# **NaftaPOS software** POS system software for petrol stations



# **USER MANUAL**

Review date: 14 June, 2018

## **TECHNOTRADE LTD**

## CONTENT

Revisions history	4
Purpose of the document	5
List of terms and abbreviations used in text	6
Purpose, characteristics and area of application of NaftaPOS system	7
Connected equipment	8
Requirements to POS terminal for NaftaPOS system installation	9
NaftaPOS system installation	10
Electronic protection dongle Guardant	15
Appointment of Guardant dongle	15
Reading and updating of Guardant dongle permissions	16
Configuration of NaftaPOS system	17
Configuration tab "General"	18
Configuration tab "Database"	21
Configuration tab "States/Errors"	24
Configuration tab "Drivers"	25
Configuration of cash registers drivers	26
Configuration of pumps controller drivers	30
Configuration of ATG system drivers	37
Configuration of barcode scanner drivers	41
Configuration of pumps controller service drivers	45
Configuration of ATG system service drivers	47
Configuration tab "Tanks"	49
Configuration tab "Pumps"	51
Configuration tab "Payment forms"	52
Configuration tab "Order"	53
Configuration tab "View"	56
Configuration tab "Pump modes"	58
Configuration tab "Discounts"	59
Configuration tab "Additional modules"	60
Configuration tab "Users"	62
Configuration tab "Control panel"	63
Operation in NaftaPOS software	64
Launching the NaftaPOS system	64
Exiting / restarting NaftaPOS software	65
General view of NaftaPOS software	65
NaftaPOS system main menu	69
Beginning and finishing of operation	71
Operations with fuel dispensers	72
Displaying of fuel dispensers	72
States of pumps	75
Modes of control over fuel dispensing	79
Selection of payment form	81
Delayed sales of fuel	82
Control over fuel remains in tanks	84
Adjustment of fuel levels in tanks (input level measurements)	86
Registration of fuel reception at petrol station	88
Changing of fuel grades and prices	90

Reading fuel dispensers total counters and setting increments	91
Setting of pump relative errors	92
Operations on sales of products in shop	
Window of product sales	93
Registration of products reception	
Review of existing products	
Review of sales	
Review of reception operations	
Reporting in NaftaPOS system	100
Recommendations on products coding in NaftaPOS system	107
Formation of receipt from template	108
File receipt_template.xml	108
Examples of receipts	110
Operation with automatic vehicles identification system	114
Description and peculiarities of hardware operation	114
Wireless nozzle reader MT123	114
Receiver MT124	114
RFID tag MT125	115
Description of operation and configuration of the receiver driver	116
Structure of files and folders of driver	116
Driver configuration	117
Description of operation with driver	122
Operation with bank terminals	124
Used terms	124
User interface	125
Operation	126
Appointment	126
Sequence of operations	126
Operations with parties	126
Configuration	128
ePayPlugin module configuration interface	128
Dialog of device configuration	131
TT Shell – NaftaPOS shell for Windows OS	134
Backup and restore of configuration and database of NaftaPOS system	139
NaftaPOS system localization	141
NaftaPOS system trial version	143
Things to configure first in NaftaPOS system	144
Remote data gathering from a petrol station network and monitoring	145
NaftaCards fuel card system for petrol stations	153
NaftaPOS system uninstallation	154

## **Revisions history**

REV	DATE	BY	DESCRIPTION	
R08	2018.06.14	Evgeniy Vasyliev	Updated PosSet, operation with automatic vehicles identification system, operation with bank terminals, TT Shell, barcodes scanner, configuration flags, database structure, other minor changes	
R07	2015.06.21	Evgeniy Vasyliev	New release of NaftaPOS 6.7 system built under a new version of compiler with UTF-8 characters encoding and new reporting	
R06	2014.07.14	Evgeniy Vasyliev	Updated version of the PTS controller configuration utility	
R05	2013.01.11	Evgeniy Vasyliev	Added Cash Windows printer (extended)	
R04	2013.07.29	Evgeniy Vasyliev	Delayed sales of fuel section added	
			Some sections in POSSet updated	
R03	2013.04.22	Eugene Vasylyev	NaftaPOS version with updated graphical interface and enriched functionality	
R02	2012.08.21	Eugene Vasylyev	Drivers of fuel dispensers and ATG systems updated	
R01	2010.08.10	Eugene Vasylyev	First release of NaftaPOS multi language release version	

## Purpose of the document

This User Manual is intended for studying of NaftaPOS software operation and all its basic operations. It contains information regarding installation, configuration and application of the software. Information regarding special customized plug-ins for the software can be found in documentation supplied together with such plug-ins.

Information regarding connection to specific peripheral equipment and correspondent configuration of NaftaPOS software can be received upon request to TECHNOTRADE LTD company.

Due to a reason that NaftaPOS software is constantly being developed in direction of improvement of its possibilities, changes are possible in final version, which are not described in given User Manual.

During the system development process given User Manual is also expanded and updated and new chapters are added. Latest version of this User Manual can be downloaded from the NaftaPOS software web-page: <u>http://www.technotrade.ua/petrol-station-software.html</u>.

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In case if you find any mistakes, omissions in this document or have any suggestions on improvements to this document, please feel free to e-mail them to our support mailbox: <a href="mailto:support\_la@technotrade.ua">support\_la@technotrade.ua</a>. We will be grateful to you for this valuable information.

All technical questions regarding the NaftaPOS software are welcome to be asked on support mailbox: <u>support 1a@technotrade.ua</u>. Our support team will be glad to help you.

Also you can call to us or visit us on:

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#### List of terms and abbreviations used in text

**ATG** – automatic tank gauge system, refers to systems for automatic measurement of fuel parameters in tanks (fuel and water level, volume and temperature, fuel density, pressure, others)

**CPU** – central processing unit

**FD** – fuel dispenser or also called pump (under a fuel dispenser it is understood a whole dispenser if it has only 1 side or a fueling place of a dispenser if the dispenser has 2 sides)

**Fueling place** - fuel dispenser side in case if a fuel dispenser has 2 sides or a fuel dispenser in whole if a fuel dispenser has 1 side (same as pump)

FM – fiscal module

HDD – hard disk drive

**OEM** – original equipment manufacturer (manufactures products or components that are purchased by a company and retailed under that purchasing company's brand name)

**OPT** – outdoor payment terminal

**OS** – operation system

**PC** – personal computer

**Pump** – fuel dispenser side in case if a fuel dispenser has 2 sides or a fuel dispenser in whole if a fuel dispenser has 1 side (same as fueling place)

**POS system** - point of sale system, refers to a POS terminal or more generally to the hardware and software used for checkouts, the equivalent of an electronic cash register. NaftaPOS system relates to software of a POS system

**RAM** – random access memory

**RDMS** – relational database management system

RFID – radio frequency identification

#### Purpose, characteristics and area of application of NaftaPOS system

**POS system software NaftaPOS** is complex software for petrol stations intended for:

- provision of control over technological processes and forecourt equipment (fuel dispensers, ATG systems, price boards, car washes, others)
- automated measurement and commercial account at petroleum products
- provision of sales of retails products using various payment forms
- automated reporting over petrol station operation history during a selected period of time
- provision and account of personnel operation of petrol station
- provision of discount-bonus loyalty card system for customers
- automated identification of vehicles
- remote monitoring over petrol station operation (optional)
- remote reporting over operation of a petrol station network (optional)

#### Main purposes of NaftaPOS software are:

- make petrol station work efficiently and bring maximum profit to its owner
- reduce the cost of management over the petrol station
- make activity of cashiers and fuel attendants transparent in order to avoid stealing and frauds by personnel of petrol station
- make reporting over petrol station operation easy and convenient
- provide control over fuel dispensers and ATG systems of various brands and models
- provide multiple payment methods and attract more customers with discount-bonus loyalty programs (optional)
- make the owner of petrol station concretely master all operations and transactions by remote monitoring of petrol station activity and sales (optional)

#### Main characteristics of NaftaPOS software are:

- Convenient operation without any professional training because of intuitive, explicit and clear user interface and operations procedures
- Visualization and monitoring of petrol station activity real-time (locally and remotely)
- Flexible adjustment of the way of petrol station operation
- Possibility to customize user interface with selection of a skin, position and size of windows and elements, their details
- Possibility to flexibly create and configure templates for printed receipts
- Easy-to-read reporting and graphic statistic
- Easy localization to any international language
- Remote data gathering from a petrol station provides a possibility for petrol station owner to supervise petrol station activity everywhere and every moment (optional)

**Area of application** – petrol stations for dispensing of petroleum products, diesel fuel, liquified petroleum gas (LPG), compressed natural gas (CNG), multiproduct fuel petrol stations, petroleum storage depots.

NaftaPOS system is developed with account of all modern requirements to systems for automation of petrol stations, at this it is oriented as on small petrol stations, so as on big petrol complexes with organization of several working places of cashiers, administrator (Back-Office) of a petrol station, central Head-Office for management and planning and provision of loyalty card system for customers.

#### NaftaPOS system supports:

- various forms of payment
- various modes of control over fuel dispensers (Preset, Full tank, Manual (monitoring))
- control over up to 32 fuel dispensers
- database for up to 100 000 products and services.

NaftaPOS software uses MySQL open source relational database management system for storing of all data. Database structure of NaftaPOS software is open and its description can be found section *"NaftaPOS database structure"* in the end of this User Manual.

#### **Connected equipment**

#### NaftaPOS software allows connection with the following equipment:

- *forecourt controllers and interface converters* for connection and provision of control over fuel dispensers, ATG systems, price and sign boards, car washes, etc;
- ATG fuel measurement systems and probes for automatic measurement of fuel parameters in tanks (fuel and water level, volume and temperature, fuel density and pressure, others);
- price-boards and sign-boards for indication of current price for fuel and products;
- cash registers and receipts printers for printing-out of fiscal (non-fiscal) receipts in accordance with local legislation requirements;
- automatic vehicle identification (AVI) equipment for identification of vehicles;
- modems for data transmission to remote Head-Office software;
- bank payment terminals for cashless payment using bank cards;
- card readers for reading information from cards, used in discount/bonus loyalty card systems;
- barcode scanners for automatic reading of products barcodes;
- printers for print-out of report documents;
- cash boxes for cash money storage;
- pole displays for indication of sale information o customers;
- other equipment



Connected equipment to NaftaPOS software

#### **Requirements to POS terminal for NaftaPOS system installation**

NaftaPOS software is to be installed on a POS terminal (or a standard PC) with Microsoft Windows operation system. Supported versions of OS Windows:

- Windows 2000
- Windows XP
- Windows Embedded POSReady
- Windows Vista
- Windows 7
- Windows 8
- Windows 8.1
- Windows Server
- Windows 10

Minimal requirements to a POS terminal (or a standard PC) include the following:

- 2 GHz CPU
- 8 GB RAM
- 200 GB HDD

At using NaftaPOS you should in Windows Control Panel in configuration of regional parameters on tabs "*Numbers*" and "*Currency unit*" as a "*Separator of integer and fractional parts*" set '.' (point, dot).

Control over pumps and ATG systems in NaftaPOS is made through a PTS controller over fuel dispensers and ATG systems (<u>http://www.technotrade.ua/fuel-pump-controller.html</u>), which is connected to a POS terminal via the RS-232 interface (COM-port) or any of possible interface converters to RS-232 interface (USB-to-COM, Ethernet-to-COM, PCI-to-COM, etc).

## NaftaPOS system installation

NaftaPOS installation files is used for both 32-bit and 64-bit systems.

Installation of NaftaPOS software is made by running an installation file and following instructions, specified in installation wizard:

😼 Setup - T&T NaftaPOS	
	Welcome to the T&T NaftaPOS Setup Wizard
	This will install NaftaPOS v6.7.0.3 on your computer.
	It is recommended that you close all other applications before continuing.
	Click Next to continue, or Cancel to exit Setup.
NaftaPOS	
6.7	
	Next > Cancel

NaftaPOS installation configuration – step 1

On second step it is necessary to select a type of system installed:

- full version
- trial version

15 Setup - T&T NaftaPOS	B Setup - T&T NaftaPOS   Choose version
Which version to install:	Which version to install:          Image: Trial (requires USB-dongle)         Image: Trial (requires key-file)
< <u>B</u> ack <u>N</u> ext > Cancel	< <u>B</u> ack Next > Cancel

NaftaPOS installation configuration – step 1

Third step asks for the place on drive, where the system is to be installed. The system should be installed in folder NaftaPOS on any of the local drives:

Setup - T&T NaftaPOS		2
Select Destination Location Where should T&T NaftaPOS be	installed?	G
Setup will install T&T Na		
To continue, click Next. If you we	ould like to select a different folder, click Browse.	
D:\NaftaPOS	Browse	
At least 185,8 MB of free disk sp	vace is required.	

*NaftaPOS installation configuration – step 3* 

Setup - T&T NaftaPOS		• <b>x</b>
Select Start Menu Folder Where should Setup place the program's shortcu	ts?	
Setup will create the program's shortcul	ts in the following Start Menu fold	ler.
To continue, click Next. If you would like to selec NaftaPOS System	t a different folder, click Browse.	]
	< Back Next >	Cancel

NaftaPOS installation configuration – step 4



NaftaPOS installation configuration – step 5

After this the installation process is started:

Installing	
Please wait while Setup installs T&T NaftaPOS on your computer.	
Extracting files	
D:\NaftaPOS\eReports\GrdAPI32.DLL	
	Correl

NaftaPOS installation process

During installation process MySQL RDMS will be installed to C:\mysql\ folder and MySQL service starts:

C:\Windows	system32\cmd.exe	
Extracting Extracting	<pre>system32\cmd.exe c:\mysql\share\japanese\errmsg.sys c:\mysql\share\japanese-sjis\errmsg.sys c:\mysql\share\korean\errmsg.sys c:\mysql\share\norwegian\errmsg.sys c:\mysql\share\norwegian\errmsg.sys c:\mysql\share\polish\errmsg.sys c:\mysql\share\portuguese\errmsg.sys c:\mysql\share\romanian\errmsg.sys c:\mysql\share\romanian\errmsg.sys c:\mysql\share\spanish\errmsg.sys c:\mysql\share\spanish\errmsg.sys c:\mysql\share\spanish\errmsg.sys c:\mysql\share\spanish\errmsg.sys c:\mysql\share\spanish\errmsg.sys c:\mysql\share\ukrainian\errmsg.sys c:</pre>	
1 f Wait for My MySQL servi Databases c	ile(s) copied. SQL service up ce up and running reated	Ŧ

NaftaPOS installation process – MySQL DBMS installation

Borland Database Engine will be installed during NaftaPOS software installation process, so it is important to agree with a request on its installation:

Borland Database Engine Installation/Upgrade		
The Borland Database Engine will be installed/upgraded in the following directory:		
C:\Program Files\Common Files\Borland Shared\BDE Browse		
OK Cancel		

*NaftaPOS installation process – Borland Database Engine installation* 

Guardant dongle drivers are installed during NaftaPOS software installation process, so it is important to agree with a request on its installation:

🙀 Guardant Drivers (5.50.86) Setup	🙀 Guardant Drivers (5.40.80) Setup
Welcome to the Guardant Drivers Setup Wizard	Installing Guardant Drivers
The installer will guide you through the steps required to install Guardant Drivers on your computer.	Guardant Drivers is being installed.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.	Please wait
Cancel < Back	< <u>B</u> ack <u>N</u> ext>

Installation process – Guardant dongle drivers installation

During installation the following NaftaPOS services will be installed:

- T&T database server
- T&T Scheduler



NaftaPOS installation process – service installation

After installation of NaftaPOS software a logical drive, on which the system is installed, will contain a directory "*NaftaPOS*" with all files of NaftaPOS software and NaftaPOS system files that track its operation (log-files):

- main\_logfile.txt
- controller.txt
- CashErr.txt
- others

Others log files may be created automatically during the system operation. By content of these log-files it is possible to track reasons of possible errors and misoperations arisen during software operation and lead a log of actions performed by cashier of the petrol station. This information is written in logs that at necessity can be sent to TECHNOTRADE LTD company for defining of found errors and their initial reasons with subsequent fixing of these errors.

## **Electronic protection dongle Guardant**

#### Appointment of Guardant dongle

For protection of NaftaPOS software from unauthorized copying and illegal distribution electronic protection dongle Guardant is applied.

Electronic protection dongle Guardant – is a device that is connected to USB port (or a parallel port LPT in older versions), located on a panel of a POS terminal (PC) motherboard. Electronic protection dongle Guardant is necessary for protection of NaftaPOS software from unauthorized copying and illegal distribution. Scope of protection is that the dongle contains part of the code of NaftaPOS software. At launching NaftaPOS the system verifies contents of dongle's memory and in case if the dongle is absent or it contains data that does not correspond to data demanded by the system, NaftaPOS throws an error of protection system and stops operation.



USB Electronic protection dongle Guardant

Guardant USB dongle drivers are installed during NaftaPOS software installation process or can be installed/updated any time later:

🙀 Guardant Drivers (5.50.86) Setup	🔀 Guardant Drivers (5.40.80) Setup
Welcome to the Guardant Drivers Setup Wizard	Installing Guardant Drivers
The installer will guide you through the steps required to install Guardant Drivers on your computer.	Guardant Drivers is being installed.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.	Please wait
Cancel < Back	<u> </u>

Guardant dongle drivers installation

In case if Guardant dongle is removed during operation of NaftaPOS system – NaftaPOS will be switched to Demonstration mode of operation, which has limitations on sales of fuel and products.

At system start it checks presence of USB dongle. In case if dongle is not connected – an error will be generated:



Error of protection system - Guardant dongle not found

#### Reading and updating of Guardant dongle permissions

List of permissions programmed in Guardant dongle can be viewed using a *stealth\_view.exe* tool (location: *NaftaPOS\stealth\_view.exe*):

Protection dong	le review	X
Dongle factory numb	er 290453AE	
	Permissions Main Minimal version Cash register Shop Discounts system Autocalibration Option # 10 Option # 10 Option # 10 Option # 12 Additional Option # 2 Option # 3 Option # 3 Option # 4 Option # 3 Option # 4 Option # 5 Option # 7 Option # 7 Option # 7 Option # 7 Option # 1 Option # 3 Option # 3 Option # 4 Option # 5 Option # 7 Option # 10 Option # 10 Opt	Validity term Va
F	lead	🗶 Exit

Stealth\_view - tool for viewing of Guardant dongle permissions

For updating of Guardant dongle programmed permissions *stwrite.exe* tool is used (location: *NaftaPOS\stwrite.exe*):



Stwrite - tool for updating of Guardant dongle permissions

**Revision: R08** 

### Configuration of NaftaPOS system

For configuration of NaftaPOS software it is necessary to have administrator rights in NaftaPOS system (these rights are set in NaftaPOS configuration, person without rights can not configure NaftaPOS).

Configuration of NaftaPOS software is made in configuration utility POSSet.exe (location: *NaftaPOS\POSSet.exe*), which can also be run from NaftaPOS software by selecting an item from main menu *'Configuration'*. In case if the configuration utility was started from inside the NaftaPOS software – then for the made adjustments to enter into force it is necessary to restart NaftaPOS system.



At entering the configuration tool a user is requested to authenticate in order to prove his permission to make configurations of the system:

Authentication	x
User	
Service	
Password	
Password change after	log in
💞 Enter 🔰	Cancel

Authentication window

By defaults after installation there is only 1 user present with the following credentials:

- login: Service
- password:

To avoid system unauthorized access to NaftaPOS system using default login and password it is recommended to change them at once on tab "Users" at once after the system start.

After logging inside the configuration utility the following window is shown, where on the left side – there is a selector of tabs to be configured, and on the right side – configurable parameters of the selected tab.

Organization name (petrol station)       Database       Cash register       Additional workplace       States/Errors       Drivers       Drivers       Tanks       Periodicity of Variance from 2311.2012 (*)       Query Control       Periodicity of Variance from 2311.2012 (*)       Query Control       Periodicity of Variance from 2311.2012 (*)       Periodicity of Variance from 2311.2012 (*)								
Detabase     Cath register       Addional workplace       StatesyErrors       Drivers       Drivers       Tranks       Periodicity of Warning [min]								
Addional work place      States/Errors      Drivers      Tranks      Pumpa      Pumpa								
States/Errors     Shit duaton control     First warning 12       Drivers     Periodicity of Warning Imining     5       Tranks     Date/Time of transfer to summer time 2203.2012/17     0200       Date/Time of return to winter time 2203.2012/17     0200       Dete/Time of return to winter time 2203.2012/17     0200       Dete/Time of return to winter time 2203.2012/17     0200       Dete/Time of return to winter time 2301.2012/17     0200       Periodicity of Warning Imini 5     5       Periodicity of Warning Imini 5     5	Additional workplace							
States/Errors     First waring 23       Drivers     Periodary of Warings [min] 5       Tanks     Dete/Time of itsmifter to summer time 2303.2012 /?       Pumps     Periodary of Waring [min] 5								
Peiddcity of Warning Imin 5     Blocking 23     Drivers     Tanks     Tanks     Pumps	First warning 23:30							
	Periodicity of Warnings [min] 5 💲							
Drivers         Transfer to summer time and back         0 2002 [7]         02.00           Tranks         Defe/Time of tommer time 22.03.2012 [7]         02.00           Parmos         Periodolly of Warring [0]         5         0           Pleidodity of Warring [0]         5         0         01.55	Block	king 23:55						
Dete/Time of transfer to summer time         23.03.2012 (*)         02.00           Tanks         Dete/Time of return to wrinket time         23.03.2012 (*)         02.00           Periodicity of Warning         01.30         Periodicity of Warning         01.00           Pumps         Blocking         01.55         Periodicity         01.00								
Tanks         Delet/Time of return to writer time [2311:2012]         02:00           First writering         01:30         Periodicity of Warning [mm]         5           Pumps         Blocking         01:55         Deletering	23.03.2012	02:00						
Tanks         First warning         01:30           Periodicity of Warnings (min)         5         5           Blocking         01:55         5	23.11.2012 🐬	02:00						
Periodicity of Warnings (min) 5 \$ Pumps Blocking 01:55	01:30							
Pumps Blocking 01:55	5 🌲							
B) Pumps	01:55							
C Browst of Zurant within								
I request or 2-teport pinning								
Payment forms	Dialog 'Grades and Prices' (needs flag 'Permission to set prices at opened shift')							
Restart after shift closing	Restart after shift closing							
72 Deministrative in a band have been a second with								
Pennissuri tu set Dook keeping remains at opened shirt	n							

POSSet.exe - main view of NaftaPOS configuration tool

## Configuration tab "General"

Tab "General" serves for general configuration of NaftaPOS software. Main view of the "General" tab with settings set by default after the system installation is shown below:

× POSSet	📶 🖄 Load 🕌 Save 👘	– C	×
3	Cananal	Name NaftePOS	î
	General	Name of company (petrol station) Company_name	
F	Databasa	Currency name USD	
	Database	Name of petrol station manager Manager_name	
		Petrol station number Company_ID	
0	States/Errors	Work as cash register	
-Alm		Additional workplace	
	Drivers	Shift duration control First warning 23:30	
		Periodicity of Warnings [min] 5	
The second se	Tanks	Blocking 23:55	
		Transfer to summer time and back Date/Time of transfer to summer time 23.03.2012 2 02:00	
<u>F</u> R	Pumps	Date/Time of return to winter time 23.11.2012	
		First warning 01:30 Periodicity of Warnings [min] 5 \$	
	Payment forms	Blocking 01:55	
		Request of Z-report printing	
	Order	☑ Dialog 'Grade and Price' (needs flag 'Permission to set price at opened shift')	
		Restart after shift closing	
	View	Permission to set book-keeping remains at opened shift	
		Permission to set prices at opened shift	
	+	Permission on dispensing during fuel reception	+
General - (0)			///
X POSSet	💶 🖄 Load 📔 Save	- C	×
3	Conorol	✔ ATG system presence in system	<b>^</b>
	General	Virtual keyboard in window of products sales	
6		Virtual keyboard for setting fuel dose and cost	
	Database	Expanded logging of products' basket	
		Prohibition of entry of fractional amount in shop	
	States/Errors		
- Allen		Automatic shift opening O Not used (manually)	
	Drivers	Open a shift at system start     Open a shift at system start	
	Tanks		
		Close shift at system exit	
EB	Pumps	Close shift at specified time	
	Payment forms	Price change <ul> <li>Manual price setting</li> </ul>	
		Automatic price setting (from Back-Office)	
	Order	New prices setting type	
2.00		Intermediate revaluation     Price change at closed shift	
	View	Loading timeouts	
		Protection dongle driver loading timeout, seconds 10	
	+	Database driver loading timeout, seconds 60	-
			_

*NaftaPOS configuration tool – "General" tab* 

Appointment of the fields shown on tab "General" is the following:

**Field "Name"**: name of POS system software, which is displayed in top left corner during system operation. **Field "Name of company (petrol station)"**: name of a petrol station, which is displayed in reports

Field "Currency name": currency name to be used in system and reports

Field "Name of petrol station manager": name of petrol station manager to be used in system ad reports Field "Petrol station number": number of petrol station to be used in system ad reports

**Checkbox** *"Work as cash register"*: used for specifying whether system works as a fiscal cash register (checkbox is checked) or not (checkbox not checked). If this checkbox is checked – it means that NaftaPOS software works on a specialized POS terminal, connected with a fiscal receipts printer, which works in accordance with local fiscal legislation. At this NaftaPOS will operate as the only one software, which can be run on the POS terminal, window of NaftaPOS will not be possible to minimize or hide and in order to access standard Windows operation system possibilities a user should know the administrator password in NaftaPOS system. When NaftaPOS is configured to work with non-fiscal receipts printer driver (configured on tab *"Drivers"* for Cash registers) – then this checkbox will not be checked.

**Checkbox** "Additional workplace": used for specifying whether system works standalone and leads its own database (checkbox not checked) or it works together with other systems and uses their databases (checkbox is checked).

**Checkbox** "*Shift duration control*": used for specifying whether blocking of system operation is required in case of shift duration is exceeded. It allows to set blocking of NaftaPOS system operation in case of shift duration control is required. At blocking NaftaPOS software will not allow any sales to be made. There are 2 possible options of shift duration control:

- Till 23:59 NaftaPOS software will block its operation every day at 23:59
- 24 hours NaftaPOS software will block its operation every time when shift duration exceeds 24 hours

After blocking is set it is necessary to close a current shift and start a new one.

**Checkbox** *"Transfer to summer time and back"*: if checked – used for specifying whether automatic transfer to summertime and back should be made in system. It allows automatic transfer to summer and winter time on specified date and time.

**Checkbox** "*Request of Z-report printing*": when system is used together with a fiscal printer - this option is used for specifying whether Z-report should be printed automatically at shift closing.

**Checkbox** "Dialog 'Grades and Prices' (needs flag 'Permission to set prices at opened shift')": if checked together with a checkbox 'Permission to set prices at opened shift' – allows changing of prices within an opened shift on fuel grades and change fuel grades names.

**Checkbox** "*Restart after shift closing*": if checked – leads to restart of NaftaPOS software after closing of a shift.

**Checkbox** *"Permission to set book-keeping remains at opened shift"*: if checked – allows setting of book-keeping remains on fuel in tanks within an opened shift.

**Checkbox** *"Permission to set prices at opened shift"*: if checked – allows to change prices on fuel grades and products within an opened shift.

**Checkbox** *"Permission on fuel dispensing during fuel reception"*: if checked – allows to dispense fuel from the tank, to which fuel is being received.

**Checkbox "ATG system presence in system"**: if checked – then indications of fuel level in tanks and its parameters will be taken from connected ATG system, which driver and parameters are configured on tab

"Drivers"  $\rightarrow$  "Tanks". If the checkbox is unchecked – all values on fuel remains in tanks will be entered manually (assumed that meter stock is used for fuel level measurement),

**Checkbox** *"Virtual keyboard in window of products sales"*: if checked – then virtual keyboard will be indicated in the window of products sale and it will be possible to use NaftaPOS software on POS terminals having a touchscreen to provide sales of products.

**Checkbox** *"Virtual keyboard for setting fuel dose and cost"*: if checked – then virtual keyboard will be indicated in pump windows for setting of fuel dose and cost and it will be possible to use NaftaPOS software on POS terminals having a touchscreen to provide control over fuel dispensers.

In case if any of the checkboxes "Virtual keyboard in form of products sale" and "Virtual keyboard for setting fuel dose and cost" is checked – then a virtual keyboard will be shown for every other window in NaftaPOS system in every field, where information can be inputted.

**Checkbox** *"Expanded logging of products' basket"*: if checked – then NaftaPOS will write more extended log *"main\_logfile.txt"*, where extended information on products sales is specified.

**Checkbox** *"Prohibition of entry of fractional amount in shop"*: if checked – then NaftaPOS will not allow sales of fractional amount of products through sales window (sales will be allowed only on integer amount value).

**Field "Automatic shift opening":** is used to specify whether a working shift should be opened automatically or not. It is required in those cases when there is no need to lead working shifts in system. But as NaftaPOS software is built to work in shifts and reports in NaftaPOS software are generated in accordance with working shifts – then automatic opening of shift is foreseen. Possible options:

- Not used (manually)
- Open a shift at system start
- Open a shift at system start and after shift close

**Field "Automatic shift closing":** is used to specify whether a working shift should be closed automatically or not. It is required in those cases when there is no need to lead working shifts in system. But as NaftaPOS software is built to work in shifts and reports in NaftaPOS software are generated in accordance with working shifts – then automatic closing of shift is foreseen. Possible options:

- Not used (manually)
- Close shift at system exit
- Close shift at specified time

Radiobutton list "Price change": allows to specify the source of changing prices in the NaftaPOS system:

- Manual price setting (from NaftaPOS)
- Automatic price setting (from Back-Office software)

In case if option "Automatic price setting (from Back-Office)" is selected – then it is possible to select a type of price setting in a radiobutton list "New prices setting type", which has the following options:

- Free price
- Intermediate revaluation
- Price change at closed shift

**Field** *"Dongle driver loading timeout, seconds"*: specifies a period for keeping checking the Guardant dongle presence in system at starting of NaftaPOS software. If during the specified period dongle is not found in the system – then an error of protection system is thrown.

**Field "DB driver loading timeout, seconds":** specifies a period for keeping checking the database driver in system at starting of NaftaPOS software. If during the specified period system is unable to use database drive (for example due to a reason that MySQL service is stopped or gone away) – then a corresponding error is thrown.

## Configuration tab "Database"

Tab "Database" serves for operations related with database of NaftaPOS system: its editing and archiving. This tab contains 3 subtabs:

- Database settings
- Data review
- Additionally

Subtab "Database settings" contains the following adjustments:

POSSet ▼ Load Save					
3 General	Database settings	Data review	Additionally		
6	Main database				
Database	Database server:	Automatically clean and r	migrate data older than	40 🗘 days	
O States/Errors		<ul> <li>□ additionalinfo</li> <li>✓ append</li> </ul>	carwasherr cashform	☐ findata ☐ fmcashform	
	AZS.MYSQL	<ul> <li>barcode</li> <li>book_change_log</li> </ul>	cashformsum cashformsumhost	groups hidden_prices	
Drivers	Connection parameters:	book_change_reasons carwash	clients epaydata	host nakreg	
Tanks	USERNAME=AZSUSER	carwash2	error_goods_descrip	tion new_prices	
Pumps					•
A	Backup database				
Payment forms	Database name:	Automatically clean data	older than	180 🗘 days	
Order	AZSARC.MYSQL	✓ sessions ✓ append	✓ sales		
View		<ul> <li>✓ operator</li> <li>□ product</li> <li>✓ remain</li> <li>✓ rfindata</li> </ul>			
Pump modes		✓ rtank ✓ rtrk			
Discounts					
	Additionally				
Additional modules	Save data to files before cleanin	ng the backup database server after cleaning the backup DE	e backup database er after cleaning the backup DB Recove		
Users	Save temporary tables to a direct	ctory	Confi	iguration backup and restore wizard	

NaftaPOS configuration tool – "Database" tab: "Database settings" subtab

Appointment of the fields shown on subtab "Database settings" is the following:

#### "Main database" area:

- Field "Database server": is used for specification of IP-address of the database server, where remote database of NaftaPOS is lead in case if NaftaPOS uses remote database (checkbox "Additional workplace" is set on tab "General"), incase if local database is used – this can be left empty.
- Dropdown list "Database name": is used for selection of the local main database of NaftaPOS (by defaults "AZS.MYSQL").
- Field "Connection parameters": is used for specification of the access credentials to main database (username, password, etc).
- Checkbox "Automatically clean and migrate dataolder than ... days": if checked provides automatic cleaning of main NaftaPOS database content, which is older than quantity of days specified herein, and storing them to backup NaftaPOS database. User can select list of database tables to perform this operation.

#### "Backup database" area:

- Dropdown list "Database name": is used for selection of the backup copy of NaftaPOS main database (by defaults "AZSARC.MYSQL").
- Checkbox "Automatically clean data older than": if checked provides automatic cleaning of selected list of tables in backup NaftaPOS database content, which is older than quantity of days specified herein.

#### "Additionally" area:

- Checkbox "Save data to files before cleaning the backup database": sets whether old data to be cleaned should be saved to file as SQL query.
- Checkbox "Delete the binary logs of the DB server after cleaning the backup DB": sets whether old database logs should be cleaned together with cleaning the old data from backup database.
- Checkbox "Save temporary tables to a directory": sets whether temporary tables should be saved to a directory in a view of SQL queries, if they should be saved – it is needed to specify path to this directory.
- Button "Recover data from the backup database": is used for launching a wizard for restoring data from backup database.
- Button "Configuration backup and restore wizard": is used to launching Backup/Restore utility for backing up of data when making update of NaftaPOS software and restoring of the data back after the update was installed. See more information in section "Backup and restore of configuration and database of NaftaPOS system" on given User Manual.

สา	Databas	e settings	Data re	view	1	Additionally	
General	Open database	table					
	Databa	se Table					
-	AZS.MYSQL	▼ product	•	~			
Databasa	PRODUCTID	PRODUCTGROUP SEC	TION PLU	TAX	NA	ME	
Database	► 10001	10	1	2	1 No	rmal	
	10002	10	1	2	1 Pre	emium	
	10003	10	1	3	1 Die	esel	
States/Errors	10004	10	1	5	1 Ur	ileaded	
	20001	1	1	6	1 Ch	ewing gum "Orbit"	
	20002	1	1	7	1 Ca	ke "Dan cake"	
No.	20003	1	1	8	1 Co	ca-cola botl. 1L	
Drivers	20004	1	1	9	1 Jui	ce "Tomato" 1L	
53.	20005	1	1	10	1 Ch	ocolate "Nuts"	
	20006	1	1	11	1 Ca	ndies "Rafaello"	
5	20007	1	1	12	1 Bra	andy "Galitsin" 0.75L	
Tanks	20008	1	1	13	1 Mi	k botl. 1L	
	20009	1	1	14	1 Bre	ead "Morning"	
22	20010	1	1	15	1 Ca	r air cleaner "Clean air"	
V Pumps							
Payment forms							
	DAT.			100	-		

Subtab "Data review" contains the following elements:

NaftaPOS configuration tool – "Database" tab: "Data review" subtab

#### "Open database table" area:

- > **Dropdown list "Database"** allows to select a database from a list.
- Dropdown list "Table" allows to select a table in a database, selected using a dropdown list "Database".

When database and its table is selected – it is possible to view, edit, insert and delete records in it using buttons in the bottom of the "Open database table" area.

Database structure of NaftaPOS software is open and its description can be found in the end of this User Manual in section "*NaftaPOS system database structure*".

Subtab "Additionally" allows calling of requests to NaftaPOS database with indication of results.

হী	Database settings	Data review	Additionally	
General	Enter request to database			
	SELECT COUNT(*) FROM PROD	עכד		
B Database		Send		
	SELECT COUNT(*) FROM PRODU	UCT		
States/Errors				
Drivers				
Tanks	Execution of 'SELECT COUNT(') FRI Executed: SELECT COUNT(') FRI	FROM PRODUCT' FAILED with message DM PRODUCT, Rows affected - 1	"Key violation. [TCX][MyODBC]Access denied f	or u
Pumps				
Payment forms				
intes .				

NaftaPOS configuration tool - "Database" tab: "Additionally" subtab

At sending of a request NaftaPOS will ask for login and password to connect to database:

Database:	AZS.MYSQL
<u>U</u> ser Name:	AZSUSER
Password:	

NaftaPOS configuration tool – login to database on "Database" tab: "Additionally" subtab

## Configuration tab "States/Errors"

Tab "*States/Errors*" serves for settings of colors of pump windows and displayed pump errors. It is possible to adjust a foreground color and background color for each of the pump state and error. Main view of the "*States/Errors*" tab is shown below:

🗙 POSSet	🔽 🖄 Load 🕍 Save 👘						– 🗆 🗙
2		<ul> <li>States of pumps —</li> </ul>		Pump errors			
144	General					FB	
	achora	Undefined	????	Error 0	No error		
9		NotWorking	OFF	LOSTPULSE	No count pulses		
		Working	WORK	BUTTON_S_P	NOZZLE		
11000	Database	Ready	IDLE	OWERLOAD	OVERLOAD		
		Stoped	IDLE	KTRKOWERLOAD	OVERLOAD		
		EnoughFuel	EMPTY ?	KTRKFAILURE	PUMP FAILURE		
		WaitCommand	WAIT	BUKLINKERROR	NO BUK CON.		
	States/Errors	ReadyForWork	READY	TRKLINKERROR	NO PUMP CON.		
$\sim$		OperatorCall	CALL !	TIMEOUTERROR	TIMEOUT		
		GunUp	NOZZLE	Error 9	????		
10mm		Status 10	????	READYNOTLOCAL	READY		
	Drivers						
	Tanks						
	Dumpe						
	r unips						
1 Alexandre							
	Payment forms						
-51							
	Ouel - 1						
	<b>W</b>						
States/Errors -	(2)						//.

NaftaPOS configuration tool – "States/Errors" tab: settings of colors of pump states and errors

Having pressed a right mouse button on the color in color panel leads to setting this color as a foreground for the selected pump state/error, which is indicated with inscription "FG" in color panel.

Having pressed a left mouse button on the color in color panel leads to setting this color as a background for the selected pump state/error, which is indicated with inscription "*BG*" in color panel.

If both foreground and background colors match – this is indicated by an inscription "FB" in color panel.

#### Configuration tab "Drivers"

Tab "Drivers" serves for configuration of drivers of connected equipment to NaftaPOS software, namely:

- Cash register (receipt printers) (subtab "Cash register")
- Pumps controller (subtab "Pumps controller")
- ATG system (subtab "ATG system")
- Barcode scanner (subtab "Barcode scanner")
- Other POS systems for sharing the same pumps controller (subtab "Pumps controller service")
- Other POS systems for sharing the same ATG system (subtab "ATG system service")

Driver for each type of the connected equipment is configured on its own subtab.

					Co cur	onfigura rrently s	ation of et driver	Selection to con	of d figu	evice re	Cu	rrently drive	y set r		
		Setting of from a c	of a dr Iriver	iver list			Selection outside	a driver fron the system	ו				L dr	ist of availa ivers in sys	ble tem
*	POSSet 👻	Load Save								,					
1	General		Cash Curre	register nt driver	Pum	ps controller	r ATG system	Barcodes scanner	Pum	np controller s	ervice A	ATG syste	m service		
	Database			Configur	ation			CashWin driver 6 D:\NaftaPO	5.7.56 S\Ca	541.42947 ( shWinExt\c	12.06.20 ash.dll	)15)		-	
States/Errors			Driver	s found -		۔ ۲	Con Cat from die	te l							Ħ
Drivers		File	Set			Set from dis	Version							┹┤	
		D: Wa D: Wa	ftaPOS\Ca ftaPOS\Ca	ashW ash.d	/inExt\cash. III	dll	CashWin void cash	driver drive	6.7.5641.42 r 6.7.5585.3	947 (12.0 5386 (17.0	6.2015) )4.2015)				
<u> </u>	Pumps														
<i>.</i>	Payment for	ms													
	Order														
	View														
-	Pump modes	5													
	Additional m	odules													
<u> </u>	Users														
	Control pane	el.													
Drivers - (	3)														///

NaftaPOS configuration tool - "Drivers" tab

#### Configuration of cash registers drivers

Main view of subtab "Cash registers" is shown below:

Х		POSSet 👻	Load Save							– = ×
	1	General		Cash register	Pumps controller	ATG system	Barcodes scanner	Pump controller service	ATG system service	
		Database		Configu	ration		CashWin driver 6 D:\NaftaPO	.7.5641.42947 (12.06. S\CashWinExt\cash.dll	.2015) I	
	Image:	Drivers found			4.					
	States/Errors         Image: States/Errors         Image: Drivers         Image: Tanks         Image: Tanks         Image: Pumps         Image: Payment forms         Image: Order         Image: View		Drivers File Version CathWin driver 6, 7, 5641, 43947 (12, 06, 2015)							
		Tanks		D: WaftaPOS (C	LashWinExt(cash.d Cash.dll	1	void cash	driver 6.7.5585.35386 (1	7.04.2015)	
	<u> </u>	Pumps								
		Payment for	rms							
		Order								
	Payment forms       Order       Image: Constant of the second of th									
	-	Pump mode	S							
	*	Additional m	nodules							
	22	Users								
		Control pan	el							
Dri	ivers - (	(3)								11.

NaftaPOS configuration tool – "Drivers" tab: "Cash register" subtab

List of drivers for cash register includes the following:

- CashWin driver- driver for printing of receipts on a standard printer set in Windows operation system
- Void cash register driver simulator of a cash register presence in system, receipts are not printed or displayed
- other specific drivers can be added optionally upon request

In order to set a cash register driver in NaftaPOS it is necessary to focus the required driver and press a button "*Set*". In case if cash register driver is in a view of external file (dynamic library file with name "*Cash.dll*") and is not present in the list – it is possible to select it using a button "*Set from disk*".

Configuration of the set driver is made using a button "Configuration".

#### Cash register driver "CashWin driver"

Driver "CashWinExt driver" is used to print receipts on a standard receipts printer, which driver is installed in Windows OS and this printer is set as a default printer and also to print additional fields in the receipt and save them to the database with usage of formulas in the receipt template. Please read about it in section "Formation of receipt from template" below in this User Manual for more information. In such a way to print receipts it possible to use any model of printer, which has a driver for Windows OS. Also you can configure the driver to use a separate printer for each pump (group of pumps), so you can install a printer on each pump and configure NaftaPOS to print receipts for given pump on its own printer.

Driver has a template of the receipt to be printed, which is in XML format and allows modification of its appearance and printed information. It is possible to specify in the template what text and images should of printed receipt. By defaults template the located be in the receipt is in NaftaPOS\CashWinExt\receipt\_template.xml file. Receipt template includes rich comments on how the text can be formatted. See section "Formation of receipt from template" below in this User Manual for more information.

🔆	3
left side but other line (either right or center aligned) will be printed at the current line	_
	^
- <fuel_header></fuel_header>	
<text align="center" size="33">RSP SHELL STATION</text>	
<text align="center" size="27">Bahada Dao, Pagadian City</text>	
<text align="center" size="27">Registered TIN: 944-112-420</text>	
<img align="center" height="188" src="CashWinExt\ur-logo-here.bmp" width="500"/>	
- <cashier></cashier>	
<text size="31"></text>	
<text align="justify" font="FontA11">Date/Time:</text>	
<text align="right">{date} {time}</text>	
<text align="justify"> Cashier name: </text>	
<text align="right">{cashier}</text>	
<td></td>	
<pre>ctude_priset</pre>	
<pre>ctext align="center" font="FontA11"&gt;Receipt on fuel cales no {recno}</pre> /text>	
<pre>chat/s</pre>	
<pre><text align="iustify" font="EontA11">Euel grade:</text></pre>	
<text align="right">{product}</text>	
<text></text>	
<text align="justify">Order volume:</text>	
<text align="right">{preamount} L</text>	
<text align="justify">Price:</text>	
<text align="right">{price} PhP/L</text>	
<text align="justify">Amount due:</text>	
<text align="right">{pre_entry} PhP</text>	
<text></text>	
<text align="justify">Vatable:</text>	
<text align="right &gt; {vatable_preset} PNP&lt;/text&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;text align=" listing"="">includes VAI ({val_perc}%):</text>	
<text align="introduction" amount="" c="" dura="" td="" total="" totats<=""><td></td></text>	
<text align="right" bbc="" store="" td="" texts<="" total=""><td></td></text>	
<pre><text pre="" s<=""></text></pre>	
<pre><text align="iustifv">Payment form:</text></pre>	
<text align="right">{cashform}</text>	
<text></text>	
<text align="justify">Vehicle number:</text>	
<text align="right">{Vehicle_number}</text>	
<text></text>	
<text align="justify">Customer name:</text>	~
<text align="right">{Customer_name}</text>	

Template of the receipt in XML format for "Cash printer Windows driver"

A Parameters X	🙏 Parameters
General Printing	General Printing
Tax rates	Settings
Method of calculating VAT included in price	Path to receipt template:
	D:\NaftaPOS\CashWinExt\receipt_template.xml
Tax rates	Paper width: 550 Print receipt Always 💌
Additionally	Do not print zero receipts
Input of additional information	Attachments
	Disp# Printer
	1 Samsung M2070 Series (192.168.1.181)
	2 Samsung M2070 Series (192.168.1.181)
	3 Samsung M2070 Series (192.168.1.181)
	4 Samsung M2070 Series (192.168.1.181)
	Printer: Dispenser:
	Samsung M2070 Series (192.168.1.181) 💌 🛛 4 💌
	Test print: Delete Add
💾 Save 😫 Cancel	💾 Save 🗮 Cancel

Configuration of "Cash printer Windows driver"

List "Method of calculating VAT" sets whether VAT is included into price or not.

**Button** *"Tax rate"* opens a new window *"Tax groups"* for management over tax groups specifies a tax rate (in percents) for VAT to be calculated in the receipt.

**Checkbox** *"Input of additional information"* sets whether additional information fields should be shown for adding these fields in receipt or not.

Field "Path to receipt template" allows selection of a path to a receipt template file on the PC.

List "Print receipt" sets whether it is necessary to request receipt printing each time after the sale is performed.

**Field "***Paper width*" sets width of used paper for printing a receipt (generally in conventional units of the receipts printer), however this field can be overlapped by printer configurations, so each time at configuration of a new printer should be tested individually.

Checkbox "Do not print zero receipts" sets whether receipts with zero amount should be printed or not.

Field "Attachments" is used for linking specific pumps to printers.

In "*Tax groups*" window it is possible to view, add, edit and delete tax groups. In configuration of each tax group it is necessary to set a tax group number, tax group name and tax rate.

TaxRat	esForm	×	Tax rate	×
Group 1 2 3	Marking A B C	Rate 10,00 14,00 20,00	Enter tax group code Enter the symbolic design A Enter tax rate value 0,00	ation
	🖌 🔨 ОК	🗶 Cancel	✔ ОК	💢 Cancel

Configuration of tax groups in "Cash printer Windows driver"

## Cash register driver "Void cash register driver"

Driver "Void cash register driver" is used when there is no printer connected to NaftaPOS and there is no necessity to print receipts. Application of this driver is required, when NaftaPOS is used to testing or works in a monitoring mode – silently tracks operation of all dispensers and stores information on every performed transaction in its database.

#### Configuration of pumps controller drivers

Main view of subtab "Pumps controller" is shown below:

Ж		POSSet 👻	Load Save							– 🗆 ×	
	1	Ceneral		Cash register	Pumps controller	ATG system	Barcodes scanner	Pump controller service	ATG system service		
	6	General		Current driver			·				
		Database		Configu	Configuration						
	-				- D:\NaftaPOS\pts\controll.dll						
	0	States/Error	s	Drivers found		_					
	<u>_</u>			Set		\mu Set from dis	k				
	2	Drivers		File			Version		IE (20.0E 201E)		
		Tanks		D: WaftaPOS (	Controll.dll		virtual co	ntroller 6.7.5515.56995 (0	6.02.2015)	•	
	_₿	Pumps									
	100										
	×.	Payment for	ms								
	1	Order									
	100										
		View									
	~	Dump mode	-								
		Pump mode	5								
		Additional m	odules								
	2	Users									
	1	Control nan									
	1		51								
Driv	/ers - (.	5)								11.	

NaftaPOS configuration tool - "Drivers" tab: "Pumps controller" subtab

List of drivers for controller includes the following:

- PTS controller driver is used for controlling fuel dispensers connected through the PTS controller over fuel dispensers and ATG systems for petrol stations (read more on <u>http://www.technotrade.ua/fuel-pump-controller.html</u>)
- Virtual controller is used for simulation of fuel dispensers
- other specific drivers can be added optionally upon request

In order to set a controller driver in NaftaPOS it is necessary to focus the required driver and press a button "*Set*". In case if controller driver is in a view of external file (dynamic library Controll.dll file) and is not present in the list – it is possible to select it using a button "*Set from disk*".

Configuration of the set driver is made using a button "Configuration".

Connection of all real fuel dispensers in NaftaPOS software is done using "PTS controller" driver.

#### **PTS controller driver**

Driver *"PTS controller"* is used to provide control over fuel dispensers using the PTS controller. PTS controller provides conversion of its common UniPump communication protocol into communication protocols of a variety of fuel dispensers protocols of various manufacturers. More information regarding the PTS controller, its configuration and schemes of connection to fuel dispensers can be found on its web-page: <u>http://www.technotrade.ua/fuel-pump-controller.html</u>.

Configuration of PTS controller is made by calling *Pts\_config.exe* utility, which is launched from tab "*Pumps*" by clicking a button "*PTS configuration*" (location on the disk is *NaftaPOS\Pts\_config.exe*") – see section "*Configuration of PTS controller*" for more information.

Configuration of PTS controller is done using a PTS controller configuration and testing utility *Pts\_config.exe*, which is can be launched from *"Pumps"* tab of NaftaPOS configuration tool.

	9. SAFE Graf 10. GALILEO PumpControl GC21 12. SLAVUTICH FD-Link 13. PUMP SIMULATOR 10 14. SB T10 AR 15. TATSUNO SS-LAN 16. SHELF 17. UniGaz 18. GILBARCO AUS. ELECTROLINE 19. PUMALAN Marconi 20. EnE Korea 21. BENNETT 24. NUOVO PIGNONE CL 25. GALLAGHER (PEC) 26. BLUE SKY 77. PROWALCO	Select file to restore configuration       Select         Restore configuration       Reset configuration         Reset pumps configuration       Reset probes configuration         Reset parameters       Reset configuration
Request firmware version	25. GALLAGHER (PEC) 26. BLUE SKY 27. PROWALCO	Reset parameters      Reset configuration
LIGHT	Hequest firmware version           Events review	

Main view of PTS controller configuration and testing utility

PTS controller configuration and testing utility *Pts\_config.exe* is a multipurpose utility for PTS controller. It provides the following possibilities:

- provision of control over the connected pumps (fuel dispensers) and probes (ATG systems) for testing purposes
- configuration of pumps (fuel dispensers) channels and probes (ATG systems) channels
- configuration of PTS controller parameters and pumps (fuel dispensers) protocols parameters

- update of the PTS controller firmware
- logging of PTS controller communication exchange with connected equipment
- self-diagnostics of PTS controller communication ports and switches
- saving of all configuration of PTS controller to file and loading of all configuration of PTS controller from file

More information about this utility please find in the technical guide for PTS controller, which can be downloaded from PTS controller web-page: <u>http://www.technotrade.ua/fuel-pump-controller.html</u>.

Pump channels in PTS controller are configured on tab '*Pumps configuration*' of the *Pts\_config.exe* utility. To read current configuration of the PTS controller use a button "Get pumps configuration".

'ump	channels configuration			. 1	Pumps configur		u.	D1		
1	22 Dart Simpler	-	Baud ra	ite –	Logic. addr.	Channel IL	1-	Physic. ad	ar.	Param
2	5. CIL DADCO Two Wirrs		4. 3000		2	Channel 1		Addman 2		Param.
2	15 TATSUNO SSJAN		5 19200	Ť	2	Channel 1	-	Address 2		Param.
4	6 TOKHEIM	-	4 9600		4	Channel 1	-	Address 4		Param
					5	0	-	0	-	a ann.
N A	RNING!				6	Channel 2	-	Address 1	-	Param
lake	e sure that parameters for p	ump pi	otocols are		7	Channel 2	-	Address 3	-	Param
onfi	gured correctly on tab "Para	meter	s":		8	Channel 2		Address 7	-	Param
6. T	OKHEIM				9	Channel 2	-	Address 9	-	Param
15.	TATSUNO SS-LAN				10	Channel 3	-	Address 3	-	Param.
					11	Channel 3	-	Address 4	-	Param.
	Confi	igure pu	ump parameters	s now!	12	0	-	0	-	
					13	Channel 4	-	Address 1	-	Param.
	Get pumps cor	nfigura	tion		14	Channel 4	-	Address 2	-	Param.
					15	Channel 4	-	Address 3	-	Param.
	Set pumps con	figura	tion		16	Channel 4	-	Address 4	-	Param.
ents .02.	: review 2015 08:56:22 - Pumps configu 2015 08:56:23 - Pumps configu 2015 08:57:56 - Firmware versio	ration retion response	eceived. eceived. onse received.							

Pts\_config utility: pumps configuration

Configuration of pump channels includes setting of communication protocol and baud rate for each of the pump channels and also assigning of pumps to each of the pump channels. Each of the pumps can be assigned to any of the pump channels and requires specification of the pump physical address.

Logical address of the pump means the address on which the control system (POS system, cash register, OPT, etc) will see given fueling place. Physical address of the pump means address of the real fueling place, which is programmed or set in configuration of the fuel dispenser fueling place.

After configuration is finished it is necessary to click a button "Set pumps configuration", which will write current pump channels configuration to PTS controller. Information about result of operation of writing of configuration to controller (whether it is made successfully or there was some problem) will be written in the events review field on the form.

For some pump protocols it is also necessary to configure parameters, which is to be done on tab "*Parameters*" of the utility.

Configuration of the PTS controller driver includes the following:

PTS driver configuration	>	×
Controllers Pumps Multipliers		
Controllers in system 1 🗘 Show to	otalizer update button	Selection of quantity of PTS controllers in system
Use pumps electronic total counters  Read/write prices to controller  Ouick authorization  Wait for confirmation of dispensing start  Do not use Lock/Unlock commands  Controller  Setup of controller #1	<ul> <li>Nozzle change</li> <li>Authorization by amount</li> <li>Difference, I 0,00</li> <li>Forced start</li> </ul>	Selection of adjustments for all pumps in the system
Controller #1 COM port Maximal dose, I	t 1 🗘 Test	Selection of COM-port with connected PT           controller and testing communication with           Number of the PTS controller (in case of several PTS controllers connection)
✓ Pump #1 ✓ Pump #2 ✓ Pump #3 ✓ Pump #4 Pump #5 ○ Pump #6 ◀	▶	Pump numbers to be polled by the NaftaPOS system
🖌 ок 🗱	Cancel	

NaftaPOS configuration tool – PTS controller driver configuration, tab "Controller"

Clicking of button "*Test*" opens a window for checking communication with the current PTS controller on specified COM-port: If response is OK – communication is successful, otherwise various errors will be displayed.

Adjustment for the pumps include:

- "Show totalizer update button" enables to update total counters values from pumps at any moment.
- "Use pumps electronic total counters" sets to request total counters from pumps after each performed dispensing
- "Quick authorization" authorization of pumps should be made quickly
- "Wait for confirmation of dispensing start" pump window will show 'WORK' state only after real dispensing on pump starts and dispensed volume is bigger than zero
- "Nozzle change" repeated authorization of same pump nozzle is allowed only after the nozzle is returned back
- "Authorization by amount" authorization is made by money amount (if checked) or by volume (if unchecked)
- "Forced start" authorization command is given forced
- "Do not use Lock/Unlock commands" enables communication with PTS controller without using LockRequest and UnlockRequest commands to make communication be faster, however at this it is required to use configure parameter "NOT USE COMMANDS LOCKREQUEST AND UNLOCKREQUEST" in PTS controller configuration and used PTS controllers should not be interconnected with any other PTS controllers over DISP port.

Revision:	R08

		🖬 Universal protocol test	×	
Response type: if "OK" – successful, else – various errros	-	Protocol state Ok Head timeout	Count 28 15	Quantity of received responses
		Pump 1		Selection of the pump number

*Test of communication with PTS controller* 

In configuration of "*PTS controller*" driver only logical addresses of dispensers are set, the physical address of the connected fueling place is specified in PTS controller configuration utility.

#### Notice!

Due to a reason of constant development of PTS controller and adding to it communication protocols of new fuel dispensers and ATG systems PTS controller configuration utility is also constantly being developed. That is why in order to have the latest version of the configuration utility and the latest firmware of the PTS controller – request it from *"TECHNOTRADE LTD"* company. Location of PTS controller configuration utility is *NaftaPOS\Pts\_config\"*.

Linking of pump windows numbers to logical addresses of fuel dispensers set in PTS controller configuration utility is made on tab "*Pumps*" of PTS controller driver:

PTS driver configur	ation X	
Controllers Pumps M	lultipliers	Selection of the logical pump address in
Pumps	Number of pump in controller	PTS controller to be polled
Pump # 1	2 🗘 Flexible settings	(inking to pump in NartaPOS system)
Pump # 2 Pump # 3		Enabling flexible setting for each of the
Pump # 4		pumps in NaftaPOS system
Pump # 5	Read/write prices to controller	Flexible setting for each of the pumps in
Pump # 6 Pump # 7	Quick authorization	NaftaPOS system
Pump # 8	🗍 Nozzle change	
Pump # 9 Pump # 10	Wait for confirmation of disponsing start	
Pump # 11		
Pump # 12	Authorization by amount Difference, I 0,00	Dumme in Neffe DOC suptom
Pump # 13 Pump # 14	Maximal dose   9999	Pumps in NartaPOS system
Pump # 15		
Pump # 16	Allow dispensing at nozzle down	
Pump # 17		Colocting normalize for each of the number in
Pump # 19		NaftaPOS system
Pump # 20 Pump # 21	Nozzles mask	Handi OO System
Pump # 22	V 0	
Pump # 23		
Pump # 24 Pump # 25	√ 2 √ 3	
Pump # 26	v 4	
Pump # 27 👻	5	
	V OK Cancel	

NaftaPOS configuration tool – PTS controller driver configuration, tab "Pumps"

Field "*Nozzles mask*" serves for specification of what nozzles are enabled in selected pump (for normal operation all checkboxes should be checked).

Flexible settings are used to enable/disable individual settings for each of the pumps.

Tab "*Pumps*" specifies the pumps in NaftaPOS system, with which NaftaPOS works. To each of these pumps on tab "*Pumps*" can be linked any pump logical address, which is configured in PTS controller configuration.



Configuration of "PTS controller" driver (tab "Pumps") – linking of logical pump numbers in PTS controller to pump numbers in NaftaPOS system

Tab *"Multipliers"* specifies quantity of digits in money amount, volume and price fields used on the pump for NaftaPOS software to operate correctly with it. These fields are used in communication protocol with PTS controller, where quantity of digits in each of the values is to be specified:

- Authorization multipliers (separate for volume and money)
- Intermediate counts multipliers (separate for volume and money)
- Transaction multipliers (separate for volume and money)
- Total counters multipliers (separate for volume and money)
- Price multipliers

Multipliers can be set separately for each of the pumps. Clicking on button "Set for all pumps" leads to setting of the current multipliers on currently selected pump for all other pumps.

PTS driver co	nfiguration	×
Controllers Pump	IS Multipliers	
Pumps	Authorization multipliers	
Pump # 1 Pump # 2 Pump # 3 Pump # 4 Pump # 5 Pump # 6 Pump # 7	Volume Money 2 Intermediate counts multipliers	\$
Pump # 8 Pump # 9 Pump # 10 Pump # 11	Z ↓ Z Transaction multipliers	=
Pump # 12 Pump # 13 Pump # 14 Pump # 15 Pump # 16	Volume Money 2	\$
Pump # 17 Pump # 18 Pump # 19 Pump # 20 Pump # 21	Volume     Money       2     2	\$
Pump # 22 Pump # 23 Pump # 24 Pump # 25	Price multiplier 2 \$ Set for all pu	imps
	🛹 OK 🗱 Cancel	

*NaftaPOS configuration tool – PTS controller driver configuration, tab "Multipliers"* 

Shown on image above multipliers set that there are 2 digits on the pump in fields of money amount, volume and price and also pump gives out total counters (volume and money) with 2 digits after decimal separator.

Other examples of multipliers:



Setting multipliers for pump with 0 digit in money amount and 3 digits in volume

Setting multipliers for pump with 1 digit in money amount and 2 digits in volume

Except setting of multipliers for each of the pumps it is necessary to set multipliers in NaftaPOS system in order to set how data should be accounted in system, stored in database and displayed in reports. Setting of multipliers for NaftaPOS system is made on tab "Order" in configuration utility of NaftaPOS.

#### Virtual controller driver

Driver "Virtual controller" is used for simulation of fuel dispensers. At using of this driver NaftaPOS can simulate presence of actual fuel dispensers, but at this no real dispensers are connected to the system. This driver is often used in situations when between all the dispensers on the petrol stations there 1 (or several) dispensers, which can not be automated, but account on these dispensers should be lead. In such a way NaftaPOS will indicate pump windows on the screen and virtual sales through these dispensers will be possible to be made, which will be indicated in the reports.
### Configuration of ATG system drivers

Main view of subtab "ATG system" is shown below:

×		POSSet 👻	Load Save							– 🗆 ×
	14	General		Cash register	Pumps controller	ATG system	Barcodes scanner	Pump controller service	ATG system service	
	6	General		<ul> <li>Current driver</li> </ul>			DTC ATC drives	7 5502 1 (202) (24 04	2015)	
		Database		Configu	ration		PIS AIG driver	5.7.5592.16293 (24.04.	.2015)	_
-	-						D:\Naft	aPOS\pts\tank32.dll		
	0	States/Error	s	Drivers found		_				
	<u>_</u>	D.:		Set		差 Set from dis	k			
		Drivers		File			Version		04.0045)	
		Tanks		D: WaftaPOS b	ank32.dll		void tan	driver 6.7.5592.16293 (24	3. 12. 2014)	•
-										
	<u> </u>	Pumps								
	100									
	×	Payment for	ms							
	1	Order								
	10									
		View								
	~	Pump mode	<u>د</u>							
	- 27	T dinp mode.								
		Additional m	odules							
-	222									
	2	Users								
		Control pane	el							
Dri	ivers - (	3)								

NaftaPOS configuration tool - "Drivers" tab: "ATG system" subtab

List of drivers for ATG systems includes the following:

- PTS ATG driver is used for communication with various ATG systems, connected through the PTS controller over fuel dispensers and ATG systems for petrol stations (http://www.technotrade.ua/fuel pump controller.html)
- Driver of virtual tank is used for emulation of ATG system presence in system
- other specific drivers can be added optionally upon request

In order to set a tanks driver in NaftaPOS it is necessary to focus the required driver and press a button "*Set*". In case if tanks driver is in a view of external file (dynamic library tank32.dll file) and is not present in the list – it is possible to select it using a button "*Set from disk*".

Configuration of the set driver is made using a button "Configuration".

Connection of all real ATG systems in NaftaPOS software is done using "PTS ATG" driver.

### **PTS ATG driver**

Driver *"PTS ATG driver*" is used for communication with various ATG systems using the PTS controller. PTS controller provides conversion of its common UniPump communication protocol into communication protocols of a variety of ATG systems protocols of various manufacturers. More information regarding the PTS controller can be found on its web-page: <u>http://www.technotrade.ua/fuel\_pump\_controller.html</u>.

In configuration of "*PTS ATG driver*" driver only logical addresses of ATG system probes (sensors) are set, the original physical addresses of probes are specified in PTS controller configuration utility.

Configuration of PTS controller is made by calling *Pts\_config.exe* utility, which is launched from tab *"Pumps"* by clicking a button *"PTS configuration"* (location on the disk is *NaftaPOS\Pts\_config\Pts\_conigf.exe"*).

Tab *"Probes configuration"* is used for reading and writing of configuration of probe channels in PTS controller.

PTS contro File Lang	ller configuration and testing uti juage Connection	lity, v	. 1.0.0.7			-					
СОМ-ро	coms 🚔					С	onnected		Connect	Di	isconnect
General P	umps configuration Probes configur	ation	Parameters Control	Lo	ogging	g Firmware update	Diagnostics				
Probe c	hannels configuration					Probes configura	ation				
Name	Protocol name		Baud rate		1	Logic. addr.	Channel nam	e	Physic. addr		Param.
DISP	1. GILBARCO Veeder Root	-	4. 9600	-		1	DISP	-	1	-	Param.
LOG	0	-	0	-		2	DISP	-	2	-	Param.
USER	2. START ITALIANA SMT-X	. 🔻	4. 9600	-		3	DISP	-	3	*	Param.
						4	DISP	-	4	-	Param.
						5	DISP	-	5	-	Param.
WARI	NING!					6	0	-	0	-	
Make su correctly	re that parameters for probe pr on tab "Parameters":	otoc	ols are configured			7	USER	-	21442	-	
1. GILÉ	SARCO Veeder Root					8	USER	-	21443	-	
						9	USER	-	21444	-	
						10	USER	-	21445	-	
						11	0	-	0	-	
	Configu	re pr	obes parameters no	w!		12	0	-	0	-	
						13	0	-	0	-	
	Get probes config	gura	ation			14	0	-	0	-	
						15	0	-	0	-	
	Set probes config	gura	ation			16	0	-	0	-	
Events re 06.02.201 06.02.201 06.02.201 06.02.201 06.02.201 06.02.201	view 15 08:58:07 - Pumps configurati 5 08:58:33 - Firmware version 15 08:58:34 - Pumps configurati 5 08:59:03 - Firmware version 15 08:59:04 - Probes configurati 15 08:59:36 - Firmware version 15 08:59:37 - Probes configurati	ion respo ion respo ion r respo ion r	eceived. onse received. eceived. onse received. eceived. onse received. eceived.								×

Pts\_config utility: probes configuration

Configuration of probe channels includes setting of communication protocol and baud rate for each of the probe channels and also assigning of probes to each of the probe channels. Each of the probes can be assigned to any of the probe channels and requires specification of the probe physical address.

Logical address of the probe means the address on which the control system (POS system, cash register, OPT, etc) will see given probe. Physical address of the probe means address of the ATG system probe, which is programmed or set in configuration of the ATG system console or probe.

After configuration is finished it is necessary to click a button "Set probes configuration", which will write current probe channels configuration to controller. Information about result of operation of writing of configuration to controller (whether it is made successfully or there was some problem) will be written in the events review field on the form.

#### Notice!

Due to a reason of constant development of PTS controller and adding to it communication protocols of new fuel dispensers and ATG systems PTS controller configuration utility is also constantly being developed. That is why in order to have the latest version of the configuration utility and the latest firmware of the PTS controller – request it from *"TECHNOTRADE LTD"* company. Location of PTS controller configuration utility is NaftaPOS\Pts\_config\.

Configuration of the PTS controller driver includes the following:

In configuration of "*PTS ATG driver*" driver only logical addresses of ATG system probes (sensors) are set, the original physical addresses of probes are specified in PTS controller configuration utility.

	Select ATG	ion of logical i probe is PTS o	olume in accord number of controller	lance with fuel le Fuel level o end of pro	vel) ffset, mm – offset fi obe to bottom of tar	rom nk
Configuration	5					X Water level offer
Tank	PTS controller	ATG address	Calibr. source	Fuel lev. offset, mm	Water lev. offset, m	water level offset
#1	1	1	NaftaPOS	0	0	end of probe to
#2	1	2	NaftaPOS	0	0	bottom of tank
#3	1	3	PTS controller	0	0	
#4	1	4	PTS controller	0	0	
	Destand					
400	2000	¢	Automatic in-tank	deliveries detection		

Configuration of "PTS ATG driver"



Configuration of "PTS ATG" driver – linking of logical ATG probe numbers in PTS controller to tanks in NaftaPOS system

#### <u>Notice!</u>

When "PTS ATG" driver is set in order to make it display probes data in NaftaPOS system it is necessary to set a checkbox "*Level meter presence in system*" on tab "*General*" in POSSet.

#### Driver of virtual tank

Driver *"Driver of virtual tank"* is used for simulation of ATG system presence in system. This driver should be set, when there is no ATG system connected.

#### Notice!

In this case a checkbox "Level meter presence in system" on tab "General" should be unchecked.

### Configuration of barcode scanner drivers

Main view of subtab "Barcode scanner" is shown below:

8	POSSet - Load Save						□ ×
	General	Cash register Pumps controlle Current driver	er ATG system	Barcodes scanner	Pump controller service	ATG system service	
	Database	Configuration	Gen	eric barcode scan	ners driver 6.7.0.0 (2	0.04.2018)	
0	States/Errors	Drivers found		D:\Natta	aPOS\scan\Scan.dii		
2	Drivers	Set	🚔 Set from dis	k			
	Tanks	File D:\VaftaPOS\PinPad\Scan.dll		Version PinPad dr	iver 6.7.0.0 (05.04.2018)		
<u> </u>	Pumps	D:\VaftaPOS\scan\Scan.dll D:\VaftaPOS\ScanMulti\Scan.dll	I	Generic b Multi scan	arcode scanners driver 6.7 driver 6.7.5703.44731 (1	7.0.0 (20.04.2018) .3.08.2015) 7021 (20.07.2017)	
	Payment forms	D: WartaPOS (ScanvkD (Scan. dii		VKMOdule	reader driver 6.7.6418.5	/921 (28.07.2017)	
	Order						
	View						
-	Pump modes						
	Discounts						
	Additional modules						
	Users						
	Control panel						
Drivers -	(3)						lti.

*NaftaPOS configuration tool – "Drivers" tab: "Barcode scanner" subtab* 

List of drivers for barcodes scanners includes the following:

- *PinPad driver* is used for communication with Pinpad terminal (http://technotrade.ua/pinpad-terminal.htm)
- *Generic barcode scanners driver* is used for communication with barcode scanner connected through COM-port and through keyboard wedge
- *Multi scan driver* is used for communication with scanners through several drivers
- *VKModule reader driver* is used for communication with VRD-E RFID readers (http://technotrade.ua/vrd-e-card-reader.html)

### Description of "Generic barcode scanners driver" configuration

### Capture service configuration

Scan driver configuration	x
Capture service Scanner Scanner t	уре
Input capture service	
Port number:	3398
Reconnect timeout:	4000
Run service at driver start	
State check timeout:	3000
Service application:	
D:\Src\Sandbox\UsbScanTests\Ou	itput\ScanHost[ Select
Setup	input capture driver
OK	Cancel Apply

- Port number: port on which the driver connects to capture service
- **Reconnect timeout:** time period, through which there will be an attempt to make connection to service in case of disconnection
- **Run service at driver start:** if this flag is set then the driver will automatically start and stop the service at operation
- **Enable service state monitoring:** if this checkbox is set then the driver will automatically relaunch the service if it was closed or stopped its operation abnormally
- State check timeout: time period, through which there will be an attempt to restart the service
- Service application: full path to executable file of service

#### Scanner configuration

Scan driver configuration
Capture service Scanner Scanner type
Reading settings
Enable scanner
Avaliable devices:
Generic symbol scanners 🔹
Description: Generic symbol scanners Type: Keyboard VID: 0000
Generic symbol scanners
OK Cancel Apply

- Enable scanner: flag, which enables scanner operation
- Available devices: list of present devices, which can select for input capture

#### Scanner test

Scan driver configuration
Capture service Scanner Scanner type
Reading test
Connection state: CONNECTED A
-
Mode
Normal scan
© Keylog
OK Cancel Apply

Mode: sets a mode of scanning during test:

- Normal scan: acceptance of code as at normal operation with control system
- *Keylog:* display of detailed information about actions with keyboard

Information is given out in a view [HEX:0x\_\_, STATE:\_\_, CHAR: `\_`].

Key `HEX` contains hexadecimal code of key; `STATE` contains state of key (PRS – pressed, RLS - released); symbol value (without register shift).

Button "Clean": deletes strings from reading test field.

#### Configuration of "Generic barcode scanners driver"

#### Configuration of equipment

For correct operation of driver it is necessary to program prefixes of scanner. By defaults driver is configured to combination [Ctrl + b]. Also in code end scanner should send a code of pressing button Enter.

#### Configuration of service

Configuration is done by editing of file ScanHostDaemonCfg.ini. Main settings:

- **PORT:** number of input port
- CAPTURE\_LIBRARY: name of library for input capture

Perhaps it is needed to add used port to exceptions to firewall.

#### *Configuration of capture driver*

Configuration is done by editing a file VKCodeCaptureCfg.ini. Depending on the library specified in this file

the driver can process scanners connected through COM-port (library SerialCodeCapture.dll) or scanners connected through keyboard wedge (library VKCodeCapture.dll). Each of the specified libraries contain .ini file for configuration.

SCAN\_CODE\_TIMEOUT: maximal time, through which a bar-code should be read

**WORDS\_LIST\_SIZE**: number of commands of start sequence (prefix) including press and release of buttons

Each action is described by 2 keys *KEY\_CODE\_n* and *KEY\_STATE\_n*, where n is a number of action (number starts from 0):

- **KEY\_CODE\_n** should contains a hexadecimal code of button (for example 0xA2, 0x42);
- **KEY\_STATE\_n** is a state of button (1 pressed, 0 released).

Different scanners process prefixes in different way. For exact definition of it you can use a reading test in a mode "*Keylog*". On received results you can easily configure a list of start sequence.

#### Configuration of scanner driver for NaftaPOS

Critical settings of the driver are fields "Service application" on "Capture service" tab and a flag "Enable scanner" on "Scanner" tab. These fields should be obligatory configured. After change of configuration "Service application" it is necessary to press a button "Apply" for restart of service.

### Configuration of pumps controller service drivers

Main view of subtab "Pumps controller service" is shown below:

×		POSSet 👻	Load Save							– 🗆 🗙
	1	General		Cash register	Pumps controller	ATG system	Barcodes scanner	Pump controller service	ATG system service	
		Database		Current driver	ration	Mas	ster controller sen	vice 6.7.5624.2882 (26	5.05.2015)	
	0	States/Error	s	Drivers found		🗂 Cat from die			v.u.	
	2	Drivers		File	^trlServ\Master\Ctr	Serv dl	Version Master co	introller service 6, 7, 5624	2882 (26.05.2015)	
	9	Tanks		D:\WaftaPOS\C	CtrlServ (Mirror \CtrlS	Serv.dll	Controll s	ervice 6.7.5624.2976 (26.	05.2015)	
		Pumps								
		Payment for	ms							
		Order								
		View								
	-	Pump mode	s							
	•	Additional m	nodules							
	22	Users								
		Control pane	el							
Dri	ivers - (	3)								11.

NaftaPOS configuration tool – "Drivers" tab: "Controller service" subtab

List of drivers for ATG systems includes the following:

- *Mirror controller service driver* is used for organization of several NaftaPOS systems operation for provision of control over any of the fuel dispensers when each of the NaftaPOS systems has some of the fuel dispensers connected
- Master controller service driver is used for organization of several NaftaPOS systems operation for provision of control over any of the fuel dispensers when all fuel dispensers are connected to one of NaftaPOS systems
- other specific drivers can be added optionally upon request

Difference between the specified drivers is that driver "*Mirror controller service driver*" is used when part of fuel dispensers are connected to one of NaftaPOS systems, other part of fuel dispensers – connected to the other NaftaPOS system(s) (each NaftaPOS system has its own fuel dispensers connected) and it is required to provide control over any of the fuel dispensers from each of the NaftaPOS systems. Driver "*Master controller service driver*" is used only when all fuel dispensers are connected to one NaftaPOS system and the other NaftaPOS system(s) does not have connected fuel dispensers and it is required to provide control over any of the NaftaPOS system.

Configurations of drivers "*Master controller service driver*" and "*Mirror controller service driver*" are similar and include the following:

Settings	Local pumps	
Mode Locally Client Server	Pump 1 Pump 2 Pump 3 Pump 4 Pump 5 Pump 6	
Dynamically Name of remote computer (*=all)	Pump 7 Pump 8 Pump 9 Pump 10 Pump 11	87
V OK X Cancel	Pump 12 Pump 13 Pump 14	83

Configuration of "Mirror controller service driver"

#### "Mode" area:

- Locally: if given NaftaPOS system has connected dispensers and there is no other NaftaPOS system installed
- Client: if given NaftaPOS system does not have connected dispensers and it connects to other NaftaPOS system
- Server: if given NaftaPOS system has connected dispensers (Server can be only one)

**Checkbox** *"Dynamically"* is to be checked when automatic definition of connection with other NaftaPOS system is required.

**Field "Name of remote computer (\*=all)"** sets IP-address a PC with another NaftaPOS system or '\*' in case of several NaftaPOS systems working together.

**Field** "*Local pumps*" sets what fuel dispensers can be controlled only locally (from given NaftaPOS system) and should be inaccessible for control from all other NaftaPOS systems.

If there are several NaftaPOS systems used at the petrol station – then it is necessary to specify IPaddresses of each of them for common interconnection. Thus in driver "*Master controller service driver*" in system, to which all fuel dispensers are connected, flag "*Server*" is set and if there is only one additional system NaftaPOS – then in field "*Name of remote computer* (\*=all)" it is necessary to IP-address of this additional system, if there are several other systems (3 and more) – then in field "*Name of remote computer* (\*=all)" it is necessary to set a sign '\*'; in additional systems without fuel dispensers connected it is necessary to set a flag "*Client*" and set IP-address of server system in field "*Name of remote computer* (\*=all)". In the similar way it is necessary to set IP-addresses of each of interconnected systems for common connection in driver "*Mirror controller service driver*" (here flags "*Client*"  $\mu$  "*Server*" do not play functional role and are used for specification of address of each of connected systems).

If there are no other NaftaPOS systems at petrol station – as a mode value "Locally" should be set.

### Configuration of ATG system service drivers

Main view of subtab "ATG system service" is shown below:

Х		POSSet 👻	Load Save							– 🗆 X
		General		Cash register	Pumps controller	ATG system	Barcodes scanner	Pump controller service	ATG system service	
		Database		Configu	ration		Tank service 6.7	7.5450.64140 (03.12.2	014) III	
	0	States/Error	s	Drivers found			D. (Haltal OS			
	2	Drivers		File		🚔 Set from dis	k Version			
	9	Tanks		D:\NaftaPOS\1	ankServ\TankServ	.dll	Tank serv	ice 6.7.5450.64140 (03.1)	2.2014)	
		Pumps								
		Payment for	ms							
	1	Order								
		View								
	-	Pump mode	s							
	*	Additional m	nodules							
	22	Users								
		Control pane	el							
Dri	ivers - (	3)								

NaftaPOS configuration tool - "Drivers" tab: "Tanks service" subtab

List of drivers for ATG systems includes the following:

- Controllers list includes the driver "Tanks service", which is used for organization of several NaftaPOS systems operation, when ATG system(s) is connected only to one NaftaPOS system and all other NaftaPOS systems do not have connected ATG system.
- other specific drivers can be added optionally upon request

Configuration of the "Tanks service" includes the following:

Service configura	tion 🗙
Settings	
Mode	
Locally:	
🔿 Client	
Server	
Dynamically Name of remote con	nputer (*=all)
×	<del>0. 30. 66. a</del>
- OK	Canaal
	Lancel

Configuration of "Tanks service driver"

#### "Mode" area:

- Locally: if given NaftaPOS system has connected ATG system(s) and there is no other NaftaPOS system installed
- Client: if given NaftaPOS system does not have connected ATG system(s) and it connects to other NaftaPOS system
- Server: if given NaftaPOS system has connected ATG system(s) (Server can be only one)

**Checkbox** *"Dynamically"* is to be checked when automatic definition of connection with other NaftaPOS system is required.

**Field "Name of remote computer (\*=all)"** sets IP-address a PC with another NaftaPOS system or '\*' in case of several NaftaPOS systems working together.

Driver "Tanks service" – is used when there is one NaftaPOS system, to which ATG system(s) is connected (which is called as Server) and all there are other NaftaPOS systems installed nearby that have to read data on same ATG system(s) measurements (called as *Clients*). In this case if there is only 1 Client – then in Server configuration in field "Name of remote computer" IP-address of Client is specified and in Client PC – IP-address of Server PC. When there are several Clients – in each of the Clients IP-address of the Server PC is specified in this field and in Server – sign '\*' is specified.

If there are no other NaftaPOS systems at petrol station – as a mode value "Locally" should be set.

## Configuration tab "Tanks"

Tab "Tanks" serves for:

- configuration of tanks at petrol station
- linking of petroleum products to tanks
- adjusting of calibration chart of tanks

Tab "Tanks" contains two subtabs: "Configuration" and "Calibration chart".

"Configuration" subtab is used for adjusting of tanks quantity, linking of petroleum products from database with tanks, setting of fuel name in tanks and its displaying attributes, setting of tanks height, adjusting of *Products* table in database. Main view of the "Configuration" tab and explanation of its parameters is shown on the image below:

tanks at petrol sta	of Linkin ation petrole	Linking of tanks to petroleum products			Setting of displayed petroleum product na in tank with its foreground and backgrou				
OSSet – 🏰 Load 🦉 Save									
	Configuration Calibra	ation chart							
	Quantity of tanks								
	4 🌲 🗛	oply							
12-				_					
Drivers	# Product code	Name	Fuel	Book-	keep, remain	Height	Compressed g	az Proc	duct Price
	1 10001 -	] Tank_1	Norm		-10	3750		Norr	mal 10,25
	2 10002	Tank_2	TID		0	2700		Pier	nium i∠,/ ⊳l 11.4
5	4 10004	Tank_J	Unlead		0	2700		Unles	on 11,4 9.85 here
N Pumps	Products								
20	Product code Na	ame	Units P	rice	Product group	De	partment Tax g	roup	
	▶ 10001 No	ormal	1	10,25		10	1	41	
Payment forms	10002 Pre	emium	1	12,7		10	1	1	
		lavel	1	4.4.4					
N	10003 Die	5501		11,4		10			
	10003 Die 10004 Ur	nleaded	ì	9,85		10 10	1	1	
Order	10003 Die 10004 Ur 20001 Ch	ileaded iewing gum "	l pcs	9,85 4,55		10 10 1	1	1	
Order	10003 Die 10004 Ur 20001 Ch 20002 Ca	nleaded Iewing gum " Ike "Dan cake"	l pcs pcs	9,85 4,55 10,5		10 10 1 1	1 1 1 1	1 2 2	
Order	10003 Die 10004 Ur 20001 Ch 20002 Ca 20003 Co	ileaded iewing gum " ike "Dan cake" ica-cola botl. 1L	l pcs pcs pcs	9,85 4,55 10,5 6,35		10 10 1 1 1	1 1 1 1 1	1 2 2 2	
Order	10003 Die 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui	ileaded iewing gum '' ike ''Dan cake'' ica-cola botl. 1 L ice ''Tomato''	pcs pcs pcs pcs	9,85 4,55 10,5 6,35 8,4		10 10 1 1 1 1 1	1 1 1 1 1 1	1 2 2 2 2 2	
Order	10003 Die 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui 20005 Ch 20005 Ch	ileaded iewing gum '' ike ''Dan cake'' ica-cola botl. 1L ice ''Tomato'' iocolate ''Nuts''	l pos	9,85 4,55 10,5 6,35 8,4 5,3		10 10 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2 2	
Order View	10003 Dia 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui 20005 Ch 20006 Ca 20006 Ca	ileaded iewing gum " ike "Dan cake" ica-cola botl. 1L ice "Tomato" iocolate "Nuts" indies "Rafael andu "Galitsin	l pes	11,4 9,85 4,55 10,5 6,35 8,4 5,3 18,2		10 10 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Order View	10003 Die 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui 20005 Ch 20006 Ca 20006 Ca 20006 Ra	aleaded iewing gum " ike "Dan cake" ica-cola botl. 1 L ice "Tomato" iocolate "Nuts" indies "Rafael andy "Galita ik botl. 11	l pes	11,4 9,85 4,55 10,5 6,35 8,4 5,3 18,2 65,4 7 2		10 10 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Order View	10003 Die 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui 20005 Ch 20006 Ca 20007 Br 20008 Mil	ileaded ewing gum '' ke ''Dan cake'' cca-cola botl. 1 L icca-cola botl. 1 L icce ''Tomato'' incocolate ''Nuts'' indies ''Rafael andy ''Galitsin Ik botl. 1 L	l pes	11,4 9,85 4,55 6,35 8,4 5,3 18,2 65,4 7,2		10 10 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Order View	10003 Die 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui 20005 Ch 20006 Ca 20007 Bra 20008 Mil	Ileaded Ileaded Ilewing gum '' ike ''Dan cake'' icca-cola bott. 1L icc ''Tomato'' iccoolate ''Nuts'' Indies ''Rafael andy ''Galitsin Ik bott. 1L	l pes	11,4 9,85 4,55 6,35 6,35 8,4 5,3 18,2 65,4 7,2		10 10 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	- • ~
Order View	10003 Dia 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui 20005 Ch 20006 Ca 20007 Bra 20008 Mil	ileaded ewing gum '' ke ''Dan cake'' cca-cola botl. 1 L icca-cola botl. 1 L icce ''Tomato'' indics ''Rafael andy ''Galitsin k botl. 1 L	I pos	11,4 9,85 4,55 10,5 6,35 8,4 5,3 18,2 65,4 7,2		10 10 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	- • <
Order View (4) Table Produc	10003 Die 10004 Ur 20001 Ch 20002 Ca 20003 Co 20004 Jui 20005 Ch 20006 Ca 20007 Br 20008 Mil 20008 Mil	Ileaded Ileaded Ilewing gum " ke "Dan cake" ca-cola botl. 1L ice "Tomato" ocolate "Nuts" Indies "Rafael andy "Galitsin k botl. 1L C Ittons for	pcs	11,4 9,85 4,55 10,5 6,35 8,4 5,3 18,2 65,4 7,2		10 10 1 1 1 1 1 1 1 1 1 1 1 1 7	1 1 1 1 1 1 1 1 1 1 ( groups o	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	<u>- • ‹</u>

NaftaPOS configuration tool – configuration of tanks in system

"*Calibration chart*" subtab is used for entering and adjusting tanks calibration chart table, setting of its height step and optimization of entering, and testing it. Main view of the "*Calibration chart*" subtab and explanation of its parameters is shown on the image below:



NaftaPOS configuration tool - configuration of tanks' calibration chart tables

# Configuration tab "Pumps"

Tab "Pumps" serves for:

- Setting of number of fuel dispensers on the petrol station
- Setting of quantity of nozzles on each fuel dispenser
- Linking of petroleum products in tanks to each of the nozzles of fuel dispenser
- Running PTS controller configuration tool

Main view of the "Pumps" tab and explanation of its parameters is shown on the image below:



NaftaPOS configuration tool - configuration of fuel dispensers and their nozzles in system

## Configuration tab "Payment forms"

Tab "*Payment forms*" serves for setting of payment forms in the system, their names and pictures for sales of fuel and for sales of retails products. Main view of the "*Payment forms*" tab and explanation of its parameters is shown on the image below:



*NaftaPOS configuration tool – configuration of payment forms in the system* 

Names of payment forms can be edited in the table. Payment form with ID equal to 32 serves for technological dispensing of fuel for reasons of dispenser calibration (assumed that fuel is returned to tank after being dispensed).

**Checkbox** "*Zero receipt at shift opening*": if checked – leads to printing-out of a zero receipt at opening of a new shift at operation with a fiscal receipts printer.

**Checkbox** *"Possibility to change after"*: if checked – allows to select a payment form after the fuel was dispensed.

## Configuration tab "Order"

Tab "Order" serves for setting of configuration of actions related to orders, namely:

- enabling prepayment / postpayment when using various payment forms
- automatic order closing
- possibility to change payment form
- closing of order at form changing
- rounding of ordered dose of fuel
- others

Main view of the "Order" tab is shown on the image below:

*	POSSet - Load Save		_ = ×	
	General	Blocking files common directory	Dose rounding To lesser value To nearest value To nearest value	
0	States/Errors	Blocking of dispensing at absence of counter ticks Maximum discretion [] 2 \$	✓ Do not round amount         ✓ Only non-zero dispensings	
22	Drivers	Timeout of countings absence [ms] 30000 \$	Setting of multipliers Volume	
2	Tanks	Order autodose in Manual mode Postpayment by defaults	2	
Ð	Pumps	Close order at form changing Splitting of order	Volume total counters	
<i>\</i>	Payment forms	Open order when nozzle up Climitations for payment forms	Money total counters	
	Order	Cash Deny prepay Talon Deny postpay Deb. card Deny Full tank mode Waybil Delayed payment	Price 2	
	View	Paysheet Akt Dis. card		
	Pump modes			
	Additional modules			
2	Users			
Order - (7	Control panel		A	

NaftaPOS configuration tool - configuration of actions related to orders in the system

**Area** "*Dose rounding*" serves for selection the direction of rounding of fuel amount in the mode of control "Order/Remains" when order is made on money amount. It includes the following items:

- To lesser value
- To nearest value
- To greater value

As an example: assume that we need to dispense fuel on 50 USD (cost) with price 7.97 USD/I and the dispenser has a pulse sensor with discreteness of 10 ml/pulse. In such a way if we divide cost on price we receive that the volume to be dispensed is not an integer value (in  $10^{th}$  of ml) and equals to 50 / 7.97 = 6.273525... Dispenser having 10 ml pulse (most of dispensers have such sensor discreteness of the pulse sensor) can dispense fuel volume only in 10 ml portions. Thus it can either dispense 6.27 I (which is lesser value) or 6.28 I (which is bigger value).

- In case if it dispenses 6.27 I then cost will be 6.27 I \* 7.97 USD/I = 49.97 USD (not 50 USD)
- In case if it dispensers 6.28 I then cost will be 6.28 I \* 7.97 USD/I = 50.05 USD (not 50 USD)

Thus **area** "Dose rounding" in NaftaPOS at once sets in which direction should be the cost rounded: to lesser, to bigger or to closest. In our example the values will be the following:

- To lesser value => 49.97 USD
- To nearest value => 49.97 USD
- To greater value => 50.05 USD

This behavior of NaftaPOS is fair because having a 10 ml pulse sensor in dispenser makes it impossible to dispense fuel on 50 USD with fuel cost of 7.97 USD/I.

For a situation when order of fuel is made from the preset keyboard located on the fuel dispenser with amount and price of fuel, which form volume of fuel to be dispensed not an integer value (in 10th of ml) (like in an example with cost of 50 USD and price 7.97 USD/I) and exactly this numbers should be indicated in NaftaPOS – then **checkbox** "*Do not round amount*" is to be checked.

For the situations when order is to be given from NaftaPOS software with amount and price of fuel, which form volume of fuel to be dispensed not an integer value (in 10th of ml) (like in an example with cost of 50 USD and price 7.97 USD/I) – then **checkbox** "*Do not round amount*" is to be checked and in configuration of PTS controller driver it is necessary to check a **checkbox** "*Authorization by amount*" (see section "*PTS controller driver*").

**Checkbox** *"Only non-zero dispensings"* is used to set whether zero dispensing on pumps should be displayed and accounted in system or not.

**Area** *"Setting of multipliers"* sets how many digits after decimal separator in values of money amount, volume, price and total counter values received from pumps should be accounted in NaftaPOS system for calculations, storing in database and displaying in reports.

**Field** "*Timeout of order pause (ms)*" serves for specifying of time period, after which the dispenser will be stopped if it does not dispense fuel during this period.

**Checkbox** *"Blocking of dispensing at absence of counter ticks"*: if checked – then if there are not counter ticks from the dispenser during dispensing process during the specified period – it will be automatically stopped.

**Opendialog** *"Blocking files common directory"* is used for specification of a directory, where files with information regarding blocked dispensers, are to be situated.

**Checkbox** "*Possibility to change payment form (postpayment)*": if checked – allows to change a payment form in postpayment mode.

**Checkbox** "Order autoclose in Manual mode": if checked – allows automatic order closing in the "Manual mode" of control at hanging down the nozzle. This allows to make NaftaPOS work completely automatically in "Manual mode" (without a cashier). Order will be opened at taking up the dispensing the nozzle and closed – at placing the dispensing nozzle down. In such a way NaftaPOS system can work as a monitoring of all fuel dispensers operation, but at this cashier will not have to interfere its work.

**Checkbox** *"Postpayment by defaults"*: if checked – allows postpayment mode be set as a default mode (prepayment mode is set in opposite case).

**Checkbox** "Close order at form changing": if checked – closes the order at changing the selected payment form.

**Checkbox** "*Splitting of order*": if checked – allows to pay for the selected order using various types of payment form at the same time.

**Checkbox** "*Open order when nozzle up*": if checked – leads to automatic opening of a new order at taking up the dispensing nozzle.

**Area** "*Limitations for payment forms*" allows or denies prepayment and postpayment forms for selected payment forms as well as working in the mode of control "*Full tank*". Also it sets whether payment for the selected form should be delayed (placed in delayed payment form) or not.

There are special options available for each of the payment forms in area "Limitations for payment forms":

- Deny prepay
- Deny postpay
- Deny full tank mode
- Delayed payment

**Option "Delayed payment"** is used for allowing/disallowing delayed payment for fuel dispensing. If this option is enabled then prior to sale of fuel of any dispensing at once after dispensing is finished information about it is added as a new entry to a window of delayed sales specification of information on performed dispensing. Dispensing will be automatically added to window of sales at clicking on the entry in the window of delayed sales.

## Configuration tab "View"

Tab "View" serves for setting of what windows should be displayed on the main panel of NaftaPOS system, through which:

- Windows of pump
- Window of pumps table
- Window of products sales
- Window Sales
- Table of tanks

**Checkbox** "*Display price / discount / sum*" serves for setting whether price, discount and sum fields should be displayed on windows of pumps (not required for petroleum storage deports and for company internal application for private cars park).

**Checkbox** *"Show dispensed volume upwards"* serves for setting of a direction of counting volume during dispensing process: upwards (if checked) or downwards.

Main view of the "View" tab is shown on the image below:

8	POSSet <del>-</del> Load Save		_ 🗆 ×
The second	General	Pump window # 1 Pump window # 2 Pump window # 3	J Display price/discount/sum
	Database	Pump window # 4     Window of pumps table     Window of products sales	Show dispensed volume upwards
	States/Errors	Extended sales review window     Table of tanks	
22	Drivers		
	Tanks	<ul> <li>✓ Display flag in header</li> <li>✓ Display language name in header</li> <li>✓ Display language is the second</li> </ul>	Folder with skins:
Ē	Pumps	✓ Display language in status panel ✓ Use compact system menu ✓ Use extended menu	Skin:
<i>\@</i>	Payment forms	Inactive elements of extended menu - transparent     Extended borders	Language:
	Order		English 👻
	View		
-	Pump modes		
	Discounts		
	Additional modules		
- 22	Users		
	Control panel		
View - (8)			11.
		Configuration of	Configuration of the
		external view s	ystem skin and language

NaftaPOS configuration tool – configuration of set of windows displayed in the main panel of the system

Fields for configuration of external view serve for flexible adjustment of user interface of the software.

Skins serve for changing of the software appearance to make NaftaPOS software suit to any taste and POS system design. Selection of the skin is made in a dropdown.

#### Examples of skins:





Office 2007 Black skin



WEB2 skin

Neutral 3 skin



Retro skin







Windows 8 skin



LongHorn skin

iOS dark skin

# Configuration tab "Pump modes"

Tab "*Pump modes*" serves for setting the modes of control over fuel dispensers, to what mode to return after the dispensing is finished, maximum allowed volume dose to authorize fuel dispensers.

Main view of the "Pump modes" tab and explanation of its parameters is shown on the image below:

operation	return after dispensir	ng end autho	prization in Manual mode	
POSSet 🚽 🎦 Load 🔛 Save				- 🗆 X
Payment forms	eset III tank anual	eset of order equest nozzle change urn on STOP		
Order	1 () 1 () 1 () 1 () 1 ()	No Preset Full tank Manual		
View		Max. order 999	99	
Pump modes				
Discounts				
Additional modules				
Users				
Control panel				

NaftaPOS configuration tool – configuration of fuel dispensers modes in the system

**Checkbox** *"Reset of order"* is used for resetting indication on pump windows on NaftaPOS main panel after the dispensing is finished on the fuel dispenser.

**Checkbox** *"Request nozzle change"* is used for setting a requirement to hang down a nozzle on the dispenser before a possibility to make another dispensing on the same dispenser through the same nozzle.

Field "Max. order" is used for setting maximum order for authorization a fuel dispenser.

# Configuration tab "Discounts"

Tab "*Discounts*" serves for setting discounts and extra prices (surcharges) for petroleum products with specification of payment forms, where they are applicable.

Main view of the "Discounts" tab and explanation of its parameters is shown on the image below:

	Selection of pe product	troleum	S disco	etting of t ount (extra	he price)	Setting of pa where the disc	ayment forms count is applied
POSSet 🔻	Load Save						_ = ×
General	Fuel		Discounts			Payment forms	
Database	1. Tank_1 (Norm 2. Tank_2 (Prem 3. Tank_3 (TIR)		Nº Discount size		Add	✓ Cash ✓ Talon ✓ Deb. card	
States/Errors	4. Tank_4 (Unlea	(d)			Upwards	✓ Waybill ✓ Paysheet ✓ Akt	
Drivers		L			Downwards	Dis. card	
Tanks					Delete		
Pumps					Clear		
Payment forn	ns						
Order						Select all	Unselect all
View							
Pump modes							
Discounts							
Additional mo	odules						
🖉 Users							
Control panel	I						
Discounts - (10)							11.

NaftaPOS configuration tool – configuration of discounts (extra prices) for petroleum products

## Configuration tab "Additional modules"

Tab "Additional modules" serves for adding to NaftaPOS system new options in the view of connected modules (plug-ins) for widening of system possibilities.

It contains 2 subtabs: "*Drivers*", where plug-ins can be uploaded, and "*Configuration*", where permissions for plug-ins are set. Permission list includes the following options:

- Changing of prices
- Add new products
- Check of all products

Main view of the "Additional modules" subtab is shown on the image below:

×		POSSet 👻	Load Save									– 🗆 X	
	F	Conoral		Drive	ers	Configura	ations						_
	6	General		2	X		1	Ŧ					
		Database		lsa V	ctive	File D:\\N D:\\N	laftaPO laftaPO	S\Plu S\Plu	lugins\monitor\nafta_monitor.dl lugins\price_upd\plugin_price.o	۲ ۱۱۱۲ ۱۱۱۲،	Version Petrol station monitoring plugin 6.7.5639.2041 (10.06.2015) price_upd 6.7.5610.45788 (12.05.2015)		
	0	States/Error	rs			D:\\N D:\\N	laftaPO laftaPO	S\Plu S\Plu	lugins\TabletInputPanel\TableI lugins\PaymentDialogs\plugin_	etln : ∟di f	TabletInputPaneL plugin 6.7.5596.9056 (28.04.2015) PaymentDialogs 6.7.5597.55601 (29.04.2015)		
	33	Drivers											
	9	Tanks											
	<u></u> ]]	Pumps											
		Payment for	rms										
		Order											
		View											
	~	Pump mode	s										
	<b>*</b>	Additional m	nodules										
	22	Users											
		Control pane	el										
Ad	lditiona	al module	5									1	11.

NaftaPOS configuration tool – setting of additional modules to the system

It is possible to add plug-ins to the system from the hard disk by clicking on button "Select file".

Configuration of the selected plug-in is made using a button "Properties".

By defaults NaftaPOS system is supplied with several plug-ins:

- "Station monitoring plugin", which is intended to lead databases with data, which allows easy and comfortable way to remotely monitor current actions happening online on petrol station. More information about it read it section "Remote data gathering from a petrol station network and monitoring".
- "price\_upd" plugin for easy price updating for fuel in NaftaPOS system
- "TabletInputPanel plugin" plugin used to run Windows touch keyboard automatically with start of NaftaPOS for input of data when NaftaPOS is installed on tablet or panel PC with touchscreen.
- other specific plugins can be added optionally upon request

Each of the plugins has its own configuration and settings.

Main view of the "Configuration" subtab is shown on the image below:

× POSSet	🔽 🖄 Load 🕍 Save		– = ×
	-	Drivers Configurations	
V	Payment forms	Changing of prices	
	Order	Check of all products	
	View		
-	Pump modes		
2	Discounts		
<b>?</b>	Additional modules		
273	Users		
	Control panel		
Additional m	odule		11.

NaftaPOS configuration tool – setting of permissions for the plug-ins

## Configuration tab "Users"

Tab "Users" serves for adding and deleting users in the system and for modification of their permissions and credentials.

Main view of the "Users" tab is shown on the image below:

Peyment forms   Order   Order   View   View   Pump modes   Discounts   Additional modules   View   Control panel		Service	- User a	ttributes	
Payment forms 34113232   Order Charging of prices   View Fuel reception   View Powp modes   Discounts Service   Oiscounts Charging of pressword   View Charging of pressword   View Charging of pressword   Discounts Charging of pressword   View Control panel	T			Name	Code
Order   View   View   Pump modes   Discounts   Discounts   Additional modules   Users   Control panel	Payment forms	3		Service	341139292
Order   Image: Control panel				Permissions	
View   New   Pump modes   Discounts   Additional modules   Users   Users     Control panel	Order		_	<ul> <li>Administration</li> <li>Changing of prices</li> <li>Fuel reception</li> </ul>	
View   New   Pump modes   Piscounts   Discounts   Additional modules   Users   Control panel			4	Fuel sale     Pessetion of product	
View   Pump modes   Discounts   Additional modules   Users     Control panel     Control panel	Niew			Products sale	15
Pump modes   Discounts   Additional modules   Users     Control panel	VIEW		4	Changing of passwor	в
Pump modes   Discounts   Additional modules   Users     Control panel	al sector and a se			Setting of pumps total	alizers
Pump modes   Discounts   Additional modules   Users     Control panel     Control panel	The Development			Reports review	
Discounts   Additional modules   Users     Control panel	1 Pump modes			Check of pump	100 Mar (100 - 110)
Discounts   Additional modules   Users   Control panel	1. A.			Book-keeping remain	is input
Discounts   Additional modules   Users   Control panel				Use ual oken dongle	
Additional modules Additional modules Users Users Control panel Control panel	Discounts			🔦 Change p	password
Additional modules  Additional modules  Users  Control panel				🗸 Change	🗙 Cancel
Users Control panel	Additional mod	Jules		Add	Delete
Users Control panel					
Control panel	🚺 Users				
Control panel					
	Control panel				

NaftaPOS configuration tool - configuration of users accounts in the system

Password changing	x	
New password	*****	
Password confirmation	******	
Set	Cancel	

Changing of user password in the system

# Configuration tab "Control panel"

Tab "Control panel" provides access to Windows OS control panel and possibilities of system configuration.

It is made for a reason that in some applications NaftaPOS system can be switched as the only application running on OS Windows. NaftaPOS software has its own shell for Windows OS T&T Shell, which can be run instead of a standard Windows OS shell. In such case at starting a PC with installed NaftaPOS software T&T Shell will launch automatically, it limits access of the user to configuration tools of Windows OS, making it possible to work only in NaftaPOS on such PC. Users with administrative rights have access to all Windows OS configuration tools.

🗙 POSSet 🔻 🎽 Load 🎽 Save	* • • • • • • • • • • • • • • • • • • •					- 🗆 🗙
Payment forms	BDE Administrator	Bluetooth Settings	People Near Me	Display Settings	leInfo\041904E3\FileDe	Î
Order						
View	Internet Options	Region and Language	Infrared	Game Controllers	Mouse	
Pump modes						
Discounts	Keyboard	Network Connections	Advanced Power Options	Pen and Touch	Tablet PC Settings	
Additional modules		-				
Users	Phone and Modem	Date and Time				
Control panel						Ļ
Control panel - (13)	89. 					11.

NaftaPOS configuration tool – access to Windows OS control panel from the system

# **Operation in NaftaPOS software**

### Launching the NaftaPOS system

Launching of full version of NaftaPOS software is made by running a file *NaftaPOS.exe* (*NaftaPOS\NaftaPOS.exe*) or using a shortcut in Start panel of Windows OS (in case if full version was selected at installation):



Launching of trial version of the NaftaPOS software is made by running a file *NaftaPOSTrial.exe* (*NaftaPOS\NaftaPOSTrial.exe*) or using a shortcut in Start panel of Windows OS:



At launching of NaftaPOS system it shows its logo and current assembly version:



Current assembly version of NaftaPOS displayed at launching

At launching NaftaPOS is checking its configuration and Guardant dongle's list of permissions. In case if the dongle is not present – it will show an error and will now enter the system.



NaftaPOS error shown at absence of Guardant security dongle

# Exiting / restarting NaftaPOS software

Options for exiting / restarting NaftaPOS software are specified on its first main menu tab "Exit":



Options for exiting / restarting NaftaPOS software

# General view of NaftaPOS software

General view of NaftaPOS for control over fuel dispensing and sales of products in shop and explanation of its visual elements is shown on image below:



NaftaPOS system general view

Main panel of NaftaPOS software can contain the following windows on it:

- windows of pumps
- window of pumps table
- window of products sales
- window of tanks table
- other windows

These windows can be moved and fixed on any place of the screen, sizes can be changed.

Example of another location of windows on the screen:

T&T N	aftaPOS 👻							🏶 ENGLISH 💷 🗖 🗙
Ex	it S	Shift	Teports	Management	fuel	Pumps	Configuration	Products stock
Stop	IDLE	2 Stop	NOZZLE	3 Stop	₩ORK Start ØR	4 N Stop	OZZLE	
CASH	Price:10.2	CASH	Price:10.25	CASH	order:50.001	CASH	rice:11.40	
5 X Norm	NOZZLE	A X Norm	₩ORK	7 Norm	NOZZLE	B Norm	READY	
CASH Table of	tanks	CASH	863.0	5 CASH	0.00	CASH	8.08	
## 1 2 3 4	Type         [1]           Norm         5011           Prem         7068           TIR         2936           Unlead         5536	[mm]           626         21           802         22           688         23           678         24	Temp. Density 0.0000 0.0000 0.0000 0.0000	Water           [I]         [m           90         11           146         50           67         45           55         22	Percent of filling 16% 28% 22% 22%			
CTDL		APACAL TANK	10.04.2012	15-10-47	CL/G accord		CACUJED, 2 <sup>-2</sup>	
LIRL I	JK LASH HEG:	Virtual IANK: L	10.04.2013	15:19:47	Shift opened		LASHIER: Servi	28

NaftaPOS system general view

Set of windows displayed in main panel is adjusted in NaftaPOS configuration on tab 'View'.

NaftaPOS contains a big variety of skins for changing of its graphical user interface appearance. Skins serve for changing of the NaftaPOS software appearance to make NaftaPOS software suit to any taste and POS system design. Selection of the skin is made in a dropdown in a new opened dialog:



NaftaPOS system selection of skin



NaftaPOS system selection of skin

Examples of skins:



Office 2007 Black skin





WEB2 skin

Retro skin



KaraKum skin

Windows 8 skin



iOS dark skin

In NaftaPOS software control over operations can be performed using using a mouse and a keyboard.

If NaftaPOS software is installed on a touchscreen POS terminal – then user can control everything with his fingers using a virtual keyboard. Switching on/off virtual keyboard is made in NaftaPOS configuration on tab 'General'.

	←		Х				
7	8	9					
4	5	6					
1	2	3					
0	0.						
	-						

Virtual keyboard

Status panel, located below the main panel of the system, displays various system information.

To simplify perception of information it is displayed in red (negative) and green (positive) colors. During operation it is important to control information displayed in status panel to detect failures of the system operation in time (red color).

NAFTAPOS POS SYSTEM SOFTWARE FOR PETROL STATIONS



## NaftaPOS system main menu

Main menu of NaftaPOS software is presented by tabs with items situated in top of the screen and includes the following (actually quantity of tabs and items can differ and is adjusted in file NaftaPOS\azspos.menu):

ТАВ	ITEMS					
Exit	Exit					
	Restart NaftaPOS					
	Shutdown computer					
Shift	Continue shift					
	New shift					
	Close shift					
	Temporarily close shift					
	Enter without shift opening					
Reports	Reports 1					
	Reports 2					
Management	Select pump					
	Pump management					
	Form of payment					
	Operating mode					
	Fuel					
	Discount/Extra price					
	Reset of pump					
	Stop all pumps					
	Close active orders					
	Select cost					
Fuel	Fuel in tanks					
	Level measurements input					
	Grades and prices					
	Beginning of fuel reception					
	Completion of fuel reception					
	Reception of fuel					
Pumps	Totalizers					
	Setting of pump errors					
Configuration						
Products stock	Products review					
	Products reception					
Tools	Sales review					
	Receptions review					
View	Show pumps table					
	Show sales table					
	Show tanks table					
	Show extended window of sales review					
	Show window of delayed sales					

	Select language
	Select skin
About	

## Beginning and finishing of operation

In NaftaPOS system shift mode of operation is applied. It means that all operations of cashiers (operators) on sales of products, receptions and others are possible only within an opened working shift. Shift control can be switched off (in NaftaPOS configuration on tab 'General uncheck a flag "Shift duration control").

To open a new working shift a cashier should log in the system under his personal login and password. Cashier is able to perform actions in NaftaPOS system, that are enabled for him by the permissions set for given cashier (permissions for users are set on tab "Users" in NaftaPOS configuration).

If the previous working shift is closed – cashier at beginning of work should open a new working shift (in main menu tab 'Shift'  $\rightarrow$  'New shift'). If the previous working shift is not closed – cashier should continue the previous shift.



Starting of a new working shift

In order to enter NaftaPOS under another user (who for example has more permissions allowed) without closing of current shift select *"Enter without shift opening"* and in order to return to a previous cashier shift select *"Continue shift"*.

Sales and registration of reception of fuel and new products are prohibited at closed shift. Generation of reports is linked with working shifts periods.

Duration of the shift can be adjusted. At this shift can last unlimited time frame. Otherwise if the flag "*Shift duration control*" on tab '*General*' in NaftaPOS configuration is checked – shift duration can be configured to last until 23:59 each day or shift duration can be set to 24 hours, after which operation of NaftaPOS system will be blocked with a request to close previous shift and start a new one.

At starting of a new working shift or continuing of a previous working shift NaftaPOS system will ask to authenticate:

New shift X	Enter password to continue shift 🛛 🗙
llser	liser
Service 👻	Service 👻
Password	Password
	Presured shares after log in
Password change arter log in	Password change arter log in
Cancel	Enter Cancel

Starting of a new working shift

### **Operations with fuel dispensers**

### Displaying of fuel dispensers

Control over fuel dispensers is made through windows of pumps.

Linking of pump windows with tanks is made in NaftaPOS configuration on tab '*Pumps'* (linking of pump nozzles to tanks). Linking of pump windows with logical fuel dispensers addresses in forecourt controller is made in driver of controller in NaftaPOS configuration on tab '*Drivers*'. Linking of logical fuel dispensers addresses to physical fuel dispenser addresses is done in configuration utility of PTS controller *pts\_conf.exe* (*NaftaPOS\Pts\_conf.exe*), which can be launched from tab '*Pumps*' by clicking on button '*PTS configuration*' (read more on configuration in section '*Configuration of forecourt controller drivers*' above).

Displayed pump windows are adjusted in NaftaPOS configuration on tab 'View'.

Each side of fuel dispenser is shown by the following pump window:



Pump windows
Pump windows can be moved (dragged) across a main panel of NaftaPOS system. It is possible to be done only at opened shift. Having pressed a mouse left button on left top corner of pump window (pump number) and dragging it user can move the window to any place. But to save a position of the pump window and its configurations for all subsequent runnings of NaftaPOS system user should select '*Properties*'  $\rightarrow$  'Save attributes' for current pump window.

Configuration of pump window is made in a right-mouse click menu:

- setting pump window indents (borders) width and color
- selecting of colors of interface for every dispenser state
- setting scale of pump window
- setting blinking
- possibility to show hints and other visual effects
- setting quantity of decimal digits in a volume dose and cost
- saving of pump window attributes and position
- aligning cells
- showing keyboard



Configuration of pump window properties

Configuration of foreground and background colors of states and errors displayed on pump window is set in NaftaPOS configuration on tab 'Configuration'  $\rightarrow$  'States / Errors' (see section 'Configuration tab "States/Errors" above):

States of pumps	1	Pump errors	1
Undefined	????	Error 0	No error
NotWorking	OFF	LOSTPULSE	No count pulses
Working	WORK	BUTTON_S_P	NOZZLE
Ready	IDLE	OWERLOAD	OVERLOAD
Stoped	IDLE	KTRKOWERLOAD	OVERLOAD
EnoughFuel	EMPTY ?	KTRKFAILURE	PUMP FAILURE
WaitCommand	WAIT	BUKLINKERROR	NO BUK CON.
ReadyForWork	READY	TRKLINKERROR	NO PUMP CON.
OperatorCall	CALL !	TIMEOUTERROR	TIMEOUT
GunUp	NOZZLE	Error 9	????
Status 10	2222	READYNOTLOCAL	READY

Configuration of pump window colors

By defaults pumps windows display 2 digits after decimal separator in volume and money amount. It is possible to set other values in a right-mouse click menu items "*Decimal digits in cost*" and "*Decimal digits in dose*".

&Decimal digits in dose X	D&ecimal digits in cost X
Enter quantity of digits:	Enter quantity of digits:
Integer digits: 4	Integer digits: 4
Digits before separator: 2	Digits before separator: 2
V Dk K Cancel	V Ok Cancel
Settina auantity of diaits in volume field	Setting quantity of digits in money amount field

ting quantity of digits in volume field in pump window Setting quantity of digits in money amount field in pump window

Instead of pump windows also a table representation of all pumps can be used. In this case all pumps are displayed in a single table, which contains same information regarding every pump as pump windows.

To display table of pumps it is necessary to enable it from main menu tab '*View'*  $\rightarrow$  'Show pumps table' or to set its presence on the main panel of NaftaPOS on tab 'View' in NaftaPOS configuration:



Option to display pumps table

Appearance of the pumps table is the following:

In	put panel									x
	State	Order [I]	Cost	Remains	Fuel	Payment form	Mode	Discount/Extra price	Shift totalizer	Liters counter
1	IDLE	0	0	0	Norm	Cash	Preset		0	984
2	NOZZLE	0	0	0	Norm	Cash	Preset		0	74
3	NOZZLE	0	0	0	Norm	Cash	Preset		0	0
4	NOZZLE	0	0	0	TIR	Cash	Preset		0	0
5	NOZZLE	0	0	0	Norm	Cash	Preset		0	0
6	NOZZLE	0	0	0	Norm	Cash	Preset		0	52
7	NOZZLE	0	0	0	Norm	Cash	Preset		0	0
8	NOZZLE	0	0	0	Norm	Cash	Preset		0	0
-2	N0ZZ	LE	Noi	m		CA	<del>SH</del>	R itar Stop	Prio	ce:10.25

#### Pumps table (horizontal view)

Similar to pump windows this pumps table also has a number of visual effects, which are adjusted in a menu, called by right-button mouse click:

Input panel									x
	N <u></u> = 1	N# 2	N# 3	N	<b>⊭</b> 4	N# 5	N# 6	N# 7	N <u></u> * 8
State	IDLE	NOZZLE	NOZZLE	NO	ZZLE	NOZZLE	NOZZLE	NOZZLE	NOZZLE
Order [I]	0	0	0		0	0	0	0	0
Cost	0	0	0		0	0	0	0	0
Remains	0	0	0		0	0	0	0	0
Fuel	Norm	Norm	Properties	•	Col	or of active cell		Norm	Norm
Payment form	Cash	Cash	a		Cal	or of symbols in	active cell	Cash	Cash
Mode	Preset	Preset	Show border		CO	or or symbols in	active cell	Preset	Preset
Discount/Extra			Remove borde	er	Syn	nbols			
Shift totalizer	0	0	0		🗸 Ver	tical style		0	0
2 = NOZZ	(LE	Norm		CA	Sav	e attributes		Price	2:10.25

Fuel dispensers table menu

]	nput panel								x
Г		Nº 1	N <u></u> # 2	N <u></u> # 3	N <u></u> * 4	N <u></u> 5	N <u></u> ≇ 6	N <u></u> # 7	N# 8
	State	IDLE	NOZZLE	NOZZLE	NOZZLE	NOZZLE	NOZZLE	NOZZLE	NOZZLE
	Order [I]	0	0	0	0	0	0	0	0
	Cost	0	0	0	0	0	0	0	0
	Remains	0	0	0	0	0	0	0	0
	Fuel	Norm	Norm	Norm	TIR	Norm	Norm	Norm	Norm
	Payment form	Cash	Cash	Cash	Cash	Cash	Cash	Cash	Cash
	Mode	Preset	Preset	Preset	Preset	Preset	Preset	Preset	Preset
	Discount/Extra								
	Shift totalizer	0	0	0	0	0	0	0	0
	2 NOZZLE Norm CASH OR Start Stop % Price:10.25								

Pumps table (vertical view)

It is possible to set fixed position for the pumps table on NaftaPOS main panel, set its colors, style of view (vertical / horizontal), select fonts family and size.

In order to save a position of the pumps table and its configurations for all following runnings of NaftaPOS user should select '*Properties*'  $\rightarrow$  'Save attributes'.

In order to have the pumps table to be displayed every time NaftaPOS launches – it is necessary to select it on tab '*View*' in NaftaPOS configuration.

Operations with the fuel dispensers are generally made using a keyboard and a mouse (or fingers on a POS terminal with a touch screen), but actually all these operations can be performed using the main menu options of the tab '*Management*'.

### States of pumps

Pumps in NaftaPOS software have several states depending on operations performed:

 "IDLE" – state when dispenser is connected to the system, all nozzles are hung down and there is no dispensing process going.

State "*IDLE*" can be of two types:

- Intermediary (panel of pump state has background of dark grey color) at not finished till the end dispensing. Next start of dispensing will continue previous dispensing, receipt is not printed at continuing of previous dispensing).
- Complete (panel of pump's state has background of light grey color) next start of dispensing will call a new fuel dispensing and formation of a new cash receipt.



 "NOZZLE"- state when dispensing nozzle is hanged up on a dispenser but no dispensing is being made and NaftaPOS has not authorized the dispenser yet



#### NOZZLE state of pump

 "READY" – state when a pump has been authorized by NaftaPOS system, but the dispensing has not started yet. Pump window will show this state until a nozzle is taken up and the nozzle's trigger is pressed (pump will transfer to state "WORK") or until authorization is cancelled (button Stop is pressed in pump window).



READY state of pump

 "WORK" – state when dispensing of fuel by dispenser is being performed and we see fuel dispensing process (currently dispensed fuel volume and amount)



WORK state of pump

 "OFF" – state when a pump window is configured to the dispenser, which is not polled by the controller



OFF state of pump

- Emergency (error) states states of pump, which controller recognizes as emergency. At this controller stops dispensing of fuel by pump
  - "Link error" state when connection between pump controller and pump was interrupted due to failure of pump controller or pump serial lines
  - "Overfilling" state when pump controller turned off fuel dispensing, but signals from a pulse sensor continue to come, which says about continuation of dispensing. This state is possible at failures of electromagnetic valves, which control switching off the pumps
  - "No pulses" counting impulses are absent from the dispenser. State when controller at fuel dispensing did not register counting impulses from pulse sensor
  - "NO PUMP CON." the pump does not response to commands sent from the controller
  - "NOZZLE" after NaftaPOS software authorized a pumps nozzle in IDLE state and it transferred to READY state a wrong nozzle is taken up on the pump
  - others

1	NOZZLE
Stop	Start O/R
Prem	188.88
%	Price:12.70
CASH	1278.88
1 NO	PUMP CON.
1 NO Stop	PUMP CON.
1 NO Stop Norm	PUMP CON.     Start     0
1 NO Stop Norm	PUMP CON. Start

ERROR state of pump

"????" – undefined state when controller is not connected to the system (for example specified COM-port for controller does not exist in system)



Undefined state of pump

Configuration of pump states, displayed colors of states and possible errors is made in NaftaPOS configuration on tab '*States / Errors*':

States of pumps	1	Pump errors					
Undefined	????	Error 0	No error				
NotWorking	OFF	LOSTPULSE	No count pulses				
Working	WORK	BUTTON_S_P	NOZZLE				
Ready	IDLE	OWERLOAD	OVERLOAD				
Stoped	IDLE	KTRKOWERLOAD	OVERLOAD				
EnoughFuel	EMPTY ?	KTRKFAILURE	PUMP FAILURE				
WaitCommand	WAIT	BUKLINKERROR	NO BUK CON.				
ReadyForWork	READY	TRKLINKERROR	NO PUMP CON.				
OperatorCall	CALL !	TIMEOUTERROR	TIMEOUT				
GunUp	NOZZLE	Error 9	????				
Status 10	????	READYNOTLOCAL	READY				
			Press.				

Configuration of pump window colors

## Modes of control over fuel dispensing

Selection of the mode of control over fuel dispensers is made in pump windows or pumps tables using a switch as shown on image below:



Selection of a mode of control over fuel dispenser

NaftaPOS system supports three modes of control over fuel dispensing:

#### 1. Preset mode (contracted O/R)

Preset mode of control is used when preset order of fuel to be dispensed (in volume or currency units) is given to pump from NaftaPOS software. Order value is entered in pump window and button "*Start*" is clicked.

This mode is used at petrol stations in situations when control over every fuel dispenser is to be made from one place by cashier on known volume or money amount and money is received in advance before the dispensing was made.



Preset mode of control over fuel dispensers

### 2. Full tank mode (contracted FT)

Full tank mode of control is used when it is not known in advance how much fuel should be dispensed (capacity of car tank is not known). NaftaPOS does not know in advance fuel volume to be dispensed and authorizes a dispenser with maximum allowed fuel volume (configured in NaftaPOS configuration on tab 'Order', field 'Max. order'). Command on start of dispensing is made by the cashier by clicking on button 'Start', which is similar to preset mode.

This mode is used at petrol stations in situations when control over every fuel dispenser is to be made from one place by cashier.

### 3. Manual (monitoring) mode (contracted S/S)

Manual mode of control is used in case when fuel dispensers should be working as if in standalone mode (dispensing starts automatically when the dispensing nozzle is lifted and trigger is pressed). At his NaftaPOS software is monitoring all the transactions being performed and writes all the data to its database. Also cashier at any time can see activity of every fuel dispenser and in case of necessity can stop any of the dispensers and receive reports on operation remotely from NaftaPOS software. Receipts can be optionally printed after each dispensing.

Also in this mode third-party applications are able to use NaftaPOS software database as a storage of all transactions and sales performed (locally or remotely) – then this third party software can find total data on all sales and transactions from NaftaPOS database (structure of NaftaPOS

database is described in section "*NaftaPOS system database structure*" below).. NaftaPOS can be set to work without any working shifts and automatically start at launching PC so that it was possible to start operation with dispensers.

Also in this mode it is possible to make fuel order preset (in volume or in money amount) from the dispenser preset keyboard.

At taking up a nozzle on the pump NaftaPOS software authorizes this pump with some big volume (volume value is configured in NaftaPOS configuration on tab '*Order*'). At taking up a nozzle the pump will start dispensing of fuel automatically. Dispensing of fuel will last until:

- Nozzle trigger is unpressed and nozzle is taken down
- Preset order set on dispenser preset keyboard is reached
- Volume, with which NaftaPOS authorized a dispenser is reached

This mode is used at petrol stations in situations when control over every fuel dispenser is to be made near the fuel dispensers by fuel attendants, who also collect the payment from customers.

Also this mode is used at petrol stations in situations when NaftaPOS should work in a mode of monitoring over fuel dispensers: fuel dispensers work as if in manual mode, but at this NaftaPOS monitors every transaction and records it to database and cashier at any time can see activity of every dispenser, stop any of the dispensers and receive reports on operation.



Manual (monitoring) mode of control over fuel dispensers

Configuration of modes of control over fuel dispensers is made in NaftaPOS configuration on tab '*Pump modes*'.

## Selection of payment form

Sales of fuel support various payment forms. Payment form is set using a payment form switch. Pictures of various payment forms are shown on image below.



Selection of a payment form

Configuration of payment forms is made in NaftaPOS configuration on tab '*Payment forms*'. Names of payment forms can be edited. Payment form with ID equal to 32 (*Act* by defaults) serves for technological dispensing of fuel for reasons of dispenser calibration (assumed that fuel is returned to tank after being dispensed).

### Delayed sales of fuel

By defaults NaftaPOS software closes a sale and prints a receipt at once after fuel dispensing process is finished on the fuel dispenser. For a reason to support a way of operation when fuel sale is done together with products in the same receipt (sale is closed not at once after dispensing is finished) and thus to enable fuel dispensing to be added to a same receipt together with products from a shop and also make it possible to add several fuel dispensings to the same receipt a window of delayed sales is to be used.

Switching of option whether to use or not to use delayed dispensing is made in NaftaPOS configuration on tab 'Order' by checking a checkbox "Delayed payment" for the required payment forms. If this checkbox is set – then at once after a fuel dispensing is done using the selected payment forms information about the dispensing will be automatically added to the window of delayed sales. In order to have the window of delayed sales to be displayed every time NaftaPOS launches – it is necessary to select it on tab 'View' in NaftaPOS configuration.

	Windo	w of delayed sales	-					×
Id	Ti	ime	Pumps	Title	Product code	Volume	Price	Cost
27	21	1.06.15 19:18:28	2	Normal	10001	3.01	10.25	30.85
28	21	1.06.15 19:18:32	1	Premium	10002	6.01	12.70	76.33
29	21	1.06.15 19:18:47	3	Diesel	10003	5.01	11.40	57.11
30	21	1.06.15 19:18:48	1	Normal	10001	3.01	10.25	30.85
31	21	1.06.15 19:18:56	2	Diesel	10003	11.01	11.40	125.51
<u> </u>								

Window of delayed sales

Window of delayed sales displays dispensing of fuel per pumps in an order sequence.

At once after clicking on any entry in the window of delayed sales – this fuel dispensing will be added to a window of products sales as a separate product, where it is possible to add also other products from petrol station shop:

Sale ·													×
# Co	de	Quantity	Name	9	F	Price	Sum		Payform	+-	Rem.		I I
1 10	001	3.01	Norm	al	1	10.25	30.85		Cash	0	0	1	•
2 20	002	1	Cake	"Dan cake"	1	10.50	10.50		Cash	0	40		
3 20	003	1	Coca-	-cola botl. 1	L (	5.35	6.35		Cash	0	99	_	*
													Sale
•											•••••		
Search		by f	field	(						C.	ach		Cancel
		▼ Co	de	N	$\mathbf{D}$						3311		
Code		Name		Unit		Price		Sec	tion	Group	Rema *	•	
20001	Chewir	ng gum "C	)rbit"	pcs			4.55		1		1		
20002	Cake "	Dan cake"		pcs		:	10.5		1		1		Pavout
20003		cola botl. 1									1		
20004	Juice "	"Tomato"	1L	pcs			8.4		1		1		
20005	Chocol	late "Nuts'	I	pcs			5.3		1		1	,	
•													
_		10.0		<b>~</b> D									
S	UM:	16.8	5 U	SD									

Window of products sales together with entries from window of delayed sales

Entries will be removed from window of delayed sales only when the receipt is closed in window of products sales.

In window of delayed sales it is possible to display various information regarding each dispensing (e.g. fuel name, fuel price, dispensing cost, dispensed volume, receipt number, etc):

	Win	dow of delayed sales	-					×			
Id 28 29 30 31		Time 21.06.15 19:18:32 21.06.15 19:18:47 21.06.15 19:18:48 21.06.15 19:18:56	Pumps 1 3 1 2	Title Premium Diesel Normal Diesel	Product c 10002 10003 10001 10003	Volume Pr Properties Show border Remove bor	rice r rder	Displ Displ Save	ayed information attributes		Time Pumps Title Product code Volume Price Cost Receipt number
										_	Tag

Window of delayed sales properties

In order to save a position of the window of delayed sales and its configurations for all following runnings of NaftaPOS user should select '*Save attributes*'.

## Control over fuel remains in tanks

Information on current amount of fuel contained in tanks and its parameters can be received from a window "Fuel in tanks", which is called from a main menu 'Fuel'  $\rightarrow$  'Fuel in tanks' and contains graphical picture of the tanks:

Fuel in tanks						
<u>F</u> uel						
	Evel mente			Fuelman	Deres	
Tank_1	Fuel name	Norm		2 Fuel name	Prem	
	Tank neight	3750	mm	Tank neight	2700	mn
	lank volume	30000		lank volume	24950	1
and the second se						
	Fuel level	1996	mm	Fuel level	326	mn
	Fuel volume	15965	1	Fuel volume	1985	1
	Fuel volume (15 °C)	1996	1	Fuel volume (15 °C)	326	1
	Water level	0	mm	Water level	0	mn
	Water volume	0	1	Water volume	0	1
	Temperature	0	°C	Temperature	0	*C
and the second sec	Density	0.0000	kg/l	Density	0.0000	kg/
	Ullage	0	Ĩ	Ullage	0	Ĩ
53.22%	Mass	0	kg	Mass	0	kg
Tank 3	Fuel name	TIR		Fuel name	Unlead	
Tank_5	Tank height	2700	mm	Tank height	2700	mn
	Tank volume	13000	Ι	Tank volume	24900	1
	Fuel level	696	mm	Fuel level	537	mn
	Fuel volume	2980	1	Fuel volume	3980	1
	Fuel volume (15 °C)	696	i	Fuel volume (15 °C)	537	i
	Water level	0	mm	Water level	0	mn
	Water volume	0	1	Water volume	0	1
	Temperature	0	°C	Temperature	0	*0
Constant of the local division of the local	Density	0.0000	ka/l	Density	0.0000	ka
	Ullage	0.0000	I	Ullage	0.0000	1
22.92%	Mass	0	ka	Mass	0	ka
	muaa	U	ky.	Midaa	U	K

Fuel in tanks

Every window of tank contains information about:

- type of fuel in tank
- height of tank
- full volume of tank
- volume of fuel in tank
- temperature compensated volume of fuel in tank (to 15 degrees Celcius)
- height of fuel in tank
- volume of underproduct water in tank
- height of underproduct water in tank
- temperature of fuel in tank
- density of fuel in tank

If there is a fuel level meter system (ATG system) installed in tanks at petrol station and connected to NaftaPOS – all values on measurements are taken from it. In case of absence of such automatic system – current remains of fuel in tanks are automatically calculated by NaftaPOS in accordance with account documents on received volumes of fuel to tanks and volumes of dispensed fuel through fuel dispensers.

Configuration of tanks and their calibration charts is made in NaftaPOS configuration on tab 'Tanks'.

At connection of the ATG system a flag "Level meter presence in system" on tab 'General' in NaftaPOS configuration should be checked and corresponding driver of the ATG system should be chosen on tab 'Drivers'  $\rightarrow$  'Tanks'.

For convenience of operation a table, displaying tanks, can be fixed on the main panel of NaftaPOS. Tanks table has the following view:

Tank	S 🔻							
r Table	of tanks —							
	Tune			Fuel			Water	Percent of filling
***	туре	[1]	[mm]	Temp.	Density	[1]	[mm]	Feicent of filling
1	Norm	14180	1773	20	0.7200	0	0	47%
2	Prem	18600	1711	20	0.7100	0	0	74%
3	TIR	7672	1419	20	0.7600	0	0	59%
4	Unlead	3500	490	20	0.8200	0	0	14%
		_						

Tanks table

Tanks table as well as *"Fuel in tanks"* window contains information about each tank and its filling with fuel and water. Set of columns, position and dimension of the table columns can be changed using a right-button mouse menu:

Table	of tanks —								
	-		_	Fool	_	Mater		Percent of	
##	Туре	[I]	[mm	Properties	•	Symbols	Symbols		filling
1	Norm	14180	1773	Remove border		Color of table			47%
2	Prem	18600	1711	Show border		Fields	Þ	1	Number
3	Unlead	7672 3500	490	20 0.82	00	Save attributes		1	Туре
							=	$\checkmark$	Fuel, I
								1	Fuel, mm
								$\checkmark$	Fuel, temp.
								$\checkmark$	Fuel, dens.
								$\checkmark$	Water I
								$\checkmark$	Water, mm
								1	Percent of filling

Tanks table properties

Tanks table can be moved (dragged) across a main panel. To save a position of the window of products sales and its configurations for all following runnings of NaftaPOS user should select '*Properties'*  $\rightarrow$  'Save attributes' in right-button menu.

To display the tanks table it is necessary to enable it from main menu tab 'View'  $\rightarrow$  'Show tanks table':



Option to display tanks table

In order to have the tanks table be displayed every time NaftaPOS launches – it is necessary to select it on tab '*View*' in NaftaPOS configuration.

### Adjustment of fuel levels in tanks (input level measurements)

For cases of absence of an ATG system which automatically measures fuel level in tanks NaftaPOS system supports automatic calculation of fuel remains in tanks in accordance with volumes of received fuel volumes in tanks and volumes of dispensed fuel through fuel dispensers. Due to a reason that such account of manual leading of fuel remains is not precise and due to possible nonconformity between calibration charts of tanks (that are input in NaftaPOS) to real calibration charts calculated fuel remain values in tanks are required. In this case cashier of the petrol station should perform measurement of physical level of fuel in tanks using a meter-stock (meter bar) and input measurements of level in NaftaPOS. It is recommended to enter values of real remains of fuel in tanks each time before closing a daily working shift. Necessity of inputting measured levels before closing a daily working shift is called to make fuel levels on beginning of the next working shift be equal to actual.

Input of measured levels is made from a "Fuel in tanks" window from main menu 'Fuel'  $\rightarrow$  'Level measurements input':

Level measurements input X												
	Fuel fact.	Fuel fact.	Book-keeping	Difference	Water	Water	Temperature	Density				
	[mm]	[1]	[1]	[1]	[mm]	[1]	[C]	[kg/l]				
Tank_1 (Norm)	1773	14181.50	-781.50	-14963.00	0.00	0.00	20.00	0.72000				
Tank_2 (Prem)	1710.75	18600.00	0.00	-18600.00	0.00	0.00	20.00	0.71000				
Tank_3 (TIR)	1419.21	7672.30	-727.70	-8400.00	0.00	0.00	20.00	0.76000				
Tank_4 (Unlead)	490.00	3500.00	0.00	-3500.00	0.00	0.00	20.00	0.82000				

Level measurements input

Together with factual remains of fuel in tanks NaftaPOS system leads book-keeping account of fuel in tanks to measure difference between actual fuel remains in tanks and remains of fuel in tanks in accordance with book-keepings documents (waybills on reception of fuel in tanks).

Book-keeping account serves for indication of inventory reconciliation of fuel.

In case of book-keeping remains differ from factual remains – in the end of the working shift a window for correction of book-keeping accounts will be shown, where it is necessary to indicate a reason of correction (to make book-keeping accounts be equal to actual).

It is possible to enter book-keeping account to the system at opened working shift at a checkbox "*Permission to set book-keeping remains at opened shift*" checked in NaftaPOS configuration on tab '*General*' for a user having permission "*Book-keeping remains input*".

# Revision: R08

#### NAFTAPOS POS SYSTEM SOFTWARE FOR PETROL STATIONS

Correction of book-keep. remains X											
	Book-keeping	Fuel	Fuel	Difference	Cor. book-keep. rem.						
	[1]	[mm]	[1]	[1]	[1]						
Tank_1 (Norm)	-781.50	1773.00	14180.00	-14961.50							
Tank_2 (Prem)	0.00	1710.75	18600.00	-18600.00							
Tank_3 (TIR)	-727.70	1419.21	7672.30	-8400.00							
Tank_4 (Unlead)	0.00	490.00	3500.00	-3500.00							
Beason for correction											
Inventarization											
Internal removal	Save	•	Cancel								

Window of correction of book-keeping remains

## Registration of fuel reception at petrol station

There are two possible ways of registration of fuel reception in the system:

#### 1. Single-step (without entering data on fuel parameters)

Window "*Reception of fuel*" is called from a main menu '*Fuel*"  $\rightarrow$  '*Reception of fuel*" and has an input for entering amount of received fuel in the specified tank:

	Fuel r	eception	
Tank			
ank_1	•	Normal	
Fuel reception			
	Volu	ıme on waybill, [l]	
	1000		
Mass on wayb	oill, [kg] Temperat	ure on waybill, [°C] Den	sity on waybill, [kg/l]
	720	0.0000	0,7200
Level	Before reception	After r	eception
Level	Before reception	After r	eception Temperature, [°C
Level [Liter]	Before reception	After r 16180.00	eception Temperature, [°C 20.00
Level [Liter] [mm]	Before reception 15180.00 1898.00	After r 16180.00 2023	eception Temperature, [°C 20.00 Density [kg/l]
Level [Liter] [mm]	Before reception 15180.00 1898.00	After r 16180.00 2023	eception Temperature, [90 20.00 Density [kg/l] 0.7200
Level [Liter] [mm]	Before reception 15180.00 1898.00	After r 16180.00 2023	eception Temperature, [°C 20.00 Density [kg/l] 0.7200

Reception of fuel

### 2. Two-steps (with entering of data on parameters of received fuel)

Reception of fuel is made in 2 steps: start of reception and end of reception.

In order to start reception open a window "*Reception of fuel*", which is called from a main menu ('*Fuel*"  $\rightarrow$  '*Beginning of fuel reception*'), where it is necessary to select a required tank and make sure that tank's data correspond to actual (edit if necessary):

Beginning of fuel reception											
Tank Tank_1	Normal										
Tank data											
Current fuel level in tank, mm	1773.00										
Current fuel volume in tank, l	14180.00										
Fuel temperature in tank, °C	20.00										
Fuel density in tank, kg/l	0.7200										
<b>Э</b> ок	X Cancel										

Beginning of fuel reception

Second, after actual fuel reception is done and fuel truck has dispensed all its fuel in tank – open a window "Completion of fuel reception", which can be called from a main menu (in tab 'Fuel'  $\rightarrow$  'Completion of fuel reception'):

Tank				
Tank_1	•	Normal		
Supply Number of way 12345	/bill Supplier Service suppli	Storag er 🔻 Storac	e depot Number o ae depot no. 1 🔻 12345	f fuel truck Number of route
Fuel reception Volume on v	vaybill, [l] Mass on v 1000	waybill, [kg] 720	Temperature on waybill, [°C 20.0000	Density on waybill, [kg/l]
Level	Before reception	۵	fter reception	Parameters of sample
[Liter]	14180.00	15180.00	Temperature, [°C] 20.00	Temperature, [°C] 20.0000
[mm]	1773.00	1898	Density [kg/l]	Density, [kg/l] 0.72
ion by level me Differer	asurements (fact), L	1000 0	0	Price 10.25 Sum 10250.00
	Dispensed fuel during r	eception	0.00	

Completion of fuel reception

In window "Completion of fuel reception" it is necessary to input invoice number, select a supplier, storage depot, input number of fuel truck, and number of a route. After this it is necessary to input volume of received fuel (in liters), mass (kg), temperature (°C) and density (kg/I) according to a waybill.

After inputting it is necessary to make sure that all data is inputted correctly and only after this to click a button "*OK*" in a window. If NaftaPOS system is working together with a fiscal module – current data will be saved in fiscal module and a receipt on reception of fuel will be printed.

Note that registration of fuel is possible only in opened shift and only by users, that are allowed to make it (have permission set in NaftaPOS configuration). It is not allowed to state a volume of received fuel equal to zero.

## Changing of fuel grades and prices

Changing of fuel grades and fuel prices is made in a dialog "Grades and prices", which is called from a main menu ('Fuel'  $\rightarrow$  'Grades and prices'):

Grades and prices:											
ID	Tank	Name	Abbreviation	Current price	New price						
10001	Tank_1	Normal	Norm	25.00	25.00						
10002	Tank_2	Premium	Prem	28.00	28.00						
10003	Tank_3	Diesel	TIR	29.00	29.00						
10004	Tank_4	Unleaded	Unlead	30.00	30.00						
Price change Set prices at session close Apply prices now											
X Close											

Fuel grades and prices

Given dialog contains a table where each row corresponds to a separate tank and columns mean:

- Tank name (used for indication in NaftaPOS)
- Full name of fuel (used in reports, printed in receipts)
- Contracted name of fuel (used for indication in NaftaPOS)
- Fuel price per liter

Given dialog allows to set new prices for tanks immediately or on specific time.

Editing of a table can be made at opened working shift if checkbox "*Permission to set prices at opened shift*" are checked in NaftaPOS configuration and only by users that have permission "Changing of prices". It is not allowed to state a price of fuel equal to zero.

Configuration of tanks is made in NaftaPOS configuration on tab 'Tanks'.

### Reading fuel dispensers total counters and setting increments

Reading of fuel dispensers total counters is made in a dialog "Pump totalizers", which is called from a main menu ('Pumps'  $\rightarrow$  'Totalizers'):

Pump totalizers ×														
		Pump totalizers [I]												
Fuel		1		2		3		Pump 4	4 5					
Norm	1	7899	1	0	1	0	3	74 1		0	1			
Prem	2	7899	2	10	2	50	4	74 2		68	2			
TIR	3	0	3	10	3	50	1	0 3		68	3			
Unlead	4	7899	4	10	4	50	2	74 4		68	4			
•	-										- •			
🔲 Call at sh	nift cle	osing						🗌 In curren	icy units					
		A OK			•	Connect	1							
	V DK Cancel Update													
	-		-		-		-			-				

#### Pumps totalizers (volume)

Given window indicates values of total counters for each nozzle of every controlled fuel dispenser.

Reading of fuel dispensers electronic total counters is possible only at allowing it in driver of the fuel dispenser controller (checkbox "Use pumps electronic totalizers" should be checked).

In case if the dispenser has mechanical totalizer on some constant value bigger (lesser) than value, given out by NaftaPOS – it is possible to add this delta to NaftaPOS indications in order to have the mechanical counter on the dispenser match total counter value in NaftaPOS, For this it is necessary to input in *"Pump totalizers"* window a value, displayed on the mechanical counter in a field of corresponding nozzle.

Editing of the total counters window is possible only by users that have permission "Setting of pump totalizers".

When checkbox "Use pumps electronic totalizers" is checked in configuration of the controller then after each transaction totalizers are read from the dispenser and the window 'Pump totalizers' indicates the latest values. Also it is possible to reread the totalizers from dispensers by clicking on a button 'Update'.



Reading pumps totalizers

Checkbox 'In currency units' is used for displaying of money amount total counter.



Pumps totalizers (currentcy units)

### Setting of pump relative errors

Setting of pumps relative errors is made in a dialog "Setting of pumps errors", which is called from a main menu ('Pumps'  $\rightarrow$  'Setting of pumps errors):

-			Pur		- 60/1				1						
-			Pump error [%]												
наритеритеритеритеритеритеритеритеритерите															
	2	3		4	5	6	7		8						
0.01	1 0.02	<mark>1</mark> 0.01	3 (	D.03 <mark>1</mark>	0.01 1	0.01	<b>1</b> 0.01	1	0.01						
0.03	2 0.03	2 0.01	4 (	D.01 2	0.01 2	0.02	2 0.01	2	0.01						
0.01	3 0.05	3 0.01	1 (	D.01 <mark>3</mark>	0.01 3	0.01	3 0.01	3	0.05						
0.01	4 0.01	4 0.01	2 (	D.02 4	0.01 4	0.03	4 0.01	4	0.01						
closina															
		🖌 ок 👘			🔀 Cance	el 🛛									
		•			•••										
	0.01 0.03 0.01 0.01	0.01 1 0.02 0.03 2 0.03 0.01 3 0.05 0.01 4 0.01	0.01 1 0.02 1 0.01 0.03 2 0.03 2 0.01 0.01 3 0.05 3 0.01 0.01 4 0.01 4 0.01	0.01 1 0.02 1 0.01 3 0 0.03 2 0.03 2 0.01 4 0 0.01 3 0.05 3 0.01 1 0 0.01 4 0.01 4 0.01 2 0	0.01 1 0.02 1 0.01 3 0.03 1 0.03 2 0.03 2 0.01 4 0.01 2 0.01 3 0.05 3 0.01 1 0.01 3 0.01 4 0.01 4 0.01 2 0.02 4 closing	0.01 1 0.02 1 0.01 3 0.03 1 0.01 1 0.03 2 0.03 2 0.01 4 0.01 2 0.01 2 0.01 3 0.05 3 0.01 1 0.01 3 0.01 3 0.01 4 0.01 4 0.01 2 0.02 4 0.01 4 closing	0.01       1       0.02       1       0.01       3       0.03       1       0.01       1       0.01         0.03       2       0.03       2       0.01       4       0.01       2       0.01       2       0.02         0.01       3       0.05       3       0.01       1       0.01       3       0.01       3       0.01         0.01       3       0.05       3       0.01       1       0.01       3       0.01       3       0.01         0.01       4       0.01       2       0.02       4       0.01       4       0.03	0.01       1       0.02       1       0.01       3       0.03       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       2       0.02       2       0.01       0.01       0.01       3       3       <	0.01       1       0.02       1       0.01       3       0.03       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       1       0.01       2       0.01       2       0.01       2       0.01       2       0.01       3       0.01       3       0.01       3       0.01       3       0.01       3       0.01       3       0.01       3       0.01       3       0.01       3       0.01       3       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       0.01       4       1       1       1       1       1       1						

Setting of pumps errors

Given window indicates values of relative errors for each nozzle of every controlled pump.

Given information is used in formed reports by NaftaPOS in order to define possible deviation off dispensed total volumes by dispensers from accounted.

## Operations on sales of products in shop

## Window of product sales

Sales of products is made using a window for sales of products "Sale", which is shown on main panel of NaftaPOS.

Products basket content basket		Discount f product	or	Selection of a products basket	]						
#         Code         Que           1         20001         1           2         20002         1           3         20003         1	antity Name Chewing Cake "Da Coca-col	Price gum "O 4.55 an cake" 10.50 a botl. 1L 6.35	Sum         Form           4.41         Cash           10.50         Cash           6.35         Cash	+- Remains -3 20 0 40 0 99	1 Sale						
Search	by field Code	- Q Dis	scount/Extra price	CASH Cash	Cancel						
Code	Title Ur	iit Price Dep	partment Group	Remains Barcoge 🔶							
20003         Coca-           20004         Juice           20005         Choca           20006         Candi           20007         Brand           20008         Milk b	Cola botl. 1L pcs Tomato" 1L pcs late "Nuts" pcs es "Rafaell pcs / "Galitsin" pcs otl. 1L pcs	6.35           8.4           5.3           18.2           65.4           7.2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	99 57 24 102 32 90	Payout						
SUM:	21.26 US	DD		-0.14 USD							
Total cost of products baske	Total cost of products basket     Total discount of products basket     Form of payment     Return (payout)										

Window for sales of products may contain various sets of fields, which are selected in its right-button menu:

- products search panel
- discount / extra price panel
- virtual keyboard

Purpose of the sales window is to fill products baskets of sales and provide their sale. There could be up to 5 product baskets, which work independently.

Selection of products can be made:

- from the table of all products (double click on the list of existing products)
- manually by inputting the product code in field "Code"
- automatically by reading the products barcode using barcodes scanner (at this barcode scanner's driver should be configured in configuration on NaftaPOS software on tab '*Drivers*')

After entering of product's code it is necessary to fill in a quantity of product's items. After this total sum will be automatically calculated. Repeat above steps for all products for sales in required quantities.

Select payment form for specified products. For confirmation of sales press a button "Sale". For declining of sales press a button "Cancel" - all entered products will be deleted. For payout press a button "Payout" to return back from a customer selected products in specified quantities.

At pressing a "Sale" button NaftaPOS system will open a window to confirm a sale and for cashier to calculate change for a sale correctly. It contains a sum that a customer should pay, field to fill in how much money was actually given by a customer and automatically calculated change that an cashier should return to the customer:

Attention !									
Close receipt on amount ?									
(CASH)									
21.26									
$\mathbf{U}_{1}74$									
Close receipt									

Confirmation window of sale (selected payment form – "Cash")

If a customer gives to cashier a sum lesser than a total products cost - then a button "*Close receipt*" will not be available.

It is possible to configure the window of product sales in accordance with requirements: set window position on the screen and select displayed panels in a right-button mouse menu.

Window of product sales can be moved (dragged) across a main panel. To save a position of the window of products sales and its configurations for all following runnings of NaftaPOS user should select '*Properties'*  $\rightarrow$  'Save attributes' in right-button menu.

	Sale 👻												×
#	Code	Quantity	Nam	e		Price	Su	m	Form	+-	Remains		
1	20001	1	Chev	ving gui	4.55	1.55 4.41		Cash	-3	20		•	
2	20002	1	Cake "Dan cake" 10			10.50	10.	.50 Cash 0 40					
3	20003	1	Coca	a-cola b	otl. 1L	6.35	6.3	5	Cash	0	99		-
				Pro	operties	•	1	Payı	ment form	same f	or whole basket		/ Sala
				Sh	ow bord	er	$\checkmark$	Disc	ount				Sale
Sec	Search by field Remove bord					order		Extra price					
		•	Code	-		> 0		Fixe	d discount	s/extra	prices	0	Cancel
	Codo	Title		Linit	- Drice	Deper	Product code length						
	.00e	Coco colo ba		Onit	Price	Depar	1	/ Product search panel					
2	0003	Luice "Teme	JU. IL	pes	0.30	1		Virtu	ial keyboa	rd			
<u> </u>	0004	Chocolete "N	luto"	pes	0.4	1		Save	attributes	;		_  🤜	🔵 Payout
2	0005	Condiace "De:	iuis faoll	pes	19.0	) )	_	1	1		102		
<u> </u>	0000	Drandu "Calif	laell toin"	pes	10.2 CE /	1		1	1		22		
<u> </u>	0007	Dianuy Gain	isin	pes	00.4	1		1			32		
	20008 Milk boti. IL pcs 7.2								I		30	-	
											>		
	รเ	JM: 21.3	26 (	JSD		DI	sc	:01	JNT:	-0.1	I4 USD		

Properties of window for products sales

To display the window of product sales it is necessary to enable it from main menu tab '*View*'  $\rightarrow$  'Show sales table' or press key '=':



Option to display window for products sales

In order to save a position of the window of product sales and its configurations for all following runnings of NaftaPOS user should select '*Properties*'  $\rightarrow$  'Save attributes'.

In order to have the window of product sales to be displayed every time NaftaPOS launches – it is necessary to select it on tab '*View*' in NaftaPOS configuration.

## Registration of products reception

Registration of products reception is made in a window "*Reception of products*", which can be called from a main menu ('Products stock'  $\rightarrow$  'Products reception').

	Reception	of produc	ts									×
Fil	e Correct	tion Pro	duct									
Ľ	🖻 🔒	Þ.	% 🖻 🗙 🕅 🖩									
		Invoice	Supplie	Т			▼					
##	Produc	.Qnt.	Name	Price	Unit	Office	Depar	Prod gr.	Tax gr	. Remai	Product type	•
1	20001	19	Chewing gum "Orbit"	4.55	pcs	1	1	1	1	20	Goods	
2	20002	21	Cake "Dan cake"	10.5	pcs	1	1	1	1	40	Goods	
3	20003	65	Coca-cola botl. 1L	6.35	pcs	1	1	1	1	99	Goods	
4	20004	58	Juice "Tomato" 1L	8.4	pcs	1	1	1	1	57	Goods	
5	20007	4	Brandy "Galitsin" 0.75L	65.4	pcs	1	1	1	1	32	Goods	
												-
1		Obl	igatory field Pro	oduct code								
				. 🖊 ок				Canaal		Sumo	on invoice	
				V UK			v	Lancel			14	68.5

Registration of products reception

To receive new products it is necessary:

Enter 5-digit code of received products in table's cell "*Products code*". If a products with such code exists in products database – then table cells "*Name*", "*Price*", "*Unit*", "*Office*", "*Department*", "*Product group*", "*Tax group*", "*Remain*", "*Product type*" will be automatically filled in. If a product does not yet exist in products database – then all fields are to be filled in manually.

At presence of a bar-codes scanner it is possible to read product's barcode for identification of the products code – then if a product with such bar-code exists in products database all fields mentioned above will be automatically filled in.

After filling the products code it is necessary to specify quantity of received product in table's cell "Quantity".

Repeat the above described procedure for all received products

Performing receptions is possible only for users that have permission "*Reception of products*". It is not allowed to state a price of received product equal to zero. It is allowed to receive an existing in products database product with a zero quantity, but with a different price for revaluation of the product.

After editing a table it is necessary to make sure that all data is inputted correctly and only after this to click a button "*Save*".

If actual quantity of products at petrol station is less than specified quantity of products in NaftaPOS then writing-off of products from NaftaPOS should be done.

Writing-off a product is performed in the same way:

- Place a cursor in field Quantity
- Enter a quantity of product's writing-off with a minus sign "-" and press OK button

#### Note!

Attempt to receive products with codes, which correspond to petroleum products, will lead to indication of an error message informing that petroleum products should be received using *"Fuel reception"* window. Reception of petroleum products is prohibited in this window (only products for shop can be received).

Reception of products					×
File Correction Product					
🗅 📽 🖬 🕒 🖁 🕷 🗡 📖					
Invoice Su	ıpplier		•		
## ProducQnt. Name	Price	Unit Office	Depar Prod gr.	Tax gr Remai	Product type 📃 🔺
1 10001 100 Normal	10.25	1 2	1 10	1 8095	Goods
Rece	tion of product:	s	x		
The Use	code of product FUEL for registra	ts is used for fuel in ta ation of fuel reception OK	INKS. I\FUEL RECEPTION		
					· · · · · · · · · · · · · · · · · · ·
1 Obligatory field	Product code			C	lli
	🗸 ок	< l	🕐 <u>C</u> ancel	Sumo	1025

Attempt to receive petroleum product in products reception

### *Review of existing products*

Review of existing products in products database (stock) is made from a main menu ('Products stock'  $\rightarrow$  'Products review').

Product	t search										×
	Search 20007			0	n field	Code		T			
Code	Title	Price	Depa	Group		Unit	Remains	Barcode	Product type	TG	
20001	Chewing gum 'Orbit'	4.55	1	1	pcs		39		Goods	1	
20002	Cake 'Dan cake'	10.5	1	1	pcs		61		Goods	1	
20003	Coca-cola botl. 1L	6.35	1	1	pcs		164		Goods	1	
20004	Juice 'Tomato' 1L	8.4	1	1	pcs		115		Goods	1	
20005	Chocolate "Nuts"	5.3	1	1	pcs		24		Goods	1	
20006	Candies "Rafaello"	18.2	1	1	pcs		102		Goods	1	
20007	Brandy 'Galitsin' 0.75L	65.4	1	1	pcs		36		Goods	1	
20008	Milk botl. 1L	7.2	1	1	pcs		90		Goods	1	
20009	Bread "Morning"	3.5	1	1	pcs		120		Goods	1	
20010	Car air cleaner "Clean air"	12	1	1	pcs		43		Goods	1	
	H			•				•	M		•
				<b>~</b> (	ж			💢 Cancel			

#### Review of existing products

It is possible to view all the products on stock, their prices and remains. Also it is possible to search any of the products by its code, name, title, price and other properties.

### **Review of sales**

Review of all sales is made by opening a window "Sales review", which can be called from a main menu ('Tools'  $\rightarrow$  'Sales review').

	Sales r	eview 👻										□ ×
Г	Saletag	Tir	me	Name	Quantity	Pumps	For	m F	Price	%	Sum of sale	
	28	21.06.15 1	9:10:41	Normal	3.00	1	Cash	10.	25		30.75	
_	30	21.06.15 1	9:18:28	Normal	2.71	2	Cash	10.	25		30.85	
_	29	21.06.15 1	9:18:32	Premium	5.90	1	Cash	12.	70		76.33	
	31	21.06.15 1	9:18:47	Diesel	4.81	3	Cash	11.	40		57.11	
	33	21.06.15 1	9:18:48	Normal	2.33	1	Cash	10.	25		30.85	
	32	21.06.15 1	9:18:56	Diesel	10.92	2	Cash	11.	40		125.51	
	30	21.06.15 1	9:23:49	Cake "Dan cal	1.00	0	Cash	10.	50		10.50	
	30	21.06.15 1	9:23:49	Coca-cola bot	1.00	0	Cash	6.3	5		6.35	
	54	21.06.15 1	9:37:30	Juice "Tomato	1.00	0	Cash	8.4	ю		8.40	
	54	21.06.15 1	9:37:31	Chocolate "Nu	3.00	0	Cash	5.3	0		15.90	
	54	21.06.15 1	9:37:31	Milk botl,1L	1.00	0	Cash	7.2	20		7.20	
	54	21.06.15 1	9:37:31	Candies "Rafa	1.00	0	Cash	18.	20		18.20	
	57	21.06.15 1	9:46:58	Diesel	5.00	2	Cash	11.	40		57.00	
	57	21.06.15 1	9:46:58	Diesel	0.02	2	Cash	11.	40		0.23	
	58	21.06.15 1	9:47:00	Diesel	5.02	2	Cash	11.	40		57.00	
Þ	58		9:47:01	Diesel	0.02		Cash					-
	Na	me	Pumps	Price	%	Solo	d	Summ	<b>A</b>	Selectio	on:	
Þ	Unleaded			9.85					t i l	On	payment forms	
	Cake "Dan (	cake"		10.50		1.00	1	0.5	- T	On	products	
	Coca-cola b	otl. 1L		6.35		1.00	6	.35	-	🔘 On	pump	
										On	cash	
	Cash sum	21325.7	4									
	Work as cas	h register (		Allow update								

Window of sales review

Window "Sales review" contains two tables.

In top table each sale is represented by a separate row color. Sales made in the same receipt have the same color (same saletag). Sales are sorted by time of sales. It is possible to select displayed columns in a right-button menu.

Bottom table displays total sales on:

- payment forms
- products
- fuel dispensers
- cash

Each receipt is separated by a separate color in the table, so rows of the same color mean items in the same receipt.

It is possible to select a working shift, which sales to display.

It is possible to configure the window of sales review in accordance with requirements: select displayed columns in a right-mouse menu. To save a selected configuration of sales review for all following runnings of NaftaPOS user should select '*Properties*'  $\rightarrow$  '*Save*' in right-button menu.

1	Sales re	eview 👻											□ ×	
-	Saletag	Tin	ne	Name	Quantity	Pumps	Form	F	Price	%	SU	um of sale	•	Ι
	20	21.00.15 19	9:10:41	vormai	5.00	1	Cash	10.	25		30.75			
	29	Properties	s 🕨	Visible	e fields:		•	1	Salet	ag		1		
	31	Show bor	der	Place	forms inside	e cash am	ount: 🕨	1	Time	2			11	
	33	Remove b	oorder	Save				5	Nam	e				
	32	21.06.15.15	9:19:20	viesei	10.92	2	Casn		Prod	uct cod	e		1.1	L
	30	21.06.15 19	9:23:49	Cake "Dan cal	1.00	0	Cash		Diene	anced				L
ľ	30	21.06.15 19	9:23:49	Coca-cola bot	1.00	0	Cash		Dispe	enseu				
ľ	54	21.06.15 19	9:37:30	Juice "Tomato	1.00	0	Cash	1	Quar	ntity				
ľ	54	21.06.15 19	9:37:31	Chocolate "Nu	3.00	0	Cash	1	Pum	ps				
ľ	54	21.06.15 19	9:37:31	Milk botl,1L	1.00	0	Cash	1	Form	n				
ľ	54	21.06.15 19	9:37:31	Candies "Rafa	1.00	0	Cash	1	Drice					
ľ	57	21.06.15 19	9:46:58	Diesel	5.00	2	Cash	· ,	~					
ľ	57	21.06.15 19	9:46:58	Diesel	0.02	2	Cash	7	%					
ľ	58	21.06.15 19	9:47:00	Diesel	5.02	2	Cash	$\checkmark$	Sum	of sale				L
ľ	58	21.06.15 19	9:47:01	Diesel	0.02	2	Cash		Paym	nent sur	n			
Ĩ	Na	me	Pumps	Price	%	Sol	d s	Summ	-	Selection	on:	1		1
	Unleaded			9.85		1.25	12.3	31	<b>1</b> - 1	🔘 On	paymen	t forms		L
	Cake "Dan o	cake"		10.50		1.00	10.5	5		On	product	s		L
	Coca-cola b	otl. 1L		6.35		1.00	6.3	5	-	🔘 On	pump			L
	•								•	On	cash			
	Cash sum	21325.74	4	Allow update										]
L	WORK do Casi	in register [		Anow update										J

Configuration of window of sales review

## **Review of reception operations**

Review of reception operations is made by opening a window "*Receptions review*", which can be called from a main menu ('*Tools*'  $\rightarrow$  '*Receptions review*').

ł	Receptions review						□ × □
	Time	Product code	Name	Quantity	Invoice	*	
	19.04.13 16:01:13	10001	Normal	1000	12345		
	19.04.13 16:10:25	10001	Normal	1000	1	L	
	19.04.13 23:44:19	20001	Chewing gum 'Orbit'	19	0	L	
	19.04.13 23:44:20	20002	Cake 'Dan cake'	21	0	L	
	19.04.13 23:44:21	20003	Coca-cola botl. 1L	65	0	L	
	19.04.13 23:44:22	20004	Juice 'Tomato' 1L	58	0	L	
	19.04.13 23:44:23	20007	Brandy 'Galitsin' 0.75L	4	0		
	•					•	
			V Close		Shift Servi From 1 Before 2	ce 9.0 20.0	▼ 4.13 10:04:26 04.13 00:09:28

Review of reception operations

It is possible to select working shift, which receptions to display.

## **Reporting in NaftaPOS system**

Reports in NaftaPOS are generated using *'NaftaReport'* utility (location *NaftaPOS\NaftaReport\NaftaReport.exe*), which is called from NaftaPOS main menu item *'Reports'*.

NaftaReports utility is built on the basis of NextReports Engine (please read more on <u>http://www.next-reports.com/products/nextreports-engine.html</u>), which allows to use NextReports Designer application for generating new reports and charts (please read more on <u>http://www.next-reports.com/products/nextreports-designer.html</u>).

Application of designer application allows customers to generate new desired reports themselves quite quickly and easily. Reports supplied by default in NaftaPOS installation are located in folder '*NaftaPOS\NaftaReport\Reports\_en\*' and can be opened in NextReports Designer application to see their database script. New designed reports are to be saved to the same folder. NaftaReport application will automatically display them. Structure of NaftaPOS software database can be found in section "*NaftaPOS system database structure*" of given manual.

NaftaReport utility contains a list of all available reports and charts and a list of output formats:

			ist of available reports		
🚊 NaftaPOS rep	ort			-	
File Langua	ge				
Туре	Report name			^	To generate a report
Report	Fuel form 17 report page 1				select a report from the list, specify the output file format and click on
Report	Fuel form 17 report page 2				'Launch' button
Report	Fuel pump totals report	-			
Report	Fuel receptions complete report			=	
Report	Fuel receptions detailed report				
Report	Fuel receptions summary report				
Chart	Fuel receptions summary volume chart				
Report	Fuel sales by cards report				
Report	Fuel sales complete report				
Report	Fuel sales detailed report				
Report	Fuel sales payment form summary repo	rt			Output file format
Chart	Fuel sales summary cost chart				HTML •
Chart	Fuel sales summary payform cost chart				Launch
Chart	Fuel sales summary payform volume ch	art			
Report	Fuel sales summary report		/	-	Exit
					/
	Γ	List of output	∕ ┌─	Build rep	port
		file formats		butto	n

NaftaReport utility general view

For configuration of database connection go to menu item '*File*'  $\rightarrow$  '*Settings*':

🧮 Settings	- 🗆 X
Database server conne	ction settings
Server IP	127.0.0.1
Server port	3306 🜩
Database name	AZS
Database user	AZSUSER
Database password	
0	Test
	Connection OK!
Application settings	Connection OK!
Application settings User login	Connection OK!
Application settings User login User password	Connection OK!
Application settings User login User password Clear o	Connection OK!
Application settings User login User password Clear o	Connection OK!

#### NaftaReport utility settings

Using a button "Test" you can check if connection to database can be established or not.

Output reports may be generated in one of the following report formats:

- HTML
- PDF
- XSL
- DOC
- CSV
- RTF
- TSV
- TXT
- XML

After selecting a required report or chart and selection of output report format a loading window is shown:



NaftaReport parameters loading window

A report may contain parameters for adjustments. If the report contains parameters – a parameters dialog is shown on the next step:

Report parameters	
Set report parameters	
Shift from	Shift #1 from 16.06.15 23:26:33 till 22.06.15 12:40:03
Shift till	Shift #2 from 22.06.15 12:40:07 till 22.06.15 12:58:00
Dura sumbra	<ul> <li>✓ Pump #1</li> <li>✓ Pump #2</li> <li>✓ Pump #3</li> <li>✓ Pump #4</li> </ul>
r unp number	
	☑ Normal           ☑ Premium         ☑           ☑ Diesel         ☑           ☑ Unleaded         ☑
Fuel code	
	Run report! Cancel

Example of NaftaReport parameters dialog

After that a report is starting to be generated in the selected report format:



NaftaReport report formation window

Examples of formats of generated reports:



Example of generated report in PDF format



Example of generated report in HTML format

Example of generated charts:







Configuration settings of NaftaReports utility are stored in file D:\NaftaPOS\NaftaReport\NaftaReport.config.xml. This file contains a secret setting RestrictView, which is to be modified manually. The default value is False. When this setting is set to value True – then there is no possibility to select the output format of reports, the reports are always generated in PDF format and are opened in built-in PDF viewer, where the user can make limited operations with reports and can not access any service parts of Windows OS:

Date:		15.06.20	18		7				Rep	ort fo	rm #17	7 (pag	e 2)									
Shift start: Shift end:		Shift#11 Shift#51	rom 31.0 rom 15.0	5.18 12:0 6.18 11:0	04:39 till ( 58:58 till )	05.06.18 15.06.18	10:39:20 17:56:06															
		Produc	B - t height,	account e	of fuel in ta	nks	. (47 . 29)		C - ope Total o	ration of p ounters	Dispense	ting meel Measurin	anisms g error of				D	· sales su	m			
Fuel name	Tank number	Total	m Underpro duot water	Pipes capacity. I	Remains of fuel on shift end, I	shortage,	surplus, I	Pump number	en shift start, l	on shift end, l	d accordin g to total counters I (28 27)	941 1%	nps I	on cash	on talons	on debit eards	on waybills	on paysheet s	en discount cards	on fuel cards	on money cards	totally
18 Бенаин	19	20	21	22	23	24	25	28	27	28	29	30	31	32	33	34	35	36	37	38	39	40
A-80								1 2	162.55	164.55	3.00	0.00	0.00	125.00			:				250.00	758.40
Бенрин	'	124.80		0	15,985.00	2966		1	533.43	535.43	2.00	0.00	0.00	107.10		-	-		-		250.00	107.10
A+ 92								2 3	859.55 9.14	861.65 9.14	2.00	0.00	0.00	462.00 28.00	:	:	:	:	:	:	:	482.00 28.00
Total Бензин	2		•	0	1,985.00		189.75	1	261.27	264.27	3.00	0.00	0.00	14.50	·	-			-		•	1450
A-90								2	408.77 52.57	409.77 90.00	3.00 37.43	0.00	0.00	58.00 638.00	:	•	:	:	:	:	:	68.00 638.00
Total	3			D	2,980.00		225	4	· ·	8.00	8.00	0.00	0.00	87.00 797.50	1		1	:	:	:	:	87.00 797.50
Дир. гопливо								3	22.00	. 212.68	-22.00	0.00	0.00	600.00	:	:	:	:	:	:	:	1900.00
Total Total fuel	4			0	3,960.00	0								600.00		-				-		600.00
Total														60.00								60.00
TOTAL														2,688.00		-		•			250.00	2,938.0

Example of generated report in built-in PDF viewer

## **Recommendations on products coding in NaftaPOS system**

Products codes in NaftaPOS software should have 5-digits:

### Principle of products coding in NaftaPOS system



Product coding in NaftaPOS

## Formation of receipt from template

As it is described above a driver "*CashWin driver*" is used to print receipts on a standard receipts printer, which driver is installed in Windows OS and this printer is set as a default printer. In such a way it possible to use any model of printer, which has a driver for Windows OS to print receipts.

Driver has a template of the receipt to be printed, which is in XML format and allows modification of its appearance and printed information. It is possible to specify in the template what text and images should be printed in the receipt. Template of the receipt is located in *NaftaPOS\CashWinExt\receipt\_template.xml* file. Receipt template includes rich comments on how the text can be formatted.

## File receipt\_template.xml

Image: Comparison of the state of the s	\$\$ ☆ \$\$ •
left side but other line (either right or center aligned) will be printed at the current line 	
- <fuel_header></fuel_header>	
<text align="center" size="33">RSP SHELL STATION</text>	
<text align="center" size="27">Bahada Dao, Pagadian City</text>	
<text align="center" size="27">Registered TIN: 944-112-420</text>	
<img align="center" height="188" src="CashWinExt\ur-logo-here.bmp" width="500"/>	
- <cashier></cashier>	
<text size="31"></text>	
<text align="justify" font="FontA11">Date/Time:</text>	_
<text align="right">{date} {time}</text>	
<text align="justify">Cashier name:</text>	
<text align="right">{cashier}</text>	
- <fuel_preset></fuel_preset>	
<text size="31"></text>	
<text align="center" font="FontA11">Receipt on fuel sales no. {recno}</text>	
<text></text>	
<text align="justify" font="FontA11">Fuel grade:</text>	
<text align="right">{product}</text>	
<text></text>	
<text align="justify">Order volume:</text>	
<text align="right">{preamount} L</text>	
<text align="justify">Price:<text></text></text>	
<text align="right">{price} PhP/L</text>	
<text align="justify"> Amount due:</text>	
<text align="right">{pre_entry} PnP</text>	
<text></text>	
<text align="justily"> valable: </text>	
<pre>ctext align= Tight &gt; vacual_preset; Fine</pre> text align="iutifu"> vacual_preset; Fine text align="iutifu"	
<pre>ctext align="indf" &gt; Indf av entry &gt; Db</pre> /ctext > ctext align="indf" > fax entry > Db/ctext > ctext align="indf" > fax entry > Db>/ctext>	
<pre>stert align="introf" Total amount dues/fexts</pre>	
<pre>stext align="right"&gt;fore total Php</pre>	
<pre>ctext/&gt;</pre>	
<pre><text align="iustify">Payment form:</text></pre>	
<text align="right">{cashform}</text>	
<text></text>	
<text align="justify">Vehicle number:</text>	
<text align="right">{Vehicle_number}</text>	
<text></text>	
<text align="justify">Customer name:</text>	$\sim$
<text align="right">{Customer_name}</text>	

Template of the receipt in XML format for "CashWin driver"

The file receipt\_template.xml allows easy formation of the receipt including text and images.

List of variables used in the receipt template are:

- {date} prints current date;
- {time} prints current time;
- \t prints four space tabs;
- {t} prints tab;
- {cashier} prints cashier name;
- {productId} prints product Id;
- {product} prints product name;
- {preamount} prints ordered amount of the product;
- {amount} prints amount of the product;
- {price} prints price of the product;
- {entry} prints cost of the entry;
- {discount} prints discount value (in percents);
- {discountAbs} prints discount value in money value;
- {cash} prints total money received;
- {change} prints change value;
- {unit} prints dispenser number;
- {total} prints total cost of receipt;
- {vatable} prints total cost of receipt without VAT;
- {vat} prints VAT value;
- {vat\_perc} prints VAT value in percents;
- {totalizer1} value of total counter before dispensing;
- {totalizer2} value of total counter after dispensing,
- {recno} receipt number;

List of tags used in the receipt template are:

- tag <text>txt</text>, where txt text to print attributes:
  - font sets font;
  - align sets the position of the text, accepted values:
    - left text will appear at the left side,
    - right text will appear at the right side,
    - center text will appear at the center of the receipt,
    - justify text will appear at the left side but other line (either right or center aligned) will be printed at the current line
- tag <img />, attributes of tag:
  - src path to the image (relative),
  - width width of the image in printer units,
  - height- height of the image in printer units,
  - align sets the position of the text, accepted values:
    - left text will appear at the left side,
    - right text will appear at the right side,
    - center text will appear at the center of the receipt,
    - justify text will appear at the left side but other line (either right or center aligned) will be printed at the current line
- tag <paper /> tag for setting paper width (for example for Epson U220 printer this value equals 192, for standard PDF-printer 4200);
- tag <cashier /> tag for placing information regarding a cashier and date/time of the printed receipt;
- tag <fuel\_header /> tag for placing header information of a receipt, which is connected with sales of fuel;
- tag <fuel\_preset /> tag for placing information regarding a fuel dispensing made in preset mode;
- tag <fuel\_postpay /> tag for placing information regarding a fuel dispensing made in manual mode or in a full tank mode;
- tag <fuel\_overfilling /> tag for placing information regarding a fuel dispensing, which overfills ordered value, set in preset mode;
- tag <fuel\_payout /> tag for placing information regarding a fuel dispensing, when fuel was dispensed on total cost less than ordered in preset mode and money should be returned back to customer;
- tag <fuel\_reception /> tag for placing information regarding a fuel reception performed in tank of petrol station;
- tag <fuel\_footer /> tag for placing information footer information of a receipt, which is connected with sales of fuel;
- tag <product\_header /> tag for placing header information of a receipt, which is connected with sales of products;
- tag <product\_sale /> tag for placing information on each pprduct from the product basket sold;

- tag <product payout /> tag for placing information regarding product sales, when product is returned back to shop and money should be returned back to customer;
- tag <product\_footer /> tag for placing information footer information of a receipt, which is connected with sales of products;

# Examples of receipts

Company na Company lo Company contact inform	me, logo here ocation here mation (tel/fax/mail) here	Company name, logo here Company location here Company contact information (tel/fax/mail) here			
	UR LOGO HERE		YOUR LOGO HERE		
Date/Time: Cashier name:	04.20.2013 12:05 Service	Receipt on pr	oducts sales no. 54		
Receipt on fue	el sales no. 47	Date/Time: Cashier name:	04.20.2013 12:08 Service		
Order volume: Price: Discount, %: Amount due: Total amount due: Includes VAT: Money received: Money change: Payment form: Customer signature Cashier signature	5.00 I 10.25 USD/I 51.25 USD 51.25 USD 8.54 USD 51.25 USD 0.00 USD Cash	Product: Quantity: Price: Discount: Amount due: Product: Quantity: Price: Discount: Amount due: Total amount due: Includes VAT: Money received: Money change:	Milk botl. 1L 2.00 pcs 7.20 USD/pcs -2.00 % 14.11 USD/pcs Cake 'Dan cake' 1.00 pcs 10.50 USD/pcs 10.50 USD/pcs 24.61 USD 4.10 USD 50.00 USD 25.39 USD		
Example of rec	eipt on fuel sale	Payment form:	Cash		
		Cashier signature			
		Customer signature			

line for printer cutter Example of receipt on products sale

Additionally the driver allows to print additional fields in the receipt and save them to the database and also to use formulas in the receipt template.

It is possible to enter formulas in the receipt template, for example:

<variable name="b" value="123" /> <variable name="a" value="{b} + 2.0 \* 0.2" /> <variable name="c" value="{a} + {amount}" /> <variable name="g" value="{c} + {b}" /> <variable name="h" value="{g} + {c}" /> <variable name="user var221" value="{b} + 2.0 \* 0.2 + {amount} + {b} + {b} + 2.0 \* 0.2 + {amount}" /> In order to insert these variables values in the receipt it is necessary to print their values in braces.

Also it is possible to add additional fields, which values will be requested before the receipt is printed. For this it is necessary to add fields in the receipt template, for example:

<field name="Vehicle\_number" type="string" show="true" default="" mandatory="false" desc="Vehicle number" desc\_form="Vehicle number:" style="edit" />

<field name="Customer\_name" type="string" show="true" default="" mandatory="false" desc="Customer name" desc\_form="Customer name:" style="edit" />

In this "*field*" tag attributes are the following:

- name name of the field
- type type of data used:
  - "string" for text values
  - "int" for interger values
  - "bit" for Boolean values
  - "float" for floating point values
  - other data types, which are used in MySQL DBMS
- show Boolean value indicating whether a field should be requested to input before receipt printing or no
- default value of the field in receipt in case if the field is not inputted (skipped)
- desc description of the field
- desc\_form inscription shown near the fields to enter
- style control to input the value, possible values are
  - "edit"- editable field
  - "list" dropdown list

In order to apply these fields in the receipt – use name of the field, closed in braces, example: <text align="right">Vehicle number: {Vehicle\_number}</text> <text align="right">Vehicle number: {Customer\_name}</text>

When sales is performed in case if there are fields in the receipt template activated NaftaPOS will request to enter values of these fields as show on image:

🚺 InfoForm		×
	Input	t of additional information:
	Customer name:	Peter Brown
	Vehicle number:	EF 133-02 AM
	🗸 ОК	X Cancel

Input of fields before printing of the receipt

In case if the values are not inputted (blank fiends are left) – NaftaPOS will use values, which are set in attribute "*default*" of the "*field*" tag.

After that information about the order is placed in the receipt:

Company	Company name, logo here Company location here y contact information (tel/fax/mail) here
Date/Time: Cashier name:	06.11.2013 20:20:22 Service
	Receipt on fuel sales no. 2
Fuel grade:	Normal
Order volume: Price: Discount, %: Amount due:	20 I 10.25 USD/I 0 205 USD
Total amount due: Includes VAT (20%):	205 USD 41 USD
Money received: Money change:	210 USD 5 USD
Payment form:	Cash
Vehicle number:	EF 133-02 AM
Customer name:	Peter Brown
Customer signature	
Cashier signature	
	line for printer outter
	inte los printer cutter

Example of receipt on fuel sale

In sales review windows now it is possible to review all information about the performed sales (including additional fields), reprint any selected receipt and also correct the field values:

	Time	Name	Quantity	Pumps	Form	Price	%	Payment sum	Total on begin	Total on end	Customer name	Vehicle number	
	06.11.13 19:53:37	Normal	2.00	1	Cash	10.25		20.50	0	0			
5	06.11.13 20:20:08	Normal	20.00	1	Cash	10.25		205.00	4	24	Peter Brown	EF 133-02 AM	
8	06.11.13 20:24:33	Chewing gum "Orbit"	1.00	0	Cash	4.55		4.55	0	0			
16													
16	06.11.13 20:24:50	Cake "Dan cake"	3.00	0	Cash	10.50		31.50	0	0			
16	06.11.13 20:24:50	Cake "Dan cake"	3.00	0	Cash	10.50		31.50	0	0			
16	06.11.13 20:24:52	Juice "Tomato" 1L	1.00	0	Cash	8.40		8.40	0	0			
16	06.11.13 20:24:52	Juice "Tomato" 1L	1.00	0	Cash	8.40		8.40	0	0			
16	06.11.13 20:24:52	Juice "Tomato" 1L	1.00	0	Cash	8.40		8.40	0	0			
16	06.11.13 20:24:52	Coca-cola botl. 1L	2.00	0	Cash	6.35		12.70	0	0			
16	06.11.13 20:24:52	Coca-cola botl. 1L	2.00	0	Cash	6.35		12.70	0	0			
16	06.11.13 20:24:52	Coca-cola botl. 1L	2.00	0	Cash	6.35		12.70	0	0			
6	06.11.13 20:26:49	Normal	20.00	1	Cash	10.25		205.00	24	44	Peter Brown	EF 133-02 AM	
17	06.11.13 20:26:50	Normal	20.00	2	Cash	10.25		205.00	0	20	Cloze Humann	FD 234-98 NF	
	Name Pu	imps Price	%	Solo	t I	Sum					Selecti	on:	
Cash											💿 On	payment forms	
											🔵 🔿 On	products	
											🔵 On	pump	
											On	cash	
Cash si	um 692 65		😤 Cano	al		Print select	ad ra	ceint	Shift	06.11.131	9:52:46 06.11.13	20:24:53 Service	
Lancel     Finit selected receipt													

Sales review window with fields information

InfoForm		×
	Input of additional information:	
	Customer name: Peter Brown Junior	
	Vehicle number: EF 133-02 AM	
	V OK	

Correcting of selected receipt fields information

ä	Sales	review 👻												⊐ ×
	Saletag	Time	Name	Quantity	Pumps	Form	Price	%	Payment sum	Total on begin	Total on end	Customer name	Vehicle number	<b>1</b>
	1	06.11.13 19:53:37	Normal	2.00	1	Cash	10.25		20.50	0	0			
5	5	06.11.13 20:20:08	Normal	20.00	1	Cash	10.25		205.00	4	24	Peter Brown	EF 133-02 AM	
8	3	06.11.13 20:24:33	Chewing gum "Orbit"	1.00	0	Cash	4.55		4.55	0	0			
F														
-	6	06.11.13 20:24:50	Cake "Dan cake"	3.00	0	Cash	10.50		31.50	0	0			
	6	06.11.13 20:24:50	Cake "Dan cake"	3.00	0	Cash	10.50		31.50	0	0			
-	6	06.11.13 20:24:52	Juice "Tomato" 1L	1.00	0	Cash	8.40		8.40	0	0			
-	6	06.11.13 20:24:52	Juice "Tomato" 1L	1.00	0	Cash	8.40		8.40	0	0			
-	6	06.11.13 20:24:52	Juice "Tomato" 1L	1.00	0	Cash	8.40		8.40	0	0			
	6	06.11.13 20:24:52	Coca-cola botl. 1L	2.00	0	Cash	6.35		12.70	0	0			
-	6	06.11.13 20:24:52	Coca-cola botl. 1L	2.00	0	Cash	6.35		12.70	0	0			
-	6	06.11.13 20:24:52	Coca-cola botl. 1L	2.00	0	Cash	6.35		12.70	0	0			
-6	6	06.11.13 20:26:49	Normal	20.00	1	Cash	10.25		205.00	24	44	Peter Brown Junior	EF 133-02 AM	
	7	06.11.13 20:26:50	Normal	20.00	2	Cash	10.25		205.00	0	20	Cloze Humann	FD 234-98 NF	
		Nama D	umpo Drico	•/	Cal	-	C. ma					<ul> <li>Selection:</li> </ul>		-
	<sup>-</sup> ach	Name F	umps Frice	10	300		302 65					On pay	ment forms	
	20011						JJZ.0J					O On pro	ducts	
												Onpur		
												Oncas	ne h	
	O on cash													
С	ash si	um 692.65		🗶 Canc	el		Print selec	ted re	ceipt	Shif	06.11.131	9:52:46 06.11.13 20:	24:53 Service	-
v	/ork as c	cash register 🔲								Wo	kplace lo	icalhost		•

Sales review window with updated fields information

Also in the receipt it is possible to add additional information from the fuel card when NaftaCards system is applied (please see section "*NaftaCards fuel card system for petrol stations*"). This additional information can include fuel card number, card balance before and after the fuel sale, discount, transaction number, others.

In this case template for printing of additional information for the fuel card balance is located in a file *D*:\*NaftaPOS*\*Plugins*\*NaftaCards*\*template.xml*".

To make this information printed in the main receipt it is necessary to add a variable {CardData} in the receipts template, where {CardData} - is exactly the placeholder, where the card balance fields from template "D:\NaftaPOS\Plugins\NaftaCards\template.xml" is inserted in the main receipt.

For example:

```
<text />
<text align="justify">Additional info:</text>
<text>{CardData}</text>
```

At this in POSSet in configuration of the NaftaCards plugin please check a flag "Print additional receipt".

# **Operation with automatic vehicles identification system**

## Description and peculiarities of hardware operation



## Wireless nozzle reader MT123

Reader is placed on the nozzle. It is fed from removable accumulator. It is initiator of data exchange with receiver MT124. It has a read LED for indication of data transmission on the top panel of casing. It reads tags on distance not more than 3 cm.

Reader has a sensor of location. When the nozzle is taken down the reader is in sleep mode, in which it does not provide any data exchange. When the nozzle is input into the vehicle tag the reader is periodically (approximately once per 2 seconds) sending information about its state to the receiver.

MT123 can use addresses in range from 1 to 255. For change of the address it is necessary to remove the accumulator and insert it back. At once after insertion a LED of communication exchange has to shine. During 5 seconds after this it is necessary to send a command for address change. At change of address it is strictly required to be careful and attentive: if set address is out of addresses range serviced by receiver then the reader will become unreachable as for reading of tags, so as for change of its address. If this happened – then it is necessary to change the receiver firmware allowing to communicate with new address of reader.

## Receiver MT124

Receiver MT124 is a device for connection of control system and wireless nozzle readers MT123. Depending of the model of receiver it can support 16 or 32 nozzle readers. For communication exchange with a control system it uses RS-232 interface at 115200 baud rate (8 data bits, 1 stop bit , without parity check). Control system is always initiator of communication. Receiver is equipped with a power adaptor (5 V DC voltage, 1 A max current), external antenna and interface cable DB9-DB9. On the front panel of receiver there are LED indicators of communication exchange with nozzle readers. Number of LED indicators corresponds to the number of serviced nozzle readers.

Receiver responses to all addresses. In case when the requested reader is switched off or is unavailable the receiver returns status IDLE for such reader, thus it is not possible to determine whether the reader is in sleep mode or completely disconnected (accumulator is down).

Receiver can work simultaneously with 16 or 32 readers (depending on the model). For bigger number of readers it is possible to use several receivers same time. In this case each receiver will service its own range of readers addresses, for example first receiver will service nozzle readers with addresses 1-16, second receiver will service readers with addresses 17-32, third – 33-48 and so on. Range of addresses serviced is coded into the receiver firmware, which can be received from manufacturer.

## RFID tag MT125

The tag is done into a small rectangular plastic casing with dimensions 10 x 30 mm. It has a glue base. It works in a range 920-925 MHz. It is installed upon a tank input in a vehicle. At attempt to replace the tag it is self destroyed. Each tag contains a unique ID number with length 8 bytes.

# Description of operation and configuration of the receiver driver

## Structure of files and folders of driver

For operation of the driver following files are required:

	Name	Description	Туре
1	Scan.dll	Library of receiver driver	Mandatory
2	aviMT124Driver.Ingx	Localization file (EN, RU, UA)	Mandatory
3	aviConfiguration.ini	Configuration file (is created at saving the configuration)	Optional
4	Icons\Error.png	Error icon	Mandatory
5	Icons\Success.png	ccess.png OK icon	
6	Icons\Unknown.png	Unknown icon	Mandatory
7	Icons\Warning.png	Warning icon	Mandatory

Also during driver operation and depending on the configuration a folder "Logs" can be created in the same folder with Scan.dl file. This folder contains log-files with information about events of driver operation and also archives with old log-files. Log-files are placed to archive in start of each month.

File "aviConfiguration.ini" contains all configuration of the driver. If there is no such file in folder with Scan.dll file – then the driver will be launched with default settings. All sections and keys of parameters are shown in table below:

	Кеу	Туре	Default value	Description
Sect	ion GENERAL	General settings		
1	POLL_INTERVAL	INT	200	Poll interval, ms
2	PACKET_TIMEOUT	INT	2000	Packet timeout, ms
3	BYTE_TIMEOUT	INT	30	Data byte timeout, ms
4	STOP_POLL_ON_RX	BOOL	FALSE	Stoppage of polling at reception of tag data
5	PERFORM_TO_DECIMAL	BOOL	TRUE	Convert data to decimal number
6	USE_SKINS	BOOL	TRUE	Use skins for displaying

Soct	ICA STATUS DANEL			Status monitor panel					
Sect	ION STATUS_PANEL			status monitor paner					
7	SHOW	BOOL	TRUE	Show status panel					
8	ENABLE_DRAG	BOOL	TRUE	Allow window drag and drop					
9	LEFT	INT	50	Location from left					
10	ТОР	INT	100	Location from top					
Sect	ion ROUTERS_LIST			Configuration of receivers and readers					
%r –	receiver index (starts from 0)								
%g – index of readers group (starts from 0)									
11	ROUTERS_COUNT	INT	0	Number of receivers					
12	ROUTER_%r_PORT_NUM	INT	1	Receiver port number					
13	ROUTER_%r_RESOLUTION	INT	0	Receiver type (resolution)					
14	ROUTER_%r_ADDR_SHIFT	INT	0	Address offset for receiver					
15	ROUTER_%r_DESCRIPTION	STRING		Text description (comment)					
16	GROUPS_COUNT_%r	INT	0	Number of readers groups for receiver					
17	DISPENSER_NUM_RT%r_GR%g	INT	0	Number of pump for readers group					
18	READERS_MASK_RT%r_GR%g	INT	0	Mask of address of readers group					
Sect	ion LOGGING			Settings of logging of driver events					
19	ENABLE_LOG	BOOL	0	Logging enabling					
20	LOG_DIRECTORY	STRING		Folder with log-files					
21	LOG_PREFFIX	STRING		Prefix of log-files names					
22	INSERT_DATE	BOOL	0	Add date and time to messages					
23	INSERT_MARKER	BOOL	0	Add marker of events in messages					
24	MAX_SIZE	INT	10485760	Maximal size of log-file					
25	LOG_LEVEL	INT	4	Logging level					
Sect	ion PROTOCOL_LOGGING			Settings of logging for data exchange					
List	List of keys and their appointment is same as keys of section LOGGING								

## Driver configuration

Before starting to work with the driver it is necessary to connect receivers to COM-ports of PC of the control system. At necessity it is required to update firmware of receivers in case if several receivers are going to work together.

Configuration of driver is started for general parameters. Group "*General settings*" contains general configuration for all comfigurators:

- Poll interval allows to set interval between pollings of readers (readers groups)
- *Packet timeout* defines period of time during which the driver should wait from receiver a data packer. When the period is expired the reader status is changed to "No connection"
- *Data byte timeout* defines maximal time interval between data bytes inside the data packet. When the period is expired the reader status is changed to "No connection"
- Convert data to decimal number allows driver to convert received data from tag into string with decimal number. If parameter is not set – then control system will receive data in a view of a string with hexadecimal number

Driver configuration			×
General Receivers			
General settings			
Poll interval:	100	۲	ms
Packet timeout:	2000	۲	ms
Data byte timeout:	30	۲	ms
Convert data to decimal number			
State monitor			
Show state monitor panel			
Enable changing position			
	OK		Cancel Apply

AVI driver configuration, tab General

Group "State monitor" provides settings for a status panel:

- Show state monitor panel allows displaying of state panel in main window of control system
- Enable changing position allows user to change location of state panel

After configuration of parameters it is necessary to add and configure parameters of receivers on tab *"Receivers"*. This tag contains a list of receivers, which shows their description, number of COM-port and numbers pumps serviced by each receiver. Also the panel contains buttons for management over the list:

- "Add..." adding a new receiver to the list. At pressing this button a dialog for configuration of new receiver with default settings is opened. New device is added to the end of the list
- "Edit..." edit settings for selected receiver. At pressing this button a dialog for configuration of selected receiver is opened. "Delete" – remove selected receiver from list
- "Clear" remove all receivers from list

enera	al Receivers			
#	Description	Port	Disp	Add
1	MT124 (COM3)	COM3	1-3	
2	MT124 (COM1)	COM1	4	Edit
			ĸ	Cancel Apply

AVI driver configuration, tab Receivers

For adding a new receiver "Add..." button should be pressed – opens a dialog for configuration of new receiver with default settings. Configuration of receiver is started from tab "Receiver". This tab contains 2 groups: "General" and "Address setup". "General" group contains following elements:

- "COM-port" number of serial port with connected receiver
- "Test" test of communication with device through selected COM-port. At pressing this button a dialog for communication check is opened and communication test is performed. During the test driver is polling readers from 1 to 16, test is considered to be successful in case if the receiver responses during valid timeout without error with at least with one reader state

Connection test		×
The COM3 po Please, wait	rt is being tested	
		Close

AVI driver: COM-port test

- *"Receiver type"* selects type of receiver depending on the number of readers it can serve (16 or 32)
- *«Address offset»* sets offset of readers addresses polled by receiver. It is an integer value in range from 0 to 240. It is used for receivers with offset range of addresses.
- "Description" text description of receiver. This description is displayed in state monitor

Receiver configuration	x
Receiver Readers	
General	
COM-port:	3 👻 Test
Receiver type:	16 readers 🔻
Address offset:	0
Description:	MT124 (COM3)
Address setup	
Before starting th that the new add addressing offset addresses of this of the device is de	e change of address, make sure ress of the reader (including ) does not exceed the allowed receiver. The range of addresses etermined by its software.
Current off:	set: 0/16
Current addresses ran	ge: (from 1 to 16)
Current addre	ess: 1
New addre	ess: 1 🗭
Begin addr	ess changing procedure
ОК	Cancel Apply

AVI driver: receiver configuration

After check of communication a configuration of nozzle readers addresses should be done in "Address setup" group, it contains the following settings:

- "Current offset" shows a value of address offset and receiver resolution through slash separator
- "Current addresses range" shows addresses, served by current receiver. Value of field "Current address" should be within this range
- Field "Current address" should contain current reader address, which needs to be changed. Value should be in a range specified by field "Current addresses range"
- Field "New address" should contain a new address to be set in the reader
- Button "Begin address changing procedure..." launches a process for change of address. A dialog with description of actions to be performed for change of address in reader is displayed. Process can be cancelled by clicking a button "Cancel". After end of procedure a dialog will display result of execution.



AVI driver: change of address in readers

Before changing the addresses it is necessary to make sure that all parameters from group "General" are set correctly and correspond to real. After change of parameters of "General" group a function for change of addresses will not be accessible until a user clicks on a button "Apply", having confirmed correctness of settings. At change of addresses it is needed to be very careful and attentive and make sure that a new address of the reader does not exceed the range of readers addresses serviced by receiver, connected to selected COM-port. Also to avoid collisions it is necessary to check that among configured readers there is

no reader with address same as specified in field "New address", then to check that a reader, which address is to be changed, is online by turning the reader with a sensor upside down and making sure that its LED is blinking. Having filled the fields "Current address" and "New address" it is necessary to click a button "Begin address changing procedure...". After displaying a dialog of address changing it is necessary to remove the accumulator from the reader and insert it back. If addresses parameters were set correctly – then in few seconds a result of operation execution will be displayed. It is possible to make sure that new address is set correctly by watching the LED indicator of the receiver: on the panel a LED corresponding to new address of the reader should be blinking. After this a dialog can be closed.

After setting of addresses links between nozzle readers and dispensers should be configured on tab *"Readers"*. On this tab readers are linked to dispensers. A tab contains several elements:

- "List of readers" list of pumps and their readers (group of readers)
- "Add..." adding of new group of readers. At pressing the button a new dialog is shown with configuration of a group, in which it is possible to specify a pump number and addresses of connected readers.
- "Edit..." editing of selected group of readers. At pressing this button a dialog for change of group settings is opened.
- "Delete" removal of selected reader from list
- "Clean" removal of all readers from list

ceive	r confi	guration		
Recei	ver R	eaders		
#	Disp	Readers		Add
1	1	3-7		Edit
2	2	8-9		
-	5	10-10		Delete
				Clear

AVI driver: configuration of pumps with nozzle readers

Dialog for linking a group of readers has the following elements:

- Field "Dispenser number" should contain number of dispenser, to which the readers refer, field value should be from 1 to 32
- *Field "Addresses"* should contain addresses of readers, which are to be used on given dispenser. At specification of addresses it is possible to use comma for separation of addresses and dash for specification of the addresses range, for example "1, 3, 5 7". Range of allowed values is displayed to right side of the field.

Readers attachment		1	×
Dispenser number: Addresses:	<b>1</b> 3-7	۲	(from 1 to 32) (from 1 to 16)
		ОК	Cancel

AVI driver: configuration of pumps with nozzle readers

At configuration of linking between dispensers and nozzle readers duplication of dispensers numbers and readers addresses is not allowed.

## Description of operation with driver

After starting of the system in a main window of application a state monitor of readers should be shown (in case if parameter "Show status panel" is set). State monitor has 4 groups of states: "Unknown", "No errors", "Warning" and "Error".

Stat	State monitor					
<b>×</b> 1	MT12	4 (CO	M3) 🛷 MT124 (COM1)			
	Disp	Adr	Description			
<b>V</b>	1	3	Idle state			
V	1	4	Idle state			
V	1	5	Idle state			
V	1	6	Idle state			
V	1	7	Idle state			
×	2	8	No connection			
×	2	9	No connection			
0	3	10	Unknown			
0	3	11	Unknown			
0	3	12	Unknown			
0	3	13	Unknown			
0	3	14	Unknown			
0	3	15	Unknown			
0	3	16	Unknown			

AVI driver: readers state monitor

Group "*No errors*" includes states of address change, sleep mode and absence and reading of data. Group "*Warning*" includes state "*Recharge battery*", group "*Error*" – states of communication errors.

In window of state monitor states of receivers are displayed in a view of tabs. Name of tab contains an icon of summary state and description of device, specified in configuration. Icon of summary state shows presence of warnings and errors of receiver readers. Each tab contains the whole list of readers, grouped and separated by dispenser numbers.

At launch of control system the driver is in expectation mode. At this all readers are displayed with "Unknown" state. States of readers on monitor are refreshed during polling of receivers.

At request of tag the driver is starting of poll required receiver. If it is online the states can change between *"Expecting"*, *"No data"* and *"Data read"*. In case if there is a problem opening a COM-port during system start or the receiver is not responding – then state changes to *"No connection"*.

After finish of operation with the readers the driver stops polling the receiver until the next request.

# **Operation with bank terminals**



NaftaPOS software is able to communicate with bank terminals for processing of payments done using bank cards like VISA, Mastercard, others. For this it is necessary to connect NaftaPOS to bank terminals able to process these bank cards. NaftaPOS does not deal with bank cards directly and gets all the information about performed bank transactions from connected bank terminal.

## **Used terms**

**PAYMENT OPERATIONS** – operations with bank account of customer: PAYMENT, CORRECTION, RETURN

**PAYMENT** – writing-off money funds from bank account of client

**CORRECTION** – change (in lesser side) of written-off sum from client bank account without usage of bank card. Sum of correction can not be more than written-off sum. Given operation can be applied only in case if the party including given transaction was not completed, otherwise a RETURN operation should be performed.

**RETURN** – return of written-off sum (complete of partial) to account of client with usage of card.

**PARTY** – set of transactions, accumulated within certain period, normally not more than 1 day, expecting its queue for settlements with acquirer organization of merchant. Party can be completed as automatically, so as with a help of POS terminal.

**PROCESSING CENTER** — automated system if transactions processing on bank cards in field of electronic commerce. Main task of processing center is provision of possibility to accept payment using bank cards. Also the processing center coordinates settlements between the bank issuing card, acquirer bank (authorizing the transactions), sales point and the holder of the bank card.

**ACQURER BANK** — bank conducting payments for goods/services using bank cards with which the enterprise has concluded an acquiring agreement

## User interface



User interface at performing payment using a bank card

User dialog is separated into 3 areas: information panel, status panel and user actions panel.

Information panel contains information on order: order stage (opening, closing, payment, correction, return), mode, pump number, fuel type, ordered volume, discount.

Status panel can display a description of performed actions, errors and warnings. Also panel can display state indicators:



🕂 - warning or error

User actions panel contains 4 control elements:

- flag "Postpay" sets a moment of payment for order
- **button** "OK" confirms action
- **button** "Cancel" / "Close" cancels action
- button "Card request" / "Repeat" launches (repeats) procedure for payment or return

## **Operation**

## Appointment

Given module gives a possibility to NaftaPOS software to perform payment operation using bank cards. It allows to provide payments by the bank card as orders for fuel, so as orders for retails products. Module can work in modes "*Preset*" and "*Full tank*".

Given module is universal and allows operation with payment terminals of various manufacturers. Link with physical devices is made through special drivers, which are connected to the modules. Drivers are unique for each model of payment terminals. Module can connect with several drivers of payment terminals same time. Definition of the payment terminal to process the transaction is performed by the number of linked fuel dispenser and selected payment form. Also allowances for processing fuel and products are taken into account. At search of required device a first found device, which satisfies the search criteria, is taken.

## Sequence of operations

At operation with the module it is possible to separate 3 operations: payment, correction and return.

Payment – process of writing-off money funds from the client bank account. Execution of payment is performed at opening (prepayment) or closing (postpayment, "*Full tank*" mode) of order depending on actions of cashier (selection of payment type "*Prepayment*"/"*Postpayment*") or allowances for selected payment form (prohibition of prepayment, postpayment, full tank).

In case if during prepaid order of fuel there is an underfilling – then at closing given order a correction process will be launched – pay-off without without usage of a client card. During correction difference between the ordered cost and dispensed cost of fuel will be returned to client card.

In case if transaction for given order payment was already uploaded to server in structure of last party then attempt to return money funds with usage of client card will be performed.

## **Operations with parties**

Module allows to provide control over parties – sets of performed transactions. Number of transactions is stored in internal counter, which is lead independently from the counter of physical device (payment terminal). Therefore, at first configuration of device it is recommended to upload its current party. This can be done in the terminal itself or to set a flag *"Forced shipment when operating with shift and manual uploading"* and by pressing a button *"Upload"*. Counters are lead for each device separately and include operations for payment, correction and return.

For switching on control over upload it is necessary to set a flag "Enable batch control". If given flag is set – it is recommended to switch off automatic upload of parties on the physical device and not to make it manually on the device. If the device does not support operation with parties – this flag should be unchecked.

There are several conditions for start of parties upload. The main condition of upload is absence of noncompleted orders. Configurable conditions are listed in group *"Transactions sending settings"* in the configuration of device driver.

Parameter *"Maximum batch size"* defines how many processed transactions can be stored for device. Value of this field can be different for different types of payment terminals. This value is recommended to set a bit lesser than a real number allowed in the terminal. Threshold of uploading start defines a moment when attempts to launch a procedure of transactions uploading start.

Upload of transactions can be performed during the process of system operation between fuel dispensings and sales of products. As the payment transactions are performed, the counters will be incremented. Check of counters is performed after closing of any type of order (sale of fuel or product). If any of counters exceeded the threshold of uploading start and linked device does not have non-completed orders – then procedure for party uploading will be launched for this device. If upload procedure was successful – the counters for give devices are zeroed, otherwise the uploading attempts are continued. If the counter of transactions reaches maximum size of party – then operation of this payment terminal will be blocked and at attempt to open a new order on this terminal a message on impossibility to perform operations until upload will be displayed.

At opening a fuel order space for one more transaction is always booked: possible correction of paid sum in case of underfilling. Thus operation of correctness will be situation in the same party with payment operation and will not require a client card for return of money funds.

Also automatic upload of transactions is possible at opening (continuing) and closing or working shift. This option conforms to the same rules as launching of upload between sales of fuel and products. However listed possibilities can send upload transactions in the forced mode. At usage of forced mode condition of exceeding the threshold of accumulated transactions for uploading start by the counter is ignored. For activation of this possibility it is necessary to set a flag *"Forced shipment when operating with shift and manual uploading"*.

#### Configuration

For provision of payment operations the terminal should be configured for operation with processing center. Given setting should be performed by representatives of the acquirer bank.

## ePayPlugin module configuration interface

🛷 ePayPlugin set	tings					×
General settings	Drivers	Terminals configurat	ion			
Operator dialo	g					
Automatic	repeat of	operations when an	error occurs			
Numb	er of atte	mpts: 3 🚔	]			
🗹 Automatic	ally reque	st a card for paymen	t			
Automatic	ally reque	st a card for a refund	if necessary			
Hide order	dialog af	ter successful operati	on			
Hide order	dialog aft	ter successful sale of	goods			
Multipliers						
Use the N	aftaPOS s	ettings				
O Use the op	perating s	ystem settings				
O Special pa	rameters					
A nur	nber of sin	bols after comma:	5			
				ОК	Cancel	Apply

ePayPlugin settings: General settings tab

**Automatic repeat of operations when an error occurs** – parameter launches a cycle of automatic operations repeating at its failure execution. Number of automatic repeats is defined by a parameter "*Number of attempts*", values received are in range from 0 to 10.

**Automatically request a card for payment** – if given flag is not set then at appearing the payment dialog the module will wait for actions of cashier, buttons "Card request" and "Cancel" will be active. If the flag is set then the module will launch the payment procedure automatically. At opening an order the payment operation will be launches only in case if a mode "Postpayment" is forbidden.

**Automatically request a card for a refund if necessary** – if given flag is not set then at necessity to make return of money funds to client bank card the module will wait for actions of cashier, buttons "Card request" and "Cancel" will be active. If the flag is set – then the module will launch the return procedure automatically..

*Hide order dialog after successful operation* – if given flag is not set then after successful completion of payment operations the module will wait for confirmation from the cashier, button "OK" will be active. If the flag is set – then the module will automatically close the dialog and transfer the control to the system. Given setting refers to all types of payment operations and sales of fuel and retail products.

*Hide order dialog after successful sale of goods* – If given flag is not set then after successful completion of payment operation the module will wait for confirmation from the side of cashier, button "OK" will be

active. If the flag is set – then the module will automatically close the dialog and transfer the control to the system. Given setting refers only to payment operation and sale of retail products.

*Multipliers* – sets to the module which source of value of decimal digits numbers will be used. Variants are:

- Use the NaftaPOS settings values are taken from configuration of NaftaPOS system
- Use the operating system settings value is taken from regional settings of operation system
- Special parameters user settings of decimal digits, is defined by value of field "Number of decimal digits"

	ePay	Plugin set	tings								$\times$
C	Genera	l settings	Drivers	Terminals configu	ration						
	List	ofinstalled	payment	terminal drivers —							
	#	Name		Description	Version	Release	Developer		Ins	tall	
	1	driver_in	igenico.dll	NaftaPos	2.0.0.0	28-сен-2017 13:28:15	TechnoTrade		_	1	
									De	elete	
									Del	ete all	
									Det	tails	
							OK	Cance	ł	Apply	

ePayPlugin settings: Drivers tab

**List of installed payment terminal drivers** – given table contains a list of registered in module drivers of payment terminals and short details about them.

Button "Install ... " - selects a payment terminal driver file

Button "Delete" - deletes selected driver from the list

Button "Delete all" - deletes all registered divers from the list

Button "Details..." – shows detailed information on selected driver

|--|

4	ePay	Plugin set	tings					×
(	Genera	l settings	Drivers	Terminals configur	ation			
	List	of paymen	t termina	ls				
	#	Descripti	on	Driver	Disp.	Payment forms		Add
	1	ePayVirt	ual	driver_ingenico.dll	1-2	Deb. card		
	2	ePayVirt	ual	driver_ingenico.dll	3-4, 7-8	Deb. card		Delete
	3	NaftaPos	s	driver_ingenico.dll	5-6	Cash	D	elete all
							5	Edit
						ОК	Cancel	Apply

ePayPlugin settings: Terminals configuration tab

**List of payment terminals** – given table contains a list of payment terminals (physical devices) and short data on their configuration.

Button "Add..." – adds a new device.

Button "Delete" - deletes selected device from the list

Button "Delete all" – deletes all devices from the list

Button "Edit..." - calls a device configuration dialog

**Button** "*Setup*..." – calls a dialog for configuration of unique properties of terminal, which are unique for each device model (connection type, seller identifier, etc). Given dialog can be different for various payment terminals types.

# Dialog of device configuration

🛷 Devid	ce configuration	$\times$
Driver	Linking The parties	
Driv	er	
Naf	ftaPos (driver_ingenico.dll) ~	
	Location: D:\WORK\Направления\\driver_ingenico.dll	
	Version: 6.7.0.0	
	Comment: Virtual driver	]
Pers	sonal device configuration	
Sett	ings file:	
D:\\	WORK\Hаправления\WaftaPOS\WaftaPC Select 💜	·
	OK Cancel Apply	

Device configuration: Driver tab

**Driver** – contains a list of drivers registered in system, defines which driver will given device use. Field "Comment" is used for identification of device (mostly used for logging).

**Personal device configuration** – selection of a file for storing driver configuration, should be unique for configured device.

Ø Device configuration			×
Driver Linking The pa	rties		
Disp.			
Apply for the next fue	dispensers:		
1-2			
Payment forms			
Apply for the next pa	yment forms:		
<ul> <li>Cash</li> <li>Talon</li> <li>✓ Deb. card</li> <li>Waybill</li> <li>Paysheet</li> <li>Akt</li> <li>Dis. card</li> </ul>			
Resolutions			
Use a device for f	uel orders		
Use a device to se	ll goods		
	ОК С	Cancel Apply	

Device configuration: Linking tab

**Disp.** – string specifying pumps numbers, on which it is allowed to make payment using given payment terminal. Given string can contain all digits, space, hyphen and comma, numbers should be in rabge from 1 till 32..

*Payment forms* – list of permitted payment forms, on which it is allowed to perform payment using given payment terminal.

Use device for fuel orders – if the flag is set then the device is allowed to use for payment for sales of fuel.

*Use device to sell goods* - if the flag is set then the device is allowed to use for payment for sales of products.

Device configuration	×
Driver Linking The parties	
Transaction sending settings	
Enable batch control	
Maximum batch size: 5	
ie threshold of the start of unloading: 3	
✓ Send a shipment at the opening of the shift	
Send a shipment at the ending of the shift	
Forced shipment when operating with shift and manual unloading	
Manually sending of the batch	
ATTENTION! Manual dispatch of a consignment can only be performed if all orders that were paid through this device are closed. Otherwise, you may need a client bank card for closing the order	
Upload	
OK Cancel Apply	

Device configuration: Parties tab

**Enable batch control** – this setting allows the module to lead counter of transactions and launch a procedure of parties upload

**Maximum batch size** – maximal number of performed transactions, which the device allows to store until upload

**Threshold of the start of unloading** – number of transactions at reaching which attempts to make uploading are started

**Send shipment at the opening of the shift** – allows uploading of transactions at attempt to start or continue a working shift in system

**Send a shipment at the ending of the shift** – allows uploading of transactions at closing of working shift in system

**Forced shipment when operating with shift and manual uploading** – allows forced unload, ignoring transaction counters

Button "Upload" – launches manual unload of party

# TT Shell – NaftaPOS shell for Windows OS

NaftaPOS software offers its own shell for replacement of classic Explorer.exe Shell for Windows OS. This feature is appointed for situations when you need to make NaftaPOS system to be the only application to be running on a PC and thus protect your PC from unauthorized access by service personnel such as cashiers, so that they do not have access to Windows OS register and file system, NaftaPOS system files and database avoiding any cheatings and tricks. TT Shell is to be enabled instead the standard Explorer.exe Shell in Windows OS and thus the users without due permissions will not be able to run any side applications or enter the Windows file system, the only thing they will be able to do is to run NaftaPOS software and all the allowed utilities.

Rent Rent Rent Rent Rent Rent 188:36

TT Shell works as an application with location D:\NaftaPOS\TTShell.exe.

NaftaPOS TT Shell general view

TT Shell has a configurable user interface with preinstalled themes, you can add/remove icons for running of permitted applications and utilities and you can add/remove widgets to be displayed on the desktop.

It is possible to add/edit/remove icons on the desktop, configuration of the icon properties is done in the right mouse button content menu. It is possible to set password protection to running applications.

By default there are icons for running following applications from the TT Shell:

- NaftaPOS software
- PosSet configuration utility
- NaftaReports viewer

Shortcut settings			?	×
	Picture:			
Name:	NaftaPOS			
Object:	D: WaftaPOS WaftaPO	DS.exe		
Work folder:	D:WaftaPOS			
	Password protecti	on		
Password:				
Confirmation:				
	Hiden			
	Synchronous			
			1.54	7.8

Configuration of icons in TT Shell

It is possible to turn on constantly or turn off the TT Shell, setting is done in the right side menu:

Configurations	2
Desktop	00
Turn on SHELL	
Turn off SHELL	
	<b>ب</b> ېت

Turning on/off the TT Shell

Configuration of the TT Shell includes few option and password to their access:

You can log off the TT Shell or shutdown the computer from TT Shell:



Exiting the TT Shell

It is possible to provide management over printers from the TT Shell:

Printer name		Driver	Port	Mode		
TSC T	TP-244 Pro					
SEC84	425192AE000					
Samsu	Ing M2070 Series (192. 168. 1. 181)			· · · ·		
pdfFa	ctory Pro			By def	aults	
Micros	oft XPS Document Writer					
Microsoft Print to PDF						
Fax						
		Suspend	Resume		Delete job	
ID	Document	State		Pages	Printed	
2	document			1	1	
10	document			1	1	

Management over printers from the TT Shell

Configuraton of the TT Shell desktop includes setting of color scheme, background image, placing of widgets, etc:



Revision: R08

Desktop settings X	Desktop settings
Background Main menu Shortcuts Color schemes	Background Main menu Shortcuts Color schemes
Parameters	Color schemes list
∠ Lock shortcuts	
Highlight reverse	
Colors	O Maroon
Text	O Yellow
Background Highlight	O Green
Widgets Widget	
ي المحالي محالي المحالي محالي مححالي محالي محاليم محالي محالي مححا	Configurations
	All and a second
Widgets	Widgets
	In SHELL
Other	
OK Apply Cancel	OK Apply Cancel

## Configuration of widgets includes the default digit clock and language panel widgets:

Digital dock Language panel	Digital clock Language pane	Language panel
	Enabled	Enabled
	✓ Locked         Alignment         □ Left       20         ✓ Right       20         Ø Right       20         Ø Show background         Show frame         Text brush color (top):       Select         Text brush color:       Select         Background color:       Select         Frame color:       Select         Frame color:       Select	✓ Locked         Alignment         ✓ Left       20         Right       20         ✓ Show background         ✓ Show frame         Text color         Short name frame color:         Select         Background color:         Frame color:         Select         Select





# Backup and restore of configuration and database of NaftaPOS system

As any modern system NaftaPOS system is being constantly developed and new versions of NaftaPOS system are available. For the reason of updating NaftaPOS software with saving of all previous system data, files and configurations a separate Backup/update utility is foreseen.

Utility is called by clicking on button "*Configuration backup and restore wizard*" on tab "*Database*" in NaftaPOS configuration.

It is possible to make backup/restoring of:

- NaftaPOS configuration
- Tanks calibration charts
- NaftaPOS drivers
- NaftaPOS plug-ins
- Report forms
- Products
- Users
- Counterparts
- Database tables

Required items to backup or to restore are selected in the checkboxes in the utility:

🙆 Backup/Restore 🗕 🗙
Options of saving/restoring Configuration Calibration charts Drivers Plug-ins Products forms Products/Product groups/Barcodes/Ingredients Users Continued Facilities
✓ Counterparts/Emitters
Log 14:06:01 Save Coring from registry 14:08:02 Save plugins 14:08:02 Save plugins 14:08:06 Save report files 14:08:06 Export table `APPEND` 14:08:06 Export table `APPEND` 14:08:07 Export table `BARCODE` 14:08:07 Export table `BOOK_CHANGE_LOG` 14:08:07 Export table `BOOK_CHANGE_REASONS` 14:08:07 Export table `CARWASH` 14:08:07 Export table `CARWASH2` 14:08:07 Export table `CARWASH2` 14:08:07 Export table `CARWASHERR` 14:08:07 Export table `CASHFORM`
Saving Restoring Octobe

NaftaPOS backup and restore utility

Backup of the system is made by clicking on the button "*Saving*" and selection of the file name of the backup and its location. For restoring you need to press a button "*Restoring*".

#### Notice!

At restoring current files/configurations will be replaced with files/configuration from the backup!

When NaftaPOS software is to be updated – it is necessary to use Backup/update utility to save and restore all the configuration and database tables.

Whole process of NaftaPOS system update is to be done as follows:

- 1. Take a backup of the present NaftaPOS system using Backup/restore utility (select points, which you need to backup from it).
- 2. For any unforeseen situations save all NaftaPOS system files from *Drive:\NaftaPOS\* folder to some backup place (these files probably will not be required in future, but nevertheless we should do it for the case if there will be any inconsistency with new version, if the new system is working normally after the update you are free to delete all these files).
- 3. For any unforeseen situations save all MySQL database files from *C:\mysql\data\* folder to some backup folder (these files probably will not be required in future, but nevertheless we should do it for the case if there will be any inconsistency with new version, if the new system is working normally after the update you are free to delete all these files).
- 4. Uninstall previous version of NaftaPOS software (follow steps described in section "*NaftaPOS system uninstallation*" below).
- 5. Install a new version of NaftaPOS software.
- 6. Using Backup/restore utility restore configuration from the previous NaftaPOS system (from a file, which was saved in point 1 above).
- 7. Make sure that all configuration and database of the system are well-restored, recheck all settings and NaftaPOS system operation.

It is possible to restore NaftaPOS database from previously automatically backup database using "*Data retoring*" utility. This utility is called by clicking on button "*Recover data from the backup database*" on tab "*Database*" in NaftaPOS configuration. You can select the tables to restore and the shift number, from which the data should be taken from.

Data restoring	×
Data          sessions         append         operator         product         remain         rfindata         rtrk         sales	Sessions 1 - 21.05.2018 20:30:35 2 - 22.05.2018 16:16:19
Select all Unselect all	Select all Unselect all
	OK Cancel

NaftaPOS backup database restore utility

# NaftaPOS system localization

NaftaPOS system is easy to be localized to any international language. All text constants and phrases are stored in file *lang.xml*, which is located in NaftaPOS\ folder. So, it is necessary to add to it new language and translate the phrases to this new language:

ang.xml - Lister	
Файл <u>П</u> равка <u>Вид С</u> правка	
<trans language="es">"Clave \" combustible Record terminacion recepcion \""</trans> <trans language="pt">"Chave \" combustible Record terminacion recepcao \""</trans> <trans language="pt">"Chave \" Record combustivel conclusao recepcao \""</trans> <trans language="ru">"Клавиша \"Зафиксировать Окончание Прихода\""</trans>	*
	(=)
- <message></message>	
<pre><src>"ydanuts"</src> theread heread her</pre>	
<trans language="en"> Delete </trans>	
<t< td=""><td></td></t<>	
<trans (datas)<="" <="" language="pt" locum="" tr="" translation=""></trans>	
- <message></message>	
<src><sup>®</sup>Открыта"</src>	
<trans language="en">"Opened"</trans>	
<trans language="es">"Abierto"</trans>	
<trans language="pt">"Aberto"</trans>	
<trans language="ru">"Открыта"</trans>	
- <message></message>	
<src>"Открыть"</src>	
<trans language="en">'Open''</trans>	
<trans language="es"> April </trans>	
<pre>ctrans language= pt &gt; April </pre> /trans>	
<sr>&gt;"Hanfaaka "</sr>	
<trans language="en">"Extra charge "</trans>	
<trans language="es">"Carga adicional"</trans>	*
Готово	

NaftaPOS localization file lang.xml

NaftaPOS system has a localization utility *translator.exe* (location is NaftaPOS\Translation\ folder) to work with localization file lang.xml. This utility allows easy possibilities for adding new languages and translating of the phrases.

🚝 Translator →	_ 🗆 ×
📲 🖿 📥 🖿 💽 💭 🥅	
source language Tu	target language 🛛 en 💌
source language message	target language message
"Фиксированные объемы"	Fixed volumes
"Уровнемеры"	ATGs
"Загрузка языкового файла"	Language file loading
"Закрыть активные заказы"	Close active orders
"Ограничение демо версии 5л !"	Limitation of demo version is 51 !
"Отчет по счетчикам ТРК"	Report on pump totalizers
"Атоибиты пользователя"	User attributes
Records count: 4360 Working with: D:\NaftaPOS\lang.xml	

Localization utility translator.exe

Some new sections of NaftaPOS software are using a newer version of localization utility. This utility is found in *NaftaPOS\LCConversionTool* folder. It has the same idea as *translator.exe* utility, however is using

## a new design and new format of localization files:

LCC	onversior Inguage	n Iool - Localization Managment Tool <u>I</u> dentificator <u>T</u> ranslation <u>H</u> elp		- U
5 2		🥏    🕫 🔃    🏟 👜 🗡   🞥	🗛    🏷 🟦   🏥 🖉 📳 🏠	0
entific	ators T	ranslation		
			Current language: English [EN: 45]	
N₽	ID	Define	Accordance	State
1	0	Файл	File	Saved
2	1	Создать	Create	Saved
3	2	Открыть	Open	Saved
4	3	Сохранить	Save	Saved
5	4	Сохранить как	Save as	Saved
6	5	Закрыть	Close	Saved
7	6	Выход	Exit	Saved
8	7	Язык	Language	Saved
9	8	Управление	Manage	Saved
10	9	Идентификатор	Identificator	Saved
11	10	Добавить строку	Add line	Saved
12	11	Удалить строку	Delete line	Saved
13	12	Удалить все строки	Delete all lines	Saved
14	13	Перевод	Translation	Saved

Localization utility LCConversionTool

			M    🏷 👸   🏥 🖉 📑 🚯    I	6
ntific	ators Ti	ranslation		
			Current language: English [EN: 45]	
Į₽	ID	Define	Accordance	State
i.	7	Язык	Language	Saved
(	8	Управление	Manage	Saved
.0	9	Идентификатор	Identificator	Saved
1	10	Добавить строку	Add line	Saved
2	11	Удалить строку	Delete line	Saved
3	12	Удалить все строки	Delete all lines	Saved
.4	13	Перевод	Translation	Saved
.5	14	Удалить соответствие	Delete define	Saved
.6	15	Удалить все соответствия	Delete all defines	Saved
.7	16	Экспортировать	Export	Saved
8	17	Справка	Help	Changed
9	18	Идентификаторы	Identificators	Saved
0	19	Текущий язык:	Current language:	Saved
1	20	Нет открытых файлов	There is no opened files	Saved

Localization utility LCConversionTool

# NaftaPOS system trial version

For trial running (testing) of NaftaPOS software it includes a trial version. Its difference from standard full NaftaPOS software system is that it can work without a Guardant protection dongle, but requires constant Internet connection.

Actually trial version of NaftaPOS software also works through a Guardant dongle, but dongle is located remotely on server of TECHNOTRADE LTD.

In order to run trial version of NaftaPOS software it is necessary to:

- 1. Download NaftaPOS software installation file
- 2. Install NaftaPOS software. During installation it is necessary to specify that trial version of NaftaPOS is to be installed:

Setup - T&T NaftaPOS	
Which version to install:	
🔘 Full (requires USB-dongle)	
(Trial (requires key-hie))	
	< Back Next > Cancel

Select "Trial" version of NaftaPOS system to be installed

- 3. After installation is complete place received from TECHNOTRADE LTD key-file for NaftaPOS system file with extension .npr) to NaftaPOS folder (Drive:\NaftaPOS\).
- 4. Run POSSet.exe utility to configure NaftaPOS software.
- 5. Run NaftaPOSTrial.exe file to launch trial version of NaftaPOS.

Trial version of NaftaPOS works like a full version with all possibilities and does not have limited functions. But as it is a trial version of NaftaPOS software - it requires constant access to Internet of the PC, on which it is launched. In case if Internet connection disappears during operation of NaftaPOS trial version – NaftaPOS will be switched to Demonstration mode of operation, which has limitations on sales of fuel and products.

# Things to configure first in NaftaPOS system

Things that need to be configured first in NaftaPOS are:

- 1. Enter petroleum products present on the site in NaftaPOS configuration on tab 'Tanks'.
- 2. Configure tanks: set quantity of tanks, their height, fuel products inside of them on tab 'Tanks' in NaftaPOS configuration.
- 3. Configure pumps: enter quantity of pumps, set correspondence between pumps nozzles and tanks on tab 'Pumps' in NaftaPOS configuration.
- 4. Configure drivers of cash register, controller and tanks (ATG systems) on tab 'Drivers' in NaftaPOS configuration.
- 5. Set configurations on 'General' in NaftaPOS configuration.
- 6. Configure users and their permissions on tab 'Users' in NaftaPOS configuration.
- 7. Set correct adjustments on tab 'View' in NaftaPOS configuration.
## Remote data gathering from a petrol station network and monitoring

NaftaPOS software leads a database, where it stores all the sales and operations (see section "*NaftaPOS database structure*" below). Using its data it is possible to monitor the petrol station remotely.

NaftaPOS can be used together with NextReports Server web-server application (please read more on <u>http://www.next-reports.com/products/nextreports-server.html</u>), which allows to have a web portal with following possibilities:

- review of NaftaPOS operation online
- review of NaftaPOS reports
- adding new reports and charts
- schedule reports to be automatically delivered via E-mail, FTP, SSH, Windows Share or WebDAV to your business contacts in most popular file formats like HTML, EXCEL, EXCELX, PDF, DOCX, RTF, CSV, TSV, TXT or XML
- supervision over users and their actions on the web-portal

Having access to databases of several installed NaftaPOS systems allows to gather into one server all data from the petrol stations network to provide:

- formation of reports on operation of all petrol stations in various views for analytics and statistics of petrol stations activity to provide decisions for optimization of petrol stations operation;
- online monitoring of each petrol station activity (fuel dispensers operation, remains and parameters of fuel in tanks, current working shift operations) to provide control over personnel at petrol station and security;



Operation of web reporting system for collection of data from NaftaPOS systems

Thus using a standard web-browser it is possible to receive reports on operation of NaftaPOS systems at petrol stations and also to online monitor their activity:

HEAD OFFICE REPORTING				
NextReports is a full featured reporting tool that competes with any suite on the market. Easy to develop and deploy, it allows you to quickly access key information and to make rapid decisions in a highly competitive market.		is a st		
User Name	NextReports Server			
admin	can schedule Next and Jasper reports with automatic delivery via E-mail, FTP, SSH, Windo			
Password	EXCELX, PDF, DOCX, RTF, CSV, T	SV, TXT and XML. NextReports Server can present your		
•	charts and special reports like tab You can use BI features like drill-do	le, alarm, indicator, display in real time inside dashboards. wn, pivots and analysis tables.		
	NextReports Engine	NextReports Designer		
LOGIN	is a Java platform development	has an intuitive interface that makes report creation a		
Forgot password	library which can be used to run Next reports inside your	quick and easy task. Designer can connect to most popular databases like Oracle, MySql, MSSQL,		
	applications. This library is light	PostgreSLQ, Firebird, SQLite, Derby, Vertica, Pervasive,		
	applications. This library is light and very easy to use.	Teradata, MS Access and to CSV files.		

#### NextReports system – login page

		er/app/non	ic							
AP OFFICE REPO	ORTING						W	Change Password   Lo Velcome . You are logged in as ad		
DASHBOARDS	🖄 Charts 🗻 D	ata sources	Z Scheduler	Sector Monitor	Security 🏼 🌽 Settin	gs 🔗 Mig	ration			
Add dashboard	Add widg	et Refresh	Global Dashbo	ard Settings Pd1						
🔀 🔳 My dashboard	✓ Pumps mo	nitoring 🔀	¢							
🔆 🔳 MONITORING	Pump 🗧	Nozzle 🗧	Product	🗧 Status 🗢	Payment form \$	Price 💠	Dispensed volume 🔷 🖨	Dispensed amount 🔶		
No. 10 Pumps sales	1	2		Ready For Work	-	12.70	4.00	50.80		
X 📓 Tanks indicator	2	3	Diesel	Working	Cash	11.40	32.75	373.35		
	3	2	12.1	Ready	2	12.70	5.00	63.12		
	4	1	Diesel	Working	Waybill	11.40	192.02	2,189.03		
				and the second s						
	V Tanks mon	🗢 Tanks monitoring 🛛 🔀								
	Tank 🗢	Product	Price \$	Product, mm	Product, I	\$ Water, mi	n 💠 Water, i 💠	Temperature, C 🗢		
	1	Norm	10.25	2,388. <mark>2</mark> 8	19,102.80	0.0	0.00	20.00		
	2	Prem	12.70	2,063.00	22,570.00	0.0	0.00	20.00		
	3	TIR	11.40	1,809.91	10,126.75	0.0	0.00	20.00		
	.4	Unlead	9.85	759.07	6,488.73	0.1	0.00	20.00		
	Shift monit	oring 🔀								
	Operator	÷	Shift state	÷	Shift duration, min	¢	Cash rema	ins 💠		
	s	ervice	C	ontinued		92		1,874.30		

NextReports system – online monitoring over petrol station operation: pumps, probes and shift



NextReports system - online monitoring over petrol station operation: pumps sales



NextReports system – online monitoring over petrol station operation: tanks fuel level and volume

The NextReports web portal allows to import all reports and charts from NaftaPOS and to run them through a web-site with specification of all parameters:

→ C D localhost:8080/nextrep	orts-ser\	er/app/home						753
A OFFICE REPORTING	<b>5</b> 7						Welco	Change Password   me . You are logged in as
Dashboards 📃 REPORTS 🖄 Charts	Da Da	ta sources 🛛 🔁 Scheduler 🛛 🖶 Monitor	Se Se	ecurity 🥜 :	Settings	P Migration		
ports								
🞽 Expand All 🛛 😽 Collapse All		Add Folder 🛛 🐔 Add Next Report 🛛 🔒 A	dd Jasper I	Report 🔍 S	Search			
reports		Name ≑	Actions	Type 💠	Created	Creation \$	Modified	Modification
		🐐 Fuel pump totals report	×	Next Report	admin	6/22/15 2:20 PM		
		Tuel receptions complete report	×	Next Report	admin	6/22/15 2:20 PM		
		Tuel receptions detailed report	×	Next Report	admin	6/22/15 2:20 PM		
		🐔 Fuel receptions summary report	X	Next Report	admin	6/22/15 2:20 PM		
		🐡 Fuel sales by cards report	×	Next Report	admin	6/22/15 2:21 PM		
		🗳 Fuel sales complete report	X	Next Report	admin	6/22/15 2:21 PM		
		🐡 Fuel sales detailed report	×	Next Report	admin	6/22/15 2:21 PM		
		Fuel sales payment form summary report	×	Next Report	admin	6/22/15 2:21 PM		
		Fuel sales summary report	*	Next Report	admin	6/22/15 2:22 PM		
		🍣 Fuel tanks report	8	Next Report	admin	6/22/15 2:23 PM		
		accumulated sales	*	Next Report	admin	6/18/15 3:06 PM		
		and the second s	8	Next Report	admin	6/17/15 4:20 PM		
		🐔 Online pumps totals	8	Next Report	admin	6/18/15 3:06 PM		
		nline shift monitoring	*	Next Report	admin	6/17/15 4:20 PM		
		and the second s	8	Next Report	admin	6/18/15 2:37 PM		
		Products movements report	×	Next Report	admin	6/22/15 2:23 PM		
		Products receptions complete report	×	Next Report	admin	6/22/15 2:23 PM		
		Products receptions detailed report	8	Next Report	admin	6/22/15 2:23 PM		
		Products receptions summary report	8	Next Report	admin	6/22/15 2:23 PM		
		Products remains report	X	Next Report	admin	6/22/15 2:24 PM		
		🐡 Products sales complete report	×	Next Report	admin	6/22/15 2:24 PM		
		🏶 Products sales detailed report	×	Next Report	admin	6/22/15 2:25 PM		
		Products sales payment form summary report	×	Next Report	admin	6/22/15 2:25 PM		
		🐡 Products sales summary report	X	Next Report	admin	6/22/15 2:26 PM		
		🐔 Tank 1 fuel height	X	Next Report	admin	6/18/15 2:17 PM		

NextReports system - list of available reports



NextReports system – setting generated report parameters

Administrators of the system can create users and give them permissions (assign users to groups with specific rights) and also to monitor activity of each user:

extReports Server X III Fuel sales o	detailed report					
C localhost:8080/nextrepc	orts-server/app/l	home				F 55 🛠 🕈
aftaReports						Change Password   Welcome . You are logged in as
ashboards 📄 Reports 🖄 Charts	Data sources	Z Scheduler	Monitor SECU	RITY 🥜 Settings 💰	Migration	
🗎 Expand All 🛛 😽 Collapse All	Create Gr	roup 🤐 Search				
security	Name Name	\$ Actions	Created 🗢	Creation \$	Modified \$	Modification \$
groups users	🔲 🍰 all	×				
A RECEIPT	🔲 🍰 Naft	aCard 🔀	admin	3/10/15 12:19 PM	admin	6/22/15 2:40 PM
	🔲 🏼 🍰 Naft	aPOS 🔀	admin	6/22/15 2:40 PM		
	🔲 🏾 🍰 Use	r 🕅 🔀	admin	3/9/15 3:29 PM	admin	6/22/15 2:40 PM

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ay	• 6/22/15							Rows per page	
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	Fuel sales detailed report	view	admin	user	6/22/15 2.37 PM	00.00.00	6/22/15 2.37 PM	SQL	~

NextReports system is easily configured:

	iono ocrively app; nome		
Application's look Synchronizer Thread pool IFrame	S Data sources Scheduler Base Url * Reports Home * Reports Home * Reports Url * Mail Server Ip Mail Server Port Mail Server From Mail Server Port Mail Server Port Mail Server Password Mail Server Enable Tis Connect Timeout (s)*	Monitor Security SETTINGS Migratio	n
/ Integration	Query Timeout (s)* Update Interval (s)* Auto Open Change	600 () 60 ()	

*NextReports system – settings* 

For monitoring of a petrol station remotely a petrol station with NaftaPOS software should have a static IPaddress to allow web-server access its database remotely and get required data. In case if there is no static IP-address available it is possible to use dynamic DNS from such service providers (for more details as an example visit a web-site <u>www.noip.com</u>).

Monitoring of the NaftaPOS system operation is done using a plug-in "*Station monitoring plugin*" for online monitoring of petrol station:

- fuel dispensers activity
- tanks
- working shift

The plugin creates 3 tables in the database for each of the monitored essences "pumpmonitor", "tankmonitor" and "shiftmonitor". In order to make this table get data – it is necessary to activate them in plugin configuration (plugin is adjusted In NaftaPOS configuration on tab "Additional modules"):

#### NAFTAPOS POS SYSTEM SOFTWARE FOR PETROL STATIONS

7 Pump mor		
I amp mor	hitoring	
	Pump count: 4	\$ 🕘 Update tabl
🗾 Tank cou	nt:	
	Tank count: 4	\$ 🕑 Update tabl

Station monitoring plugin configuration

**Checkbox** "*Pump monitoring*" selects should the "*pumpmonitor*" table be filled with data or no. Enable this checkbox to have the table be constantly updated with data.

Field "Pump count" sets quantity of pumps to monitor.

**Checkbox** *"Tank monitoring"* selects should the *"tanlmonitor"* table be filled with data or no. Enable this checkbox to have the table be constantly updated with data.

Field "Tank count" sets quantity of tanks to monitor.

**Checkbox** *"Shift monitoring"* selects should the *"shiftmonitor"* table be filled with data or no. Enable this checkbox to have the table be constantly updated with data.

Selector "Refresh interval" sets the period in milliseconds how often data in the tables should be updated.

Buttons "Update table" bring the modifications made to the tables.

Monitoring plug-in automatically changes the tables when configuration of NaftaPOS is changed, so it does not require manual correction in case if NaftaPOS configuration is changed.

### Structure of table "pumpmonitor":

NO.	NAME	DESCRIPTION
1	Id	Primary key
2	PumpId	Pump identification number
3	StatusId	Pump status identification number
4	StatusName	Pump status name
5	NozzleId	Nozzle identification number currently taken up on fuel point
6	Tankid	Tank identification number to which a nozzle is linked
7	ProductId	Fuel product identification number
8	ProductName	Fuel product name
9	PayFormId	Payment form identification number
10	PayFormName	Payment form name
11	IsDispensing	Flag showing whether dispensing process is on
12	DispVolume	Volume of fuel being currently dispensed (if IsDispensing flag equals true),
		or volume dispensed in last transaction and being displayed on the pump
		(if IsDispensing flag equals false)
13	DispAmount	Money amount of fuel being currently dispensed (if IsDispensing flag
		equals true), or money amountO dispensed in last transaction and being
		displayed on the pump (if IsDispensing flag equals false)
14	DispPrice	Price of product displayed on the pump in accordance with taken up nozzle
		currently or in previous transaction
15	LastVolumeTotalValue	Last value of volume total counters on the dispenser (updated in the end
		of every transaction)
16	LastAmountTotalValue	Last value of money amount total counters on the dispenser (updated in
		the end of every transaction)

#### Structure of table "tankmonitor":

NO.	NAME	DESCRIPTION
1	Id	Primary key
2	Tankid	Tank identification number
3	ProductId	Fuel product identification number
4	ProductName	Fuel product name
5	TankHeight	Total height of tank in mm
6	TankVolume	Total volume of tank in liters
7	ProductHeight	Current height of fuel product in tank in mm
8	ProductVolume	Current volume of fuel product in tank in liters
9	WaterHeight	Current height of water in tank in mm
10	WaterVolume	Current volume of water in tank in liters
11	Temperature	Current temperature of fuel product in tank in degrees Celcium
12	TempCompVolume	Current temperature compensated volume (15 degrees Celcium) of fuel
		product in tank in liters
13	Density	Current density of fuel product in tank in kg/m3 units
14	Ullage	Current volume of empty space in tank in liters
15	IsDelivery	Flag showing whether delivery of fuel product into tank is going

### Structure of table "shiftmonitor":

NO.	NAME	DESCRIPTION
1	OperatorId	Operator (cashier) identification number
2	OperatorName	Operator (cashier) name
3	ShiftStateId	Current state of a working shift (0 - closed, 1 - opened, 2 - blocked, 3 - continued)
4	ShiftStateName	Current state of a working shift
5	ShiftDuration	Duration of current working shift from beginning in minutes
6	CashRemains	Cash received during a current working shift

# NaftaCards fuel card system for petrol stations



Application of the payment and discount loyalty card system is a good way for any petroleum company to attract new customers to its services and keep old and existing customers constantly customers with it. With application of the discount system a petroleum company gains a possibility to attract customers for a long term, stabilize groups of loyal customers and increase turnover of the company.

At considered creation of tariff policies it becomes profitable for the customer to purchase petroleum and services more often and in bigger quantities, which as a result makes a bigger profit to a petroleum company.

Loyalty card system can work as with RFID- cards, so as with cards with printed bar-code on it.

**NaftaCards fuel cards system for petrol stations** – hardware and software complex, appointed for provision and account of fuel sales at petrol station networks using fuel cards with fuel volume, money and discount wallets or their mixtures.

More technical information regarding NaftaCards fuel card system please find on its web-page: http://www.technotrade.ua/fuel-card-system.html.

# NaftaPOS system uninstallation

Uninstallation of NaftaPOS software is made either from Windows OS Control Panel in menu "Add and remove programs" or by running an uninstallation file /NaftaPOS/unins000.exe and following instructions, specified in installation wizard windows:



Uninstallation process - confirmation request

At removing the system it will propose to remove Guardant USB dongle drivers from the system:

Guardant Drivers (5.50.86) Setup			
Welcome to the Guarda	nt Drivers So	etup Wizard	
Select whether you want to reinstall or re	move Guardant Driv	ers.	
<ul> <li><u>Beinstall</u> "Guardant Drivers"</li> <li><u>Remove Guardant Drivers</u></li> </ul>			
	Cancel	< <u>B</u> ack	<u>F</u> inish

Removing of Guardant USB dongle drivers from the system

T NaftaPOS Uninstall	X
Uninstall Status	-
Please wait while 18,1 NartaPO5 is removed from your computer,	
Uninstalling T&T NaftaPOS	
	,
	Cancel

Removing of NaftaPOS files

During uninstallation process services required for NaftaPOS operation are removed:

- T&T database server
- T&T Scheduler
- MySQL



Removing of NaftaPOS services

In case if the wizard is unable to delete all NaftaPOS files – it will throw a warning that some of the remaining files should be deleted manually:



Completion of NaftaPOS system uninstall



Completion of NaftaPOS system uninstall

After the NaftaPOS system was uninstalled it is necessary to check that folder NaftaPOS with all including files is deleted from the drive, where NaftaPOS system was installed.

Also it is necessary to check that 2 branches in Windows OS system registry were deleted (delete them if they are present):

- HKEY\_CURRENT\_USER\Software\T&T
- HKEY\_LOCAL\_MACHINE\Software\T&T

Also it is necessary to check that NaftaPOS services are removed from the services list of Windows OS:

- T&T database server
- T&T Scheduler
- MySql