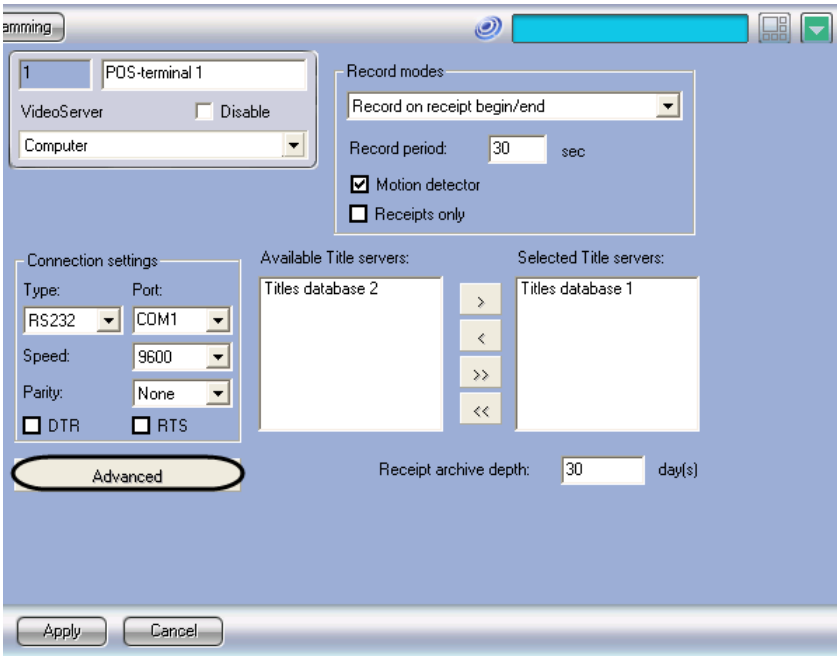


Figure 6.3—9 Opening the advanced settings of the POS-terminal object

2. Specify the string of characters (words) denoting the beginning of a receipt. Right-click the **Beginning word** column to open the drop-down menu, click **Add**, then enter the word in the dialog box that opens and click **OK** (Figure 6.3—10).

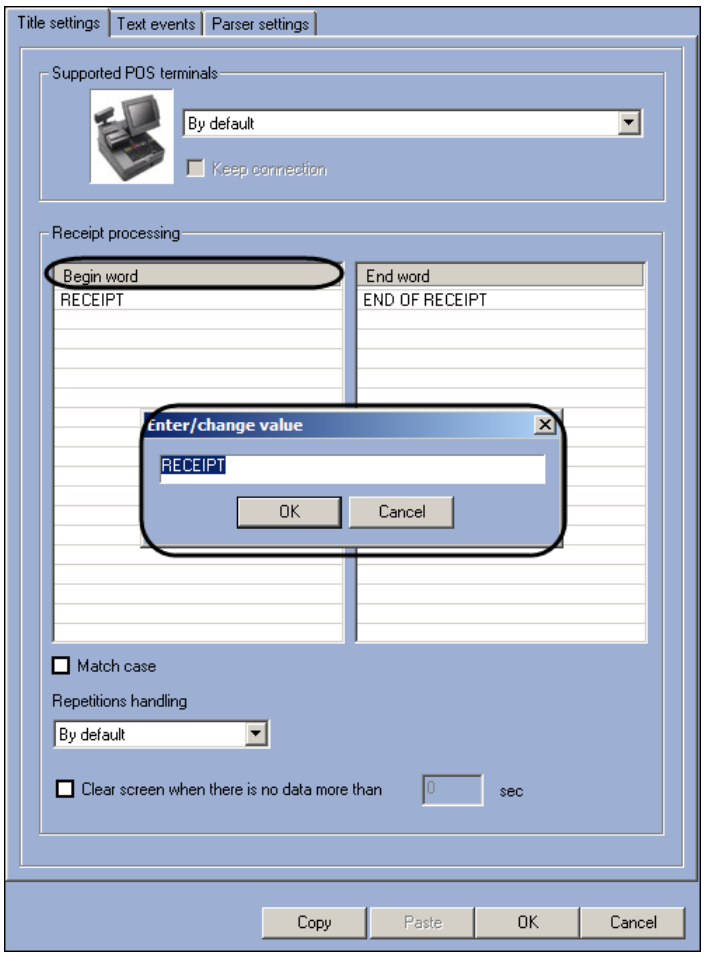


Figure 6.3—10 Specifying the beginning words for a receipt

3. Repeat step 2 for all words denoting the beginning of a receipt.

Note. To modify the words in the table, right-click a word to open the drop-down menu, or use the Copy or Paste buttons.

4. Specify the string of characters (words) denoting the end of a receipt. Right-click the **End word** column to open the drop-down menu, click **Add**, then enter the word in the dialog box that opens and click **OK** (Figure 6.3—11).

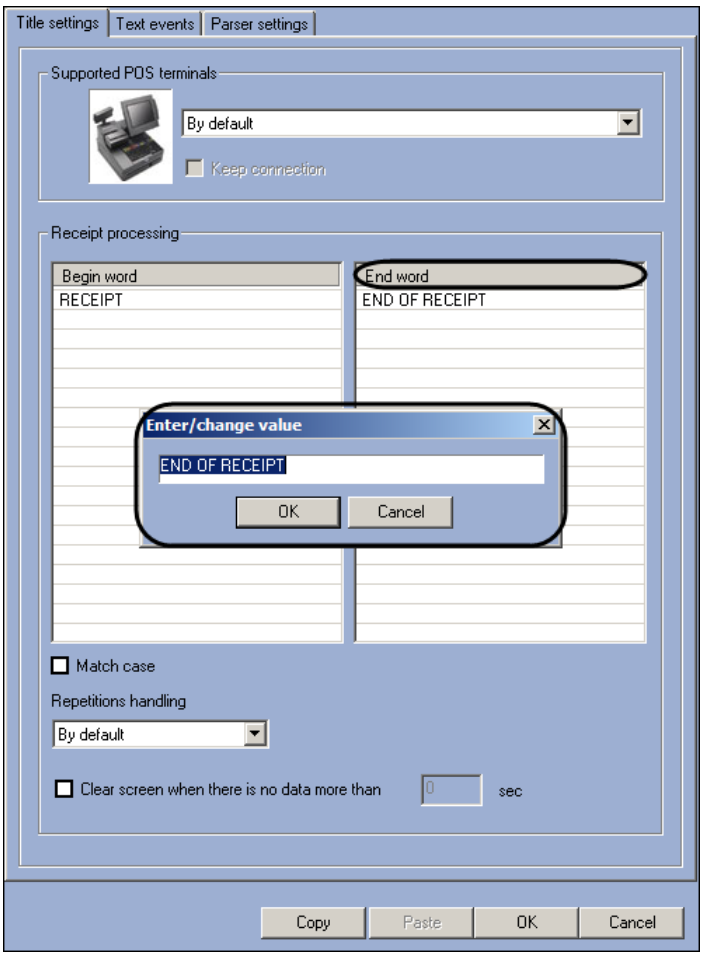


Figure 6.3—11 Specifying the end words for a receipt

5. Repeat step 4 for all words denoting the end of a receipt.

Note. To modify the words in the table, right-click a word to open the drop-down menu, or use the Copy or Paste buttons.

6. Check the **Match case** checkbox to make the beginning and end words case-sensitive (Figure 6.3—12).

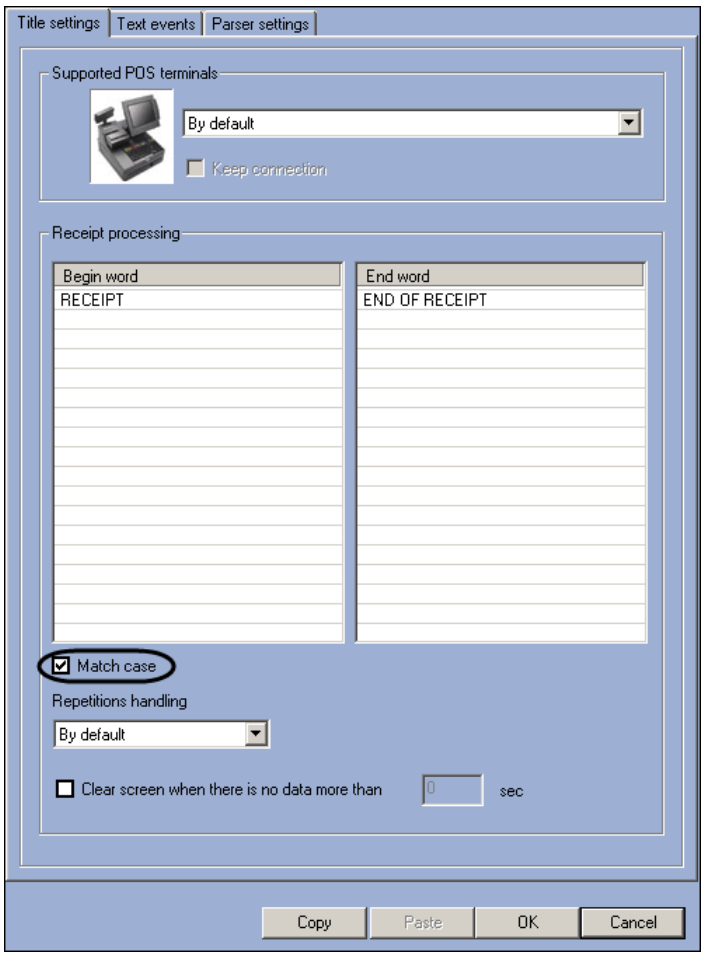


Figure 6.3—12 Enabling case-sensitive search

7. In the **Recognize next receipt** drop-down list, select the **only after the end word of current receipt** option to make the system ignore all subsequent receipt beginning words unless the end word of current receipt is received (Figure 6.3—13).

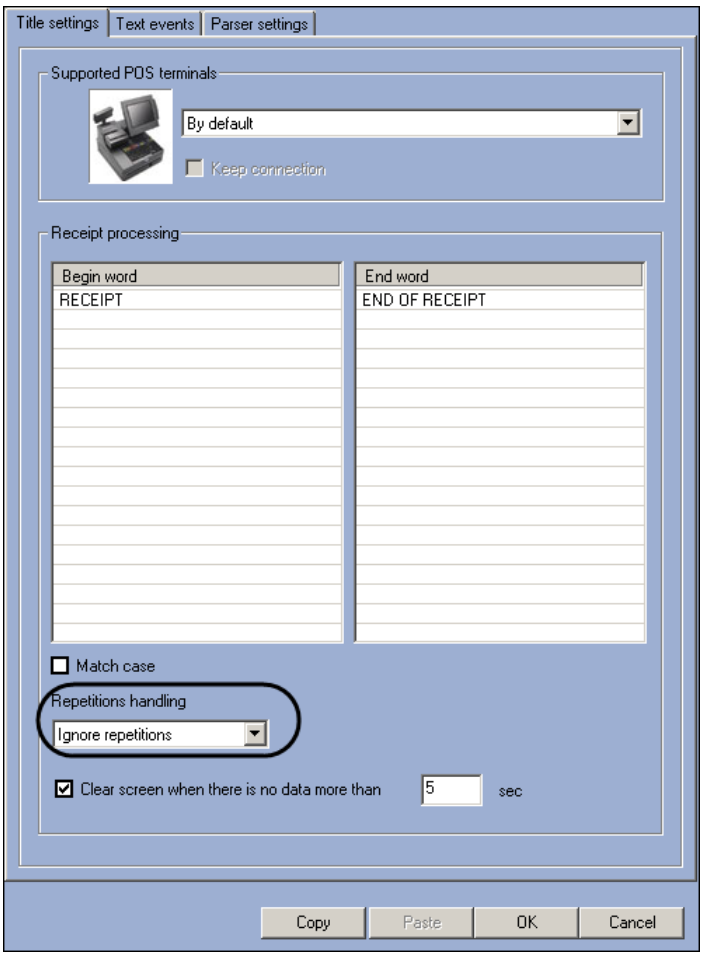


Figure 6.3—13 Options for recognition of the next receipt

Note. To recognize the receipts by the beginning word only while ignoring end words, select the on the beginning word of next receipt option.

8. To clear the titles display area after a certain amount of time if no data is received, check the **Clear screen when there is no data for more than** checkbox, and enter the waiting time (in seconds) in the text field next to it (Figure 6.3—14).

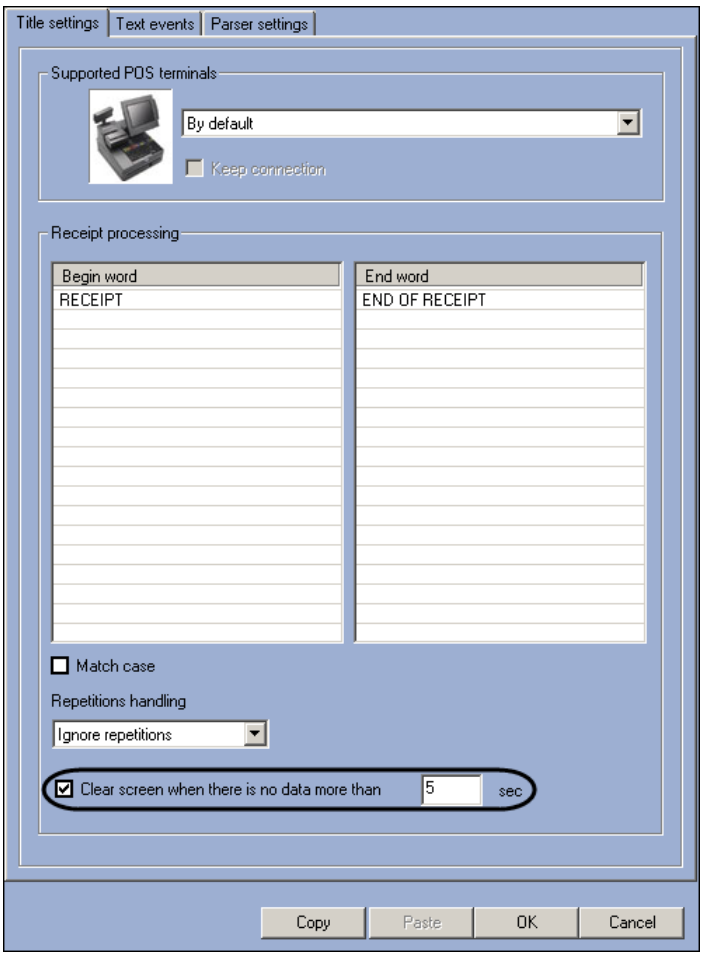


Figure 6.3—14 The option to clear the screen when no data is received

Click **OK** to close this dialog window, then **click** Apply in the **POS-terminal** object settings panel (Figure 6.3—15, Figure 6.3—16).

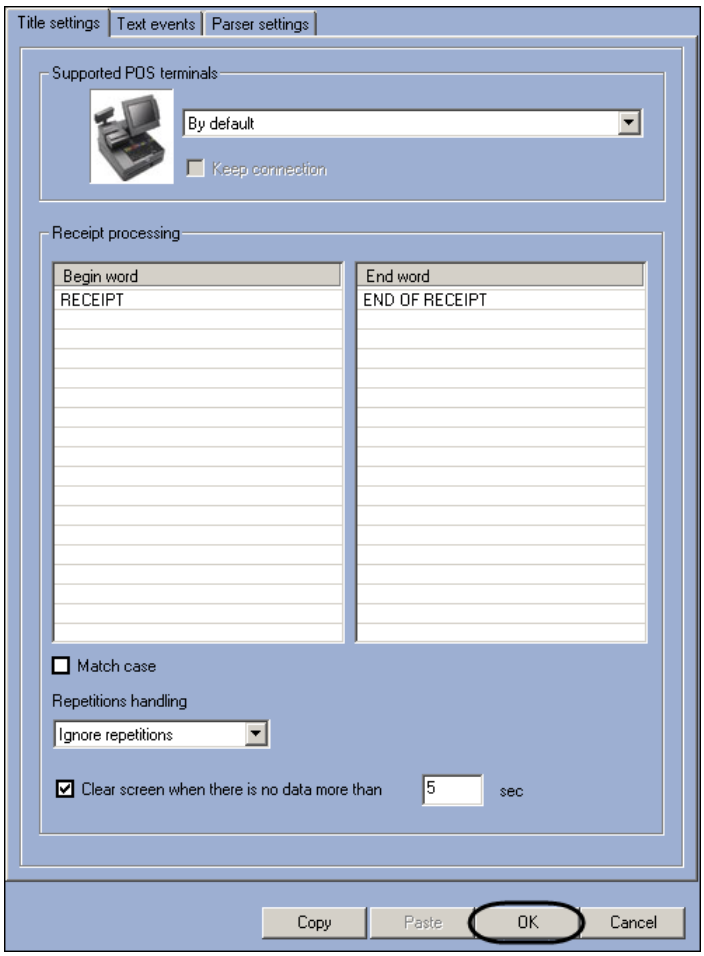


Figure 6.3—15 Closing the advanced settings window

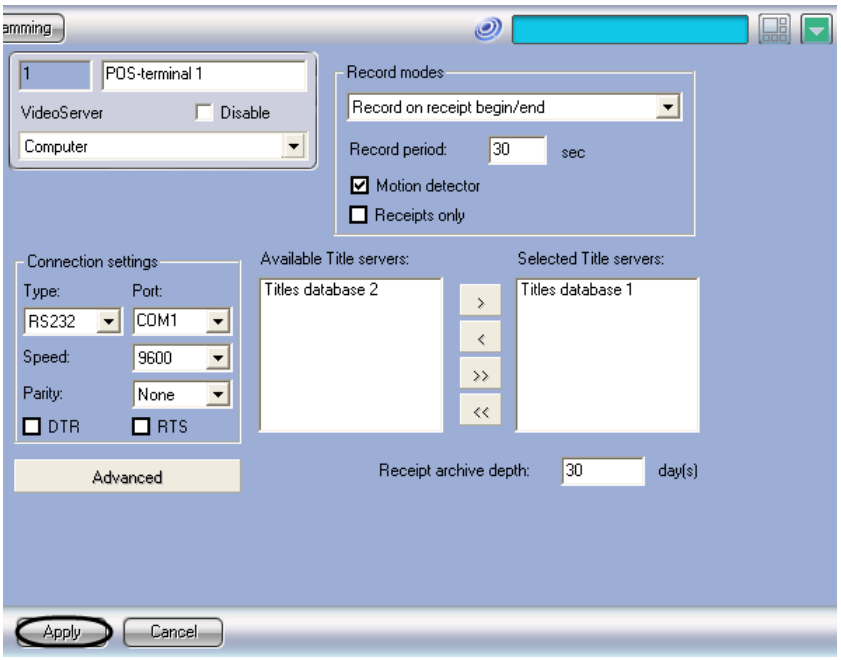


Figure 6.3—16 Saving the changes

The receipt processing rules are now specified.

6.3.5 Specifying the video recording parameters

Video recording includes the video image received from the camera overlaid with receipt data. To specify the video recording parameters, do the following:

1. Select the video recording mode in the **Recording mode** drop-down list (Figure 6.3—17). The following modes are available:
    1. Continuous recording - video is recorded continuously;
    2. Record on receipt beginning/end – video recording starts at the beginning of a receipt and stops at the end;
    3. Save one frame per receipt –the video recording contains one video frame for each operation in the receipt.

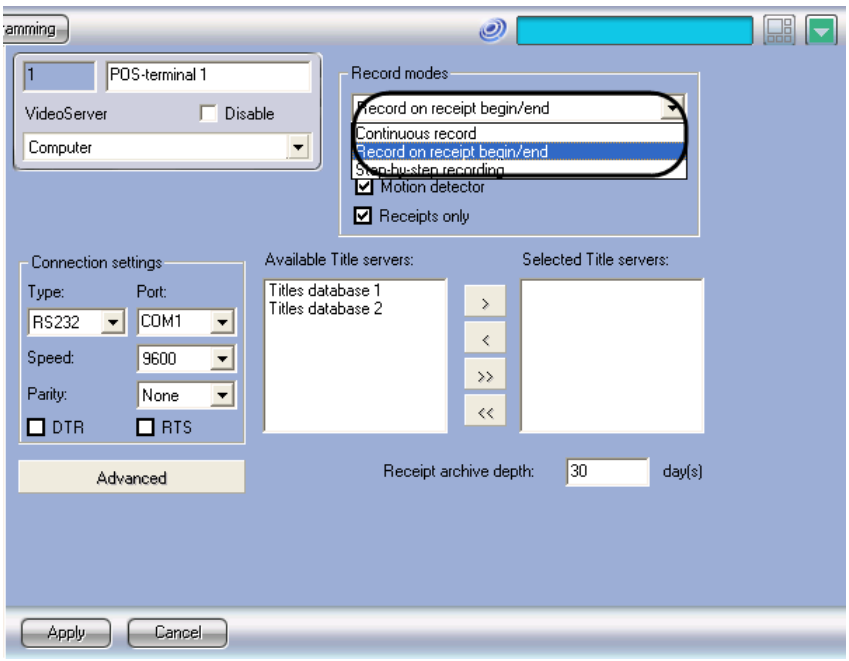


Figure 6.3—17 Selecting the recording mode

2. If the **Record on receipt beginning/end** mode is selected, enter the time interval (sec) of post-recording after the end of the recording, in the **Post-recording interval** field (Figure 6.3—18).

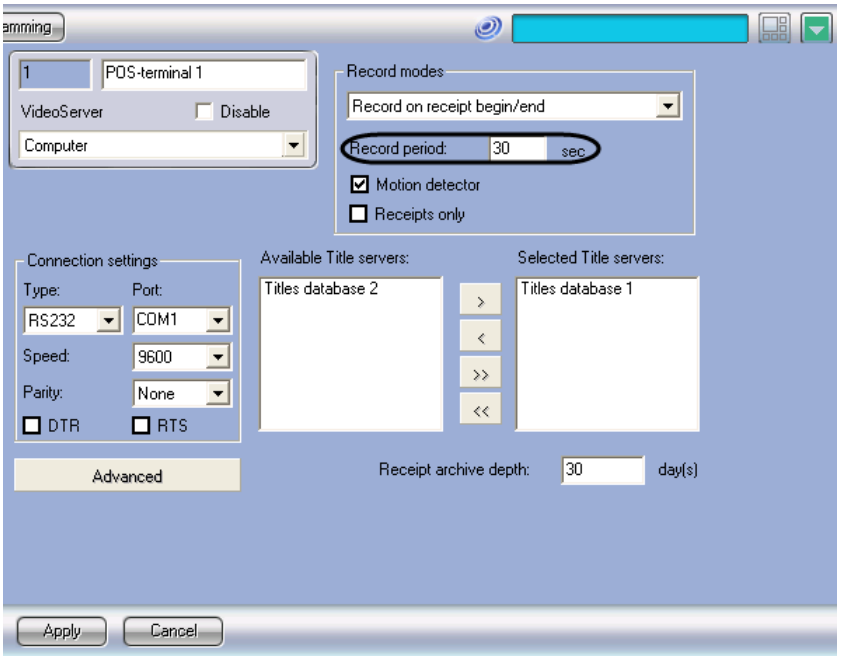


Figure 6.3—18 Specifying the post-recording interval

3. Check the **Receipts only** checkbox to include into the titles database the receipt data between the beginning and end word only (Figure 6.3—19).

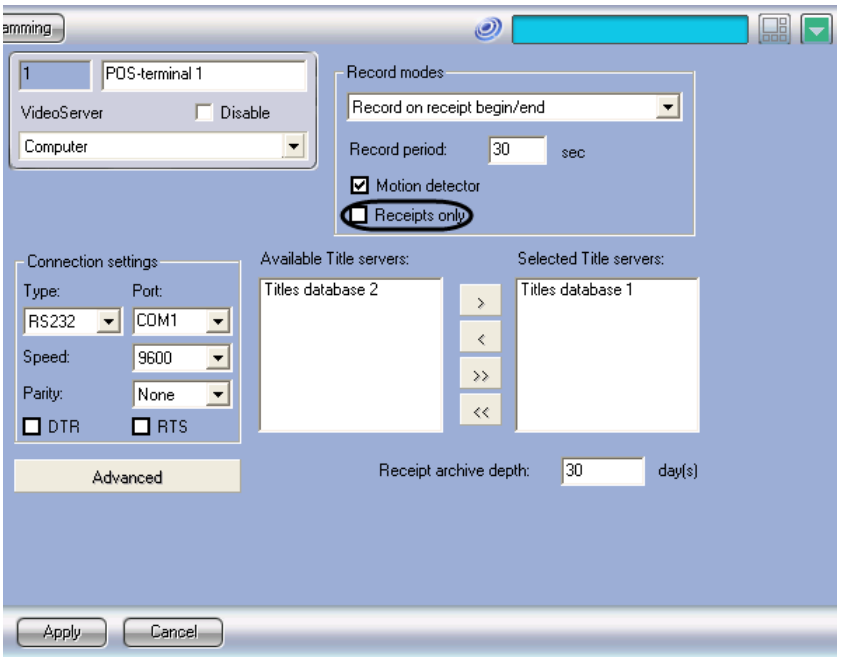


Figure 6.3—19 The Receipts only option

4. Check the **Motion detector** checkbox to enable the video recording upon a motion detector alarm (Figure 6.3—20).

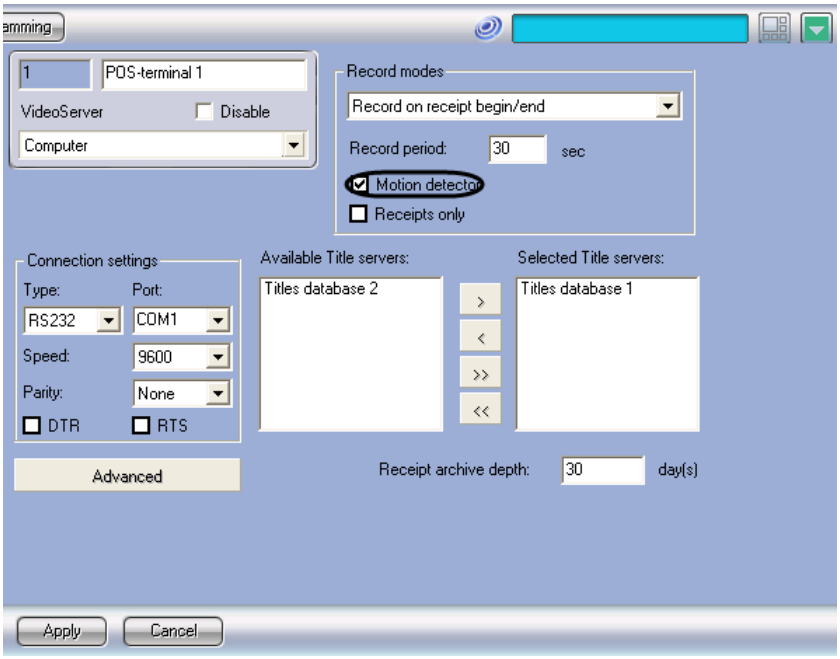


Figure 6.3—20 The Motion detector option

Note. It does not make sense to enable recording upon motion detector, if the Continuous recording mode is selected.

Warning! If the recording upon motion detector is enabled, uncheck the Record alarms checkbox (Figure 6.3—21) in all cameras related to the titles databases selected in this POS-terminal (see the Selecting the titles databases section).Record alarms option in cameras settings is disabled automatically when Motion detector option on the POS-terminal settings panel is applied.

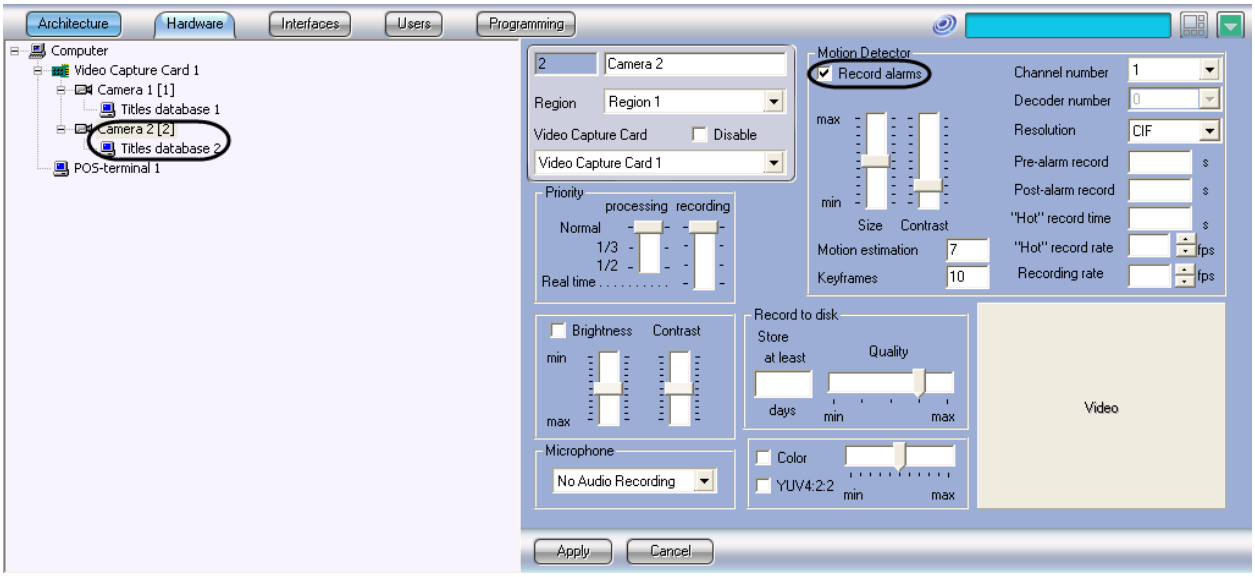


Figure 6.3—21 The Record alarms option of the Camera object

5. Click **Apply** (Figure 6.3—22).

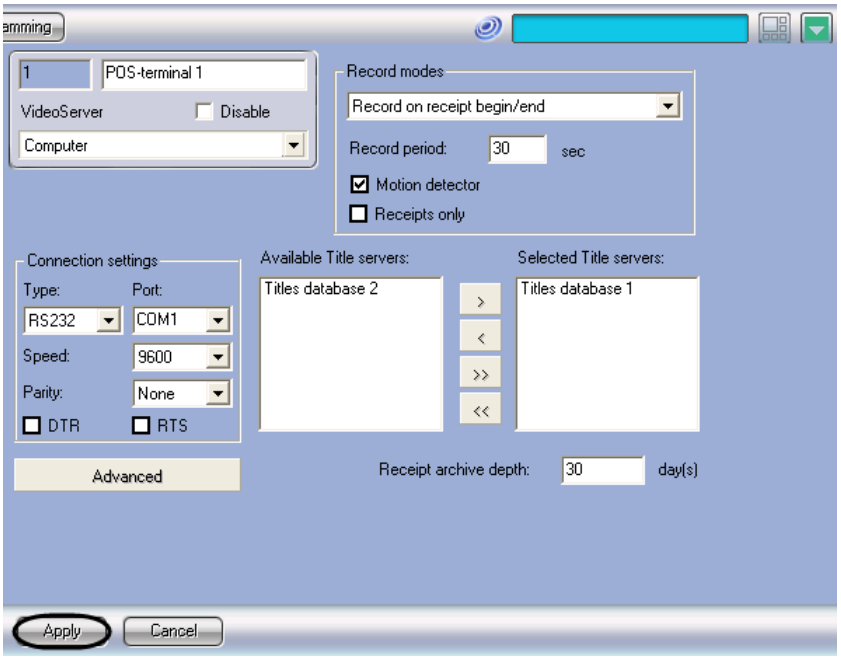


Figure 6.3—22 Saving the changes

The video recording parameters are now set.

Warning! When the Receipts only checkbox is activated, but regular expressions of check's beginning and end are not set, recording to the Titles database is not performed.

6.3.6 Specifying the receipts archive size

The receipts archive size limits the size of the receipts database; old receipts are deleted automatically. To set the receipts archive size, do the following:

1. In the **Receipts archive size** field, enter the number of days to store the receipts (Figure 6.3—23).

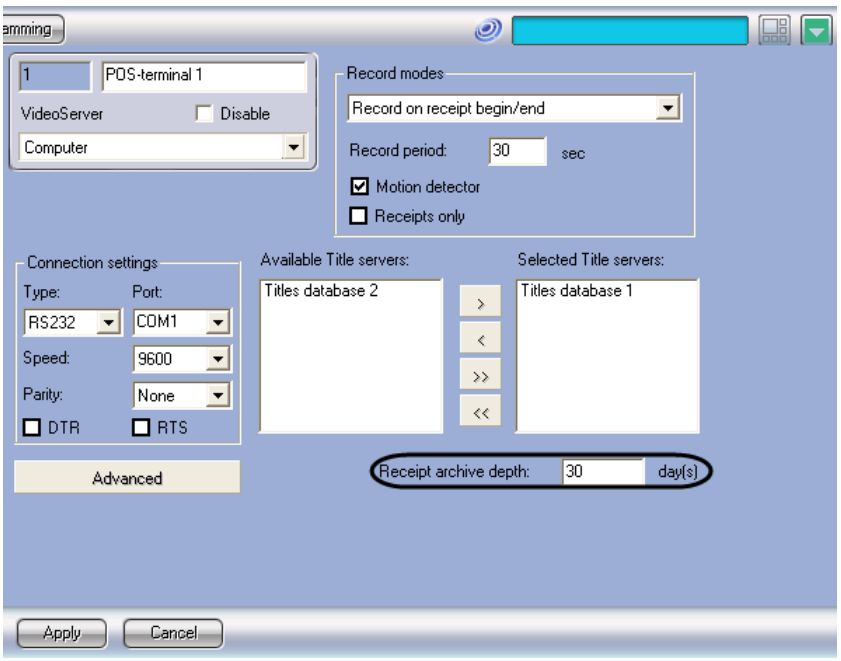


Figure 6.3—23 The receipts archive size

2. Click **Apply** (Figure 6.3—24).

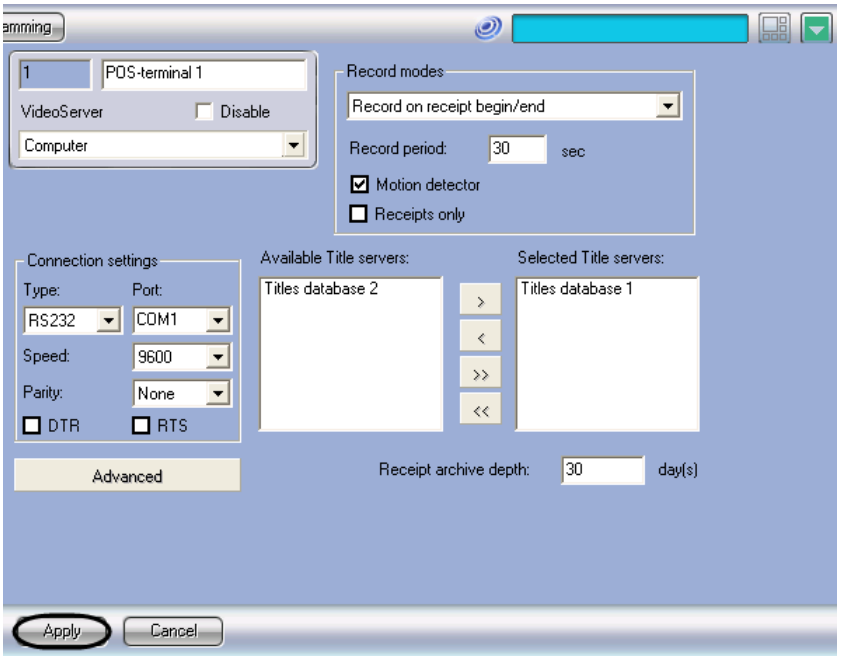


Figure 6.3—24 Saving the changes

The receipts archive size is now set.

6.3.7 For custom system setup (optional)

Certain system events can be set to occur upon finding certain words in receipts. This is an optional function in addition to the system setup.

To specify the text events rules, do the following:

1. Click the **Advanced** button and select the **Text Events** tab in the dialog window that opens (Figure 6.3—25, Figure 6.3—26).

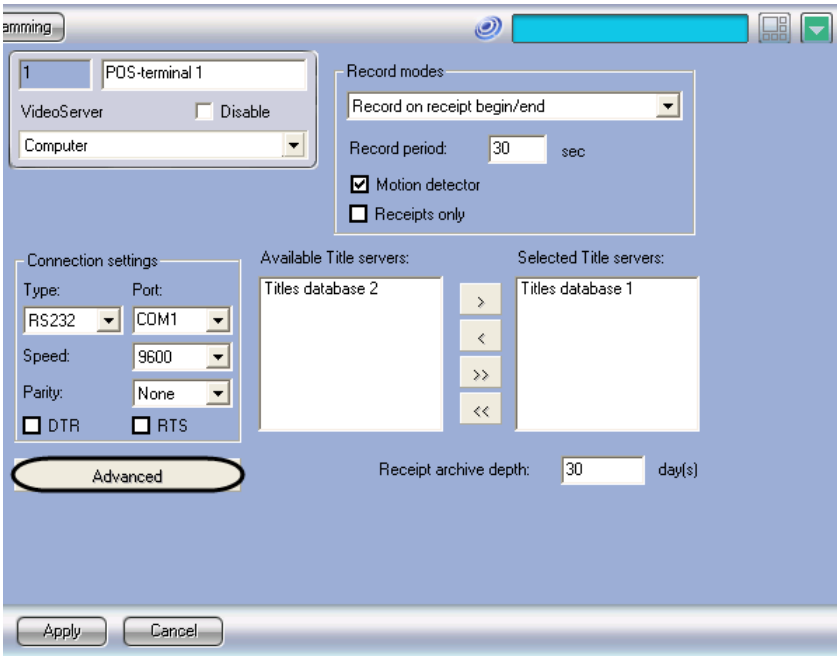


Figure 6.3—25 Opening the advanced settings of the POS-terminal object

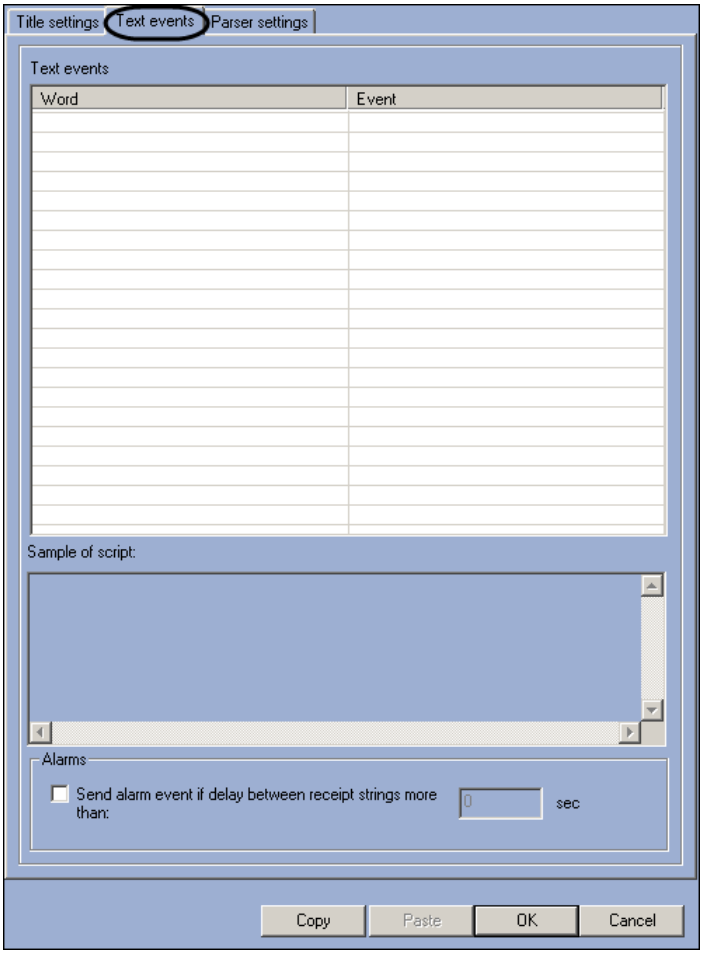


Figure 6.3—26 The Text events tab

2. Right-click an empty cell in the table and select **Add** in the drop-down menu.
3. In the **Word** field of the **Text Events** dialog box, enter the word which will activate an event (Figure 6.3—27).

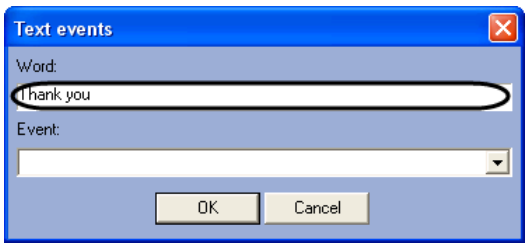


Figure 6.3—27 Entering a word

4. In the **Event** drop-down list, select the event to be activated (Figure 6.3—28).

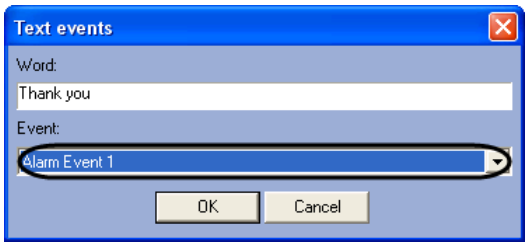


Figure 6.3—28 Selecting an event

To set up the events, use the configuration setup utility (**ddi.exe**) located in the **Tools** folder of the Intellect program folder. Using the **ddi.exe** utility is described in the *Intellect Software Package: The Administrator's Guide* document.

5. Click **OK** to save the values and close the **Text events** window (Figure 6.3—29).



Figure 6.3—29 Closing the Text events window

6. Repeat steps 2 to 5 for all words and events.

Note.

To modify the words in the table, right-click a word or event to open the drop-down menu, or use the Copy or Paste buttons.

Click a line in the table to see the script processing the word/event pair in the Script field (Figure 6.3—30).

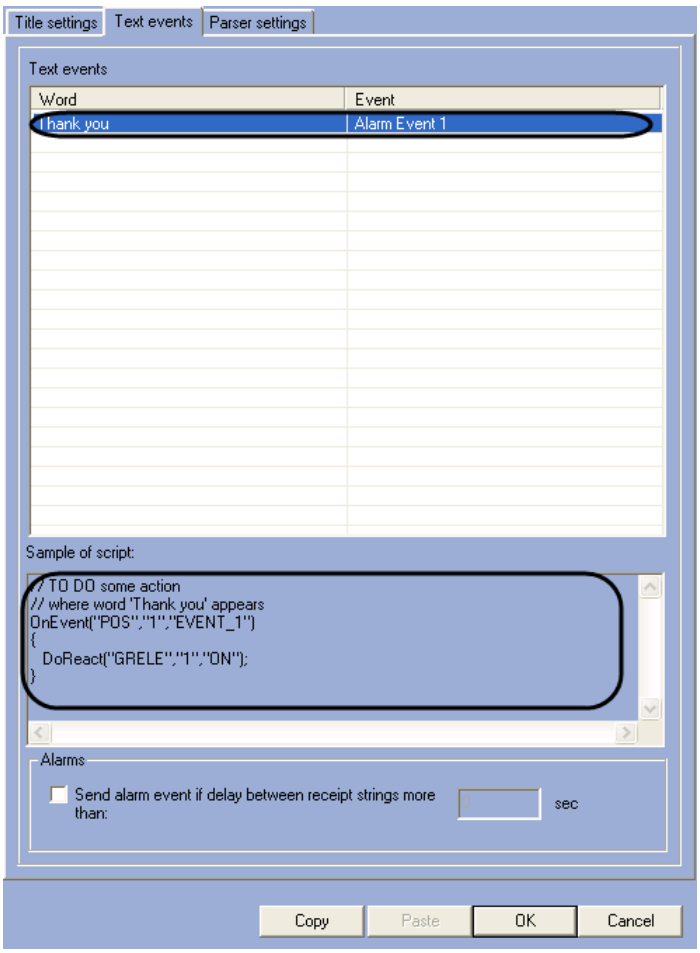


Figure 6.3—30 The script processing the word/event rule

7. To enable generating an alarm if receipt line processing is delayed for more than a certain time interval, check the **Send alarm if delay between receipt lines is more than** checkbox and enter the delay (in seconds) in the field next to it (Figure 6.3—31).

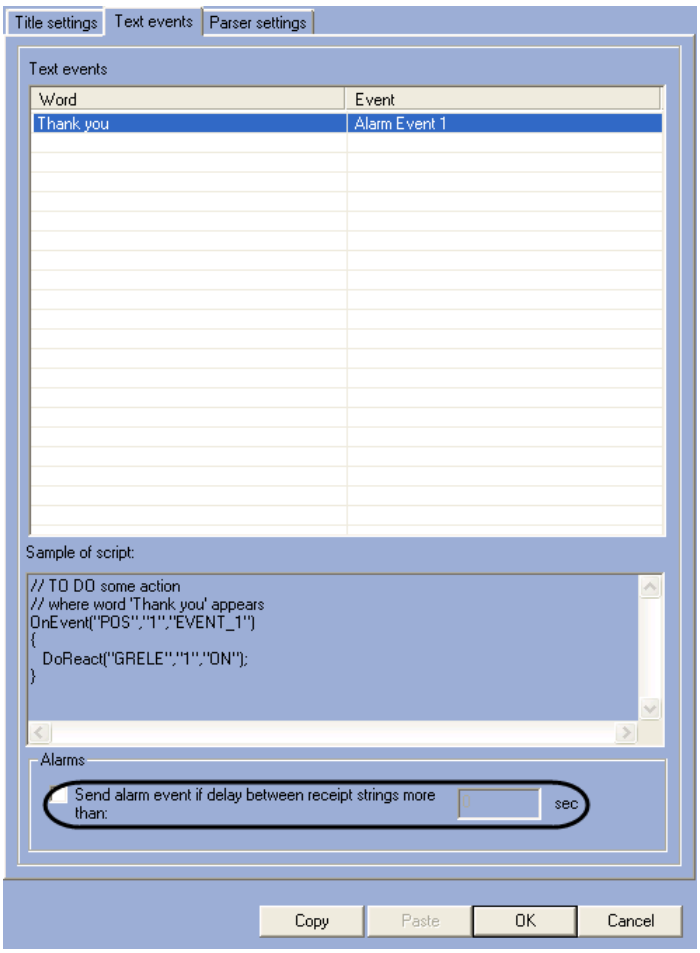


Figure 6.3—31 The Send alarm option

8. Click **OK** to close this dialog window, then click **Apply** in the POS-terminal object settings panel (Figure 6.3—32, Figure 6.3—33).

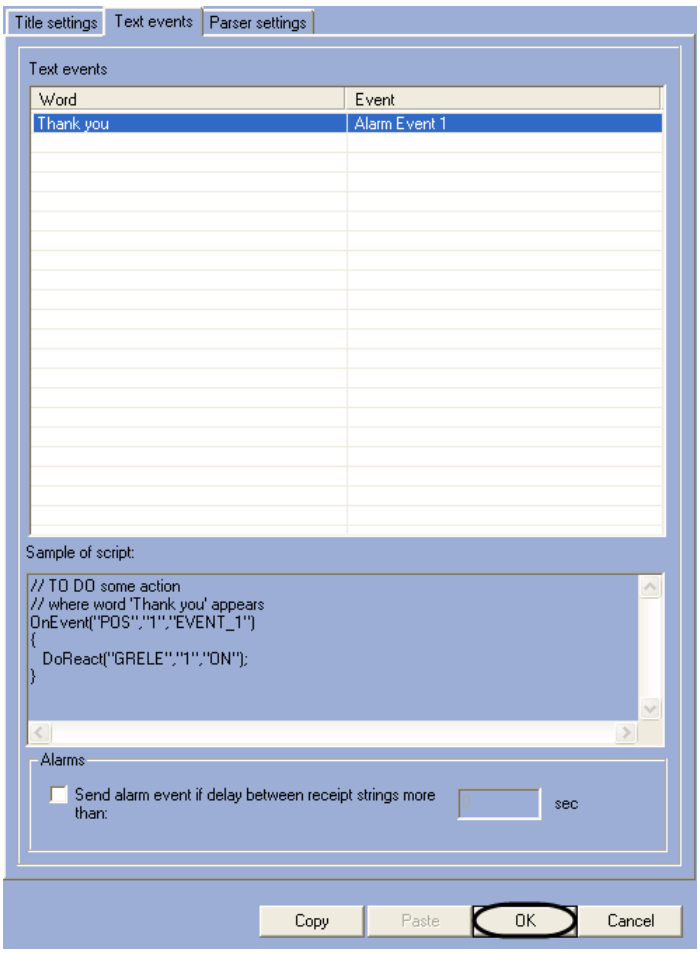


Figure 6.3—32 Closing the advanced settings window

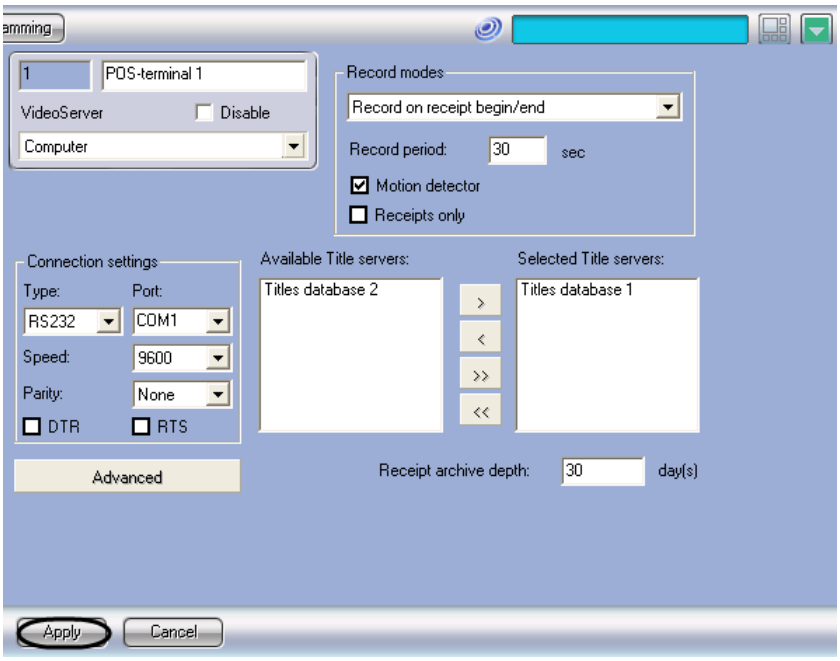


Figure 6.3—33 Saving the changes

The text events rules are now set.

6.3.8 Setting up the parser (optional)

6.3.8.1 Parser types

The data is added to the receipts database using the parser which processes the receipts. This is an optional function in addition to the system setup.

Note. The user can create structured queries on the receipts database (see the Editing the receipts database queries (optional) section).

Depending on the protocol of data transfer from the POS-terminal to the POS-server, the database can be filled up

1. using the **xml_titles.txt** parser;
2. using a **.prl** parser.

The xml_titles.txt parser specifies the rules for adding data to the receipts database if the data is transferred from the POS-terminal to the POS-server using the XML protocol. The parser contents depend on the structure of the XML data. To use the xml_titles.txt parser, the parser file should be located in the **<POS-Intellect program folder>\Modules\Pos** folder.

If the POS-terminals connected to the POS-server have the same XML data structure, common xml_titles.txt file can be used. If the POS-terminals connected to the POS-server have different XML data structures, a separate parser should be created for each terminal. The parsers should have files of the **xml_titles_N.txt** form, where N is the number of the corresponding POS-terminal object.

The .prl parser specifies the rules for adding data to the receipts database if the data is transferred from the POS-terminal to the POS-server using a protocol other than XML. The parser contents depends on the POS-terminal data structure. To use a .prl parser, its file should be imported into the system.

6.3.8.2 Import of .prl parser

To import a .prl parser, do the following:

1. Click the **Advanced** button and select the **Parser settings** tab in the window that opens (Figure 6.3—34, Figure 6.3—35).

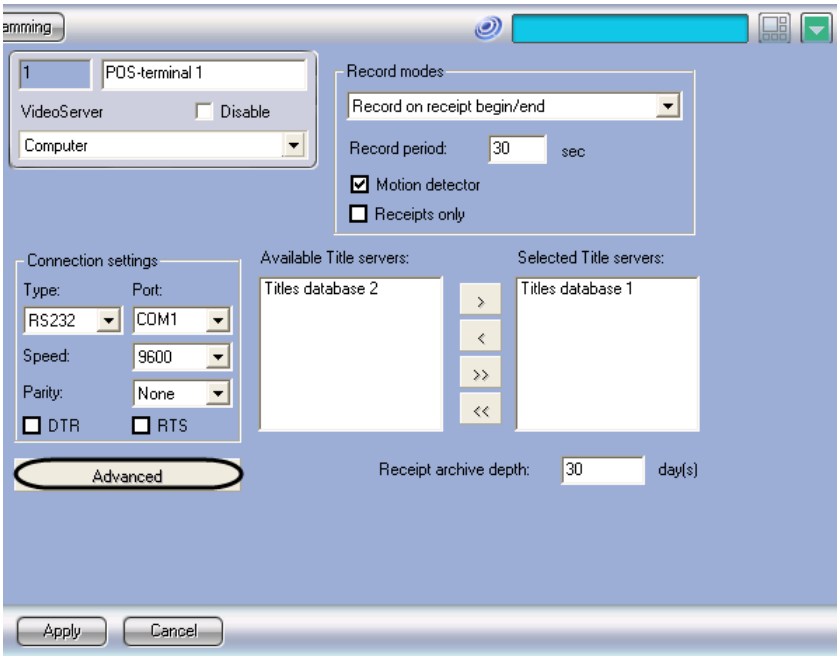


Figure 6.3—34 Opening the advanced settings of the POS-terminal object

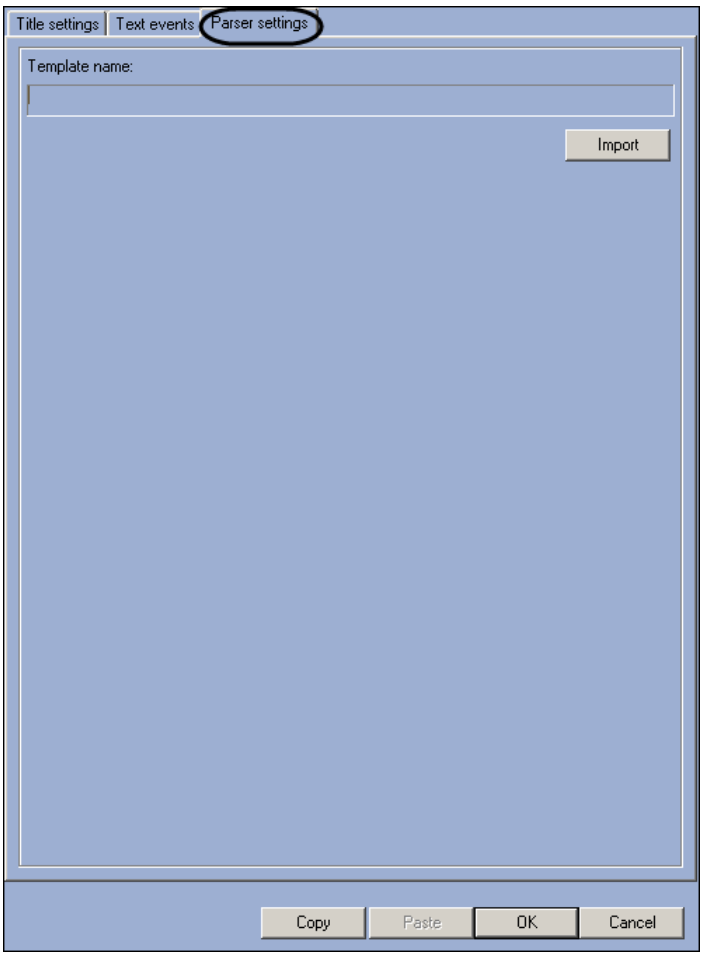


Figure 6.3—35 The Parser settings tab

2. Click the **Import** button and select the parser file in the standard Windows file open dialog box (Figure 6.3—36, Figure 6.3—37).

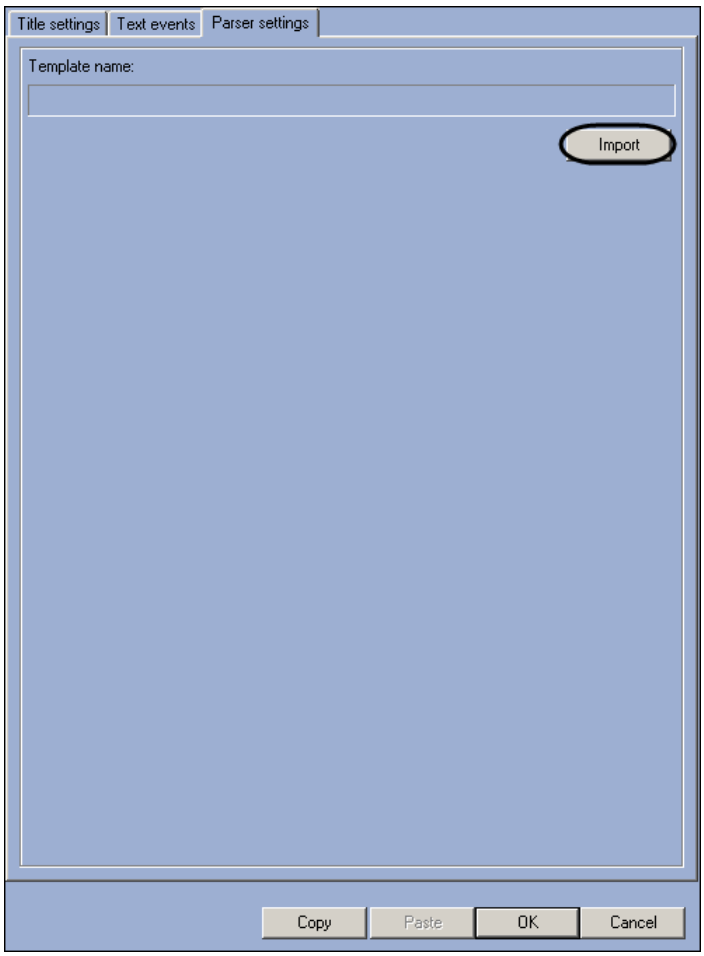


Figure 6.3—36 Importing the parser settings

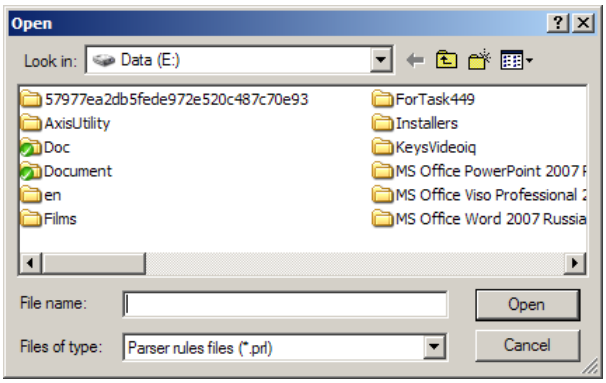


Figure 6.3—37 The standard Windows file open dialog box

3. In case of successful import, the name of the template is displayed in the **Template name** field (Figure 6.3—38).

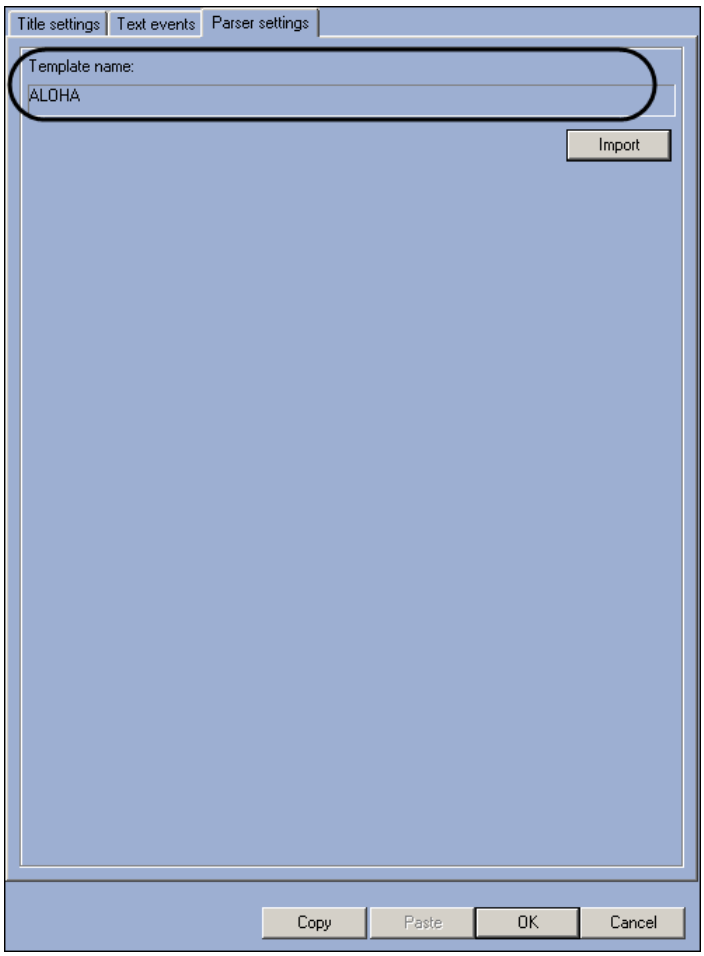


Figure 6.3—38 Successful import of parser settings

4. Click **OK** to close this dialog window, then click **Apply** in the **POS-terminal** object settings panel (Figure 6.3—39, Figure 6.3—40).

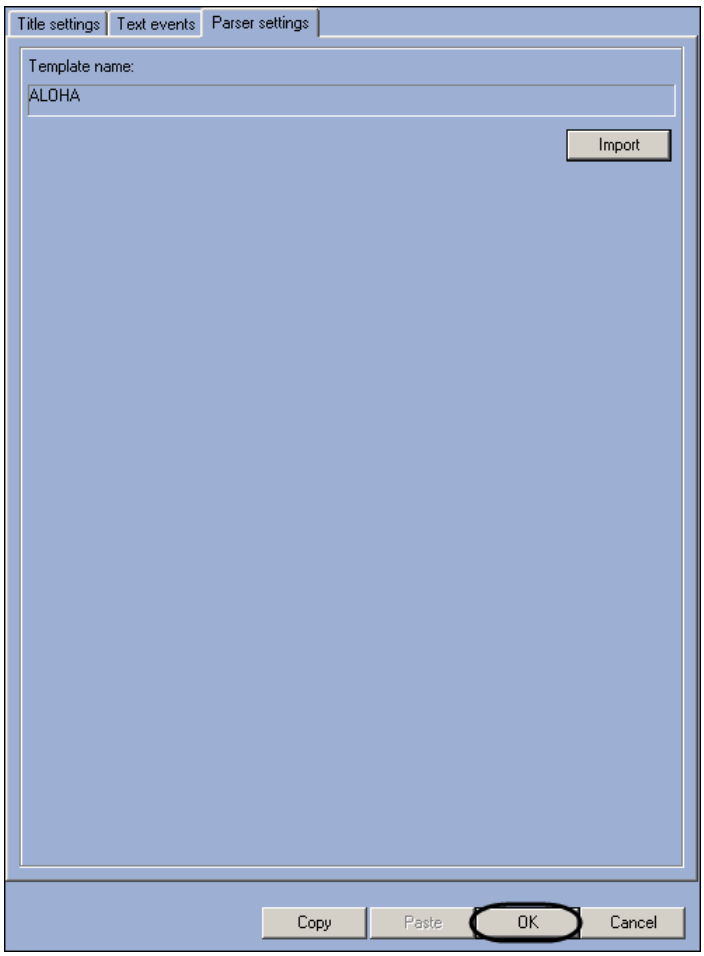


Figure 6.3—39 Closing the advanced settings window

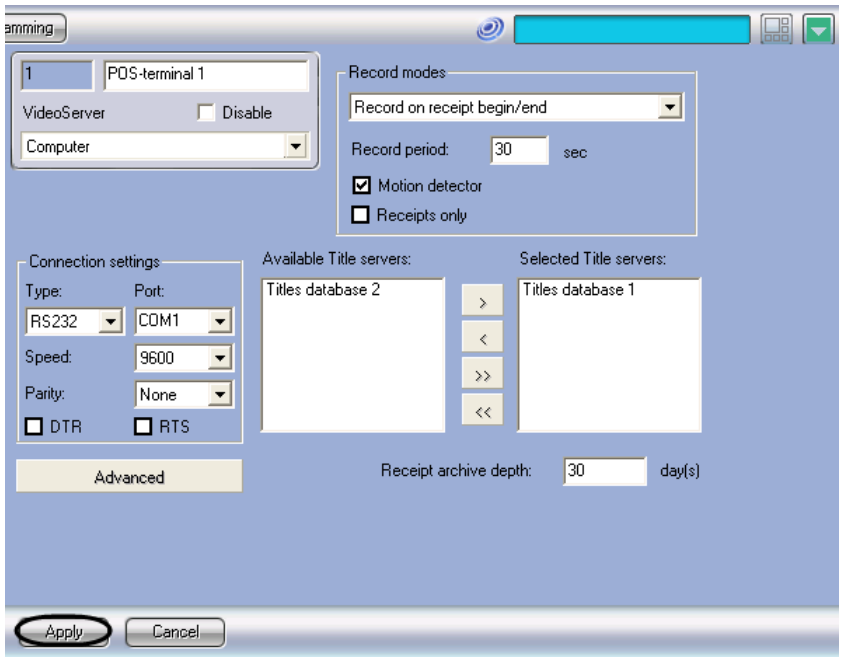


Figure 6.3—40 Saving the changes

The .prl parser has been imported.

6.3.8.3 Editing the .prl parser

To edit the.prl parser follow two stages:

1. Enable the displaying of edit parser panel
2. Set the rules of receipts structuring on the settings panel

To the Enable the displaying if edit parser panel do the following steps:

1. Run the utility «Extended settings» tweaki.exe from the Start menu OS Windows: «Start» -> «Programs» -> «Intellect» -> «Tools» -> «Tweaking utility». Intellect tweaker dialog window will open in result.

Note. The utility can also be run from «Tools» folder of POS-Intellect install catalog: «<POS-Intellect installation directory>\Tools\Tweaki.exe. Detailed description of work with tweaki.exe utility is given in the documentation «Intellect software: Administrator guide»

2. Go to the settings panel of «POS» section dialog window «Intellect tweaker» (Figure 6.3—41)

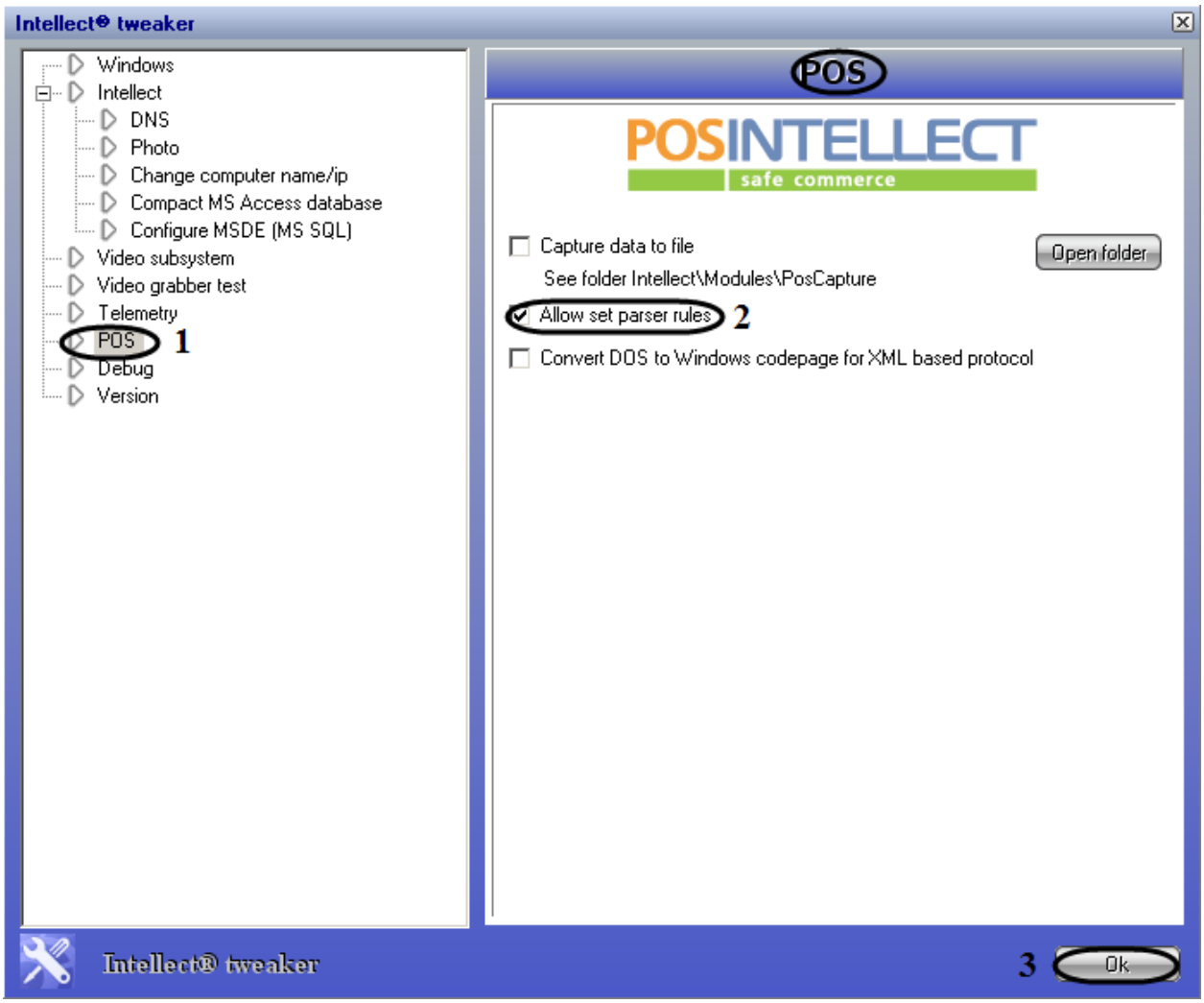


Figure 6.3—41 Settings panel of tweaki.exe section

3. Set the checkbox «Allow set parser rules» to display edit parser panel(Figure 6.3—41, 2)
4. Click Ok to save the changes and quit tweaki.exe utility (Figure 6.3—41, 3)
5. Run the POS-Intellect software and then go to the settings panel of the required POS-terminal object (Figure 6.3—42)

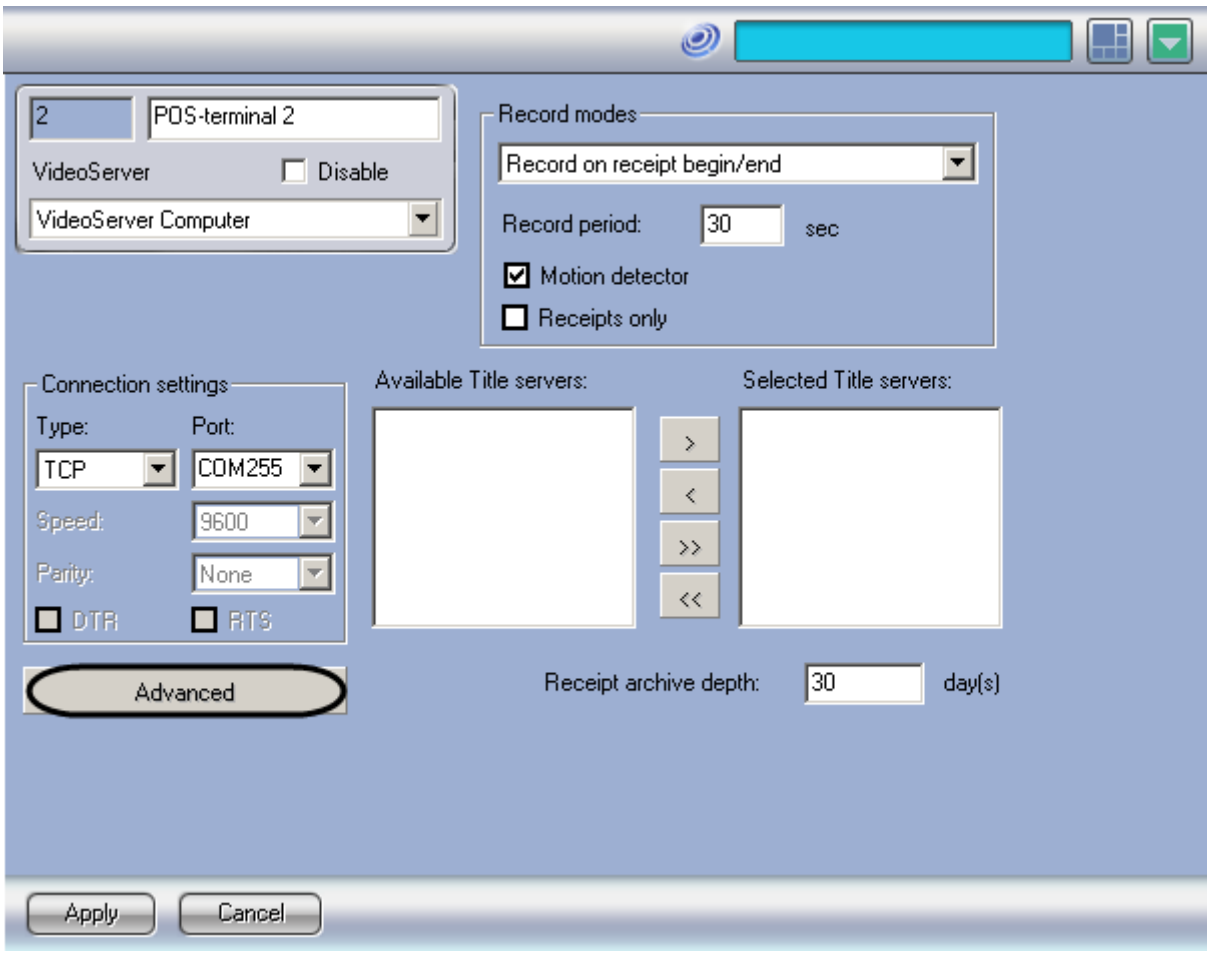


Figure 6.3—42 Access to additional settings of POS-terminal object

6. Click Advanced button and select Parser settings in the appeared dialog window (Figure 6.3—42, Figure 6.3—43).

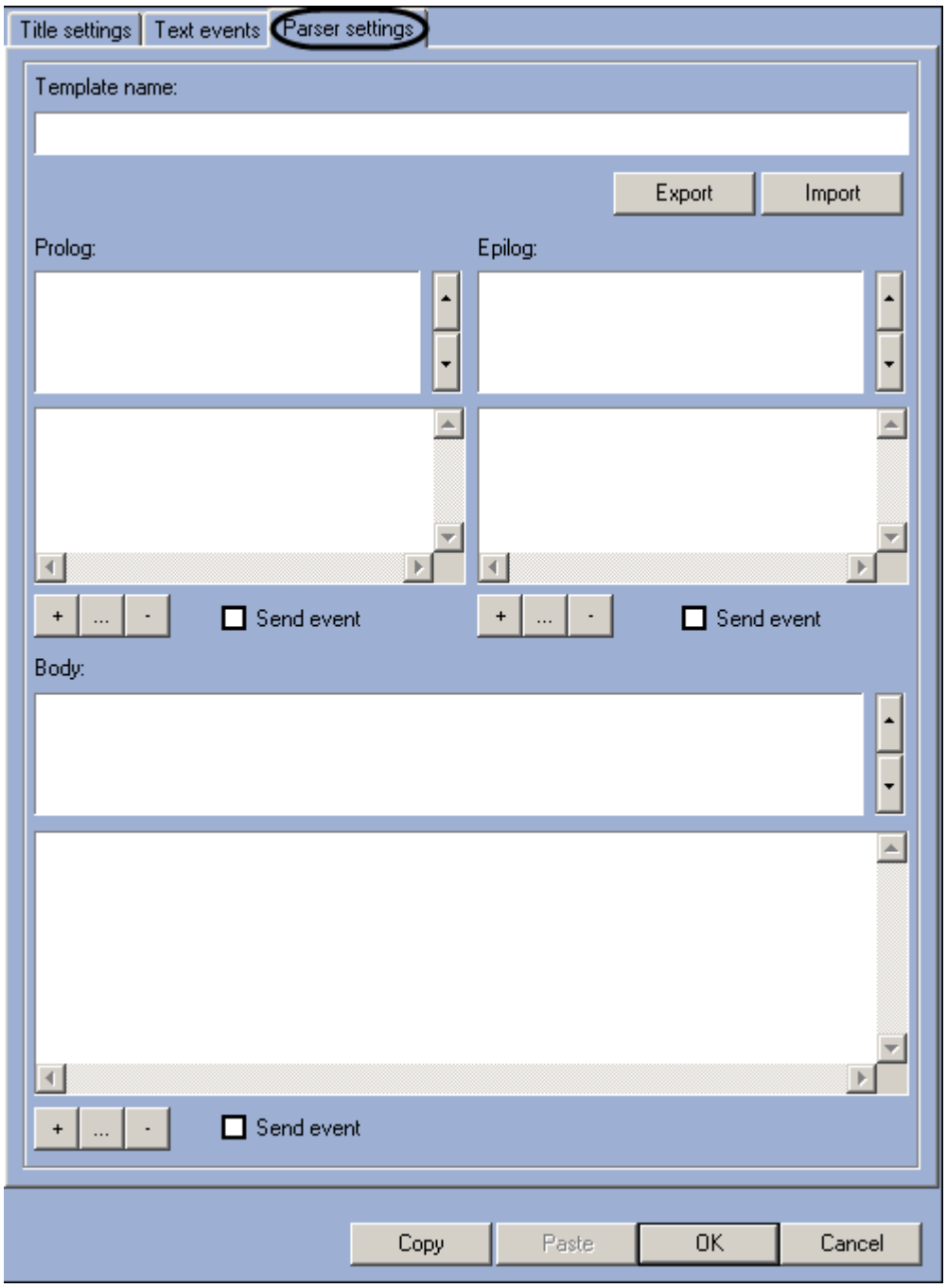


Figure 6.3—43 Parser settings tab

7. Parser settings tab will be displayed in result (Figure 6.3—43)

Displaying the Parser settings tab is completed.

Parser settings panel may be used both for editing and creating the parser. Settings group on the on the parser settings panel are shown in Figure 6.3—44.

Note. Preliminary import with the help of Import button is necessary to edit the parser. Parser import order is identical to that one, described in .prl parser import.

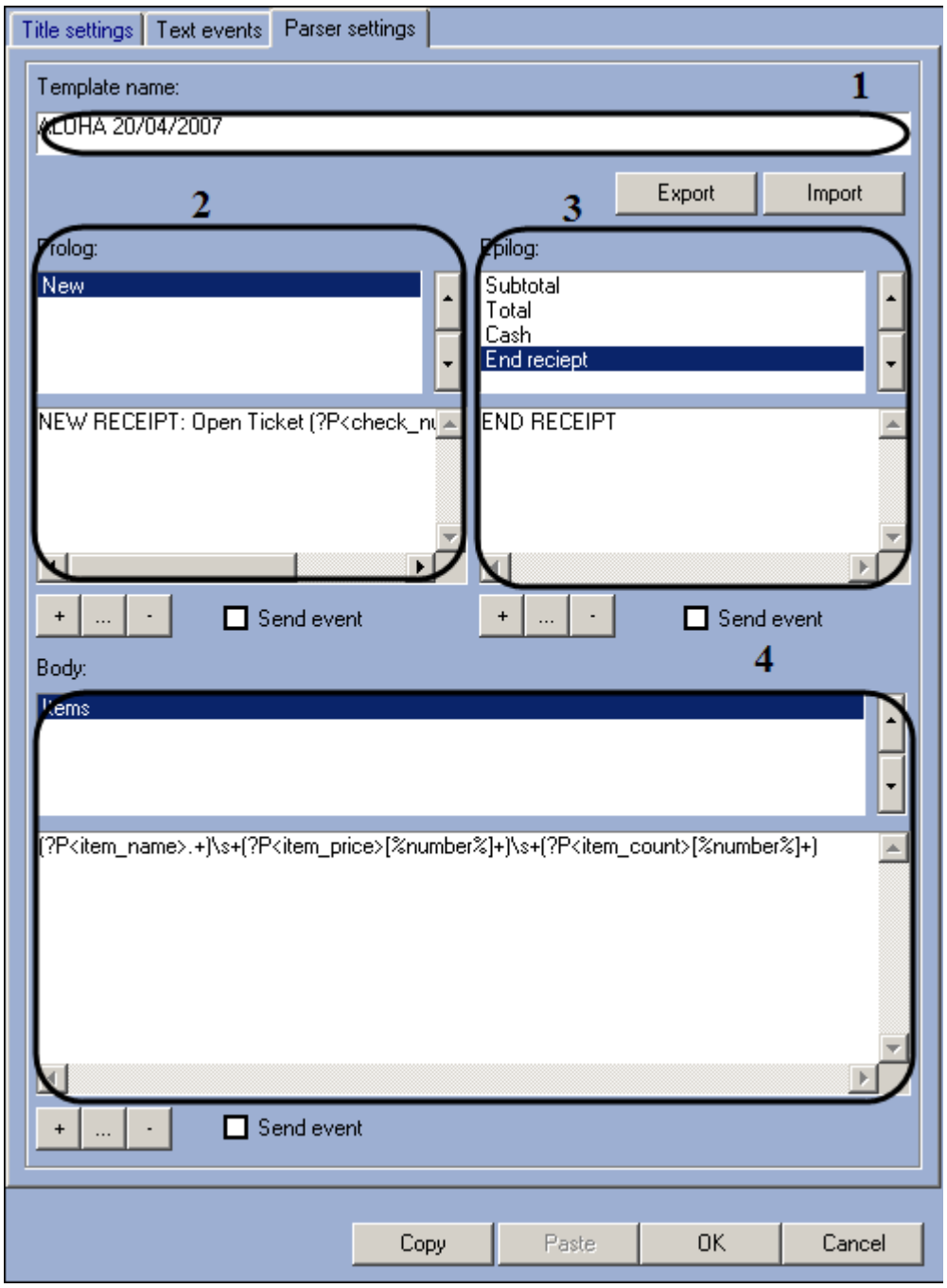


Figure 6.3—44 Settings group on the Parser settings panel

Description of settings group on the edit parser panel is given in Table 6.3.8.3-1.

Table 6.3.8.3-1 Description of settings group on the edit parser panel

№	Group	Description
1	«Template name»	Set the descriptive parser name
2	«Receipt prolog»	Set the rules of receipt structuring while fulfilling receipt's databases
3	«Receipt epilog»	Set the rules of receipt's end structuring while fulfilling receipt's databases.

№	Group	Description
4	«Receipt body»	Set the rules of receipt's body structuring while fulfilling receipt's databases.

Groups 2-4 have the same set of user interface elements (Figure 6.3—45 Setting the receipt structuring rules).

Editing the data structuring rules in groups 2-4 is done in the following way:

1. Names of structuring rules are displayed in the first list (Figure 6.3—45)

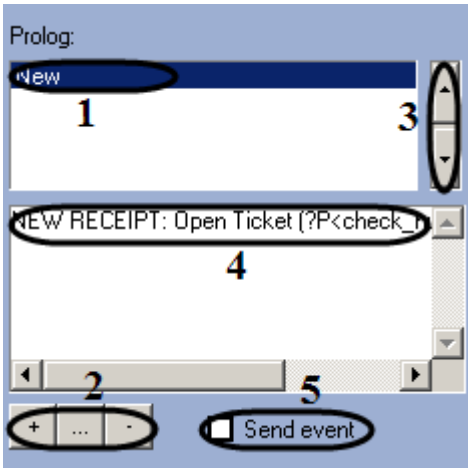


Figure 6.3—45 Setting the receipt structuring rules

2. If a new rule has to be added to the first list, click «+» (Figure 6.3—45, 1-2). Enter the name of the new rule in the opened Enter/change value dialog window and then click «OK» (Figure 6.3—46)

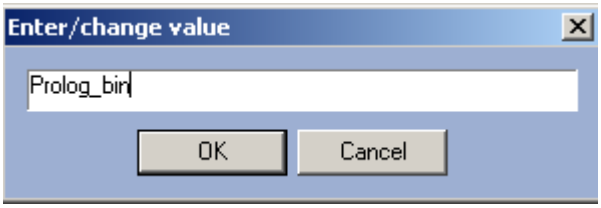


Figure 6.3—46 Enter/change value dialog window

3. If the name of the rule has to be edited, select the name of the required rule and click «...» (Figure 6.3—45, 1-2). Set a new name of the selected rule in the opened dialog window Enter/change value and then click «OK» (Figure 6.3—46).

Note. It is possible to click upon the name of the rule with left mouse button twice instead of «...» button.

4. If the rule has to be deleted, select the name of the required rule in the first list and click «-» button(Figure 6.3—45, 1-2)

5. If the name of the rule has to be moved upwards, click «», «» - to be moved downwards (Figure 6.3—45, 3)
6. Select the name of the rule in the first list and then enter the required changes in the field 4 to create/edit the text of the structuring rule (Figure 6.3—45, 4)
7. If the message about registration of the given receipt area has to be sent to POS-server, set the checkbox «Sent event» (Figure 6.3—45, 5)
8. Repeat steps 1-7 for all the required setting groups on the edit panel

Editing the data' structuring rules in groups 2-4 is completed.

To export structuring rules to the parser file do the following:

1. Click Export button (Figure 6.3—47)

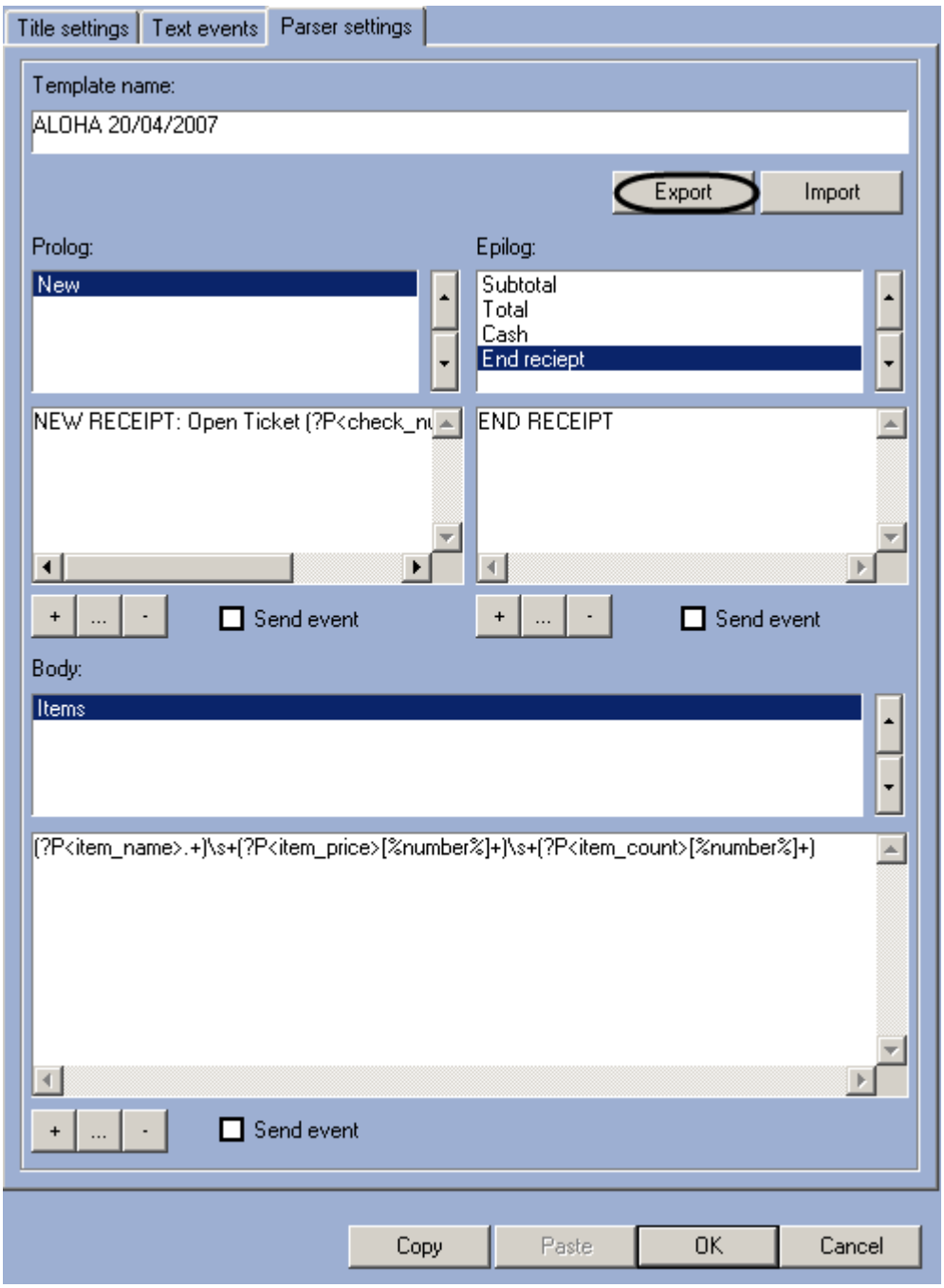


Figure 6.3—47Exporting the structuring rules to the parser file

2. Save .prl parser file in the Windows standard dialog window «Save as » (Figure 6.3—48)

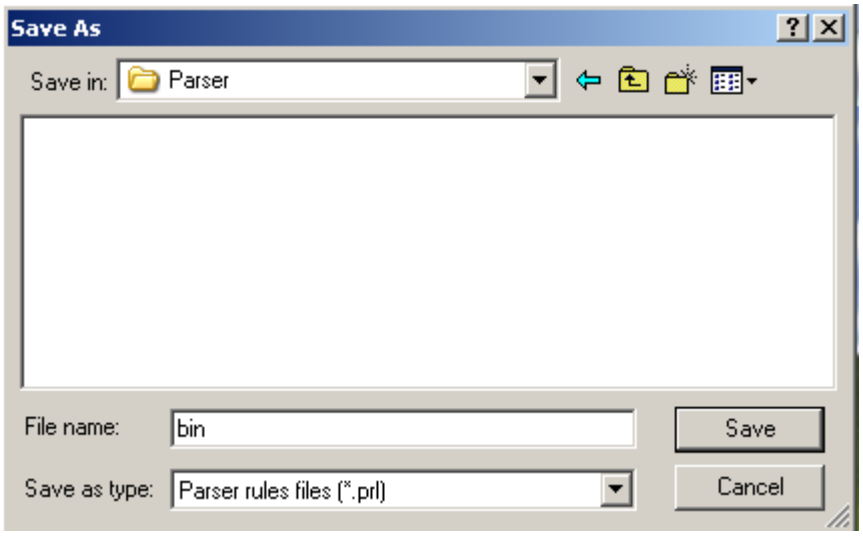


Figure 6.3—48 Standard dialog window Save as

Exporting the structuring rules to the parser file is completed.

Note. Copy and Paste buttons are very convenient for moving the structuring rules to other OPS-terminal objects, registered in the system.

Click OK to save the changes and close the dialog window Advanced, then click Apply on the POS-terminal object's settings panel (Figure 6.3—49, Figure 6.3—50).

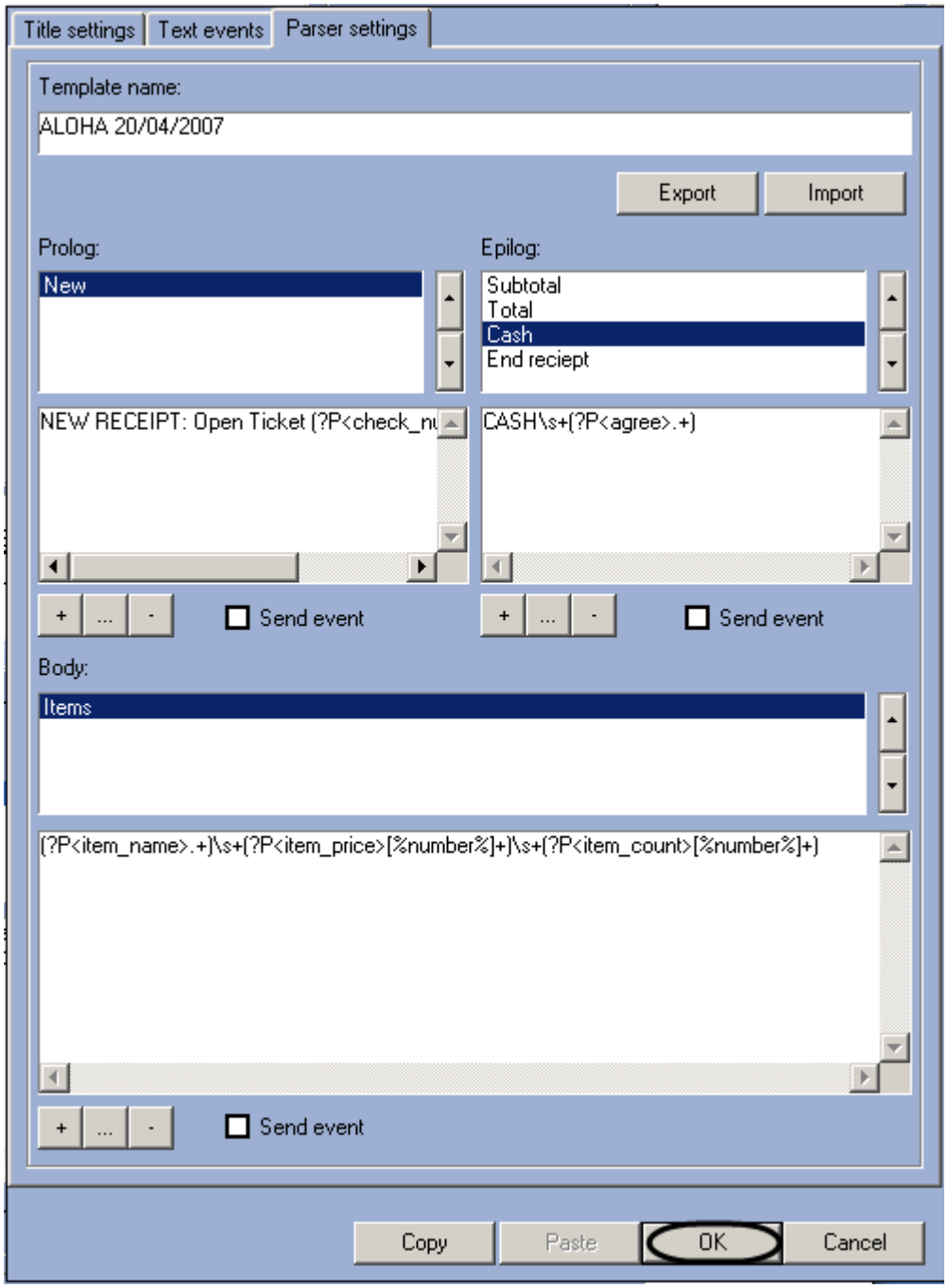


Figure 6.3—49 Parser settings panel

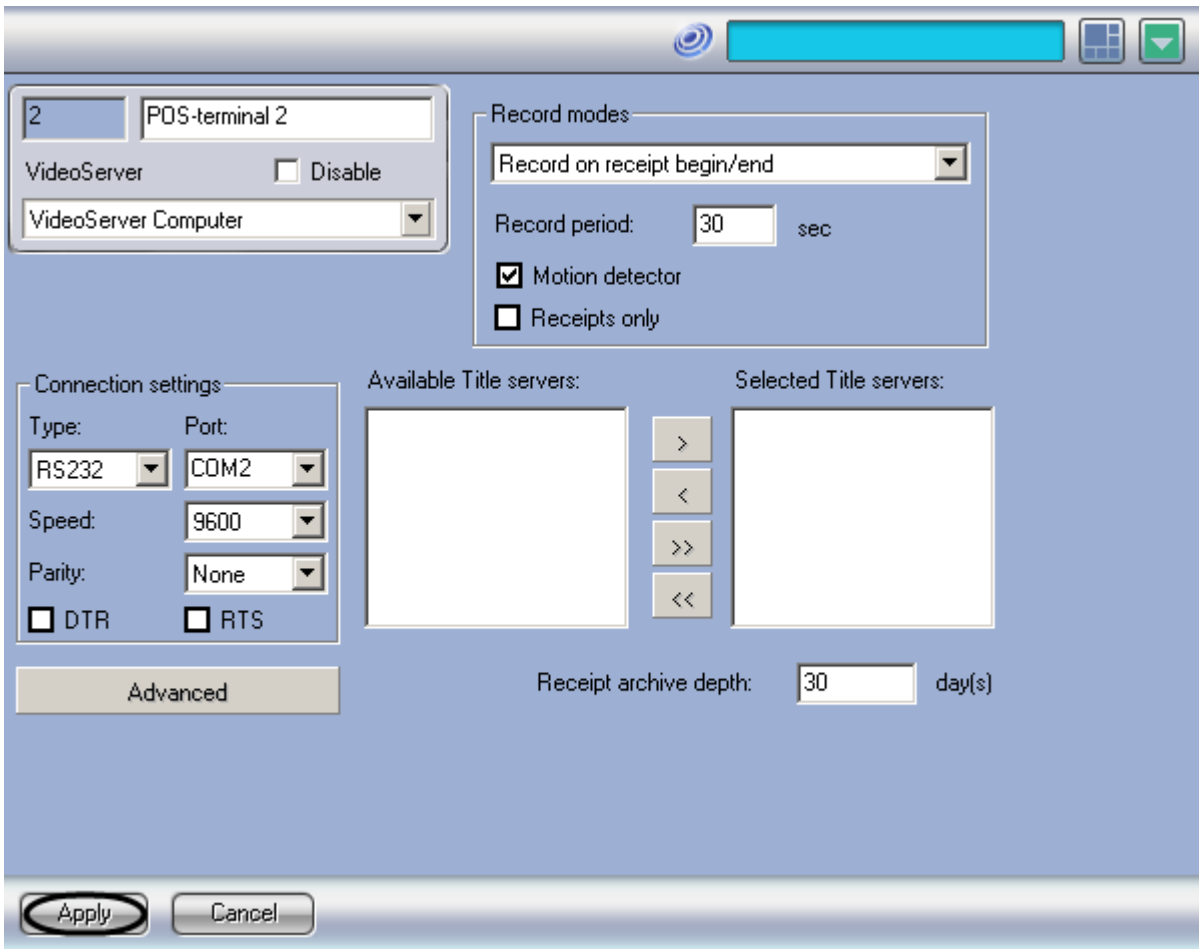


Figure 6.3—50 Closing the dialog window Advanced

6.4 Setting up the Titles search window

6.4.1 The Titles search window setup procedure

The **Titles search** object is a child of the **Screen** object; it is used for creating user queries on the titles database.

To create and set up the **Titles search** object, use the **Interfaces** tab in the **System Settings** window (Figure 6.4—1).

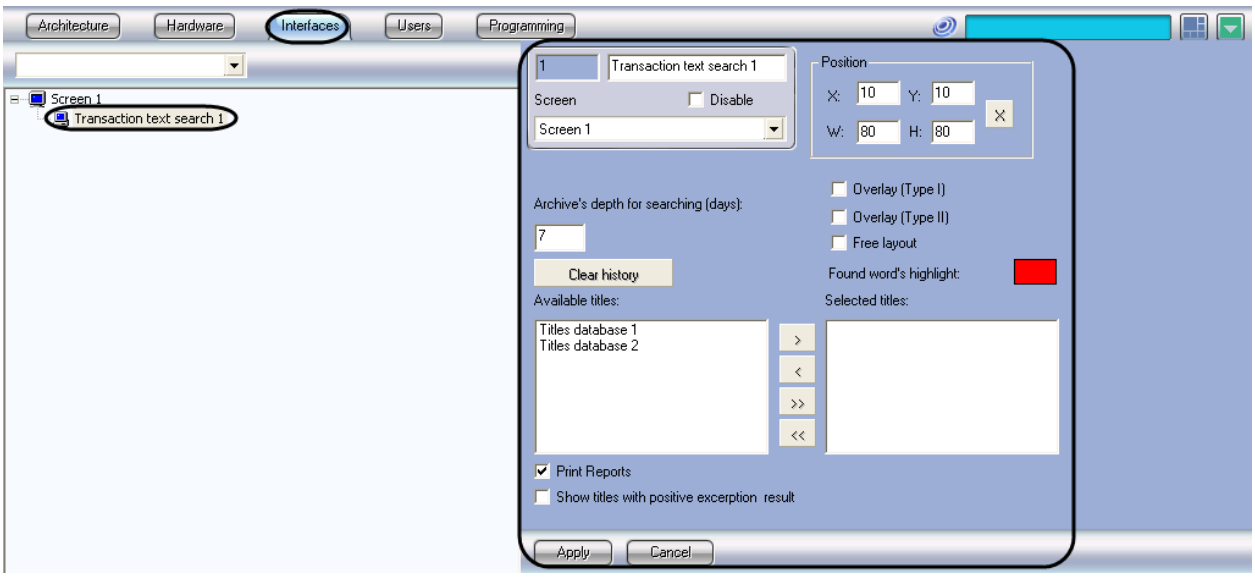


Figure 6.4—1 Setting up the Titles search window

The **Titles search** object setup includes the following steps:

1. Select the titles databases
2. Specify the search criteria
3. Set up the **Titles search** window

6.4.2 Selecting the titles databases

Select the titles databases to be used for searching the data. To select the titles databases, do the following:

1. Select the desired items in the **Available titles databases** list (Figure 6.4—2).

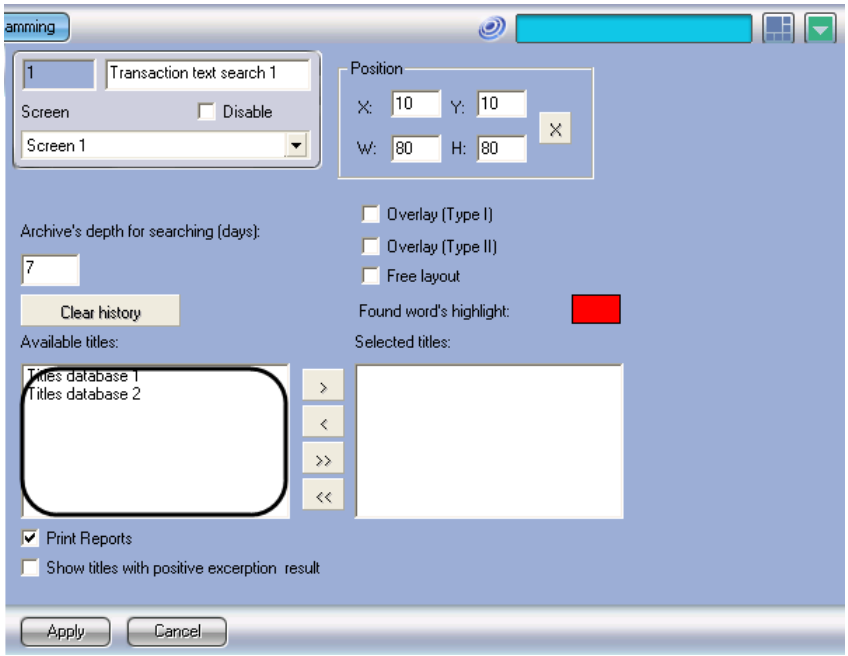


Figure 6.4—2 The list of available titles databases

Click the > button to move the selected titles databases, or the >> button to move all titles databases from the list of available titles databases to the Selected titles databases list (Figure 6.4—3).

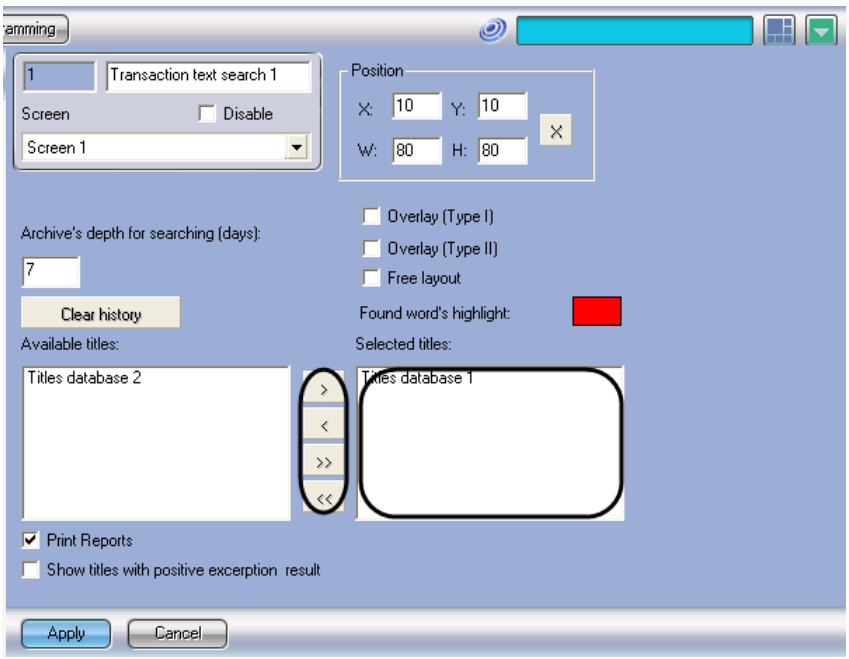


Figure 6.4—3 Selecting the titles databases

Note. Alternatively, the < *and* << *buttons are used to remove the selected or all titles databases from the Selected titles databases list.*

2. Click **Apply** (Figure 6.4—4).

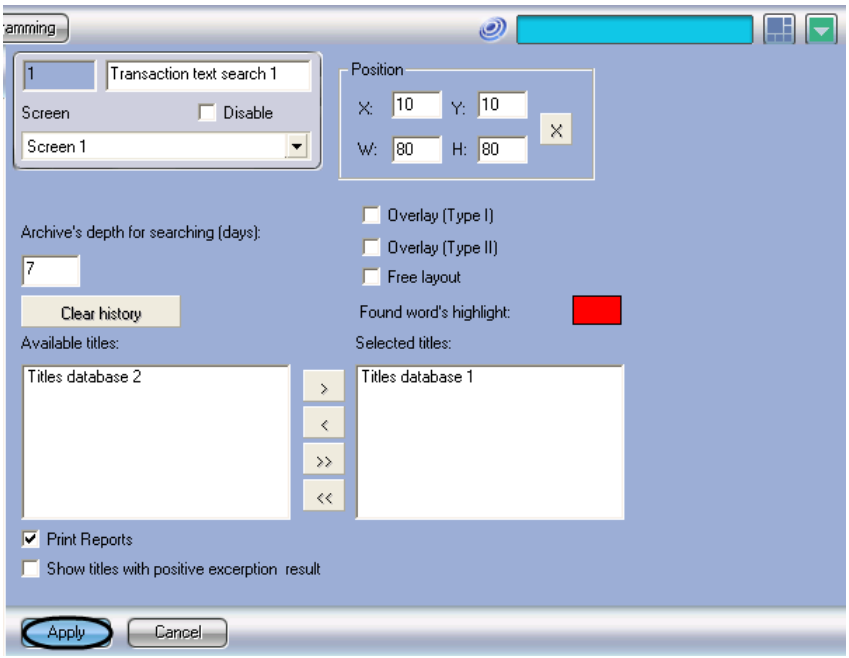


Figure 6.4—4 Saving the changes

The titles databases are now selected.

6.4.3 Specifying the titles database search criteria

To set up the titles database search, the following parameters should be specified:

1. search depth – the titles database search depth;
2. highlighting a found word – the option for highlighting the found words in the search results;

3. showing the titles databases with positive search results – displaying only the titles databases containing the required words.

To specify the titles database search criteria, do the following:

1. Enter the archive search depth (in days) in the **Archive search depth** field (Figure 6.4—5).

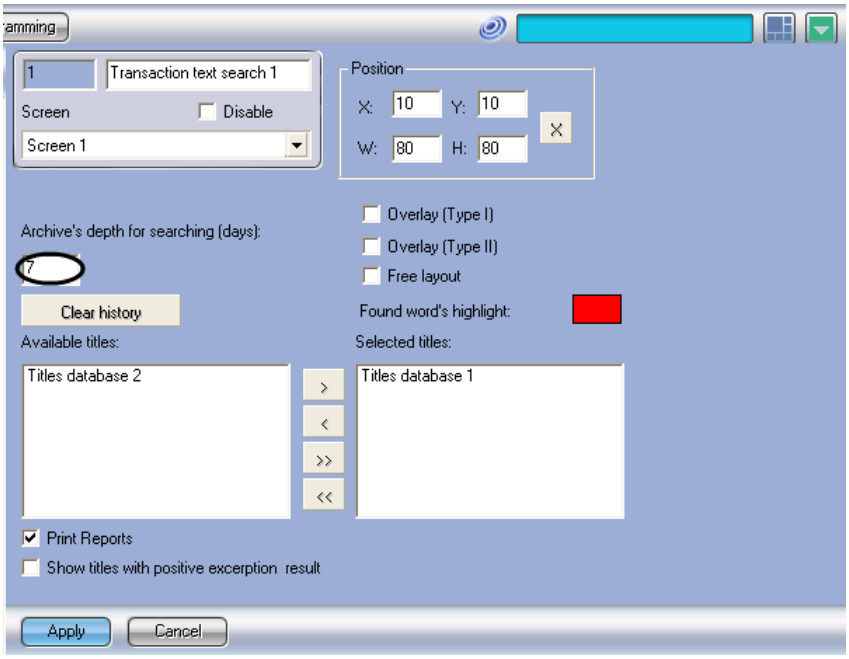


Figure 6.4—5 Specifying the archive search depth

2. To enable highlighting of found words, double-click the **Highlight found words** color box and select the color in the standard Windows color selection box that opens (Figure 6.4—6, Figure 6.4—7).

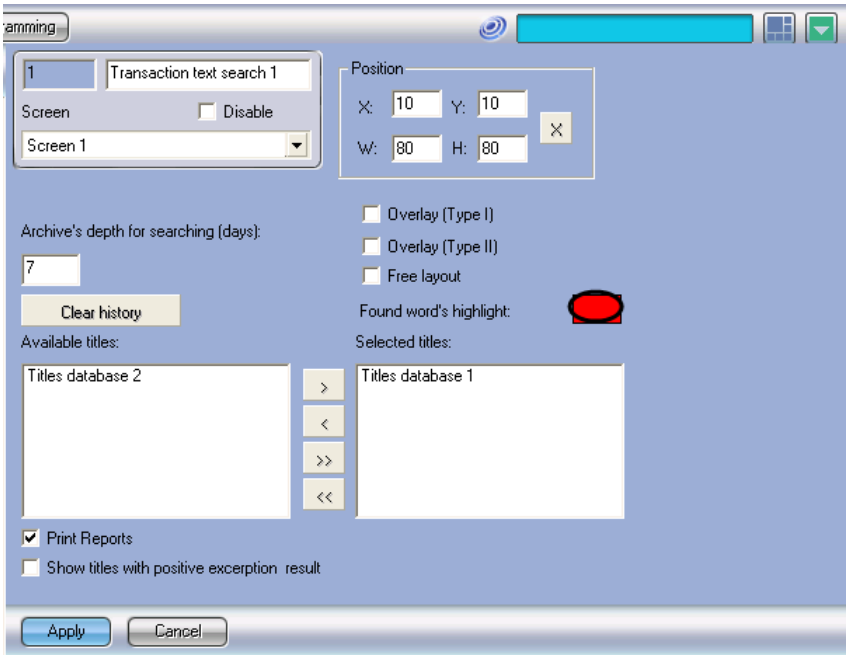


Figure 6.4—6 Specifying the word highlighting color

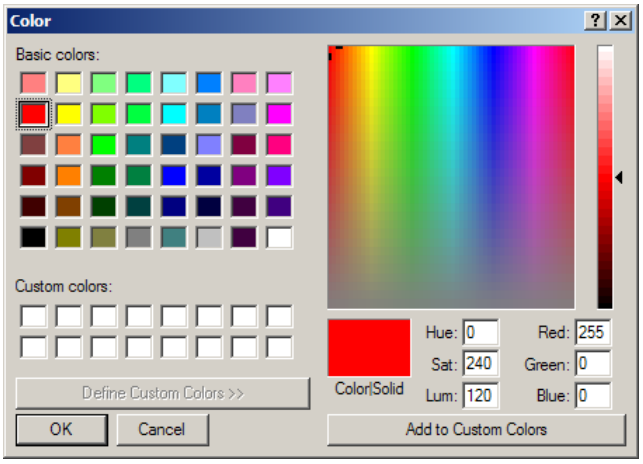


Figure 6.4—7 The standard Windows color selection dialog box

3. To display only the titles databases with non-empty search results, check the **Show titles databases with non-empty search results only** checkbox (Figure 6.4—8).

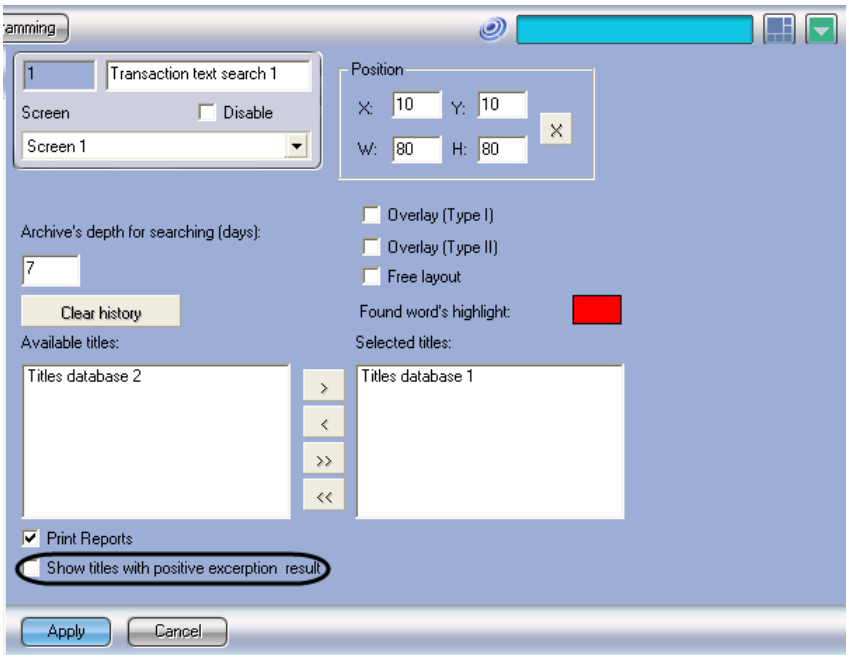


Figure 6.4—8 The non-empty search results option

4. Click **Apply** (Figure 6.4—9).

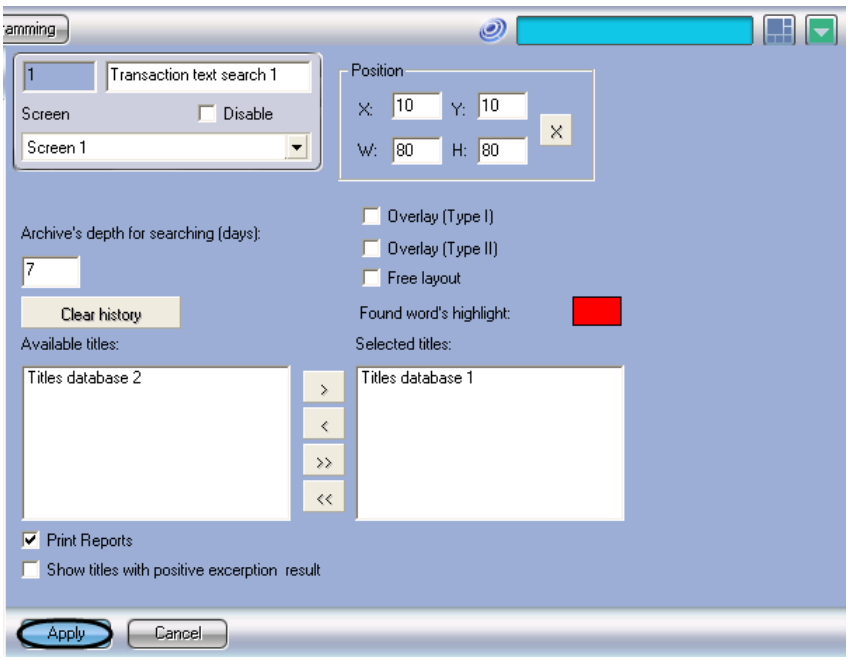


Figure 6.4—9 Saving the changes

The titles database search criteria are now set.

6.4.4 Setting up the Titles search window

To set up the **Titles search** window, the following parameters should be specified:

1. coordinates – the position and size of the window;
2. overlay type – the type of the overlay of the synchronous display of video image and search results;
3. free layout – the user can define the location of the **Titles search** window elements;
4. print reports – the user can print the search results.

To set up the **Titles search** window, do the following:

1. Specify the position and size of the **Titles search** window: **X** is the indent relative to the left border of the video image, **Y** is the indent relative to the top border of the video image, **W** is the window width, **H** is the window height.

Note. The coordinates can be set up using the visual method (Figure 6.4—10). Click the  *button and use the mouse to set the location and size of the sample window, then click OK. The coordinates of the sample window will be filled in the X, Y, W and H fields automatically.*

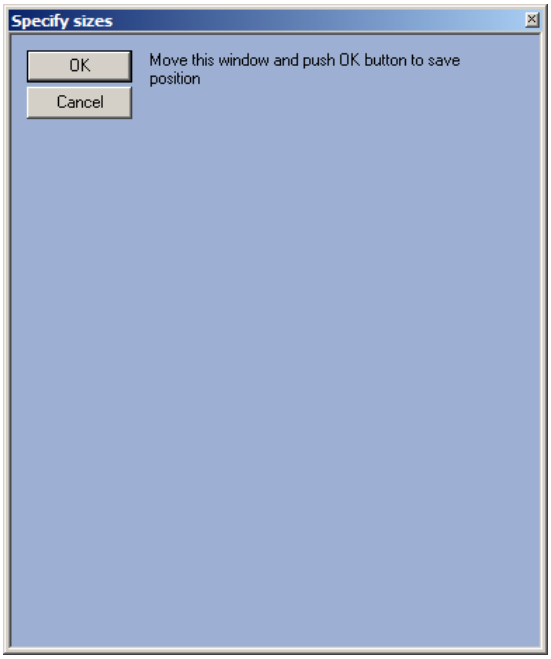


Figure 6.4—10 Visual setup of the window coordinates

2. Set the overlay type by checking the **Overlay (Type I)** or **Overlay (Type II)** checkbox (Figure 6.4—11).

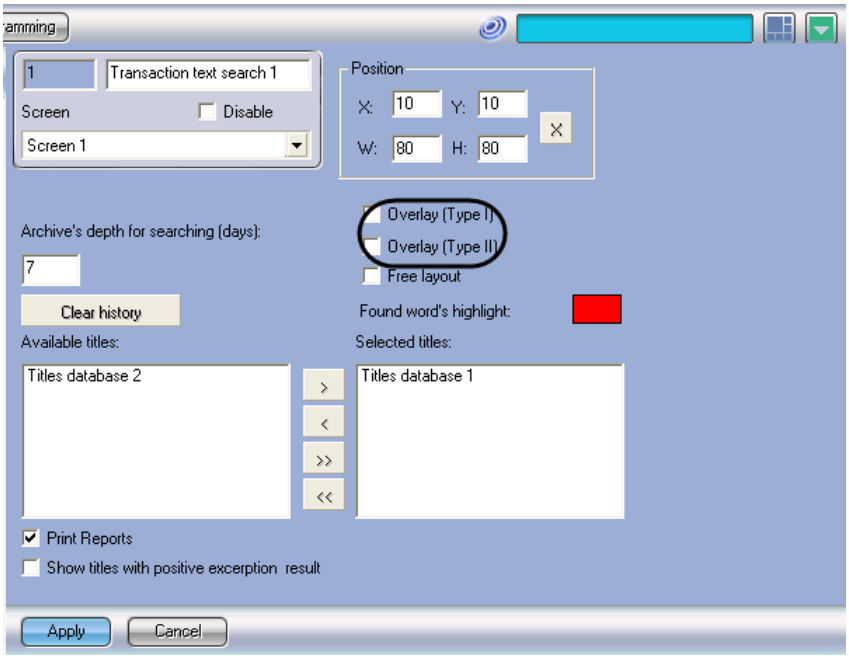


Figure 6.4—11 Selecting the overlay type

Note. As a rule, optimal mode of processing the video is Overlay (Type II). If this mode is not supported by video card, Overlay (Type I) should be selected or the Overlay should be completely disabled.

3. To allow the operator to change the proportion of the window with camera's window included, check the **Free layout** checkbox (Figure 6.4—12). Proportions of camera's window are saved in the process.

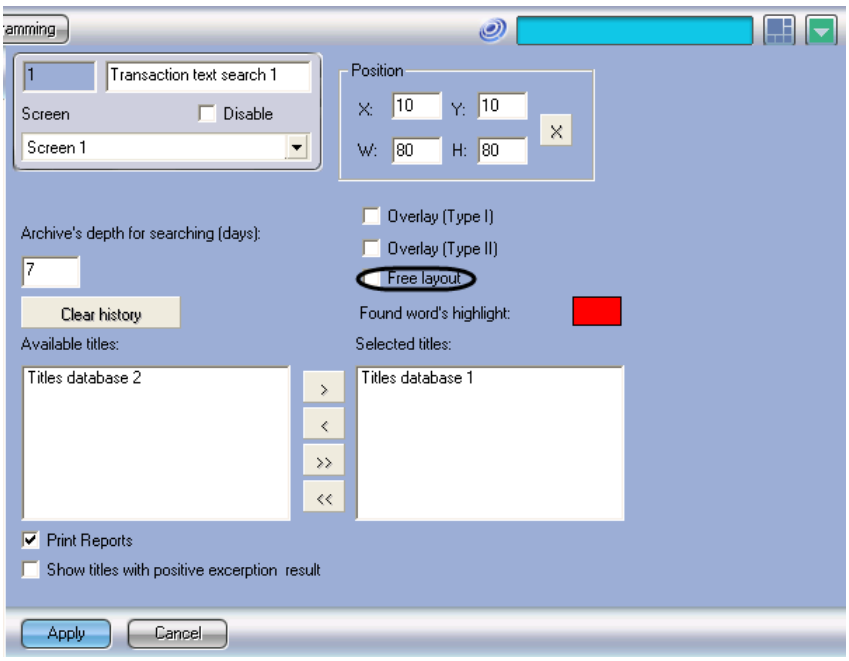


Figure 6.4—12 Enabling free layout

4. To allow the operator to print the search results, check the **Print reports** checkbox (Figure 6.4—13).

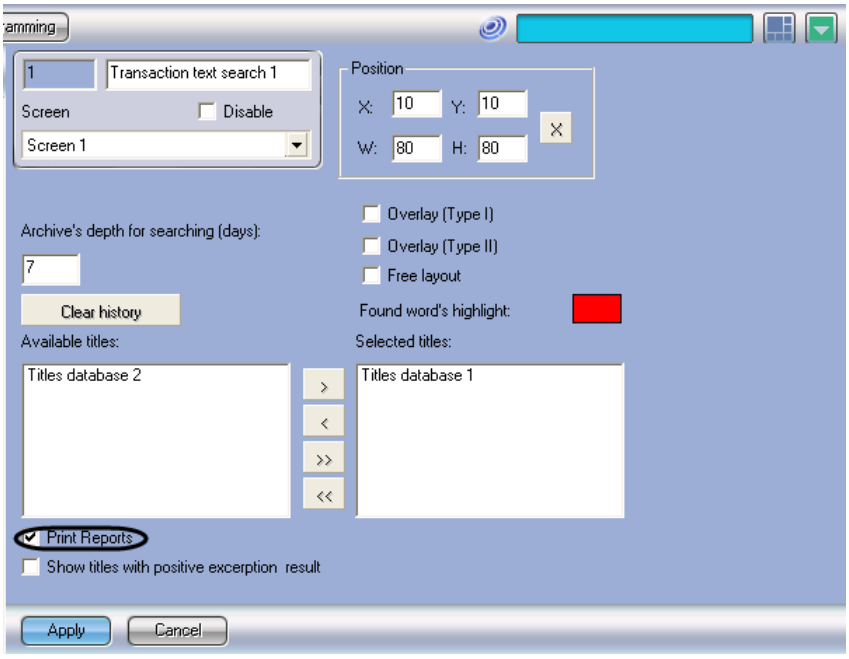


Figure 6.4—13 Enabling printing of reports

The **Titles search** window is now set.

Note. To clear the history of user queries in the Titles search window, click the Clear history button (Figure 6.4—14).

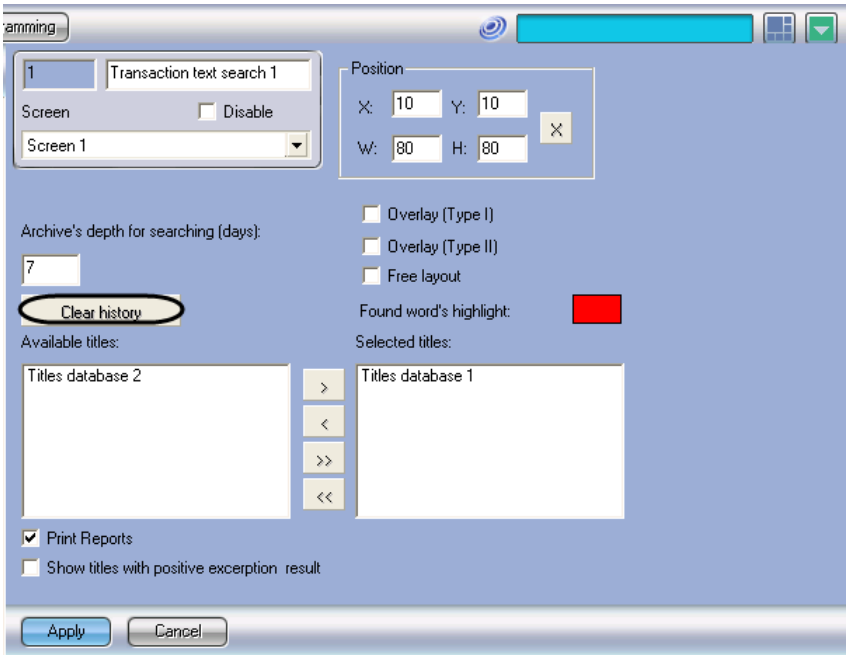


Figure 6.4—14 Clearing the user request history

6.5 Setting up the Receipts search window

6.5.1 The Receipts search window setup procedure

The **Receipts search** object is a child of the **Screen** object; it is used for creating user queries on the receipts database.

To create and set up the **Receipts search** object, use the **Interfaces** tab in the **System Settings** window (Figure 6.5—1).

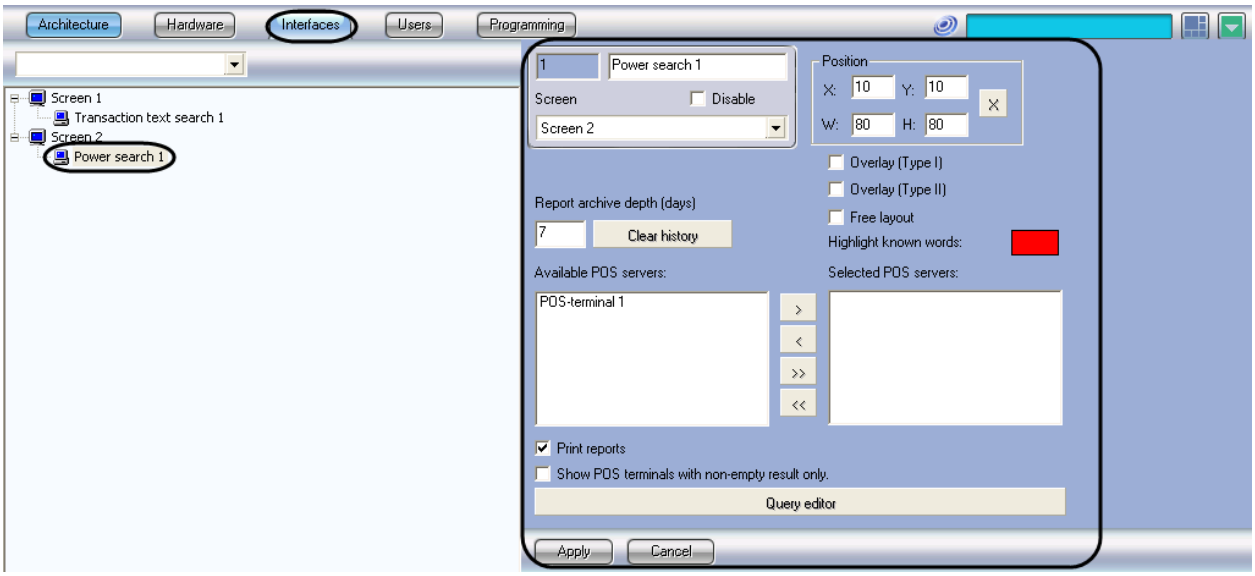


Figure 6.5—1 Setting up the Receipts search window

The **Receipts search** object setup includes the following steps:

1. Select the POS-terminals
2. Specify the search criteria
3. Set up the **Receipts search** window

6.5.2 Selecting POS-terminals

Select the POS-terminals to be used for searching the data from. To select the POS-terminals, do the following:

1. Select the desired items in the **Available POS-terminals** list (Figure 6.5—2).

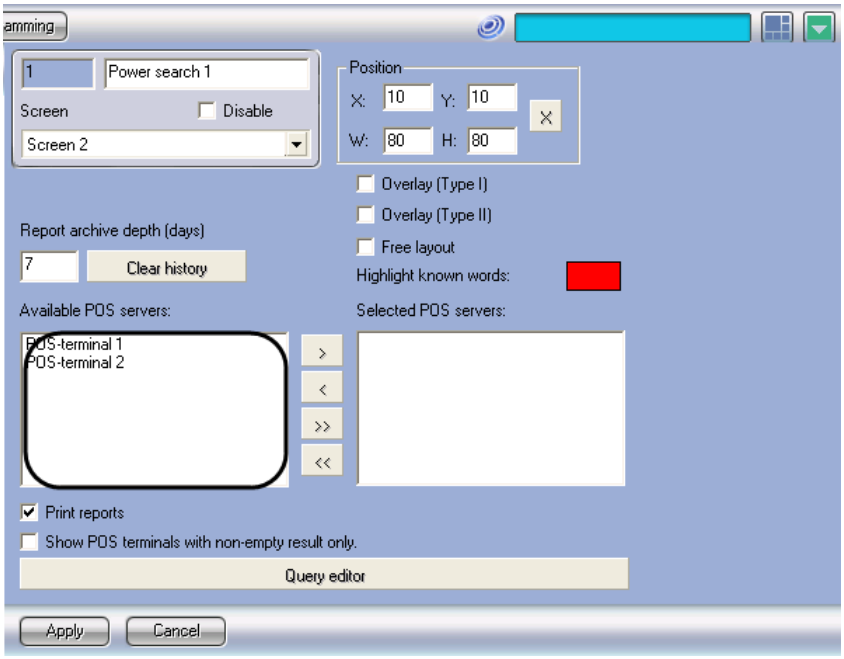


Figure 6.5—2 The list of available POS-terminals

2. Click the > button to move the selected POS-terminals, or the >> button to move all POS-terminals from the list of available POS-terminals to the **Selected POS-terminals** list (Figure 6.5—3).

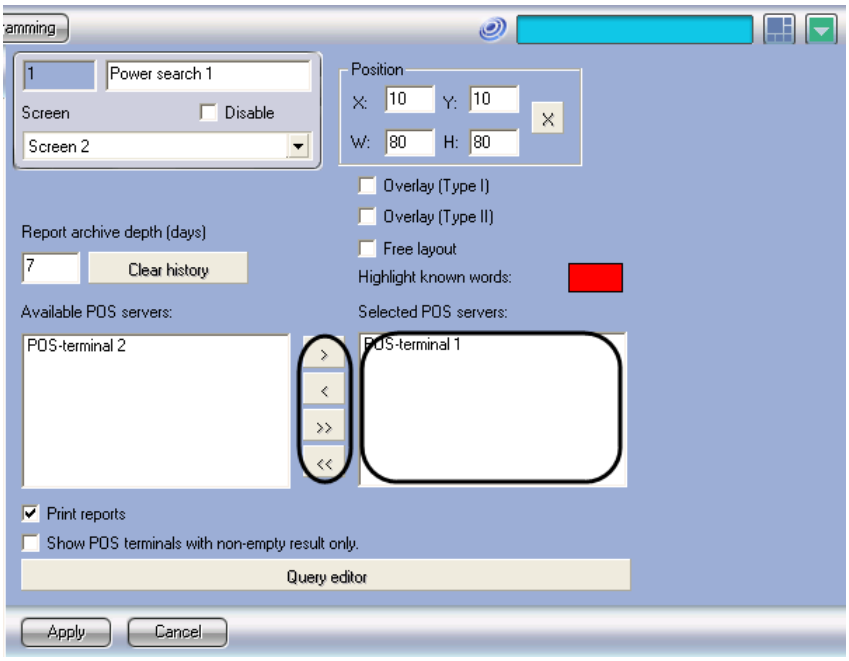


Figure 6.5—3 Selecting the POS-terminals

Note. Alternatively, the < *and* << *buttons are used to remove the selected or all POS-terminals from the Selected POS-terminals list to the Available POS-terminals list.*

3. Click **Apply** (Figure 6.5—4).

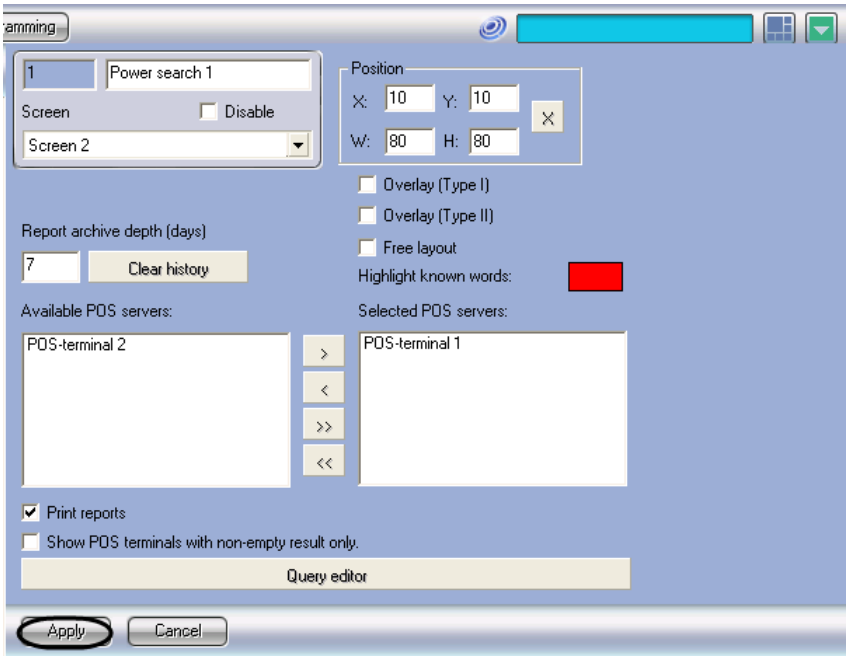


Figure 6.5—4 Saving the changes

Selecting POS-terminals is complete.

6.5.3 Specifying the search criteria

To set up the receipts database search, the following parameters should be specified:

1. search depth – the receipts database search depth;
2. highlighting of found words – the option for highlighting the found words in the search results;
3. showing the POS-terminals with positive search results – displaying only the POS-terminals whose data contains the required words.

To specify the receipts database search criteria, do the following:

1. Enter the archive search depth (in days) in the **Archive search depth** field (Figure 6.5—5).

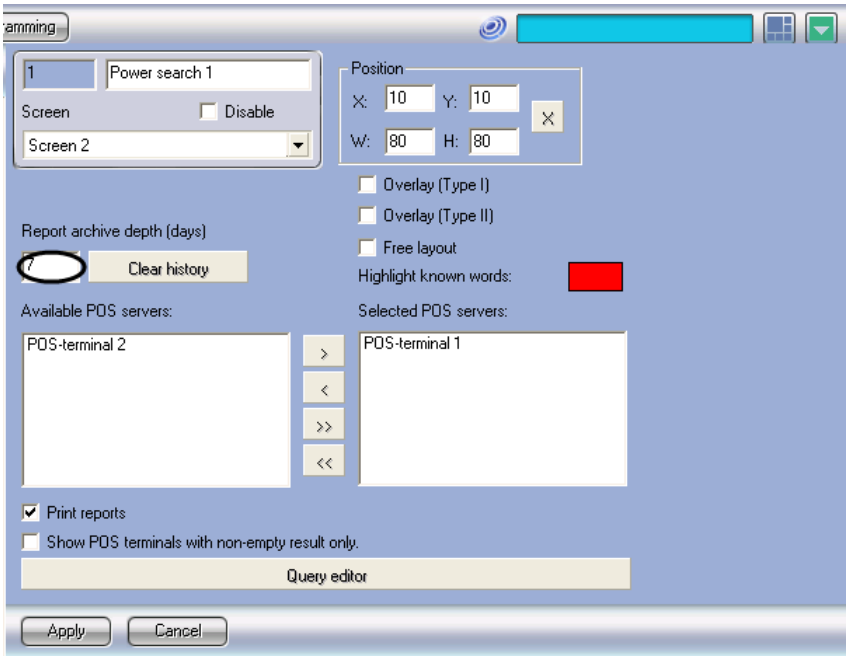


Figure 6.5—5 Specifying the archive search depth

2. To enable highlighting of found words, double-click the **Highlight found words** color box and select the color in the standard Windows color selection box that opens (Figure 6.5—6, Figure 6.5—7).

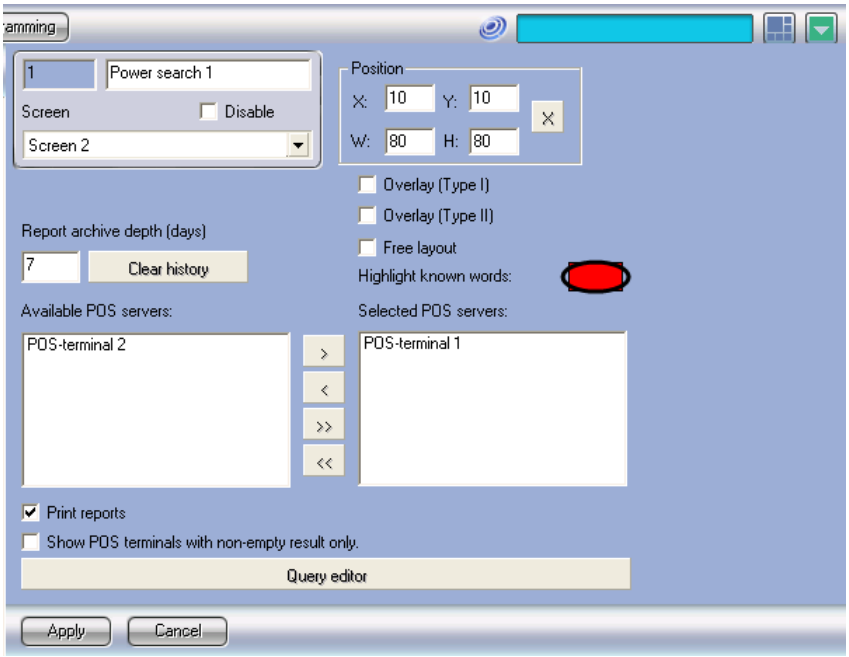


Figure 6.5—6 Specifying the word highlighting color

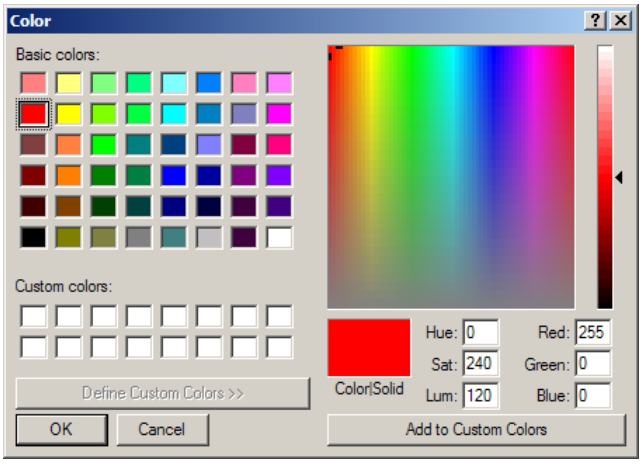


Figure 6.5—7 The standard Windows color selection dialog box

3. When only the POS-terminals with non-empty search results should be displayed, check the **Show POS-terminals with non-empty search results only** checkbox (Figure 6.5—8).

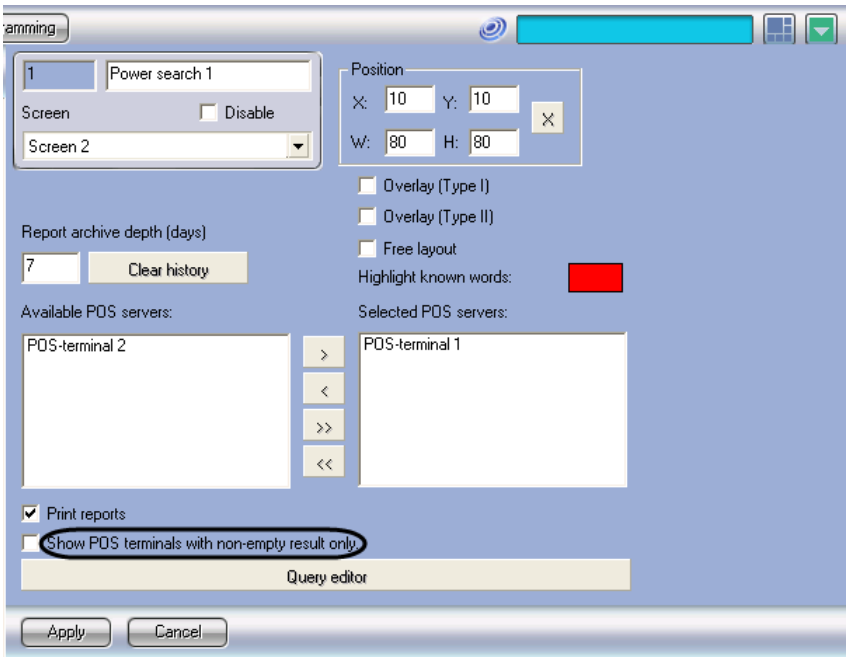


Figure 6.5—8 The non-empty search results option

4. Click **Apply** (Figure 6.5—9).

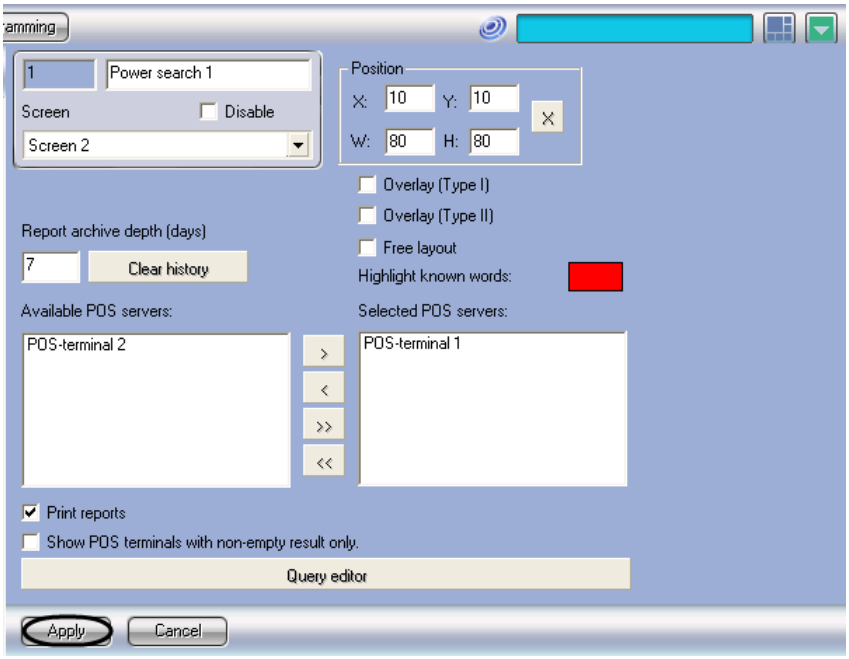


Figure 6.5—9 Saving the changes

The receipts database search criteria are now set.

6.5.4 Setting up the Receipts search window

To set up the **Receipts search** window, the following parameters should be specified:

1. coordinates – the position and size of the window;
2. overlay type – the type of the overlay of the synchronous display of video image and search results;
3. free layout – the operator can define the location of the **Receipts search** window elements;
4. print reports – the operator can print the search results.

To set up the **Receipts search** window, do the following:

1. Specify the position and size of the **Receipts search** window: **X** is the indent relative to the left border of the video image, **Y** is the indent relative to the top border of the video image, **W** is the window width, **H** is the window height.

Note. The coordinates can be set up using the visual method (Figure 6.5—10). Click the  *button and use the mouse to set the location and size of the sample window, then click OK. The coordinates of the sample window will be filled in the X, Y, W and H fields automatically.*

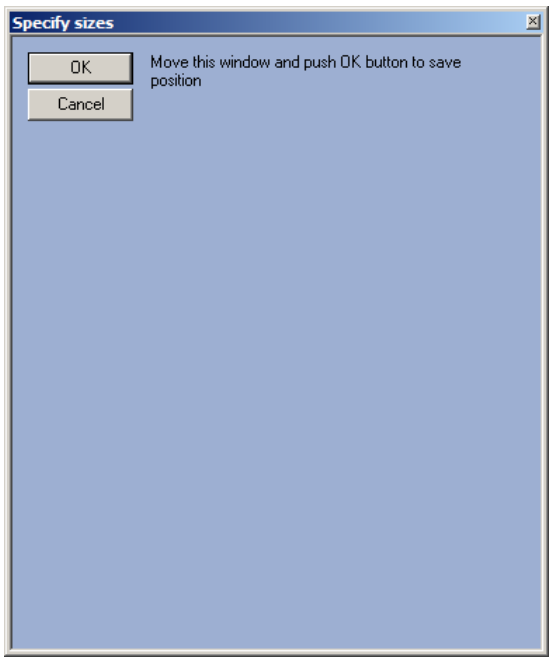


Figure 6.5—10 Visual setup of the window coordinates

2. Set the overlay type by checking the **Overlay (Type I)** or **Overlay (Type II)** checkbox (Figure 6.5—11).

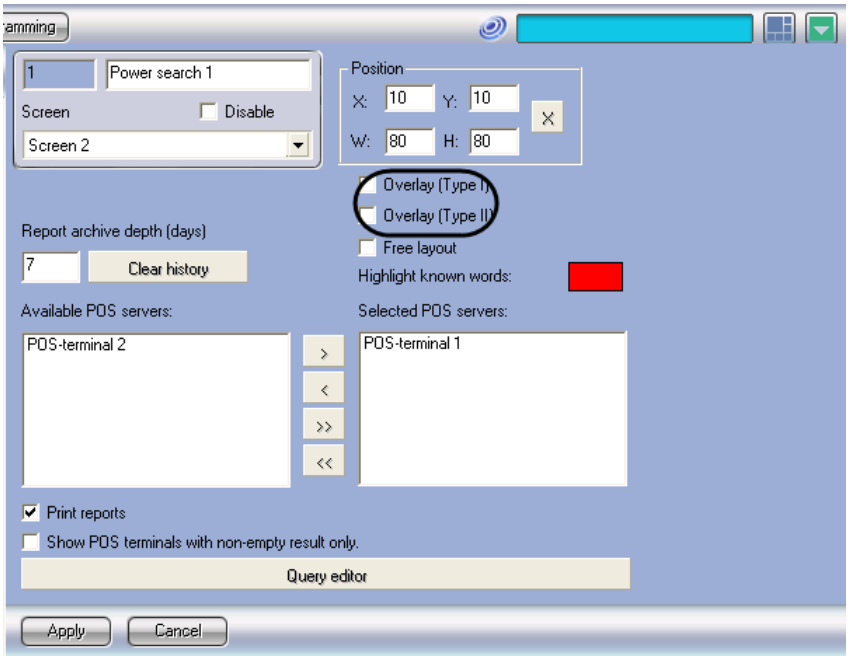


Figure 6.5—11 Selecting the overlay type

3. To allow the operator to change the location of the **Receipts search** window, check the **Free layout** checkbox (Figure 6.5—12).

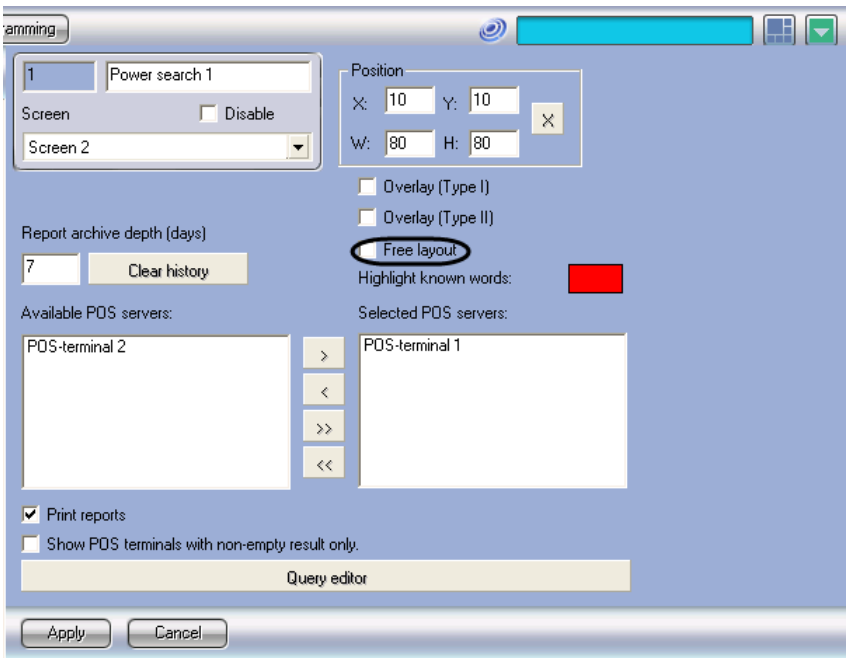


Figure 6.5—12 Enabling free layout

4. To allow the operator to print the search results, check the **Print reports** checkbox (Figure 6.5—13).

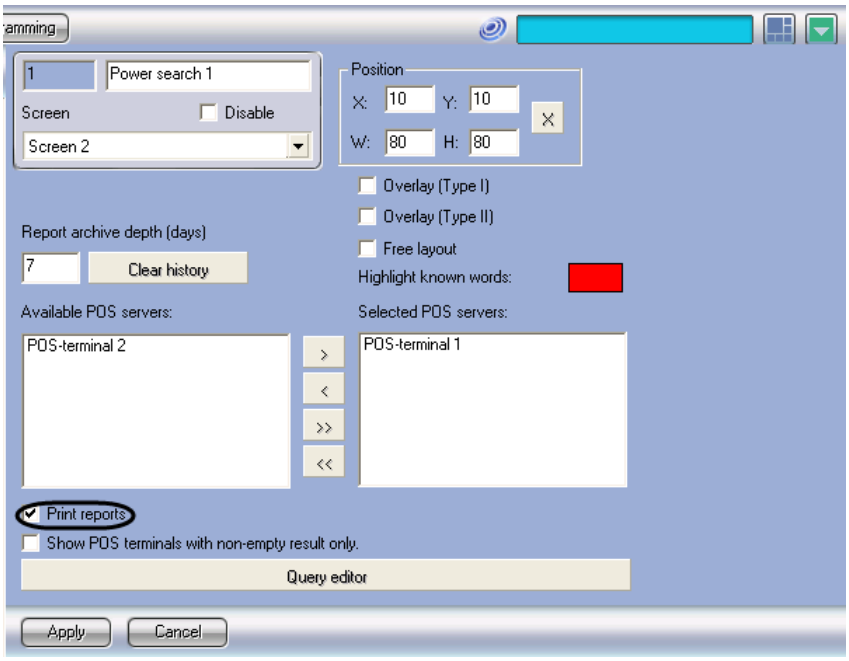


Figure 6.5—13 Enabling printing of reports

The Receipts search window is now set.

Note. To clear the history of user queries in the Receipts search window, click the Clear history button (Figure 6.5—14).

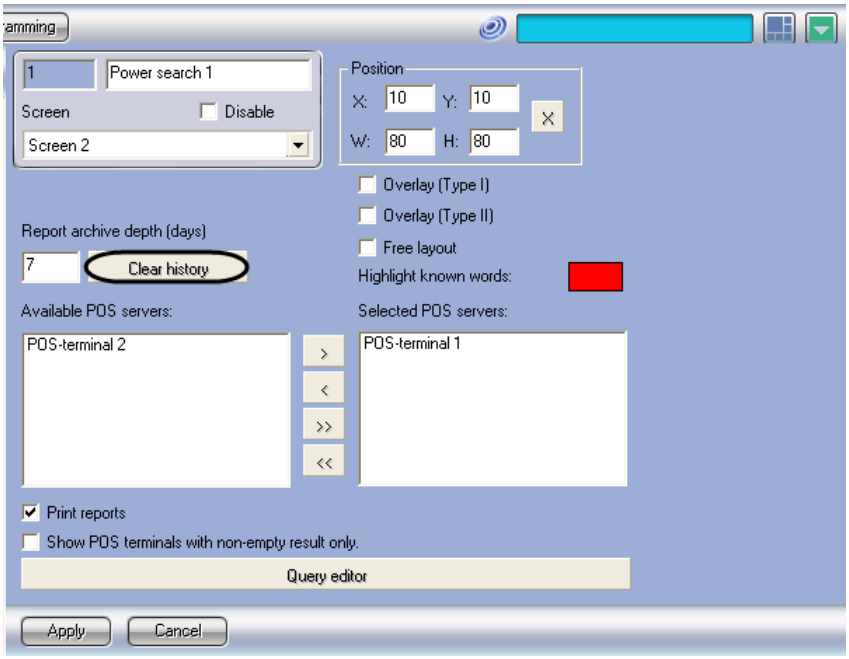


Figure 6.5—14 Clearing the user request history

6.5.5 Editing the receipts database queries (optional)

The user can create and edit queries in the receipts database. This is an optional function in addition to system setup.

Warning! The user query in the Receipts search window will be created and processed, only if the receipts parser has been set up (see the Setting up the parser (optional) section).

Query editor provides the following functions:

1. Creating and editing the list of queries. The parameters can be imported from a text file (POS query file) or using the built-in functions
2. Search for a query in the list
3. Export query parameters into a file or other **Receipts search** objects

To open the query editor, click the **Query editor** button (Figure 6.5—15). The **Query editor** window opens (Figure 6.5—16).

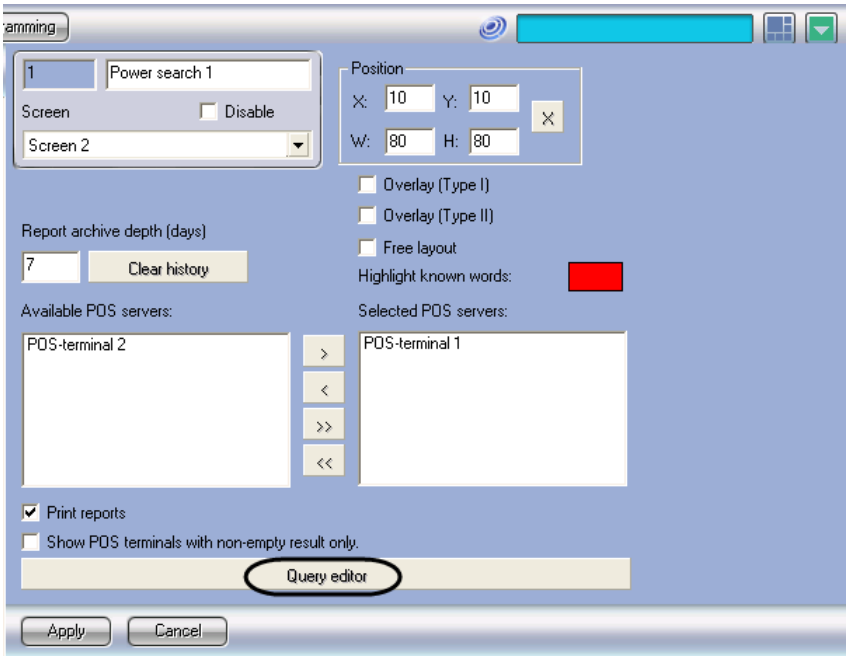


Figure 6.5—15 Opening the query editor

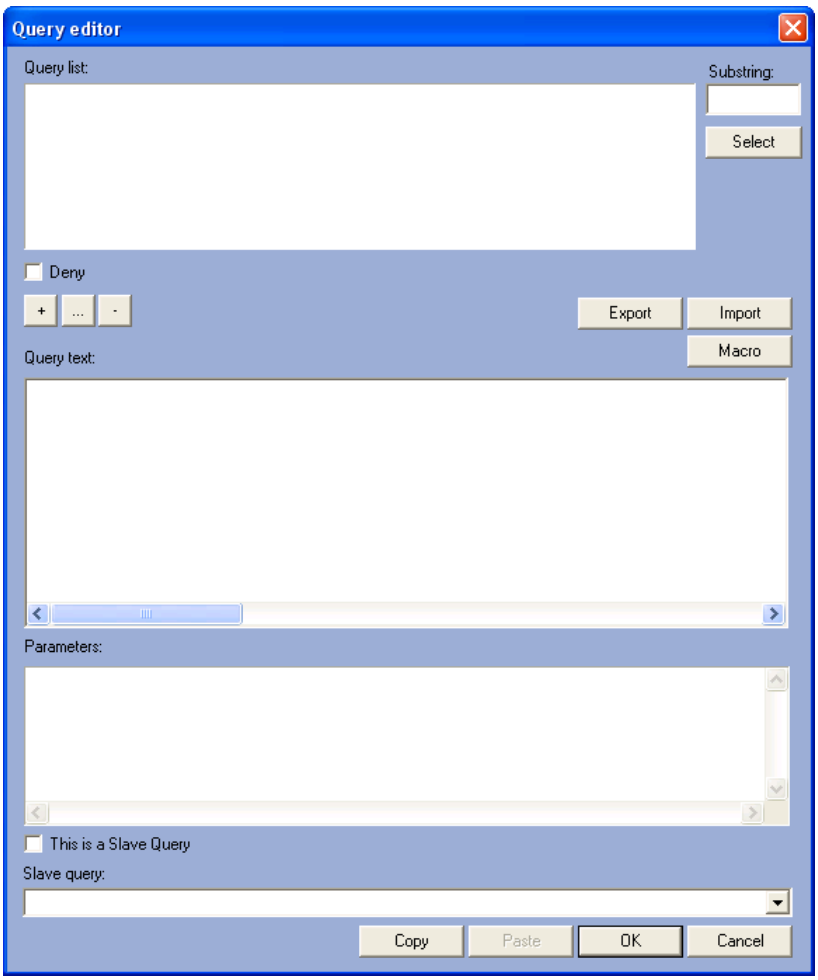


Figure 6.5—16 The Query editor window

To import a query from a text file, do the following:

1. Click the **Import** button (Figure 6.5—17).

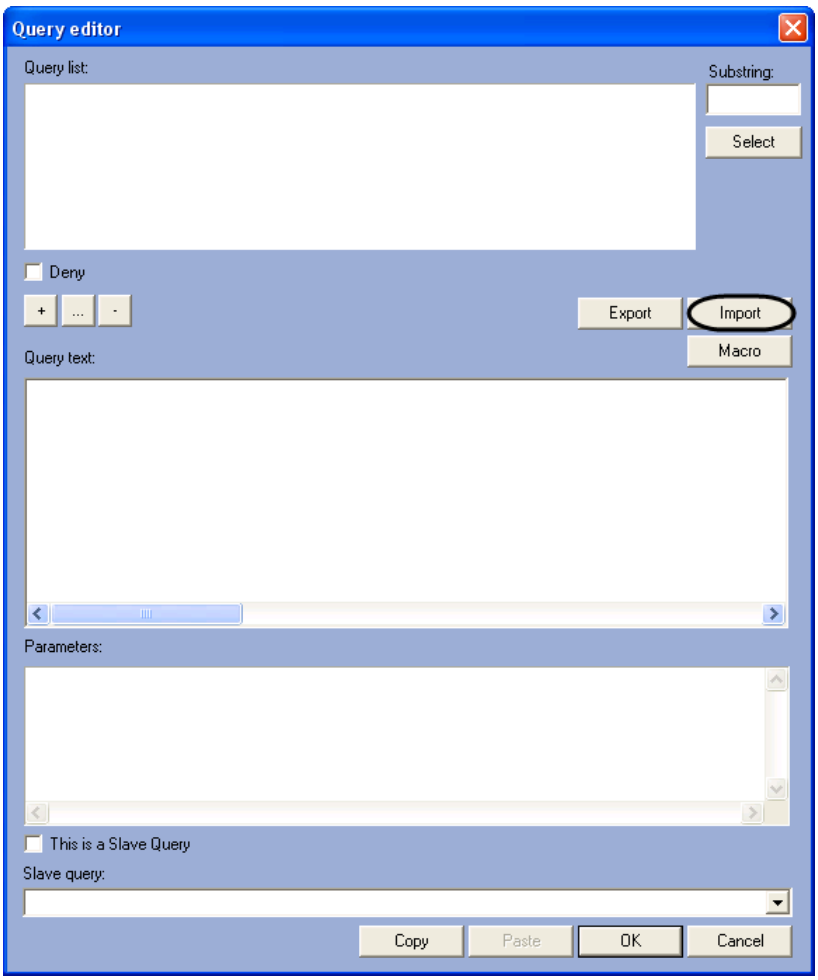


Figure 6.5—17 Importing a query

2. Open a query file in the standard Windows file open dialog box (Figure 6.5—18).

Note. We recommend importing the list of queries from the <Intellect program folder>\Modules\queries_eng.txt file included in the Intellect installation kit (Figure 6.5—18*).*

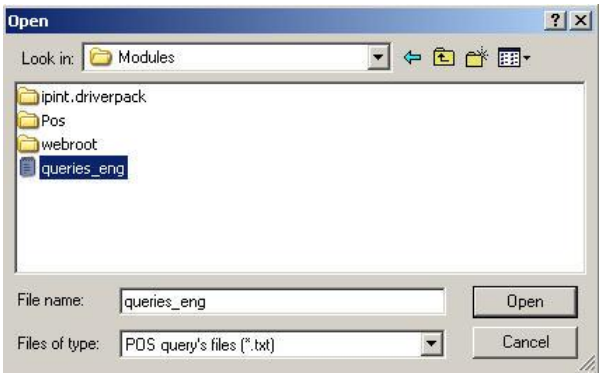


Figure 6.5—18 The standard Windows file open dialog box

3. If the file loads successfully, the list of available queries will be displayed in the **Query list** area (Figure 6.5—19).

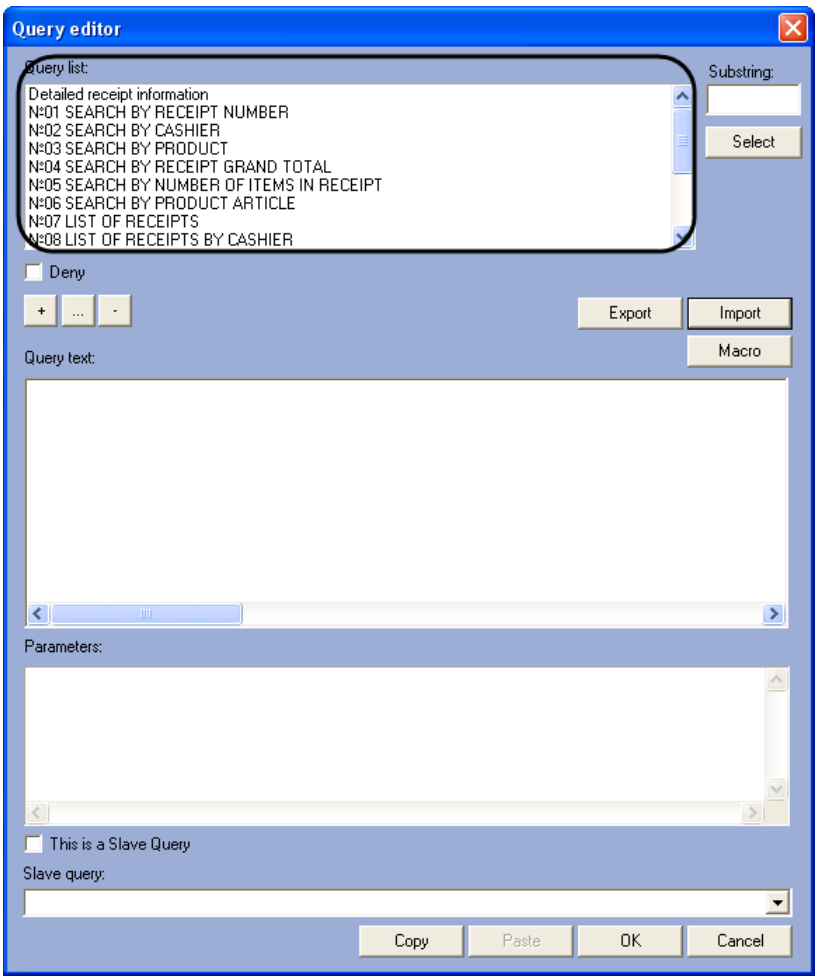


Figure 6.5—19 Successful import of queries

The query file import is complete.

To edit queries, use the editing buttons (Figure 6.5—20).

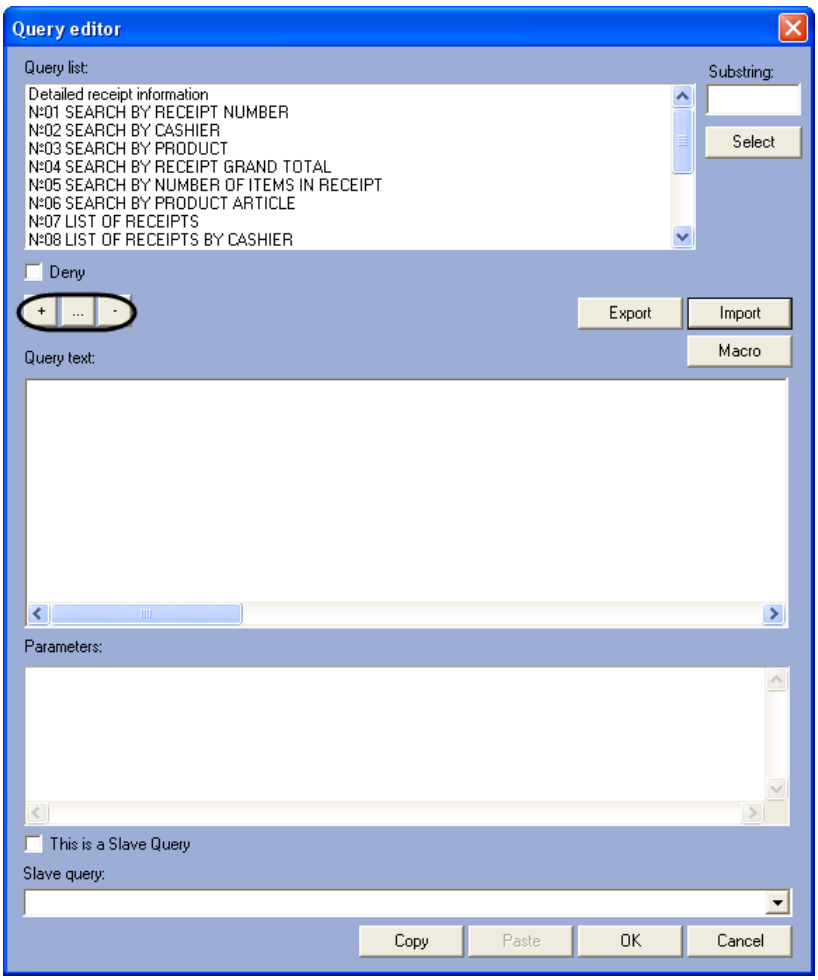


Figure 6.5—20 Query editing buttons

To add a query to the **Query list**, do the following (Figure 6.5—21)

1. Click the "**+**" button.
2. Enter a name for the query in the dialog box that opens.
3. Click **OK**.

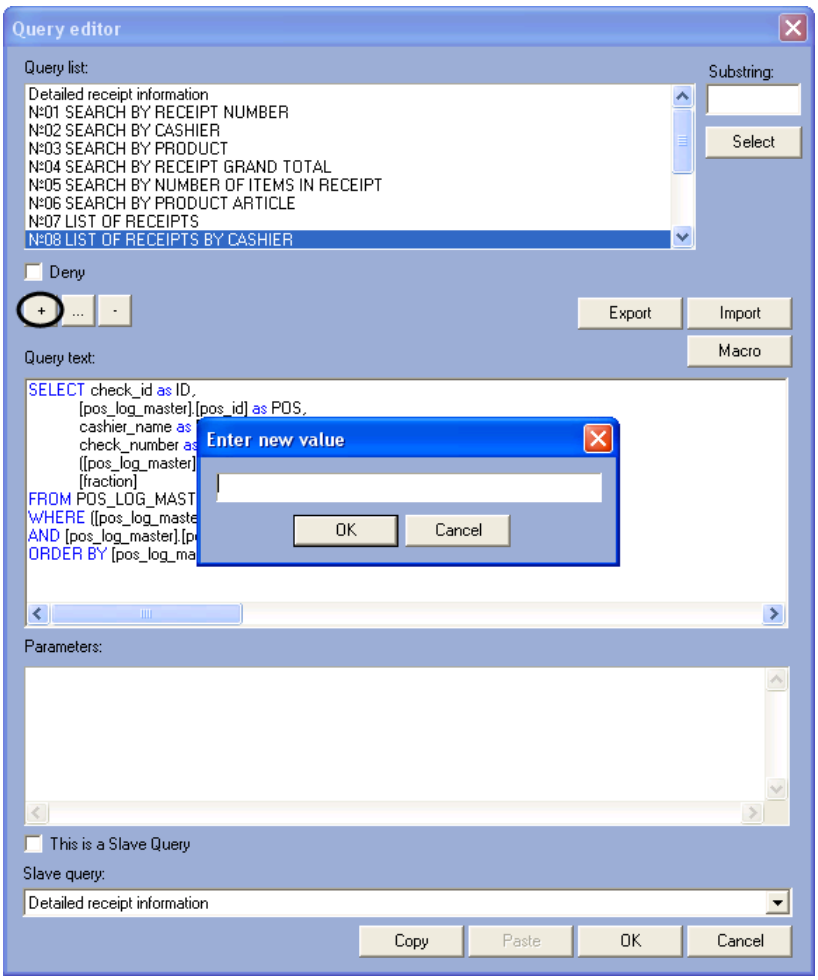


Figure 6.5—21 Adding a query name to the list

The name of the new query will be added to the list.

To edit a query name in the **Query list**, do the following (Figure 6.5—22)

1. Select a query in the **Query list**
2. Click the **"…"** button.

Note. Or double-click the query name instead of clicking the "…" button.

3. Enter a new name for the query in the dialog box that opens.
4. Click **OK**.

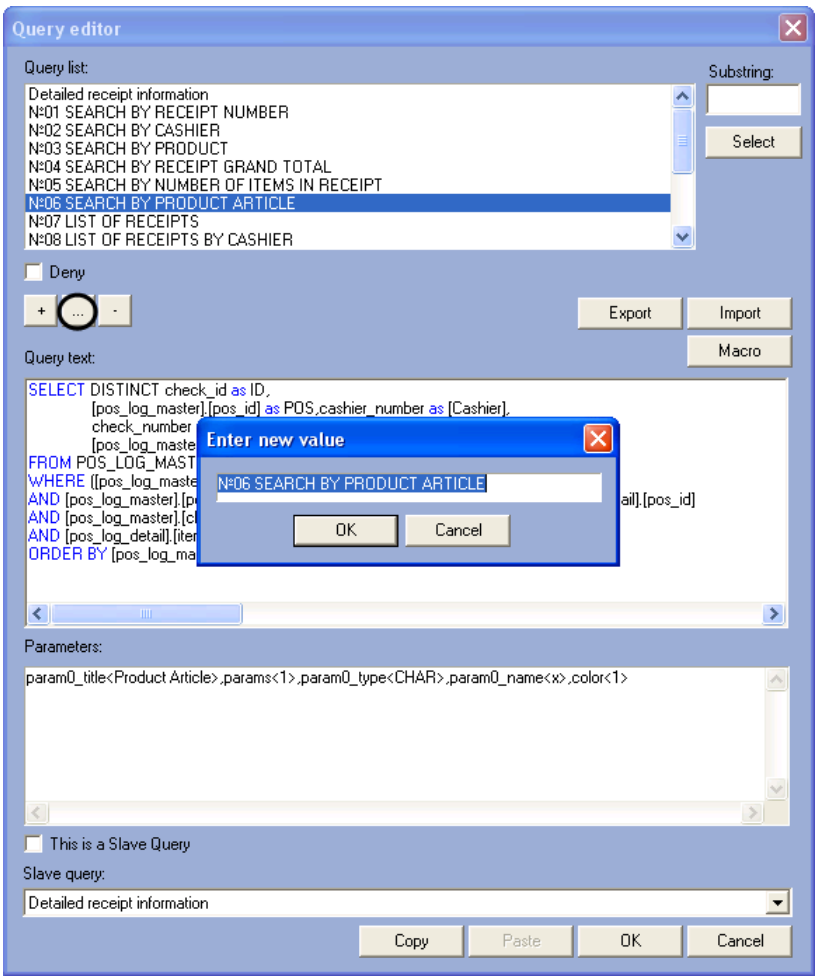


Figure 6.5—22 Editing a query name

The query name will be changed.

To delete a query from the **Query list**, do the following:

1. Select a query in the **Query list**
2. Click the “-“ button (Figure 6.5—23).

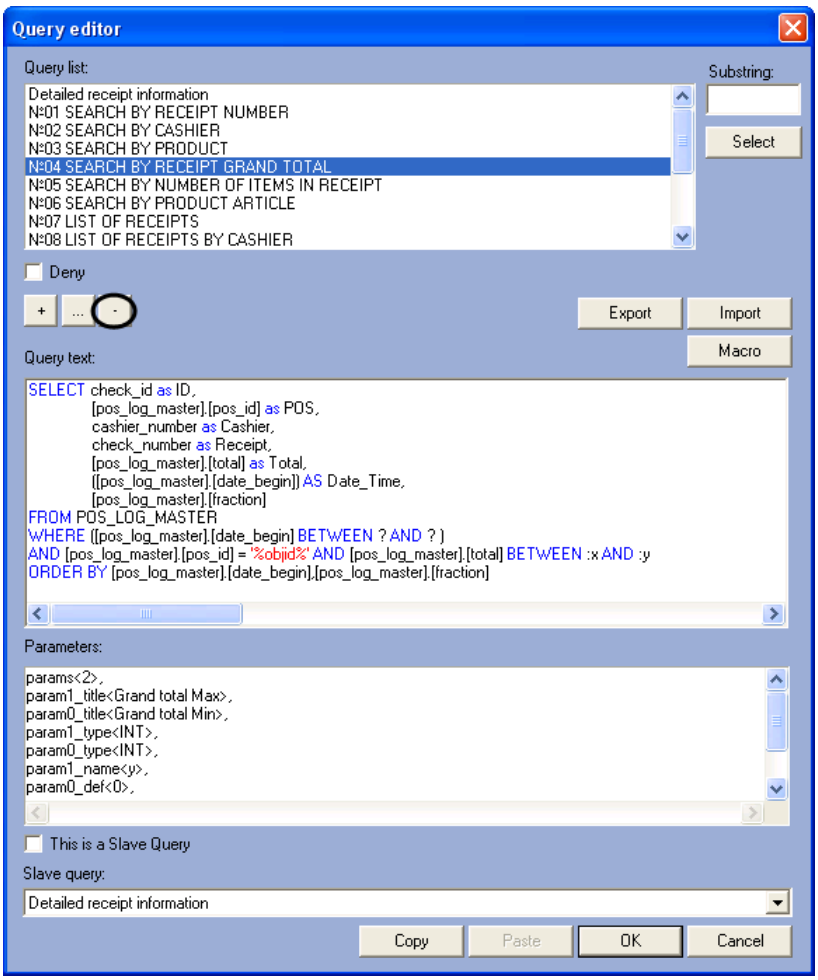


Figure 6.5—23 Deleting a query

The query will be deleted from the list.

Note. A query can be also deleted by right-clicking the query name to open the drop-down menu and selecting the Delete option.

To display a query text, select its name in the **Query list**. The query contents are shown in the **Query text** area (Figure 6.5—24).

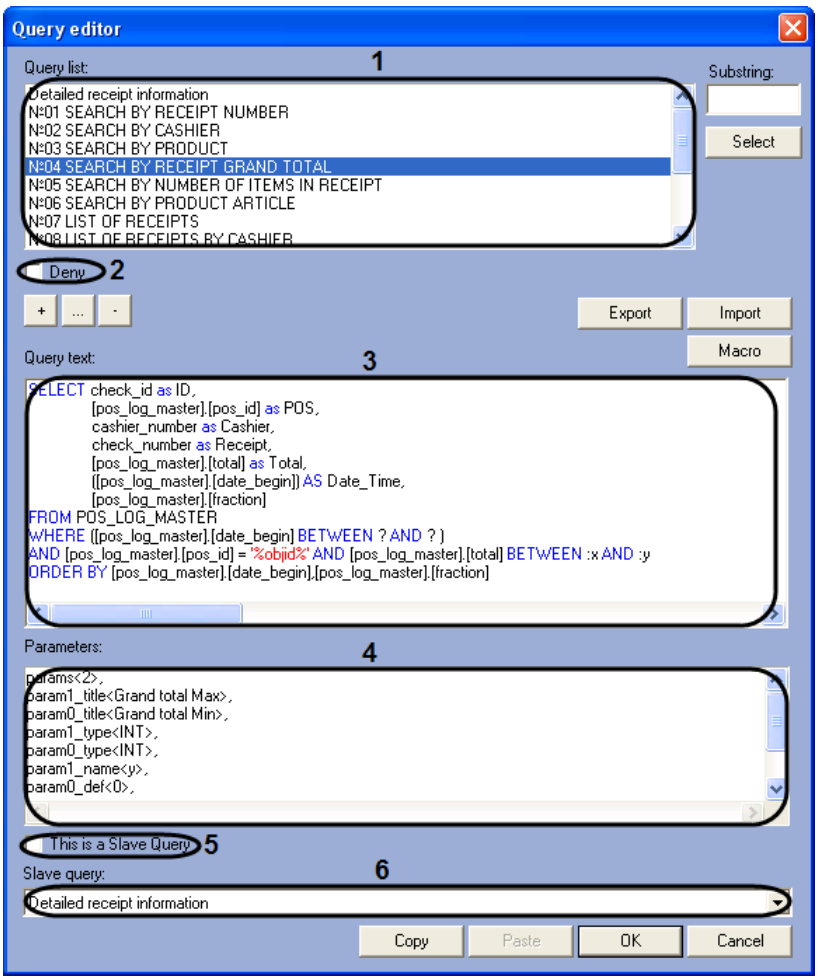


Figure 6.5—24 Query text display

Table 6.3.8.3-1 shows the interface elements of the **Query editor** window.

Table 6.3.8.3-1

No	Element name	Element type	Description	Data type	Default value	Value range
1	Query list	List, items imported or edited using the editing buttons	List of queries	Names of existing queries	-	Depends on the number of existing queries
2	Hide	Checkbox	Hides the query in the **Receipts search** window	Boolean	No	Yes - the query is not displayed in the **Receipts search** window No – the query is displayed
3	Query text	Text field	The text of the query	SQL language	-	-
4	Parameters	Text field	Query parameters	SQL language	-	-
5	This is a slave query	Checkbox	Makes the query a slave	Boolean	-	Yes – the query is a slave No – the query is not a slave
6	Slave query	Drop-down list	The query which is a slave relative to this query	Names of existing slave queries	-	Depends on the number of existing slave queries

Note. Use SQL templates while editing the text of the query. Click the Macro button and select an item from the list that opens (Figure 6.5—25).

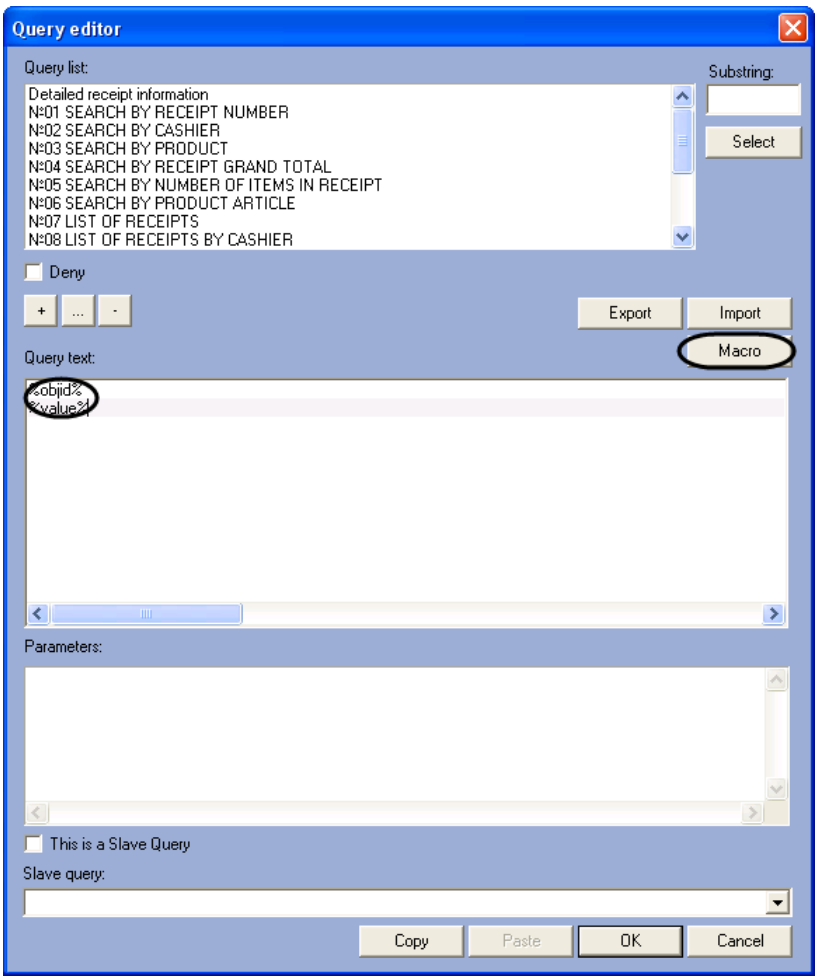


Figure 6.5—25 Using SQL templates

To search for queries in the **Query list**, do the following (Figure 6.5—26)

1. Enter the word to find in the **Word** field
2. Click the **Find** button.
3. The query names containing the word will be highlighted in the **Query list**.

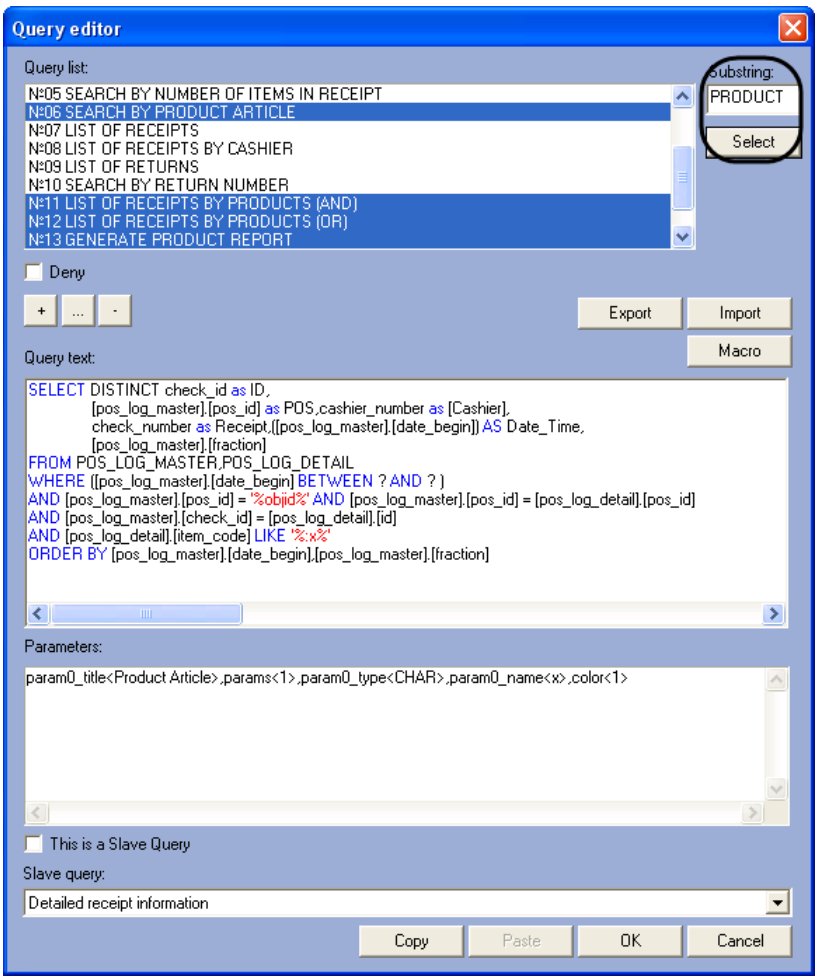


Figure 6.5—26 Searching for a word in the Query list

The word search in the **Query list** is complete.

To export the query list into a file, do the following:

1. Click the **Export** button (Figure 6.5—27).

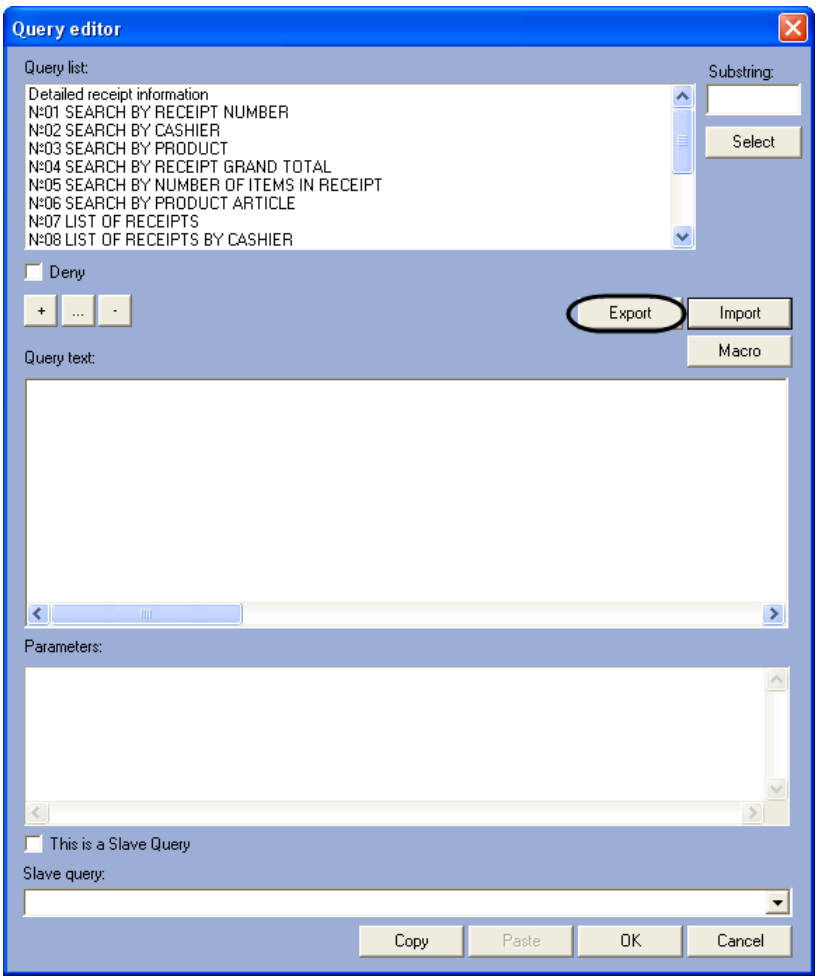


Figure 6.5—27 Exporting the query list

2. Save the query file in the standard Windows file save dialog box (Figure 6.5—28).

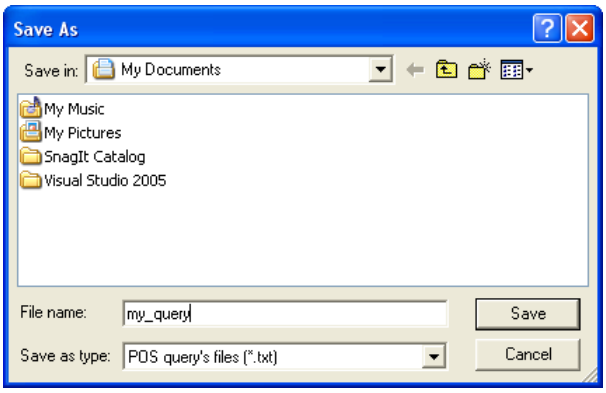


Figure 6.5—28 The standard Windows file save dialog box

3. The user queries will be saved in the file.

Query export is complete.

Note. Use the Copy and Paste buttons to copy the query list to other Receipts search windows.

To save changes and close the **Query editor** window, click **OK** (Figure 6.5—29).

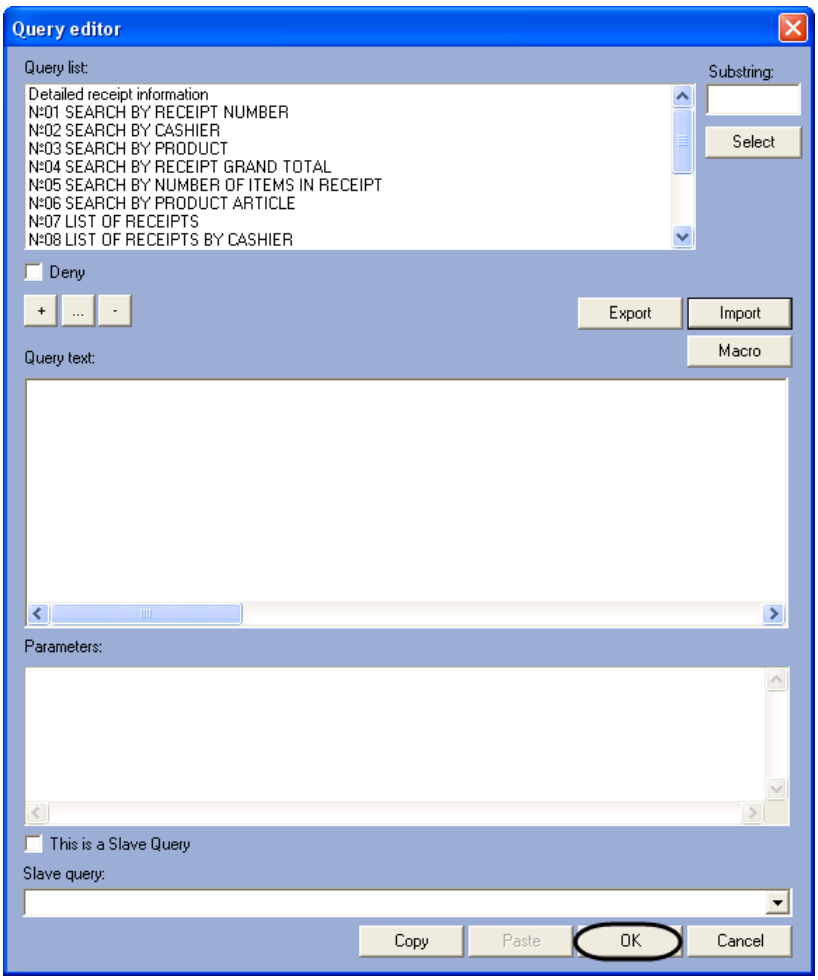


Figure 6.5—29 Saving changes and closing Query editor

The query editing in the Receipts search window is complete.

6.6 Setting up the Shop system object

The **Shop** system object is for integration of POS-terminals that are physically installed in one shop.

Creation and setup of the **Shop** system object is carried out on **Programming** tab of **System setting** dialog box (Figure 6.6—1).

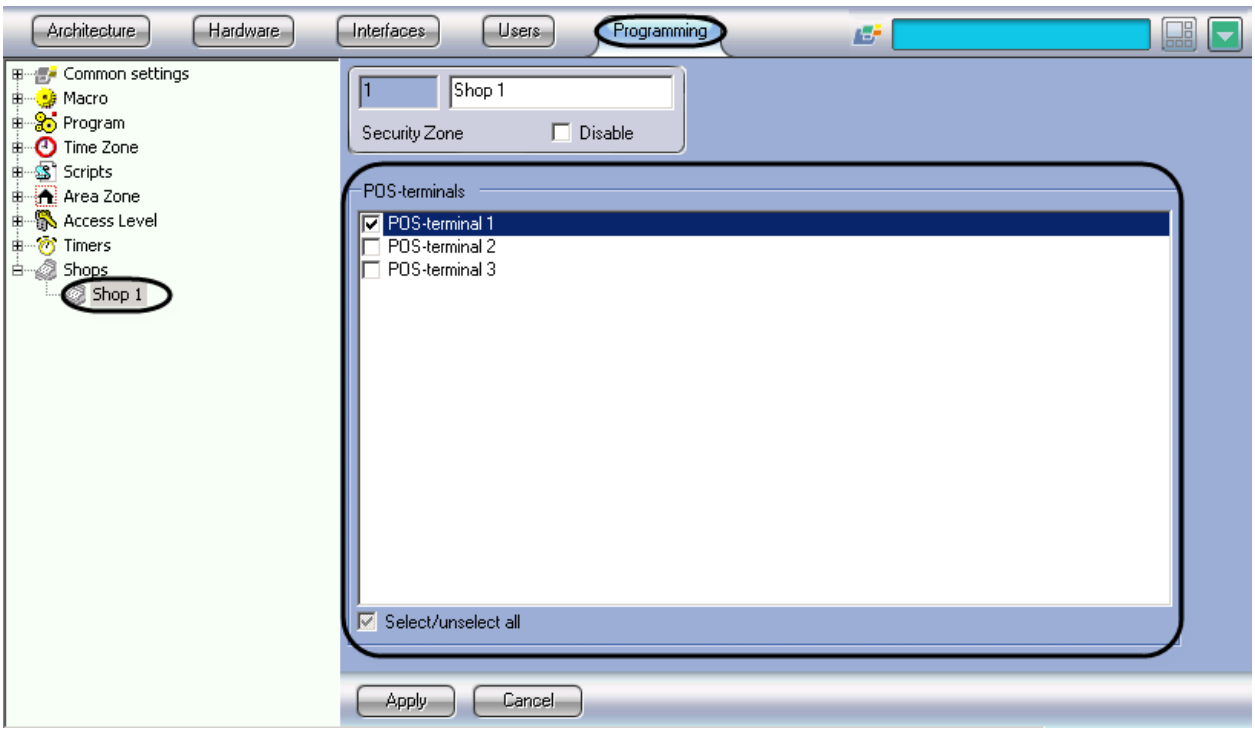


Figure 6.6—1 The Shop object creation

Setting parameters of the **Shop** system object is carried out on setting panel of the **Shop** object (Figure 6.6—1).

To set parameters of the **Shop** system object do the following:

1. Go to the **Shop** object setting panel (Figure 6.6—2).

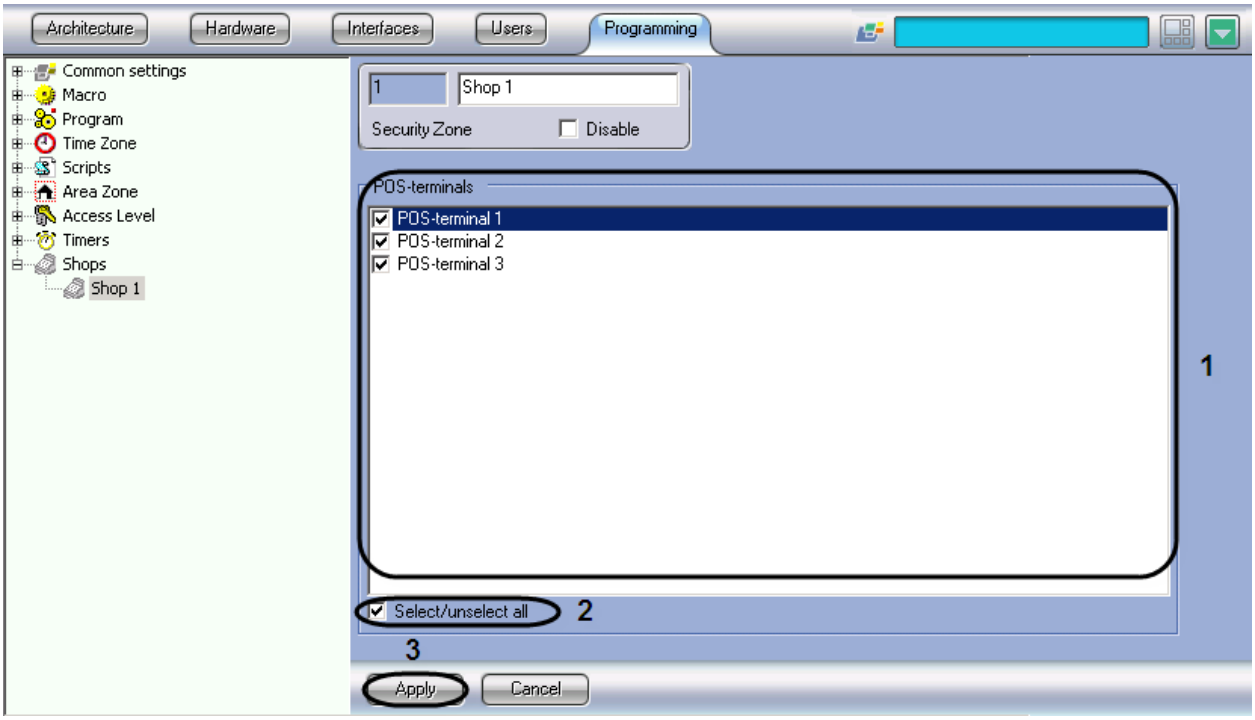


Figure 6.6—2 The Shop object setting panel

2. In **POS-terminals** field set the checkbox next to the necessary POS-terminal that is installed in the shop (Figure 6.6—2, 1).

3. Set the “Select/unselect all” checkbox to select all POS-terminals in the list (Figure 6.6—2, 2).
   Note. If it’s necessary to remove the selection of all POS-terminals remove “Select/unselect all” checkbox by clicking it once again.
4. Click **Apply** to save the changes (Figure 6.6—2, 3).

Setting parameters of the **Shop** object is completed.

6.7 Configuring the POS Replicator system object

The **POS Replicator** system object is used for replicating the databases of remote Servers to the main Server.

Attention! If the POS module is being updated on the Server where the POS module has already been installed, then it is necessary to delete the POS database before update or create a new database while updating. New databases are to be created both on remote Servers and on the main Server.

The **POS Replicator** system object is created under the **Computer** object in the **Hardware** tab of the **System setting** dialog box (Fig. 6.7—1). Only one **POS Replicator** object can be created on the Server.

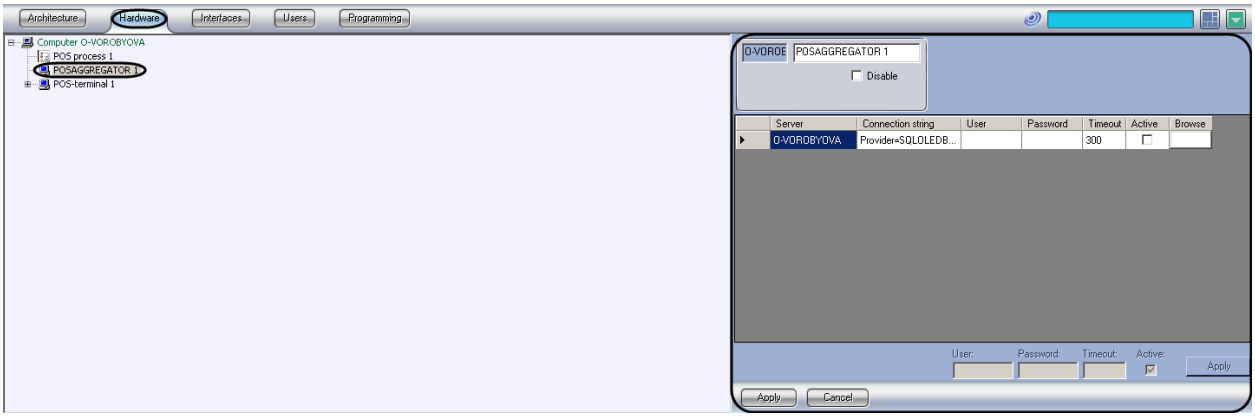


Fig. 6.7—1 The POS Replicator object

To configure the **POS Replicator** system object do the following:

1. Go to the settings panel of the **POS Replicator** object (Fig. 6.7—2).

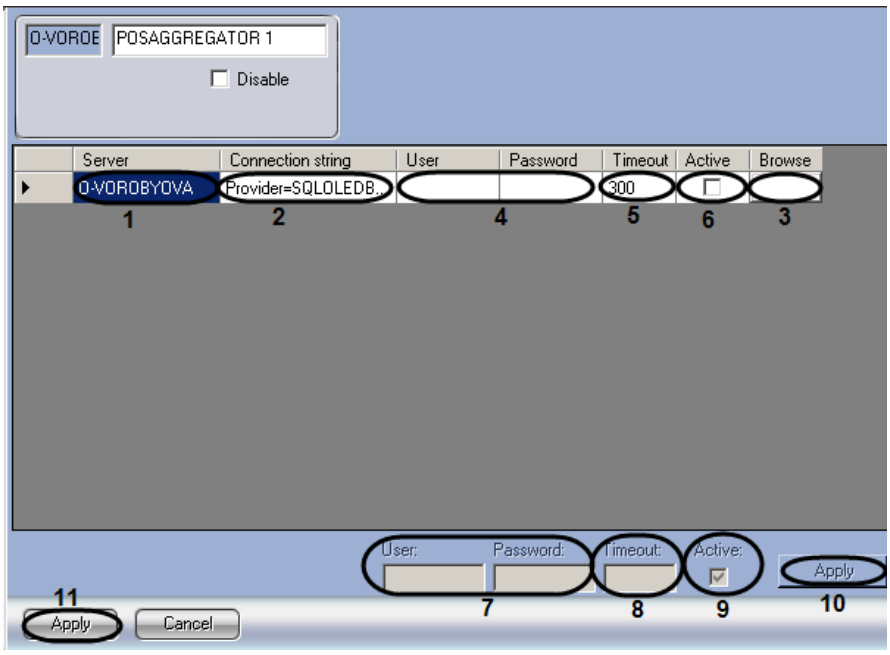


Fig. 6.7—2 Configuration of «POS Replicator» object

2. Available servers of MS SQL Server databases are specified in table (Fig. 6.7—2).
3. Names of servers in POS INTELLECT™ on which the Servers of databases are run are specified in the **Server** column (Fig. 6.7—2, 1).
4. Automatically created string of connection to remote database server is specified in the **Connection string** column (Fig. 6.7—2, 2). Name of SQL-server is made from the Server name adding the \sqlexpress, on default the name of database is POS. If it is necessary to change the connection strings do the following:
   4.1 Click the key in the **Browse** column (Fig. 6.7—2, 3). The **Data Link Properties** window is opened in order to configure the database connection.
   4.2 In the **Select or enter a server name** field select from the list or enter manually the name of MS SQL Server where the connected database is stored (Fig. 6.7—3, 1).

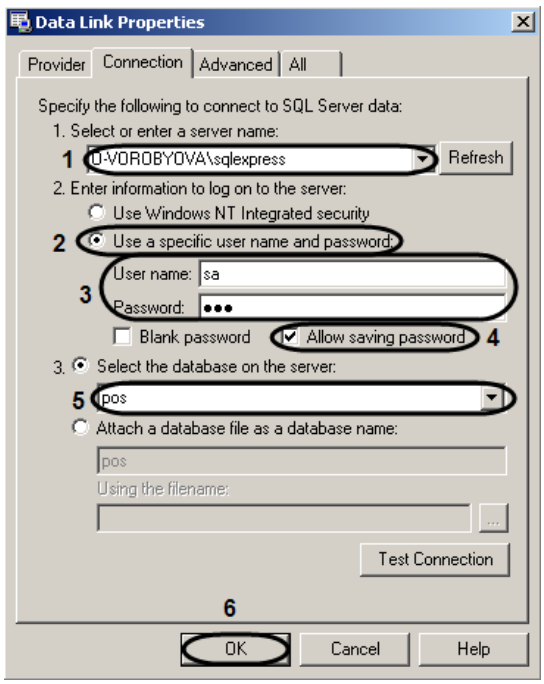


Fig. 6.7—3 Configuration of database connection

4.3 Set the switch into the **Use a specific user name and password** position (Fig. 6.7—3, 2).
4.4 In the **User name:** field enter the user name (login) to connect to the MS SQL server, in the **Password** field enter the password to access the database (Fig. 6.7—3, 3).
4.5 Set the **Allow saving password** checkbox (Fig. 6.7—3, 4).
4.6 Select the name of connected POS-Intellect database from the **Select the database on the server** list (Fig. 6.7—3, 5).
4.7 Click **OK** (Fig. 6.7—3, 6).

5. Specify the replication parameters using one of the following way:
   5.1 For each server:
      5.1.1 Enter the user name and password (Fig. 6.7—2, 4).
      5.1.2 Enter the data replication period in the **Timeout** field (Fig. 6.7—2, 5).
      5.1.3 Set the **Active** checkbox if this connection in use (Fig. 6.7—2, 6).
      5.1.4 Repeat 5.1.1 – 5.1.3 steps for each server in the list.
   5.2 For all servers, if it is necessary to use equal parameters for them:
      5.2.1 Enter the user name and password which are used to connect to all databases in the list (Fig. 6.7—2, 7).
      5.2.2 Enter the data replication period in the **Timeout** field (Fig. 6.7—2, 8).
      5.2.3 Set the **Active** checkbox if it is necessary to use all connections (Fig. 6.7—2, 9).
      5.2.4 Click **Apply** button (Fig. 6.7—2, 10).
6. Click **Apply** button (Fig. 6.7—2, 11).

Replication starts automatically when all these actions are completed. Databases with replication time rating are added to the replication queue. Databases with the lowest replication period have the highest priority. Several replication processes can be performed simultaneously depending on the number of cores in the main Server processor.

Configuration of the **POS Replicator** system object is completed.

7 Appendix 1. Description of interface windows

7.1 The Titles database object settings panel

Figure 7.1—1 shows the **Titles database** object settings panel.

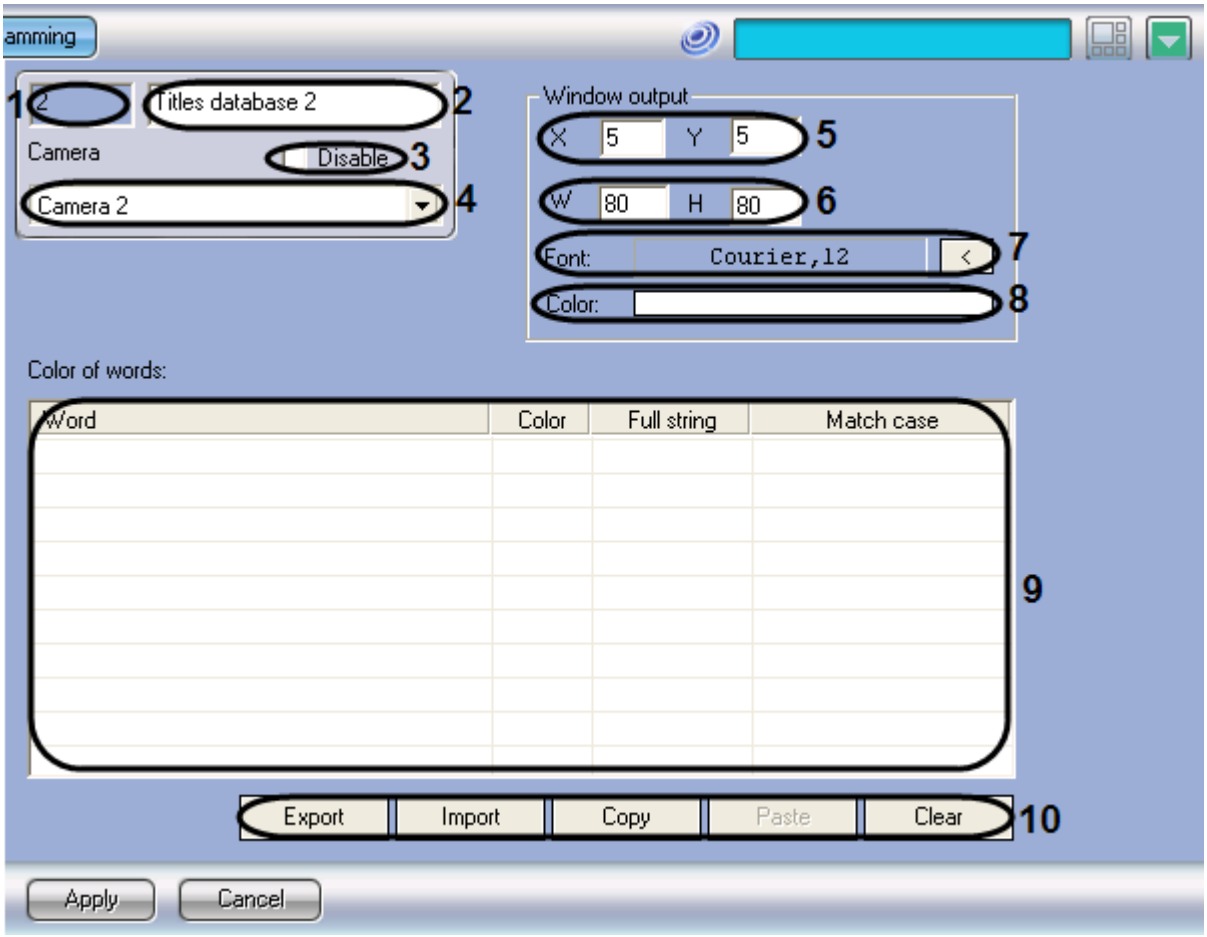


Figure 7.1—1 The Titles database object settings panel

Table 6.3.8.3-1 describes the elements in the **Titles database** settings panel

Table 6.3.8.3-1

No	Element name	Element type	Description	Data type	Default value	Value range
1	Number	Auto	Identification number of the object in the system	Whole positive numbers	-	Depends on the number of objects
2	Name	Text field	Object name	Latin, Cyrillic and special symbols	Titles database	Case-insensitive string of any symbols No more than 60 symbols
3	Disable	Checkbox	Object status	Boolean	No	Yes – the object is disabled (not used) No – the object is enabled
4	Camera	Drop-down list	Parent **Camera** object	Names of existing **Camera** objects	Parent camera name	Depends on the number of existing **Camera** objects
The **Titles area** group						
5	X	Text field	X-coordinate of the upper left corner (left indent)	% of video image width	5	0 to 100
	Y	Text field	Y-coordinate of the upper	% of video image	5	0 to 100

No	Element name	Element type	Description	Data type	Default value	Value range
			left corner (top indent)	height		
6	W	Text field	Titles display area width	% of video image width	80	0 to 100
	H	Text field	Titles display area height	% of video image height	80	0 to 100
The **Font** group						
7	Font	Auto	Titles font sample	Text line	Courier, 12	Depends on the installed fonts
	<	Button	Selecting the titles font (standard Windows font selection box opens)	-	–	-
The **Color** group						
8	Color	Auto	The titles text color	Color palette	White	Depends on the system color palette
	Color	Double-click	Selecting the titles text color (standard Windows color selection dialog box)	-	-	-
The **Word highlighting** table						
9	Word	Text field	The word to highlight	Text line	–	String of any symbols
	Color	Double-click	Highlighting color	Color palette	Turquoise	Depends on the system color palette
	Whole line	Checkbox	Highlights the whole line	Boolean	No	Yes – the whole line is highlighted No – the word only is highlighted
	Match case	Checkbox	Match case	Boolean	No	Yes – case-sensitive search No – case-insensitive search
10	Export	Button	Exporting the table into a file	–	–	–
	Import	Button	Importing the table from a file	–	–	–
	Copy	Button	Copy the table contents to the clipboard	–	–	–
	Paste	Button	Paste the clipboard into the table	–	–	–
	Clear	Button	Clear the table	–	–	–

7.2 The POS-terminal object settings panel

Figure 7.2—1 shows the **POS-terminal** object settings panel.

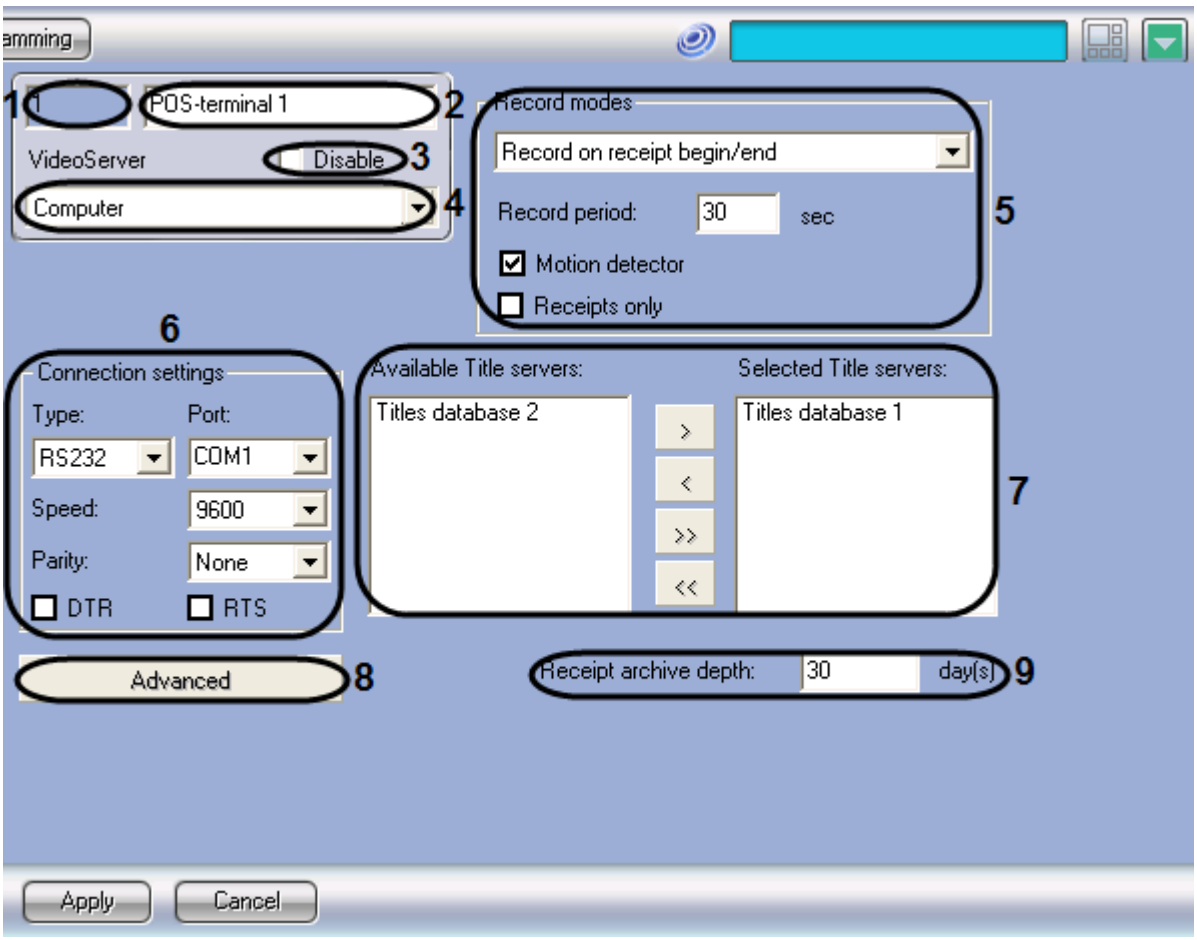


Figure 7.2—1 The POS-terminal object settings panel

Table 6.3.8.3-1 describes the elements in the **POS-terminal** settings panel

Table 6.3.8.3-1

No	Element name	Element type	Description	Data type	Default value	Value range
1	Number	Auto	Identification number of the object in the system	Whole positive numbers	-	Depends on the number of existing **POS-terminal** objects
2	Name	Text field	Object name	Latin, Cyrillic and special symbols	POS-terminal	Case-insensitive string of any symbols No more than 60 symbols
3	Disable	Checkbox	Object status	Boolean	No	Yes – the object is disabled (not used) No – the object is enabled
4	Computer	Drop-down list	Parent **Computer** object	Names of existing **Computer** objects	Parent computer name	Depends on the number of existing **Computer** objects
The **Recording modes** group						
5	Recording mode	Drop-down list	The recording mode	Existing recording modes	Record on receipt beginning /end	Record on receipt beginning/end Continuous recording Save one frame per receipt
	Post-recording interval	Text field	Post-recording time interval	Seconds	30	

No	Element name	Element type	Description	Data type	Default value	Value range
	Motion detector	Checkbox	Record on motion detector activation	Boolean	Yes	Yes – use motion detector No – do not use motion detector
	Receipts only	Checkbox	Receipt display option	Boolean	No	Yes – only data of the receipts between the beginning and end of the receipts are displayed on the screen and included in the Titles database No – all the data of the processed receipts are displayed on the screen and included in the Titles database
The **Connection settings** group						
6	Type	Drop-down list	Connection type	Supported protocols	RS232	Depends on the number of supported protocols
	Port	Drop-down list	Port number	Available ports	COM1	Number of available ports
	Speed	Drop-down list	Connection rate in accordance with RS232 protocol	Supported rates	9600	Depends on the number of supported rates in accordance with RS232 protocol
	Parity	Drop-down list	Parity mode for RS232 protocol	Supported parity modes	None	Depends on the number of supported parity modes in the RS232 protocol
	DTR	Checkbox	DTR option for RS232 protocol	Boolean	No	Yes – use DTR control signal in the RS232 protocol No – do not use DTR control signal in the RS232 protocol
	RTS	Checkbox	RTS option for RS232 protocol	Boolean	No	Yes – use RTS control signal in the RS232 protocol No – do not use RTS control signal in the RS232 protocol
The **Titles database** group						
7	Available titles databases	Auto	The list of available titles databases	–	–	–
	Selected titles databases	Auto	The list of selected titles databases	–	–	–
	<, >, >>, <<	Button	Selecting the titles databases	–	–	–
8	Advanced	Button	Opening additional POS-terminal object settings	–	–	–
9	Receipts archive depth	Text field	The size of the receipts archive	Days	30	

7.3 The Titles search object settings panel

Figure 7.3—1 shows the **Titles search** object settings panel.

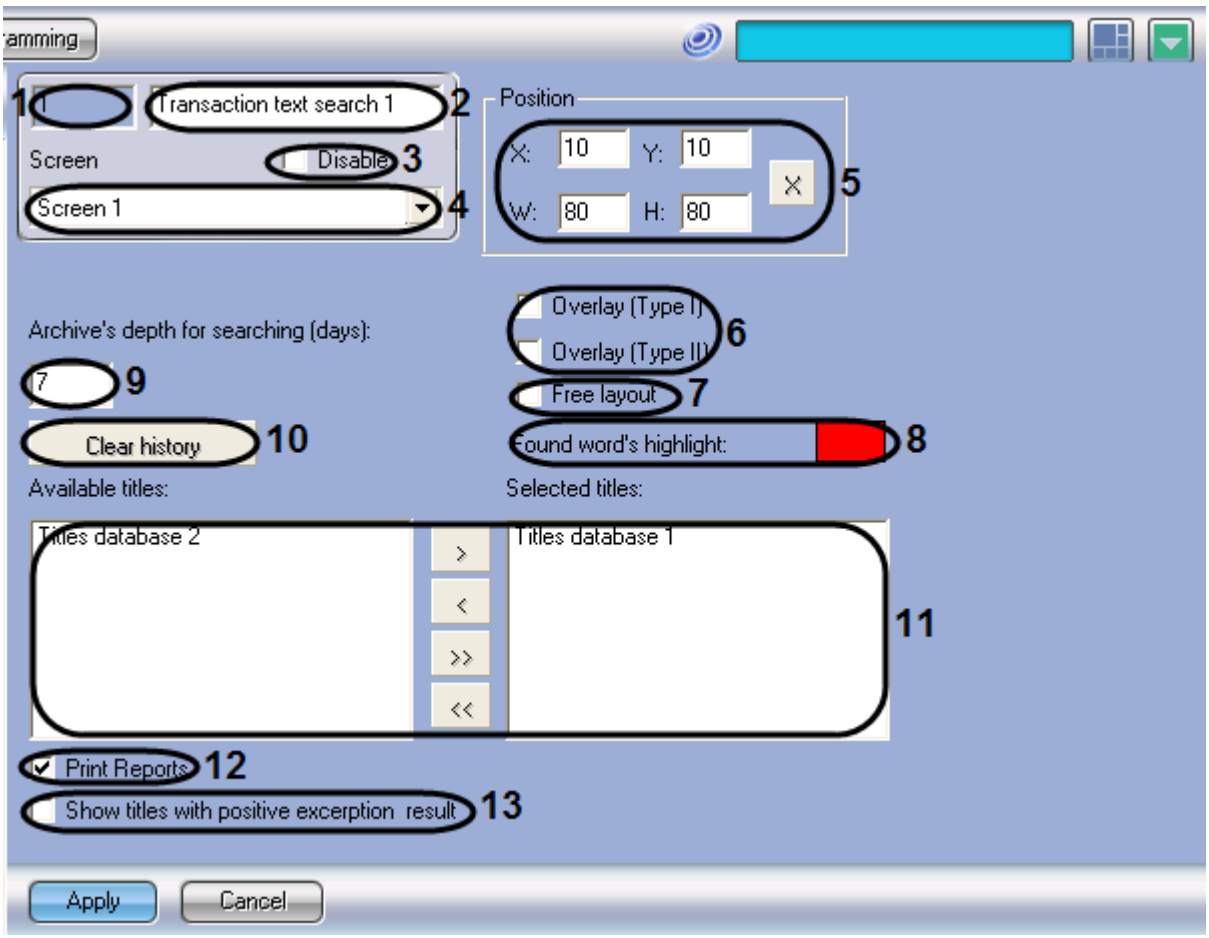


Figure 7.3—1 The Titles search object settings panel

Table 6.3.8.3-1 describes the elements in the **Titles search** settings panel

Table 6.3.8.3-1

No	Element name	Element type	Description	Data type	Default value	Value range
1	Number	Auto	Identification number of the object in the system	Whole positive numbers	-	Depends on the number of existing **Titles search** objects
2	Name	Text field	Object name	Latin, Cyrillic and special symbols	Titles search	Case-insensitive string of any symbols No more than 60 symbols
3	Disable	Checkbox	Object status	Boolean	No	Yes – the object is disabled (not used) No – the object is enabled
4	Screen	Drop-down list	Parent **Screen** object	Names of existing **Screen** objects	Parent **Screen** name	Depends on the number of **Screen** objects
The **Position** group						
5	X	Text field	X coordinate of the upper left corner	% of screen width	10	0 to M*100, where M is the number of installed monitors
	Y	Text field	Y coordinate of the upper left corner	% of screen height	10	0 to M*100, where M is the number of installed monitors
	W	Text field	Window width	% of screen width	80	0 to M*100, where M is the number of installed

No	Element name	Element type	Description	Data type	Default value	Value range
						monitors
	H	Text field	Window height	% of screen height	80	0 to M*100, where M is the number of installed monitors
	X	Button	Open the size and position sample window	-	-	-
The **Overlay** group						
6	Overlay (Type I)	Checkbox	Overlay I video display mode	Boolean	No	Yes – use Overlay I No – do not use Overlay I
	Overlay (Type II)	Checkbox	Overlay II video display mode	Boolean	No	Yes – use Overlay II No – do not use Overlay II
7	Free layout	Checkbox	Free layout	Boolean	No	Yes – operator can change both width and heigth of the window with camera's window included,the proportions of camera's window are saved in the process. No – operator can change only the width of the window with camera's window included,the proportions of camera's window are saved in the process.
The **Word highlighting** group						
8	Color	Auto	Word highlighting color	Color palette	Red	Depends on the system color palette
	Color	Double-click	Word highlighting color selection (opening the standard Windows color selection dialog box)	-	-	-
9	Archive search depth	Text field	Titles database search depth	Days	7	
10	Clear	Button	Clears the history of user queries	–	–	–
The **Titles databases** group						
11	Available titles databases	Auto	The list of available titles databases	–	–	–
	Selected titles databases	Auto	The list of selected titles databases	–	–	–
	<, >, >>, <<	Button	Selecting the titles databases	–	–	–
12	Print reports	Checkbox	Print reports	Boolean	Yes	Yes – operator can print query results No – operator cannot print query results
13	Show titles databases with non-empty results only	Checkbox	Show titles databases with non-empty search results only	Boolean	No	Yes – show titles databases with non-empty results only No – show all titles databases

7.4 The Receipts search object settings panel

Figure 7.4—1 shows the **Receipts search** object settings panel.

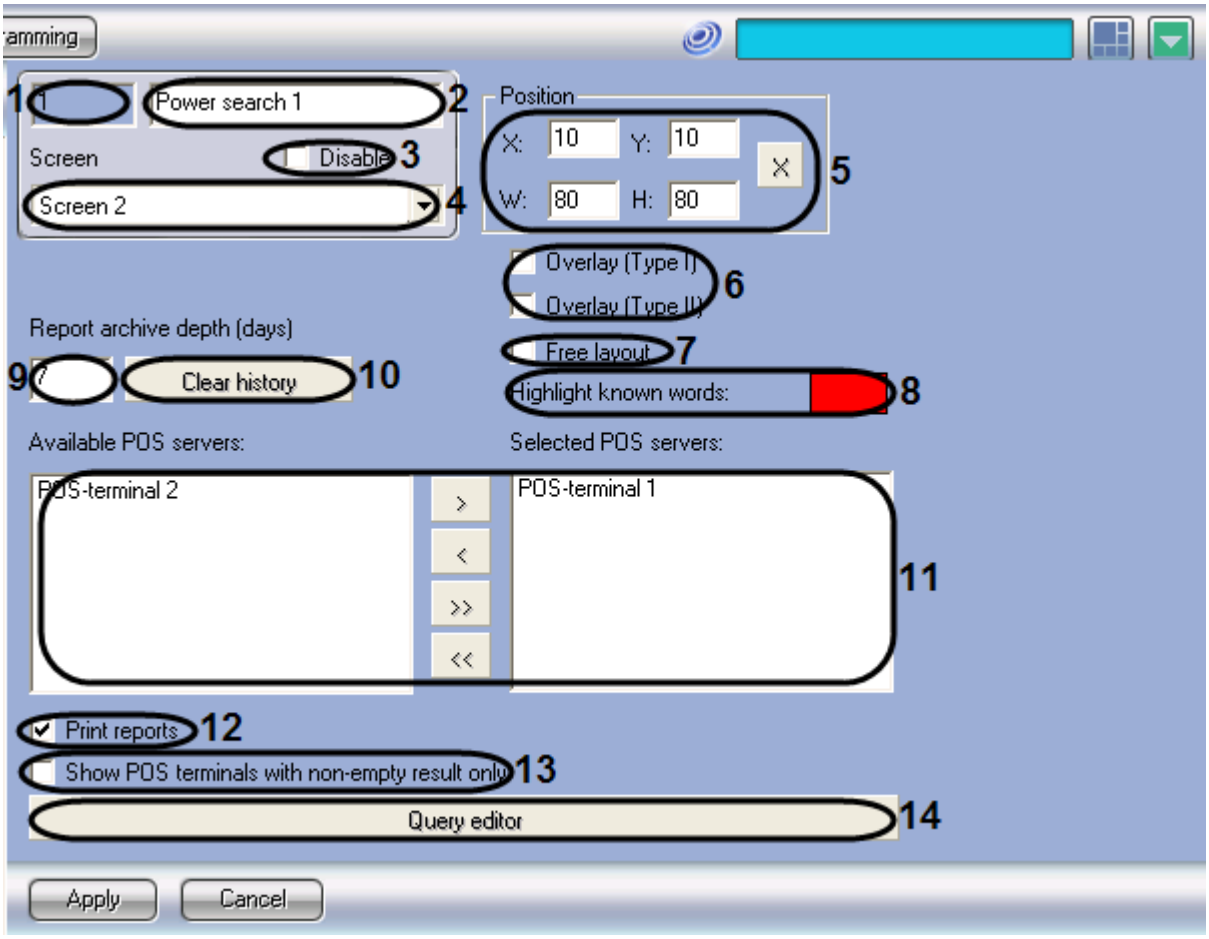


Figure 7.4—1 Setting up the Receipts search window

Table 6.3.8.3-1 describes the elements in the **Receipts search** settings panel

Table 6.3.8.3-1

No	Element name	Element type	Description	Data type	Default value	Value range
1	Number	Auto	Identification number of the object in the system	Whole positive numbers	-	Depends on the number of **Receipts search** objects
2	Name	Text field	Object name	Latin, Cyrillic and special symbols	Receipts search	Case-insensitive string of any symbols No more than 60 symbols
3	Disable	Checkbox	Object status	Boolean	No	Yes – the object is disabled (not used) No – the object is enabled
4	Screen	Drop-down list	Parent **Screen** object	Names of existing **Screen** objects	Parent **Screen** objects name	Depends on the number of **Screen** objects
The **Position** group						
5	X	Text field	X coordinate of the upper left corner of the window	% of screen width	10	0 to M*100, where M – number of installed

No	Element name	Element type	Description	Data type	Default value	Value range
						monitors
	Y	Text field	Y coordinate of the upper left corner of the window	% of screen height	10	0 to M*100, where M – number of installed monitors
	W	Text field	Window width	% of screen width	80	0 to M*100, where M – number of installed monitors
	H	Text field	Window height	% of screen height	80	0 to M*100, where M – number of installed monitors
	X	Button	Open sample window for visual setting ot position and size	-	-	-
The **Overlay** group						
6	Overlay (Type I)	Checkbox	Overlay I video display mode	Boolean	No	Yes – use Overlay I No – do not use Overlay I
	Overlay (Type II)	Checkbox	Overlay II video display mode	Boolean	No	Yes – use Overlay II No – do not use Overlay II
7	Free layout	Checkbox	Free layout	Boolean	No	Yes – operator can change positions of the elements in the window No – operator cannot change positions of the elements in the window
The **Word highlighting** group						
8	Color	Auto	Word highlighting color	Color palette	Red	Depends on the system color palette
	Color	Double-click	Word highlighting color selection (open standard Windows color selection dialog box)	-	-	-
9	Archive search depth	Text field	Receipts database search depth	Days	7	
10	Clear	Button	Clears the history of user queries	–	–	–
The **POS-terminals** group						
11	Available POS-terminals	Auto	The list of available POS-terminals	–	–	–
	Selected POS-terminals	Auto	The list of selected POS-terminals	–	–	–
	<, >, >>, <<	Button	Selecting the POS-terminals	–	–	–
12	Print reports	Checkbox	Printing the reports	Boolean	Yes	Yes – operator can print query results No – operator cannot print query results
13	Show POS-terminals with non-empty results only	Checkbox	Show POS-terminals with non-empty search results only	Boolean	No	Yes – show POS-terminals with non-empty results only No – show all POS-terminals
14	Query editor	Button	Open the user query editor	–	–	–

8 Appendix 2. Connecting the POS-server to the POS-terminal

Depending on the POS-terminal hardware and software, it can be connected to the POS-server with installed POS-Intellect software using one of the following ways:

1. POS-terminal COM-port;
2. POS-terminal receipts printer port;
3. LAN.

Note. Consult the dealer who installed your POS-terminals about available connection options.

8.1 Connecting the POS-server to the COM-port of the POS-terminal

The POS-server can be connected to the POS-terminal COM-port, if the POS-terminal allows duplication of POS-operations data to a free COM-port. Connect the free COM-port of the POS-terminal to the POS-server's COM-port (Figure 8.1—1).

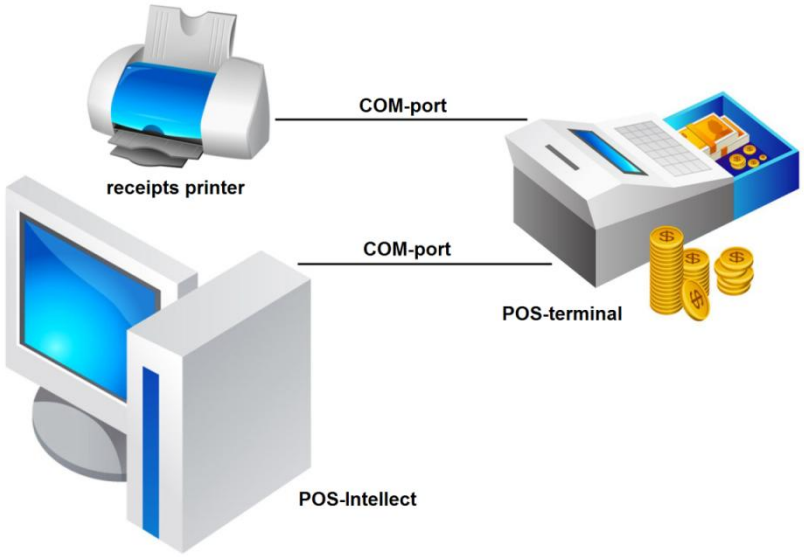


Figure 8.1—1 Connecting the POS-server to the COM-port of the POS-terminal

8.2 Connecting the POS-server to the POS-terminal receipts printer port

If the POS-server cannot be connected to a free COM-port of the POST-terminal, connect it to the POS-terminal's receipts printer port (Figure 8.2—1).

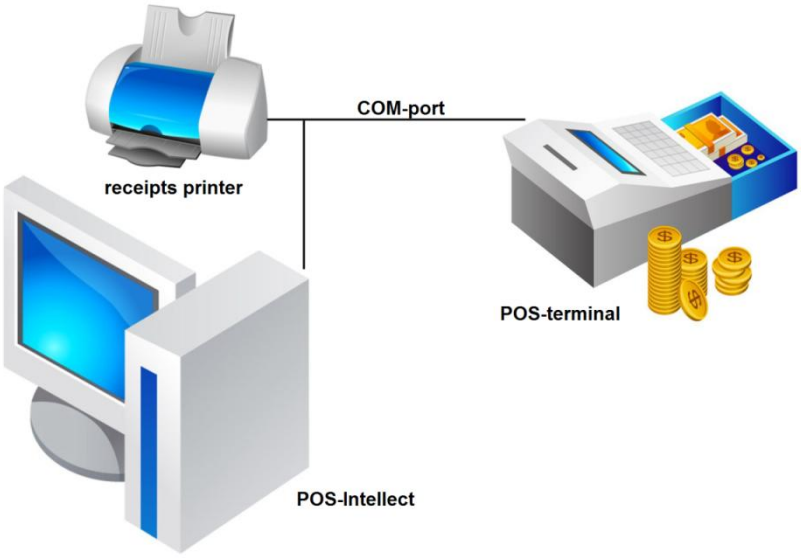


Figure 8.2—1 Connecting the POS-server to the receipts printer port

To use this connection option, make sure that:

1. the receipts printer supports the RS-232 standard;
2. the POS-terminal sends data to the printer in text format.

Use Y-cable to connect the POS-server to the receipts printer (Figure 8.2—2).



Figure 8.2—2 Y-cable

Warning! Unplug all devices from the mains prior to connecting the POS-server to the POS-terminal serial ports. Failing to do so may cause severe damage to the hardware.

8.3 Connecting POS-terminals via LAN

The POS-terminal can be connected to the POS-server via the local area network, if the POS-terminal supports TCP/IP or UDP data transfer protocols (Figure 8.3—1).

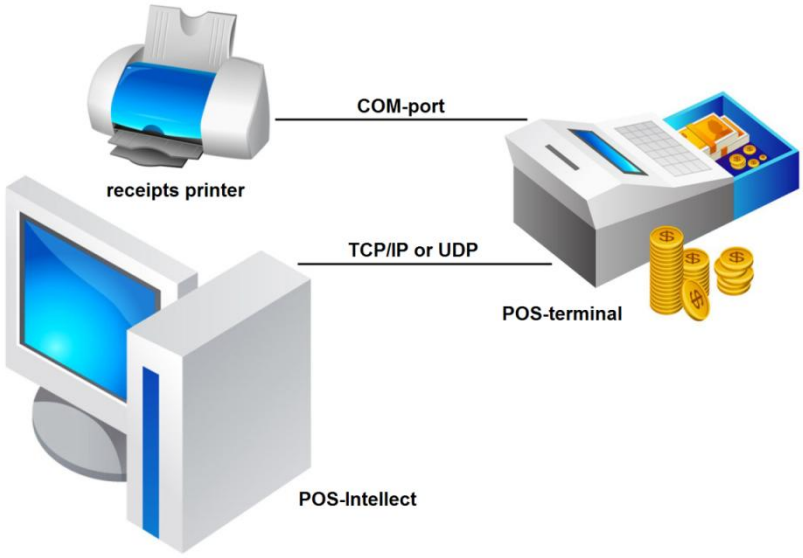


Figure 8.3—1 Connecting the POS-server to the POS-terminal via LAN

To use this connection option, make sure that:

1. the POS-terminal is connected to the LAN router;
2. the POS-terminal is set up for sending POS-operations data to LAN;
3. the LAN router is connected to the POS-server

Note. The main corporate server connected to the POS-server via LAN can be used to route the data from the POS-terminals (Figure 8.3—2).

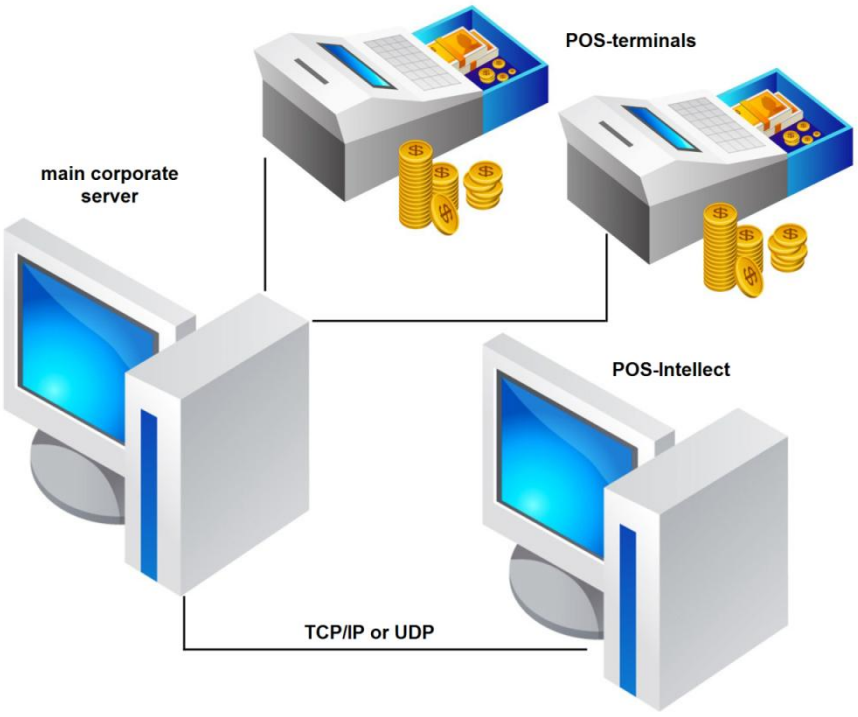


Figure 8.3—2 Connecting the POS-server to the main server

8.4 Auxiliary communication devices

8.4.1 RS-232 extensions

If the RS-232 interface is used, the distance between POS-terminals and the POS-server may be longer than the maximum cable length. The following RS-232 extenders can be used in this case:

1. RS-232 repeaters;
2. RS-232 to RS-422/485 converters;
3. RS-232 to Ethernet converters.

Note. If the RS-232 to Ethernet converter is used, the POS-terminals should be connected to the POS-server via LAN.

8.4.2 Devices installed on the POS-server

The number of POS-terminals to be connected to POS-server COM-ports may exceed the number of available COM-ports. The following communication devices can be installed on the POS-server in this case:

1. multiport RS-232/422/485 serial cards;
2. multiport converters from RS-232/422/485 to USB (Serial-USB);
3. multiport converters from RS-232/422/485 to Ethernet (Serial-Ethernet).

Note. The communication device selection depends on the type of connection between POS-terminals and the POS-server.

8.5 Testing the connection between the POS-server and the POS-terminal

To test the connection of the POS-server to POS-terminals, use the **HyperTerminal** utility included in Windows.

Note. See the official HyperTerminal documentations for its usage details.

To test the POS-terminal connection, do the following:

1. Launch **HyperTerminal** on the POS-server: Select **Start** -> **All Programs** -> **Accessories** -> **Communications** -> **HyperTerminal**. The utility interface window will open, and the **Connection description** dialog box will appear (Figure 8.5—1).

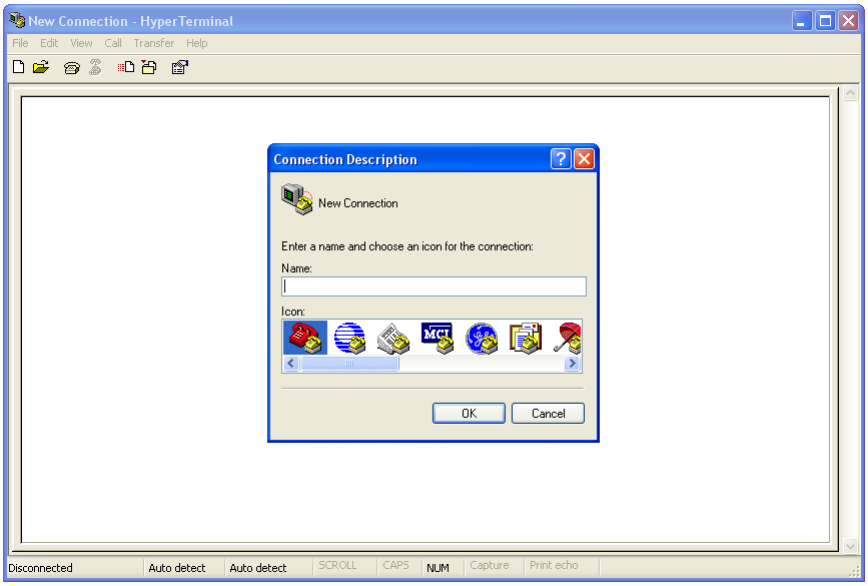


Figure 8.5—1 The HyperTerminal window

2. In the **Name** field, enter a meaningful name for the connection, then click **OK** (Figure 8.5—2).



Figure 8.5—2 New connection name

3. The **Connection** window opens. Select a network type in the **Connect using** drop-down list (Figure 8.5—3).



Figure 8.5—3 Selecting the network interface type

Note. Select the connection type according to the POS-server to POS-terminal connection.

4. If **TCP/IP (Winsock)** interface type is selected, then select the local port number in the **Port** field and click **OK** (Figure 8.5—4).

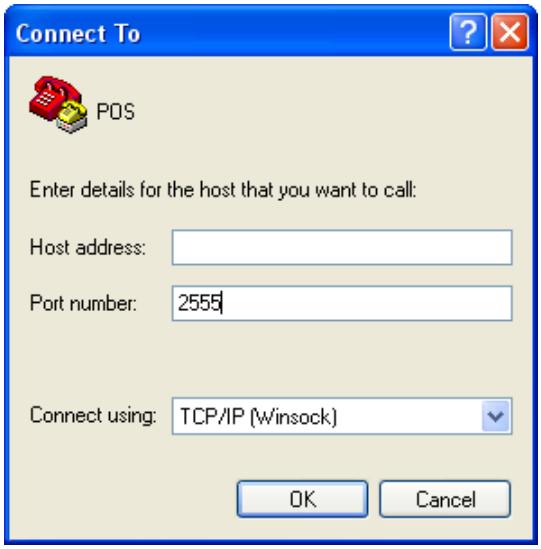


Figure 8.5—4 Setting TCP/IP (Winsock) connection parameters

*Note. An information box will appear with the following message: Unable to connect to port 2555. Click **OK** to close this box (Figure 8.5—5), then click Wait for a call in the Call menu (Figure 8.5—6).*

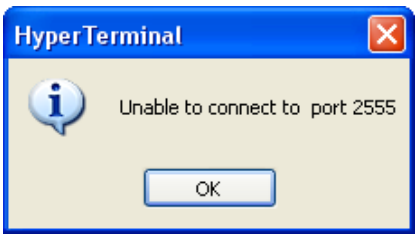


Figure 8.5—5 HyperTerminal information box

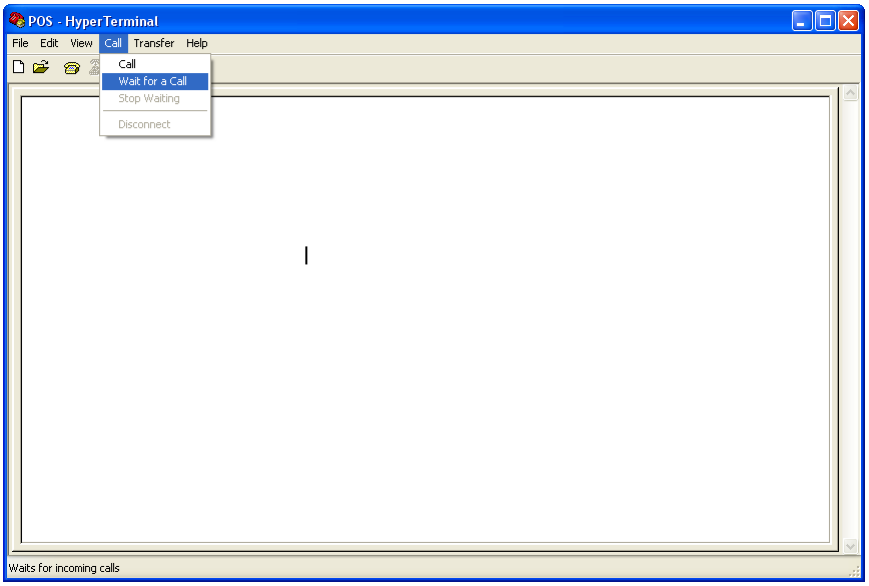


Figure 8.5—6 Waiting for incoming call

5. If the COM interface type is selected, click **OK**. In the **Properties: COM** window that opens enter the required parameters and click **OK** (Figure 8.5—7).

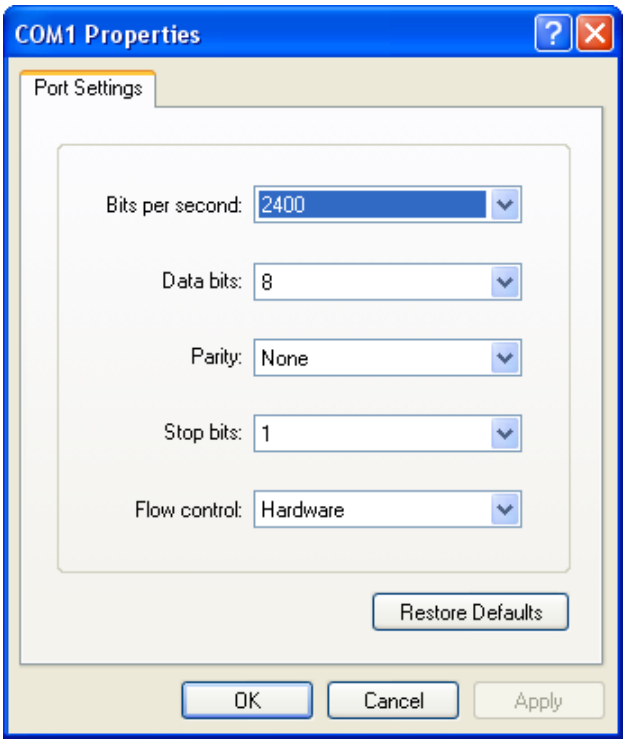


Figure 8.5—7 COM connection settings

Note. The COM connection settings should meet the POS-terminal data transfer settings.

6. Start sending data from the POS-terminal to the POS-server
7. In case of successful connection, the data will be displayed in the **HyperTerminal** window (Figure 8.5—8).

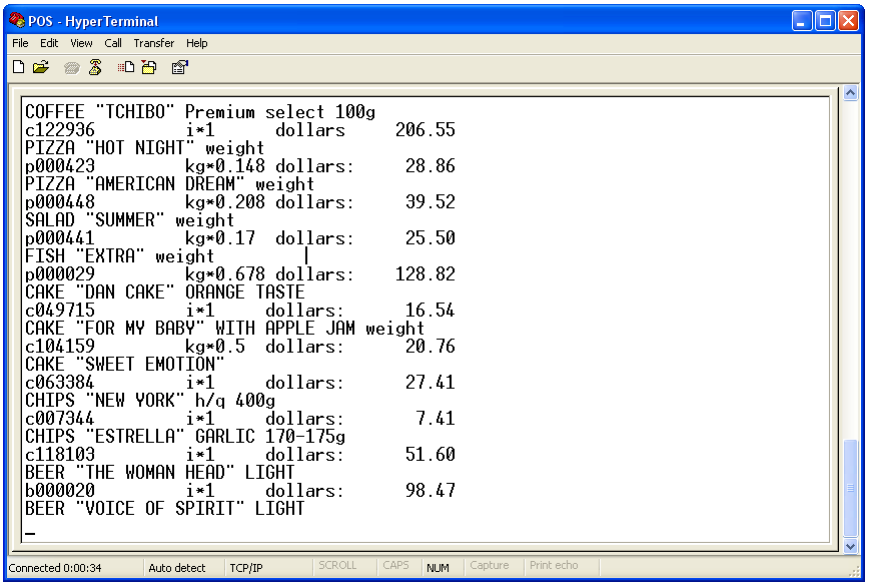


Figure 8.5—8 Successful connection to the POS-terminal

8. In the main menu, select **Call**, then **Disconnect** to disconnect from the POS-terminal
9. To test the connection to all POS-terminals, select **New connection** in the **File** menu and repeat steps 2 to 8.
10. Close the **HyperTerminal** utility.

Testing POS-server connection to POS-terminals is complete.

9 Appendix 3. Log files

9.1 Introduction

Log files are text files containing the current data on POS-Intellect operation.

Figure 9.1—1 shows an example of a log file.

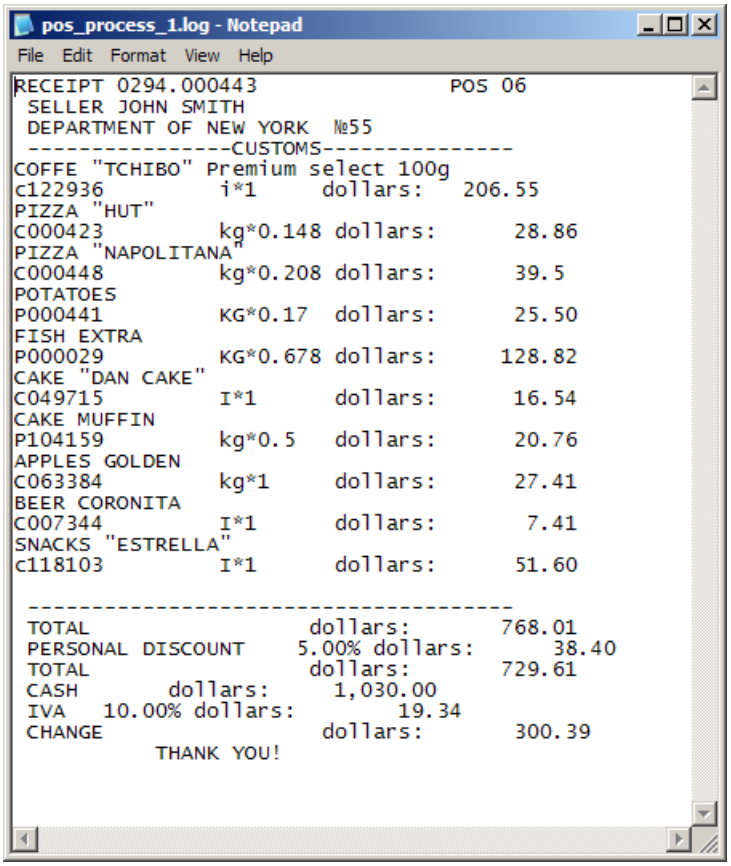


Figure 9.1—1 A log file example

The system creates log files automatically in the **<POS-Intellect program folder>\Modules\PosCapture** folder.

9.2 Enabling and disabling the logging function

Logging can be enabled or disabled using the **Tweaker.exe** utility.

To enable (disable) logging, check (uncheck) the **Log data to file** checkbox in the POS tab (Figure 9.2—1).

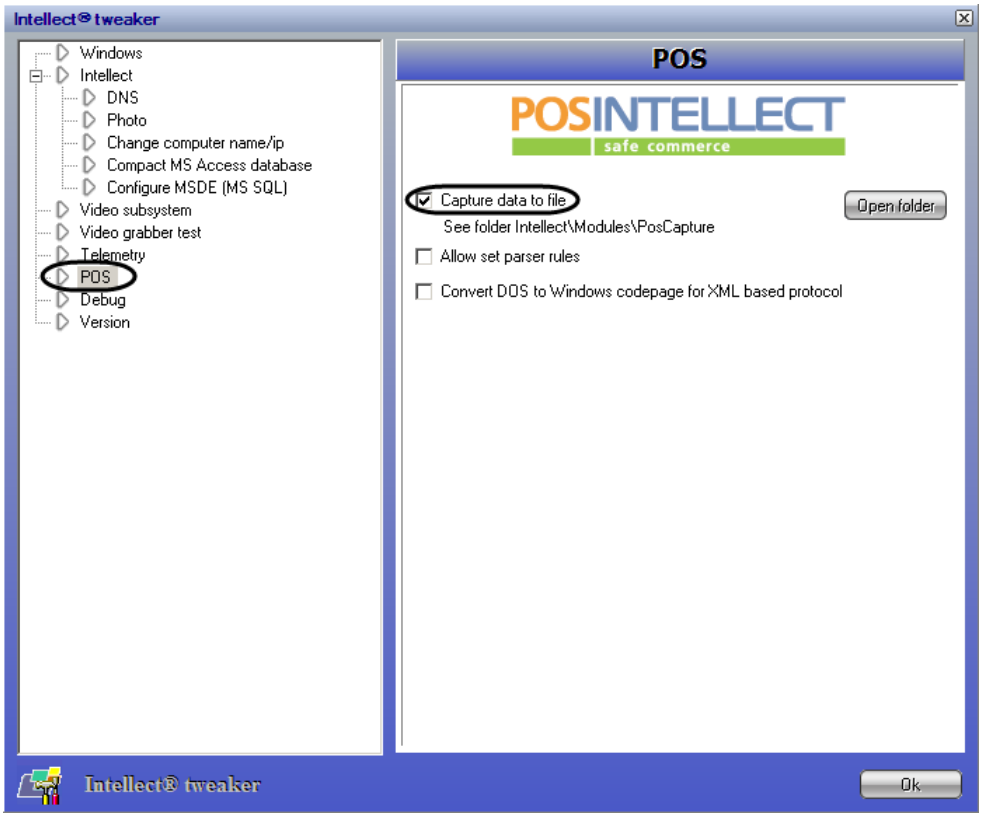


Figure 9.2—1 Enabling/disabling logging

Note. Log file size is limited to 1 megabyte.

9.3 Viewing log files

To view log files, open the **<POS-Intellect program folder>\Modules\PosCapture** folder in Windows, or click the **Open folder** button in the **Tweaki.exe** utility window (Figure 9.3—1).

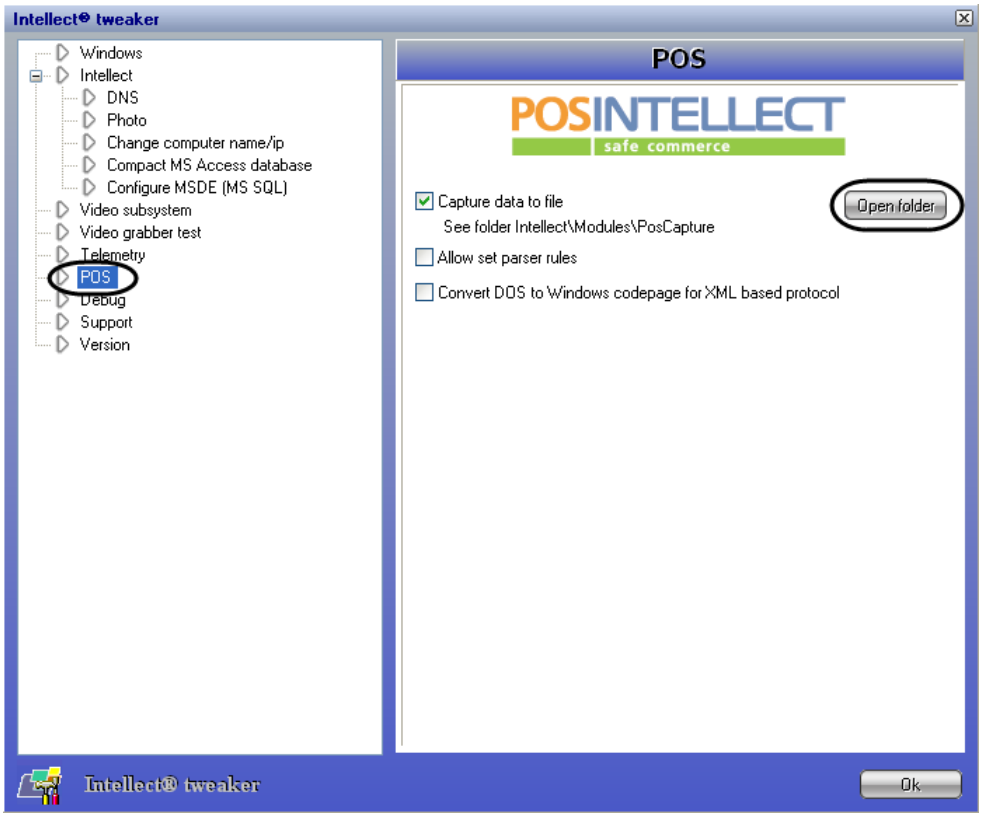


Figure 9.3—1 Opening the log files folder

Figure 9.3—2 shows an example of a log files folder.

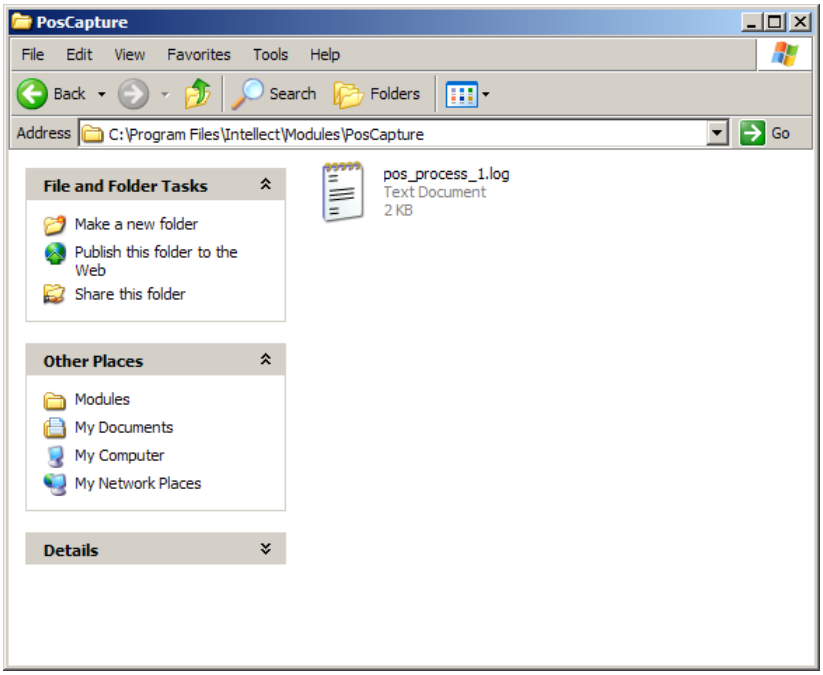


Figure 9.3—2 Log folder contents

Any common text editor can be used to view the log files, for example, the Notepad included in Windows (Figure 9.3—3).

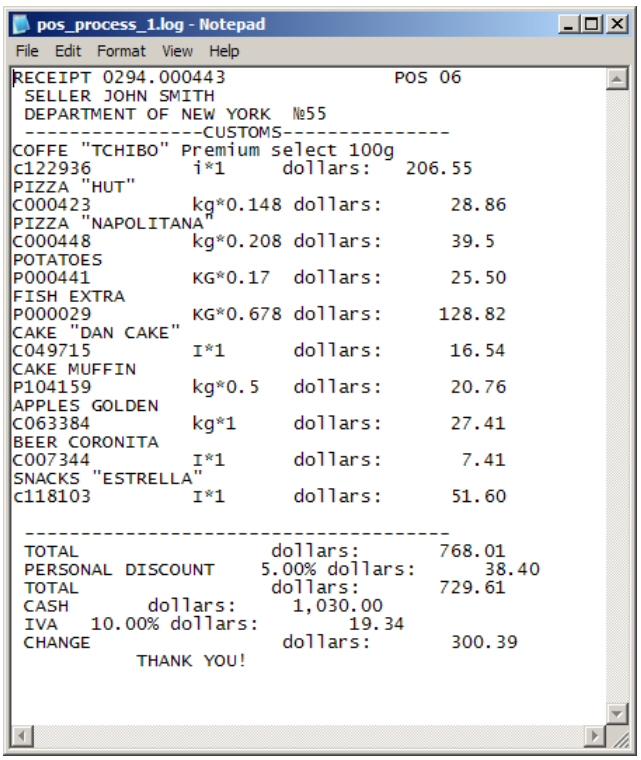


Figure 9.3—3 Viewing a log file

10 Appendix 4. The ReaderSrv utility

10.1 Introduction

The **ReaderSrv** utility reads the symbols from the keyboard (or other input devices, such as the bar code reader) and sends them over the network to the address and port specified in the configuration file.

The utility can be launched as a regular executable file, or as a system service. Usually it is set up as a system service.

The **ReaderSrv** utility is located in the **<POS-Intellect program foldr>\Modules\Pos\Scanners\Metrologic MS9500 Voyager** folder (Figure 10.1—1).

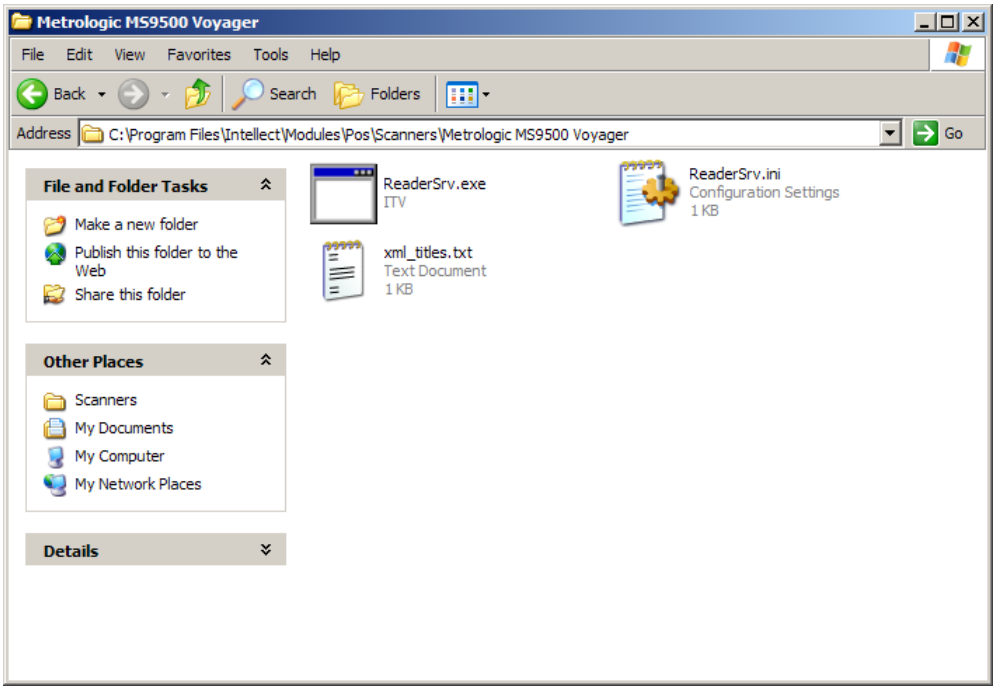


Figure 10.1—1 The ReaderSrv program files location

10.2 Setting up and using the The ReaderSrv utility

10.2.1 Setting up and using the ReaderSrv utility as a system service

To install the **ReaderSrv** utility as a service, do one of the following after the installation of POS-Intellect:

1. Run **ReaderSrv** with the **-i** argument. The utility will be installed as a service under its default **ReaderSrv** name.
2. Run **ReaderSrv** with the **-i <name>** argument. The utility will be installed as a service under the specified name.

To remove the utility from the list of system services, do the following:

1. Run the utility with the **–u** argument. The service named **ReaderSrv** will be deleted.
2. Run the utility with the **–u <name>** argument. The service with the specified name will be deleted.

To enable logging system events, enter the following parameters in the HKEY_LOCAL_MACHINE\SOFTWARE\ITV\SERVICES\SERVICE_NAME registry key:

1. ip – ip-address of the client;
2. port – port number used by the client to receive information about these events.

Enter the Debug parameter in the HKEY_LOCAL_MACHINE\SOFTWARE\ITV\Intellect key to set the debugging level:
0 – log service start and stop;
1 – log service start/stop and successful/unsuccessful data transfer to the client via TCP/IP;
2 and higher – same as 1 plus the codes received from the reader.

The data is logged into the Windows system log, thus, we recommend limiting the file size in case of large volumes of information about the events. This is done using standard Windows tools.

10.2.2 Using the ReaderSrv as a console application

The **ReaderSrv** utility settings are stored in the **ReaderSrv.ini** utility configuration (Figure 10.2—1). The configuration file should be in the catalog with ReaderSrv.exe file for the utility correct operation. **Ip** and **port** are the required parameters used to transfer data over the network. The **debug** parameter is optional. If it is not set, its value is assumed to be 0.

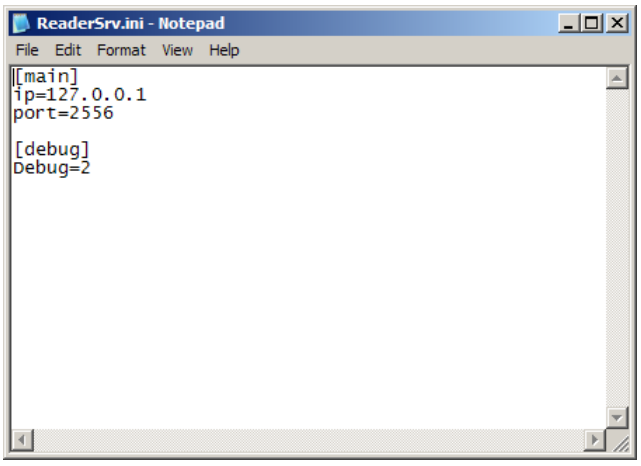


Figure 10.2—1 The ReaderSrv.ini file

To run **ReaderSrv** as a console application, run **ReaderSrv.exe** with no arguments. The console window will open (Figure 10.2—2).

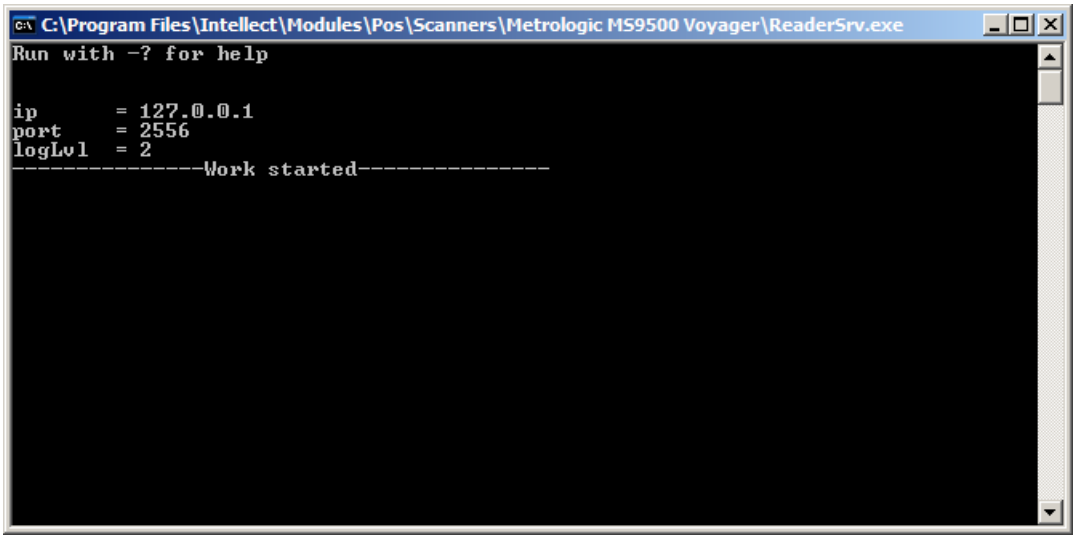


Figure 10.2—2 The ReaderSrv console window

All information received from the keyboard or other reader, simulating the keyboard, will be displayed in this window

To close the window, click  in its upper right corner, or press **Ctrl+C**.

11 Appendix 5. The CASH forward utility

11.1 Introduction

The **CASH forward** utility routes the text data packages from POS-terminals to the server IP-address and port specified in the configuration file.

Text packages are received using the **Cash Control** POS-operations control system integration protocol via Ethernet networks using TCP/IP or UDP protocols. The received packages are sent to the POS-server using the TCP/IP protocol.

The utility can do the following conversions on the fly:

1. convert DOS to Windows codepage;
2. convert text to XML.

The **CASH forward** utility operates as a regular executable file and is located in the **<POS-Intellect program folder>\Modules\Pos\Forwarders** folder (Figure 11.1—1).

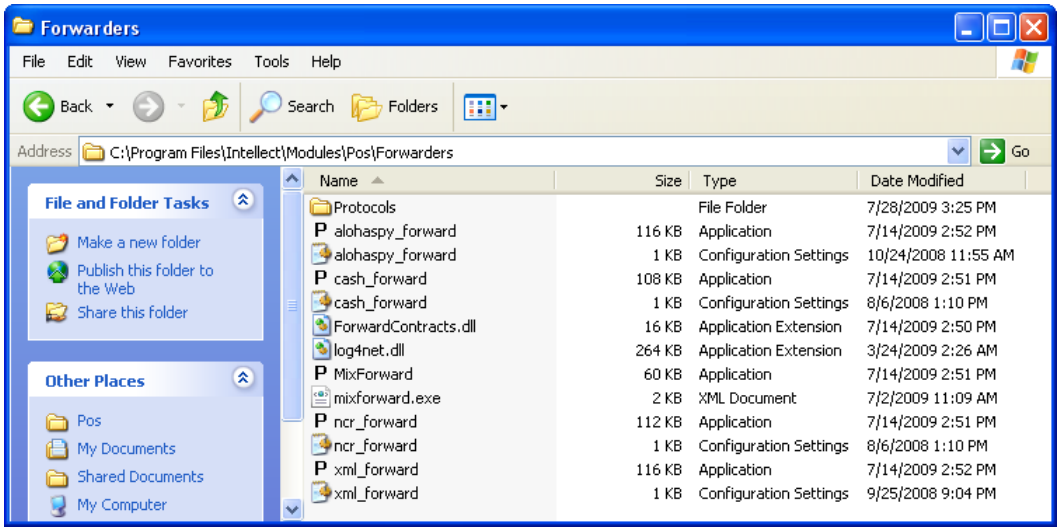


Figure 11.1—1 CASH forward files location

11.2 CASH forward setup

Each package received from a POS-terminal describes single registered event and starts from the **#CREP** protocol identifier. The package can also contain the routing label by which the utility determines the IP-address and port of the POS-server according to the **cash_forward.ini** configuration file.

Note. Routing identifier corresponds to the identification number of the POS-terminal.

The **cash_forward.ini** file (Figure 11.2—1) should be located in the same folder as the **cash_forward.exe** file for utility's correct operation.

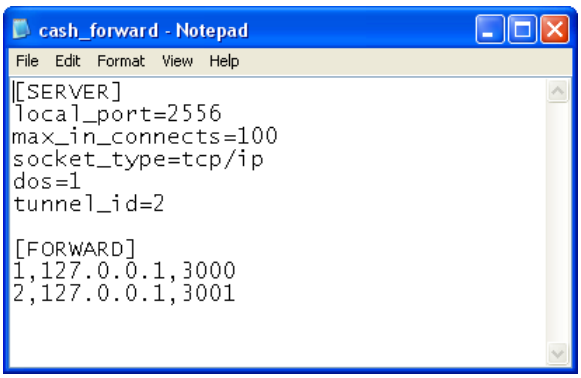


Figure 11.2—1 The cash_forward.ini file

Table 6.3.8.3-1 describes sections and parameters of the configuration file.

Table 6.3.8.3-1

Section	Parameter	Description	Data type	Default value	Value range
[SERVER]	local_port	Local port to be processed by the utility	Whole positive numbers	-	0 to 65535
	max_in_connects	Maximum number of incoming connections to be processed simultaneously	Whole positive numbers	-	Depends on the number of POS-terminals
	socket_type	Network protocol for POS-terminal data transfer	-	tcp/ip (if the value is not set or is invalid)	tcp/ip – data transfer using TCP/IP udp – data transfer using UDP
	dos	Text conversion from DOS to Windows codepage	Boolean	-	0 – data is not converted 1- data is converted
	tunnel_id	Forwarding all incoming packages to the selected POS-server irrespective of package routing labels	Routing label in the [FORWARD] section corresponding to the selected POS-server	Data is redirected according to the package routing label	Depends on the number of identifiers listed in the [FORWARD] section
	xml_convert	Text conversion from G2 to XML format	Boolean	-	0 – data is not converted 1- data is converted
[FORWARD]	Identification string	Sets the correspondence between the routing label and POS-server IP-address/port	Routing label, IP-address, port number	-	-

Note. The local_port number corresponds to the settings of the network connection of POS-terminals to the Cash Control POS-operations control system.

Warning! If the routing label of a package has no match in the utility configuration file, and tunnel_id is not set, the package is deleted.

11.3 Using the CASH forward utility

11.3.1 Automatic operation

When the **cash_forward.exe** file runs, the **CASH forward** icon appears in the system tray. In case of correct configuration settings in the **cash_forward.ini** file, the data packages sent to the local port from POS-terminals are routed automatically to POS-servers.

To view the incoming and forwarded data in the utility window, double-click its icon in the system tray (Figure 11.3—1).

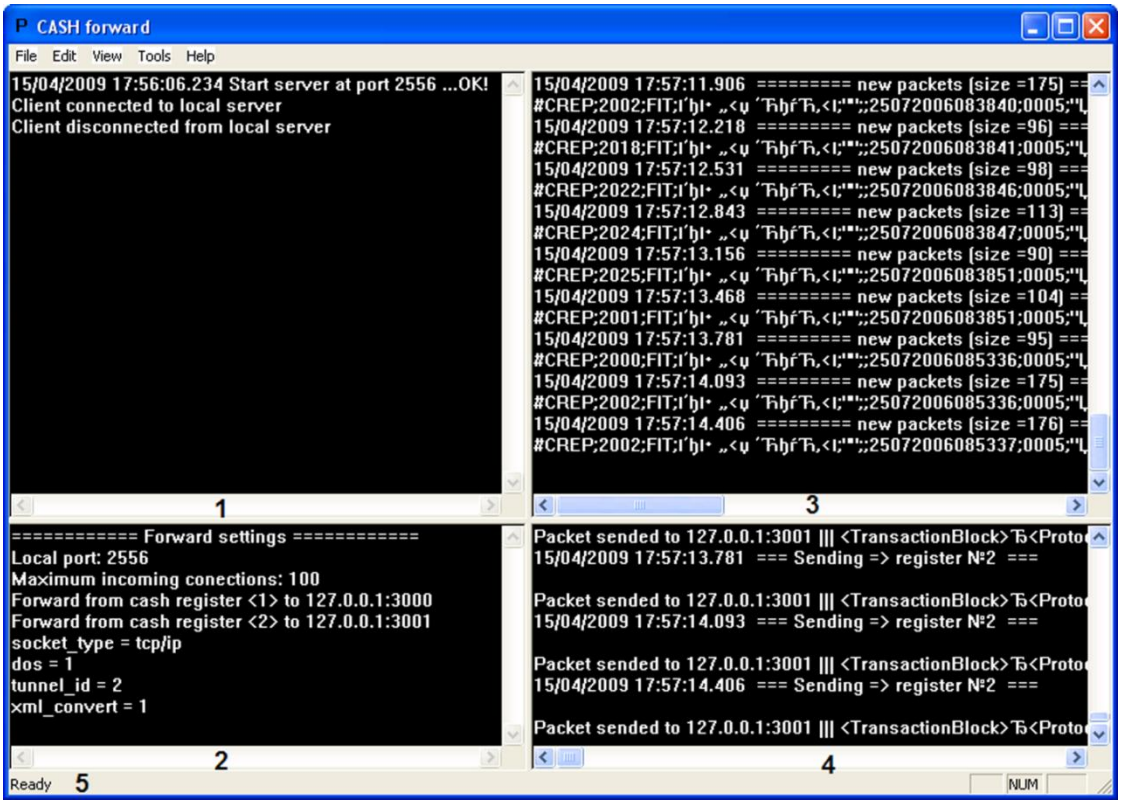


Figure 11.3—1 The CASH forward window

Table 6.3.8.3-1 describes the elements in the **CASH forward** window.

Table 6.3.8.3-1

No.	Description
1	Information about the connection to the fiscal register of the local port specified in the **cash_forward.ini** configuration file
2	Routing settings specified in the **cash_forward.ini** file
3	Data packages received from POS-terminals
4	Information about data package forwarding to POS-servers
5	Utility status bar (enable/disable in the **View > Status Bar** menu)

11.3.2 Testing the connections

The user can send a test signal to POS-servers whose IP-address and port are specified in the **cash_forward.ini** file.

To send the test signal, in the **Tools** menu of the utility, select **Send "test"**. The following information will be displayed in tile 4 of the utility window (Figure 11.3—1, Table 6.3.8.3-1): the executable file name (cash_forward.exe), the local port number processed by the utility, and the TEST SIGNAL text message.

To close the **CASH forward** utility and stop routing of data packages, select **Exit** in the **File** menu.

Note. Clicking the  *button in the upper right corner of the window closes the window, but the routing process continues.*

12 Appendix 6. The MixForward utility

12.1 Introduction

The **MixForward** utility routes the data packages received from POS-terminals to the IP-address/port of a POS-server according to the settings in the configuration file.

Note. The IP-address and port number of the POS-server are determined using the routing label specified in the data package.

The utility runs as a regular executable file located in the **<POS-Intellect program folder>\ Modules\ Pos\ Forwarders** folder (Figure 12.1—1).

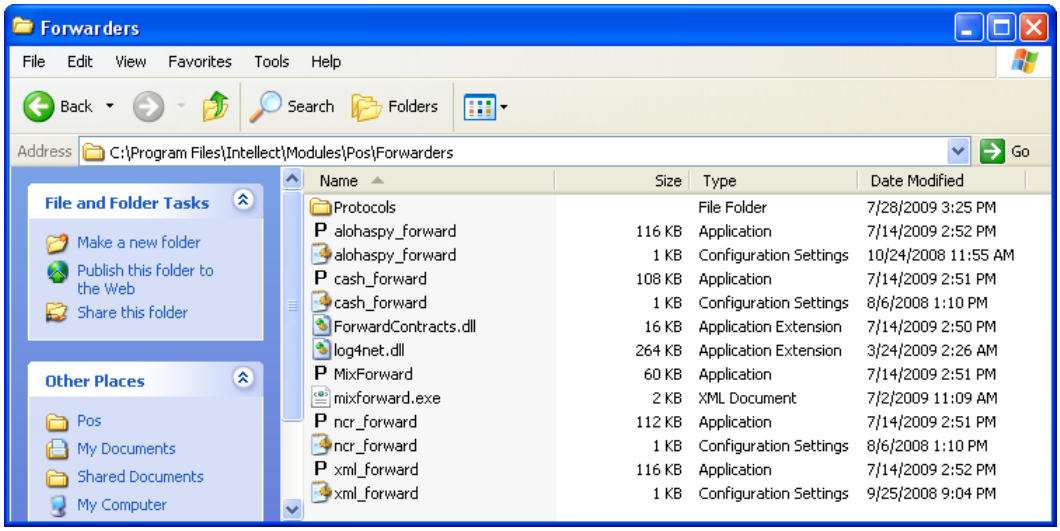


Figure 12.1—1 The MixForward files location

The utility converts data from POS-terminals to XML format using the dynamic library plug-in. The plug-ins attached to the utility are located in the **<POS-Intellect program folder>\Modules\ Pos\ Forwarders\Protocols** folder (Figure 12.1—2).

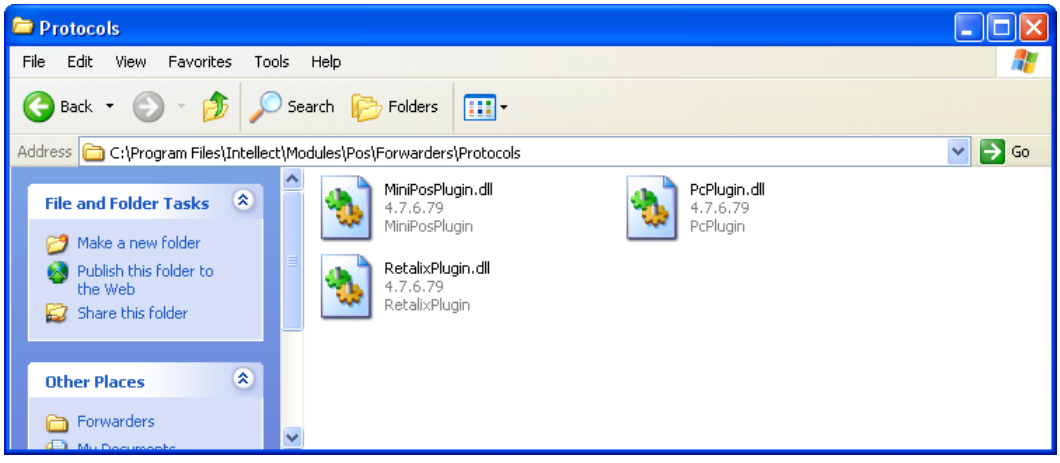


Figure 12.1—2 MixForward plug-ins location

The utility receives the data from POS-terminals using the following protocols:

1. RS-232;
2. UDP;

3. TCP/IP.

The packages are forwarded to the IP-address/port number of POS-server using the TCP/IP protocols.

12.2 Setting up the MixForward utility

The **MixForward** utility settings are stored in the **mixforward.exe.xml** file that must be located in the same folder as the **MixForward.exe** executable file for utility's correct operation.

The configuration file allows setting up the following processes (Figure 12.2—1):

1. connecting to POS-terminal;
2. processing the data transfer protocol from the POS-terminal;
3. logging the routing process;
4. forwarding data to the IP-address and port number of POS-server.

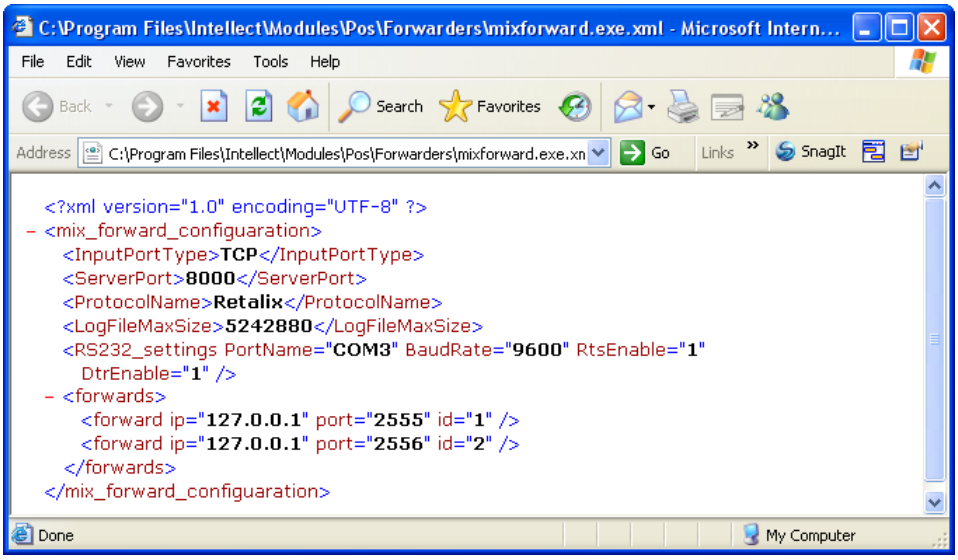


Figure 12.2—1 The mixforward.exe.xml file

Table 6.3.8.3-1 describes the configuration elements of **MixForward**.

Table 6.3.8.3-1

Element name	Element description	Element content	Element attribute	Attribute description	Value range
InputPortType	POS-terminal data transfer protocol	Protocol name	-	-	RS232 – data transfer via COM-port UDP – data transfer using UDP TCP – data transfer using TCP/IP
ServerPort	Local port number, if InputPortType is TCP or UDP	Whole positive numbers	-	-	0 to 65535
ProtocolName	Current data transfer protocol from the POS-terminal	Protocol name	-	-	Depends on the number of plug-ins linked to **MixForward**
LogFileMaxSize	Maximum log file size, bytes	Whole positive numbers	-	-	-
RS232_settings	COM-port settings if InputPortType is RS232	-	PortName	Available COM-port name	Depends on the number of available ports
			BaudRate	Supported bit	Depends on the number of

Element name	Element description	Element content	Element attribute	Attribute description	Value range
				rate, bit/s	supported bit rates
			RtsEnable	Enable RTS option	0 – do not use RTS control signal 1 – use RTS control signal
			DtrEnable	Enable DTR option	0 – do not use DTR control signal 1 – use DTR control signal
forwards	Sets the correspondence between the routing label and POS-server IP-address/port	-	ip	POS-server IP-address	Depends on the POS-server network settings
			port	POS-server port	Depends on the POS-terminal object settings
			id	Routing label	Depends on the routing label value in the data package. If the id="*", then data from all POS-terminals is redirected to the POS-server

Warning! If the routing label of a package has no match in the utility configuration file, and the id="*" is not set, the package is deleted.

12.3 Using the MixForward utility

12.3.1 Automatic operation

When the **MixForward.exe** file runs, the **MixForward** icon appears in the system tray. In case of correct configuration settings in the **mixforward.exe.xml** file, the data packages sent to the local port from POS-terminals, are routed automatically to POS-servers.

To view the data reception and redirection information, double-click the **MixForward** icon in the system tray (Figure 12.3—1).

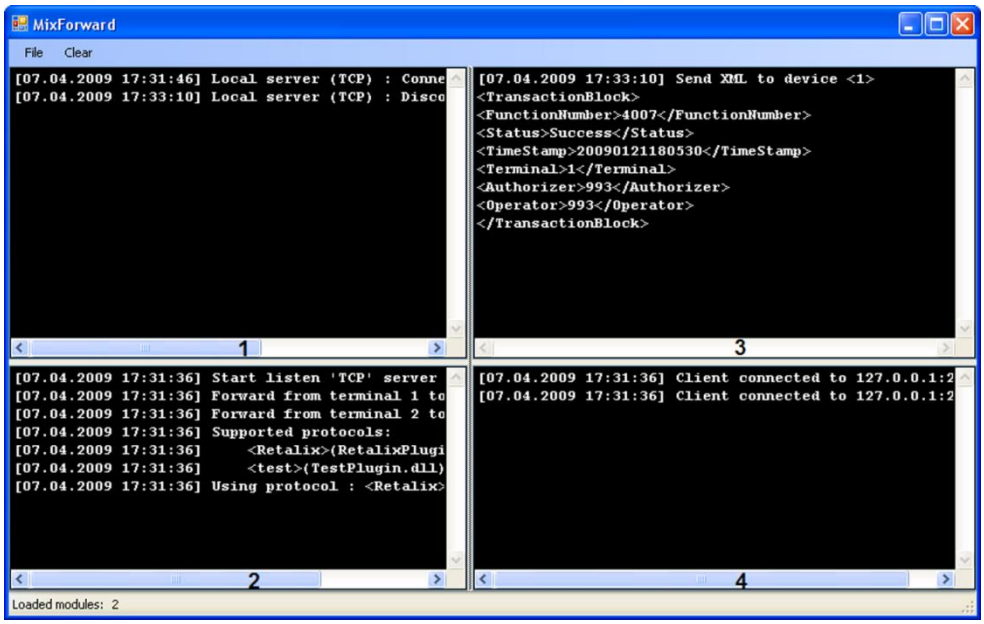


Figure 12.3—1 The MixForward utility window

Table 6.3.8.3-1 describes the elements in the **MixForward** window.

Table 6.3.8.3-1

No	Element description

No	Element description
1	Information about the connection to the Pos-terminal through a local port specified in the **mixforward.exe.xml** file
2	Routing settings specified in the **mixforward.exe.xml** file, the list of supported protocols (plug-ins) and the name of the currently used protocol
3	Data packages received from the POS-terminals
4	Information about the connection to the POS-servers specified in the **mixforward.exe.xml** file. Information about an error if the data package can not be redirected.

The **Clear** menu item empties tiles 1,3 and 4 in the window.

12.3.2 Logging the routing process

The routing of the data packages to POS-servers is logged to file (Figure 12.3—2).

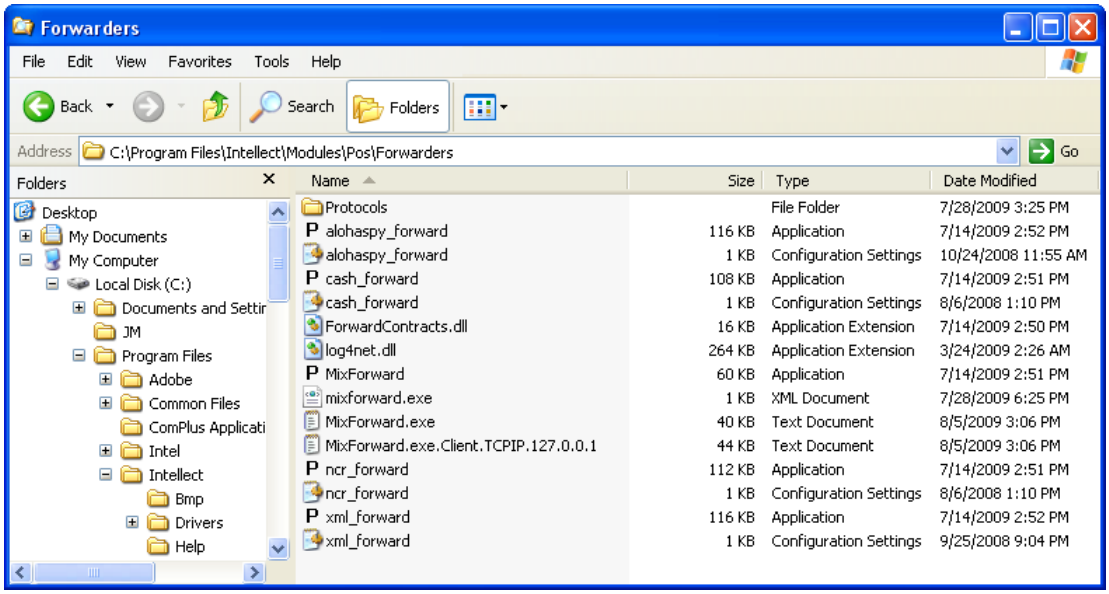


Figure 12.3—2 MixForward log files location

Table 6.3.8.3-1 describes the **MixForward** log files.

Table 6.3.8.3-1

Log file name	Main logged data	Additional log information
MixForward.exe.Client.<Terminal>.LOG, where <Terminal> denotes the connection to the POS-terminal	Unprocessed data packages from POS-terminals	-
MixForward.exe.LOG	Data packages processed by the plug-in	Information about the routing settings, supported protocol list, current protocol name

Figure 12.3—3, Figure 12.3—4 show the examples of log-files.

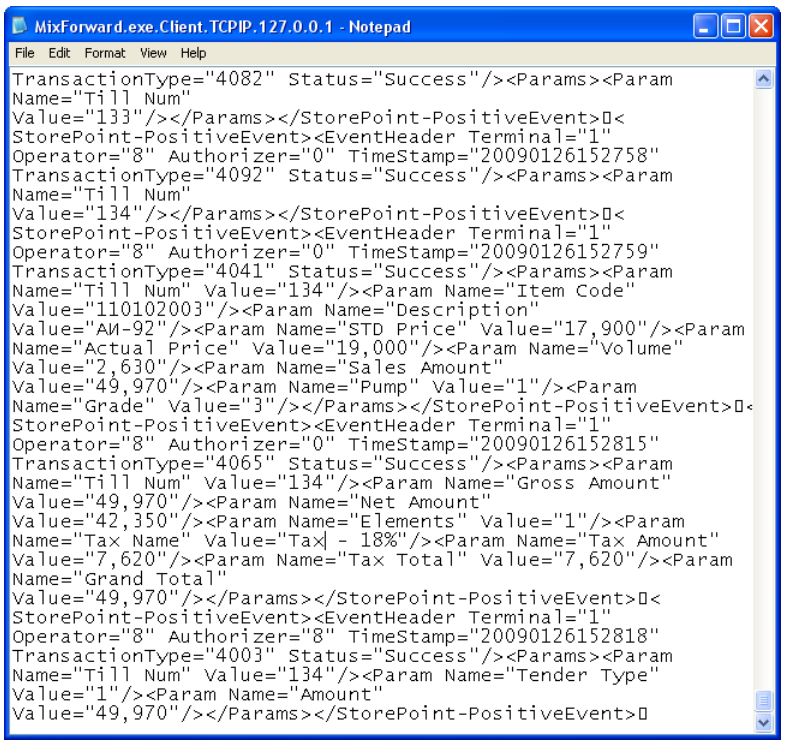


Figure 12.3—3 Example log file: MixForward.exe.Client.<Terminal>.LOG

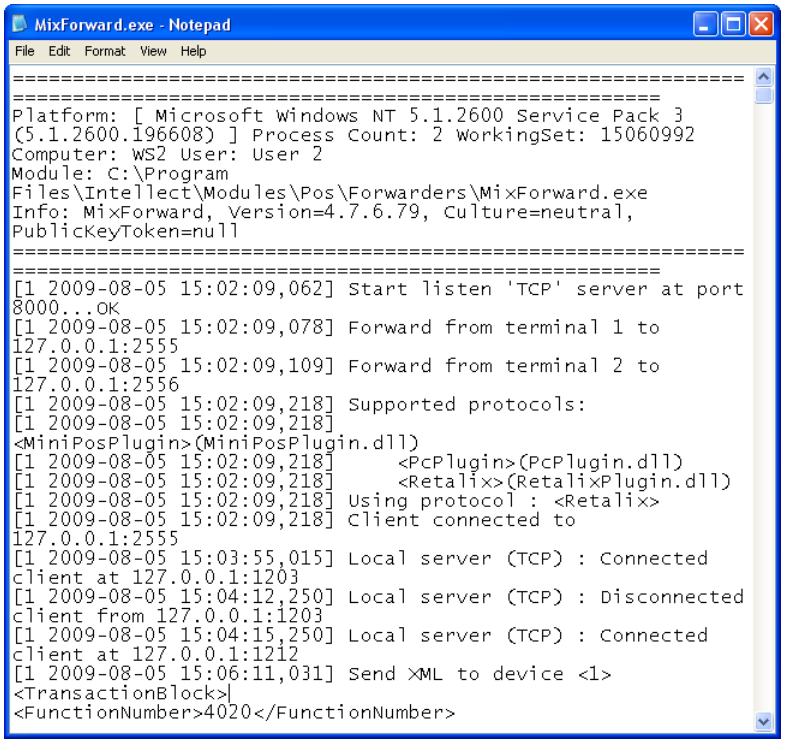


Figure 12.3—4 Example log file: MixForward.exe.LOG

When the log file size reaches the maximum specified in the **mixforward.exe.xml** file (see the *Setting up the MixForward utility* section), it is automatically renamed. Then new log file is created to continue logging.

12.3.3 Re-connecting POS-server to the MixForward utility

In case the POS-server abnormally disconnects from the **MixForward** utility, is can be re-connected.

To restore the correct connection, make sure the POS-terminal object is set up in the following way (see the *Selecting the type of POS-terminal and setting the connection parameters* section):

1. XML-data receipt via TCP protocol is expected;
2. the **Keep connection** checkbox is checked (Figure 12.3—5).

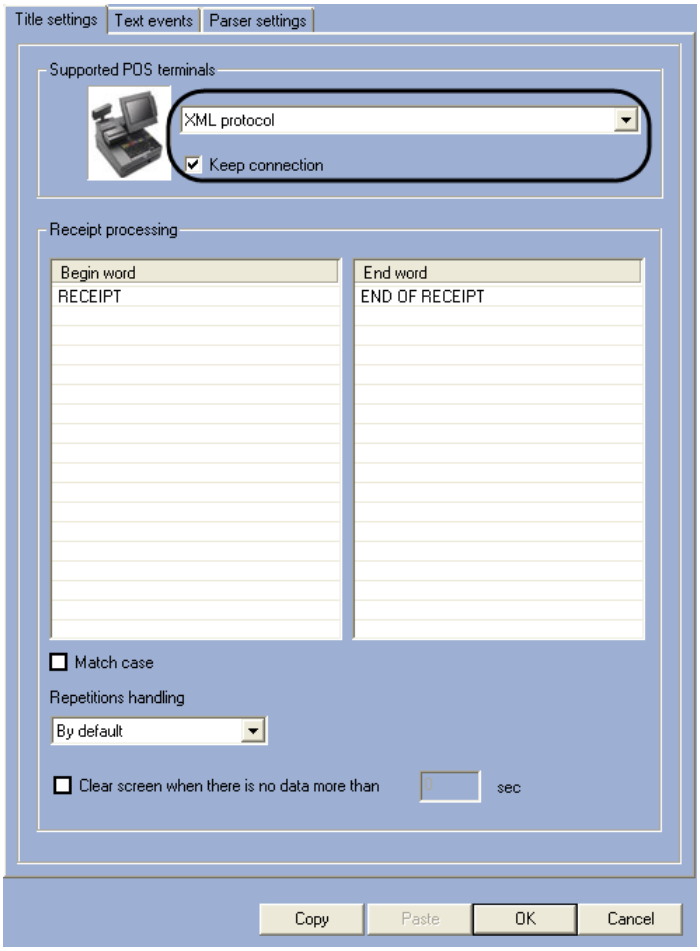


Figure 12.3—5 Checking the Maintain connection option

If the **Keep connection** option is enabled, the POS-server registers the connection of the utility and determines the time interval since the last data transfer. If the data has not been received for more than 30 seconds, the POS-server breaks the connection and re-establishes it again.

Note. If no data has been received from POS-terminals, the utility sends the control packages containing the FunctionNumber 77777 element to the POS-server at 5 second intervals.

To close the **MixForward** utility and stop the data package routing process, select **Close** in the **File** menu.

Note. Clicking the  *button in the upper right corner of the window closes the window, but does not stop the routing process.*