

Program of elevators' dispatching MPultPro

Manual for adjustment and usage.

This document describes adjustment and features of usage of the elevators' dispatching program MPultPro and related modules.

1. Purpose.

MPultPro is designed for:

- graphic and sound displaying of information coming from equipment;
- logging of information coming from equipment and operator's actions;
- analysis of saved information;
- provision of loudspeaker communication with elevator cage or machine room;
- adjusting of lift units;

2. Input of information about controlled elevators.

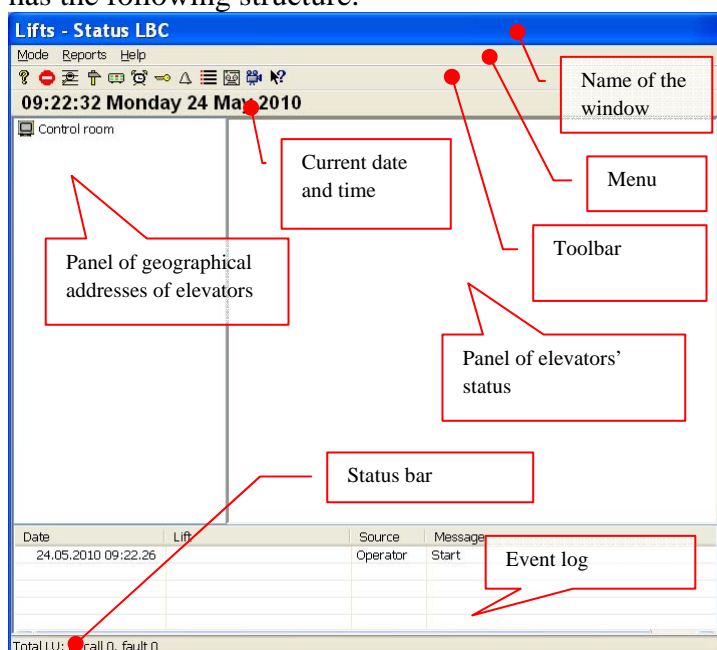
You can find the program file MPultPro.exe in the folder MPultPro of the installed SW. Links (shortcuts) of the program file are placed to the menu «Start»\ «All programs»\ ... and to Desktop during the installation process.


MPultPro has two operating modes:

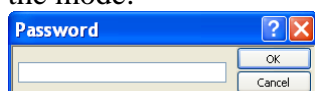
- Operator mode
- Administrator mode.

The Operator mode is designed for monitoring of condition of elevators. The Administrator mode is designed for adjusting of the program.


After first run of MPultPro the program is in the Operator mode and the program window has the following structure:



To input information about controlled elevators you need to switch to the Administrator mode. You can do this by using of the menu «Mode»\ «Switch to Administrator mode» or by clicking the icon  in the Toolbar. Anyway you need to enter password in the panel to switch the mode:



123456

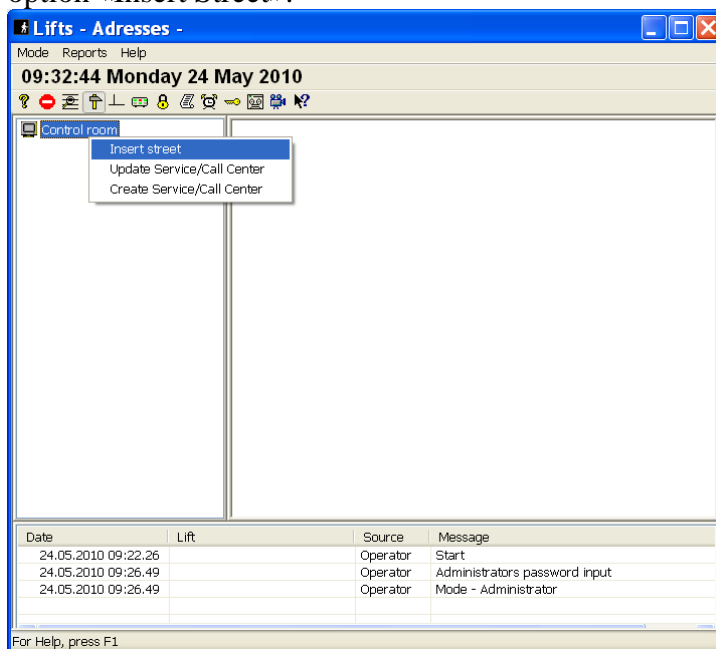
After switching to the Administrator mode it is recommended to change the password. For this purpose you need to use the menu option «Mode»\ «Password change ...»\ «Password setup for Administrator mode access» or click the icon  in the toolbar and enter new password in appearing panel (the same for both fields) and click the button «Save».

The administrator mode has different set of icons in the toolbar, menu options, borders of panels are thicker. It allows moving borders of panels.

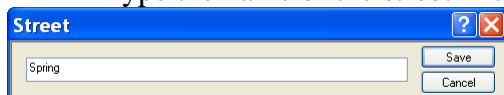
Elevators in the Address panel are represented as the hierarchic structure:

- Control room
 - Street
 - Building
 - Entrance

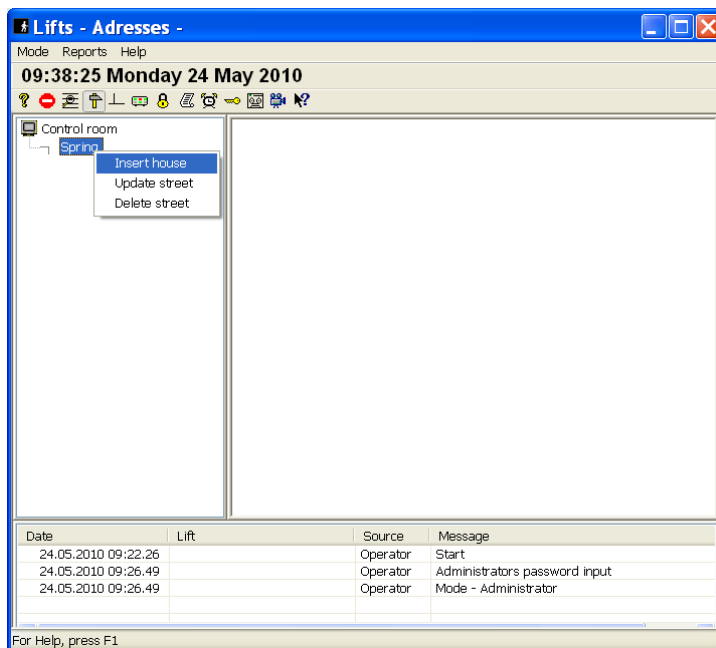
To add the street click the right mouse button on the line of the Control room and choose the option «Insert Street»:



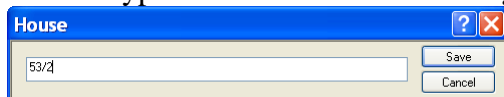
Type the name of the street in the panel and save it:



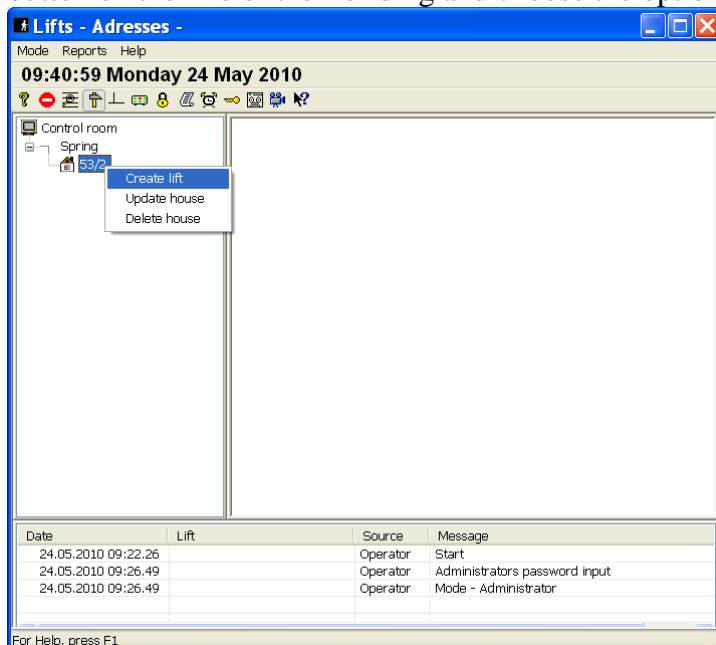
To add the number of the building click the right mouse button on the line of the Street and choose the option «Insert house»:



Type the number of the building in the panel and save it:



To add the number of the entrance (and elevator) in the building click the right mouse button on the line of the Building and choose the option «Create lift»:



The parameters panel of the elevator on set of fields can be of two variants. It depends on the way MPultPro connects with this lift unit. MPultPro can receive information from LU (and transfer information to LU) in two ways:

- Through the network of transfer of data «Ob»
- Through the support service of LU 6.1 Pro.

Source of information available for MPultPro is defined by the installation file used during installation of SW of the Dispatching complex.

In the case of installation of the file LKDSDrv.msi (or LKDSDrvLLL.msi where LLL is the user interface language of programs) the data transfer network «Ob» is available.

In the case of installation of the file LKDSProLL.msi where LL is the user interface language of programs the support service of LU 6.1 Pro is available.

Dispatching complexes based only on LU 6.1 Pro can be easily created on the basis of SW installed from the file LKDSProLL.msi since adjusting of the whole complex becomes easier.

Dispatching complexes based not only on lift units LU 6.1 Pro but also on LU5.x, LU6 should be created on the basis of SW installed from the installation file LKDSDrvLLL.msi.

The server of LKDSDrv provides interaction of MPultPro with the transmission network «Ob». It is installed on the computer simultaneously with installation of MPultPro from the file LKDSDrvLLL.msi. Operation of the server of LKDSDrv is described in the manual for its adjusting.

Support service of LU 6.1 Pro is installed on the computer simultaneously with installation of MPultPro from the file LKDSProLL.msi.

In the case the source of information is the transmission network «Ob» the parameters panel of the lift unit will be the following:

The screenshot shows a software window titled "Spring, 53/2, 1 (1)". It contains two main sections: "General parameters" on the left and "Lift reference parameters" on the right. In the "General parameters" section, fields include "Entrance" (1), "Abbreviation" (1), "Unique code" (5F82969BF8249909F91DF1832DFD6B0), "User event" (dropdown), "Type" (Lift), "Number of floors under" (0), "Floor number" (input), and checkboxes for "Managed" (checked) and "Included in statistical control". The "Link provider with LU" is set to "Network LMDS". The "LU address" section includes "Subnet number" (0), "Node No." (0), "Slot No. in the node" (0), and "Address on LB" (0). The "Camera-recorder parameters" section has a "Command string" field. The "Lift reference parameters" section lists various technical specifications like "Lift owner", "Headman", "Serviceman", "Registration N", "Lift type", "Elevating capacity, kg", "Speed, m/sec", "Number of stops", "Start-up year", "Next engineering certification", "Lift manufacturer", "Lift drive", "Traction sheave, mm", "Control cabinet", and a "Note" field.

In the case the source of information is the support service of LU 6.1 Pro the parameters panel of the lift unit will be the following:

The screenshot shows a software window titled "Spring, 53/2, (1)". It contains two main sections: "General parameters" on the left and "Lift reference parameters" on the right. In the "General parameters" section, fields include "Entrance" (input), "Abbreviation" (1), "Unique code" (F4225B22E5BF438881449ED10E15F06F), "User event" (dropdown), "Type" (Lift), "Number of floors under" (0), "Floor number" (input), and checkboxes for "Managed" (checked) and "Included in statistical control". The "Link provider with LU" is set to "Service supporting LU HELIUM Pro". Below this, there is a field for "Index LU HELIUM Pro". The "Camera-recorder parameters" section has a "Command string" field. The "Lift reference parameters" section is identical to the previous screenshot, listing various technical specifications.

Majority of fields are common. They differ from each other only by one parameter - identification of the lift unit for source of information (since the source is different).

In the field « Entrance » you need to type the number of the entrance of the building where the elevator is or other short characteristic of the elevator in the case the number of the entrance does not describe position of the elevator in the building or in the case of existing of several elevators in the entrance (passenger or service elevator) or in the case of office building.

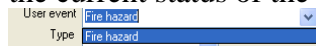
In the field «Abbreviation» you can type the identification code for personal usage which will appear in the address tree, in number of reports, in the log book after appropriate adjusting.

The field «Unique code» represents the unique identification code of the elevator which is formed by the operating system in the moment of adding of the elevator to the structure and it can not be changed later. The unique code is used for identification of the elevator:


- In Event log.

- In the name of the file which contains information about prehistory of failure of the elevator (in the folder MPultPro\LBBAD)
- In the name of file which contains information about statistics of operation of the main gear and gear of elevator's doors (in the folder MPultPro\STAT).
- In the name of the file which contains notes for the elevator (in the folder MPultPro\NOTE)

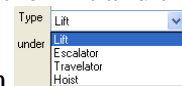
In the case the lift unit does not use the «ABL» input (automatic blocking) for connection with the elevator's control station, this input can be used in you own discretion, i.e. for indication of other events (see documentation on lift units). In this case (with the help of the field «User event ») you can assign the signal's type which will be saved in the event log and displayed in the current status of the elevator. In the case of clicking the arrow on the right of the field



you can choose the special type «Fire hazard». It provides the event

with the special priority «fire hazard », the icon  and sound accompaniment. Type of the event for all lift units can be assigned using the menu «Mode»\ «Assignment of event type of the user...». The type assigned for the particular lift unit has higher priority than assigned for all elevators.

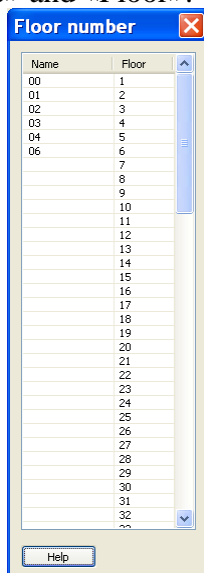
Lifts units can be connected not only to elevators but to other lift and transport



mechanisms. In the field «Type» you can choose the mechanism mechanism affect displaying of status in the status panel.

Type of the

In the field «Number of floors under» you need to type the number of basement floors which are served by the elevator for correct displaying of the elevator's position in the shaft. This displaying can be received in the Operator mode by clicking the menu option «Show the dynamics of operation of this elevator». When displaying the dynamics of operation floors are numbered from the 1st to the maximum one. In the case of specifying of the number of basement floors in the field «Number of floors under » the numeration will be made taking into account basement floors. If necessary you can assign random names of floors by clicking the button «Floor number». Specifying of names of floors is made in the list which consists of two columns «Name» and «Floor»:




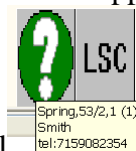
The column «Floor» shows the number of the floor to which the name is assigned. Floors in the column «Floor» are numbered from 1 to 99 regardless of the number of specified basement floors. To assign the name for the floor you need to click the left mouse button to the left of the number of the floor in the column «Name». Input field will change its color into blue. Then click the left mouse button one more time. The frame will appear around the input field.

Then you can input the name. **IMPORTANT** – to complete input of the name move to another input field of the name and click the left mouse button.

The term «Managed» allows to add new elevators to the structure, temporarily ending dispatching of elevators due to some reasons (for example – full repair).

The term «Added to the static control» is reserved for using in future versions of MPultPro and micro-programs of lift units.

Group of parameters «Lift reference parameters » describe general characteristics of the controlled elevator. Almost in all fields of the group you can choose the value of the parameter from the pop-up list by clicking the icon  to the right of the field. The list is made from previously entered values. The data entered in the field «Note» appear in the case of hovering of



the cursor on rectangle of the elevator in the status panel . To move to the next line of the field «Note» you need to simultaneously press buttons Ctrl and Enter.

You can enter in field «Command string» the Windows prompt to this field. This prompt will be executed after clicking the button «Videocamera» in the control panel of the elevator. For example, for video monitoring of the elevator cage you can use IP camera which is in the network containing dispatching computer (the computer with the MPultPro running). You can use Internet Explorer to view the image. In this case the command prompt will be the following:

"C:\Program Files\Internet Explorer\iexplore" http://192.168.2.1

Or:

"C:\Program Files\Internet Explorer\iexplore" C:\LKDS\Camera\camera.html

In the case visualization is described and adjusted in the file C:\LKDS\Camera\camera.html. For Internet Explorer it is obligatory to specify the full name of the file including the path and the disk.

The image can be displayed not only by Internet Explorer but another program provided by the designer of the camera or created individually. In this case in the field «Command string» you need to specify the program file and parameters.

In the case of specifying of the «Service supporting of LU 6.1 Pro» as the source the parameters panel of the elevator has the field «Index of LU 6.1 Pro». This field is designed for entering of index of the lift unit in the configuration of the service of LKDSPro. The service of LKDSPro is adjusted by LKDSProCfg. In the same program you can find the index of the lift unit. LKDSProCfg is installed to the computer as a part of installation of the file LKDSProLL.msi.

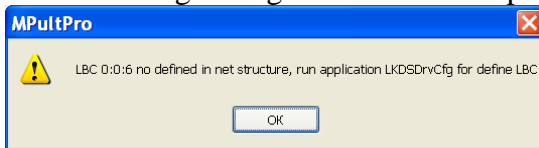
In the case of specifying of the «Data communication network 'Ob'» as the source the group «LU address». This group consists of the following fields «Subnet number », «Node No. », «Slot No. in the node», «Address on». Basics of the transmission network 'Ob' are described in the Manual for adjusting of the Server of LKDSDrv.

Example of filled parameters panel of the elevator is represented below:

Spring,53/2,1 (1)

General parameters Entrance: 1 Abbreviation: 1 Unique code: 5F882969BF249909F91DF1832DFD6B0 User event: [dropdown] Type: Lift [dropdown] Number of floors under: 0 [input] Floor number: [input] <input checked="" type="checkbox"/> Managed <input type="checkbox"/> Included in statistical control Link provider with LU: Network LMDS [dropdown] LU address Subnet number: 0 [input] Node No.: 0 [input] Slot No in the node: 6 [input] Address on LB: 31 [input] Camera-recorder parameters Command string: [input]		Lift reference parameters Lift owner: [dropdown] Headman: [dropdown] Serviceman: [dropdown] Registration N: [input] Lift type: [dropdown] Elevating capacity,kg: [input] Speed, m/sec: [input] Number of stops: [input] Start-up year: [input] Next engineering certification: [input] Lift manufacturer: [dropdown] Lift drive: [dropdown] Traction sheave, mm: [input] Control cabinet: [input] Note: Smith tel:7159082354
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During saving of the elevator's parameters the following message may appear:



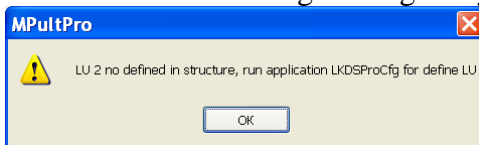
To eliminate errors you need to change the configuration of the network 'Ob' with the help of LKDSDrvCfg or enter correct values to fields of the group «Address of LU in the network 'Ob'».

Example of filled parameters panel of the elevator with another source is represented below:

Spring,53/2,1 (1)

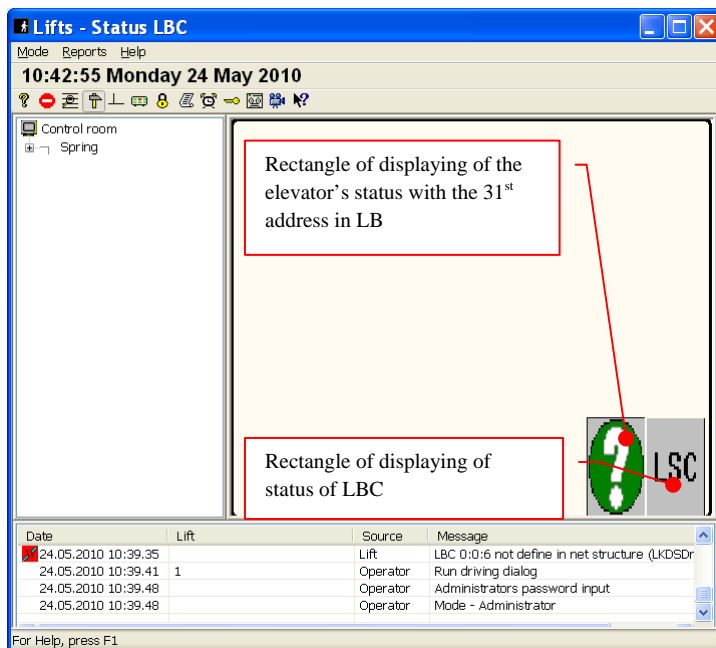
General parameters Entrance: 1 Abbreviation: 1 Unique code: 5F882969BF249909F91DF1832DFD6B0 User event: [dropdown] Type: Lift [dropdown] Number of floors under: 0 [input] Floor number: [input] <input checked="" type="checkbox"/> Managed <input type="checkbox"/> Included in statistical control Link provider with LU: Service supporting LU HELIUM Pro [dropdown] Index LU HELIUM Pro: 2 [input] Camera-recorder parameters Command string: [input]		Lift reference parameters Lift owner: [dropdown] Headman: [dropdown] Serviceman: [dropdown] Registration N: [input] Lift type: [dropdown] Elevating capacity,kg: [input] Speed, m/sec: [input] Number of stops: [input] Start-up year: [input] Next engineering certification: [input] Lift manufacturer: [dropdown] Lift drive: [dropdown] Traction sheave, mm: [input] Control cabinet: [input] Note: Smith tel:7159082354
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In the case of saving of description of the elevator which provides information to LKDSPro the following message may appear:

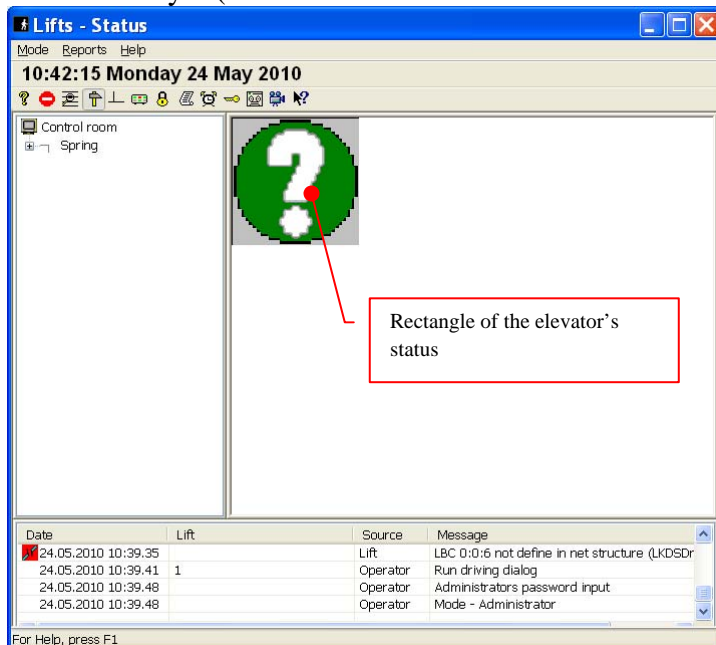


To eliminate this error you need to add the description of LU 6.1 Pro with the index 2 to the structure of service of LKDSPro with the help of LKDSProCfg or enter the correct index.


After saving of the elevator's description the program's window will have the view of front panels of LBC:



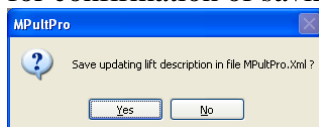
Or tabular style (in the case there is at least one lift unit controlled by the Service of LKDSPro):



3. Work in the Operator mode.

To switch to the «Operator» mode and begin dispatching you need to click the icon  in the toolbar or choose the menu option «Modes»\ «Switch to the Operator mode».

During switching from the Administrator mode to the Operator mode the program asks for confirmation of saving of changes made in the structure of equipment:



To save the structures you need to give make this confirmation. The program saves the structure of equipment in the file MPultPro.Xml. It is recommended to save this file in another carrier to have ability to restore the configuration in the case of destruction of the hard disk or installation of SW to another computer.

At several first runs of MPultPro in the case the source of information for all elevators is only «Data communications network 'Ob'» the status panel of elevators has the view of front

panels of LBC. In the case at least one elevator has the source of information «Service supporting LU 6.1 Pro» the status panel has the tabular style. There are two more variants of the status panel:



- 1) Displaying on the map (image);
 - 2) Random groups.
- Features of these variants will be described later.



Each elevator is represented in the status panel as a rectangle. In the case of moving of the cursor on the rectangle of the elevator the pop-up help appears. It contains information about geographical address of this elevator and note.


The current status of the elevator is shown in its rectangle with the help of images and additional effects (background color, blinking).


In the case the rectangle of the elevator is dark gray this elevator is not controlled, i.e. it does not have the checked box «controlled» in the parameters panel of the lift unit;

Light gray color of the rectangle means correct operation of the elevator. In the case of specified «escalator» in the field «Type» of the parameters panel of the LU arrows in the

rectangle show direction of its movement – up:  or down: . In the case of specified «travelator» in the field «Type» of the parameters panel of the LU arrows in the rectangle show

horizontal direction of its movement – left:  or right: . In the case escalator or travelator

stands the rectangle shows the icon .

The interrogation mark  in the rectangle of the elevator means there is no information about status of the LU. The program will try to determine the status in future. In the case of failures the rectangle representing the elevator in the status panel may have the following icons:



- in the case of voice communication call from the elevator cage or machine room;



- in the case of fire danger. Fire danger takes place in the case of receiving of the message from the elevator's control station or occurring of the user's event assigned with the «Fire danger»;



- opened machine room;



- unauthorized penetration to the elevator's shaft;



- lasting pressing of the button «Stop» of the elevator's cage;



- lasting opening of doors of the elevator's cage;



- absence of energy supply of the elevator and failure causing shutting down of the elevator;



- occurrence of the failure that affects correct work of the elevator but does not lead to its shutting down;



- failure of the safety device in the lift unit or local bus;



- absence of connection with the lift unit;

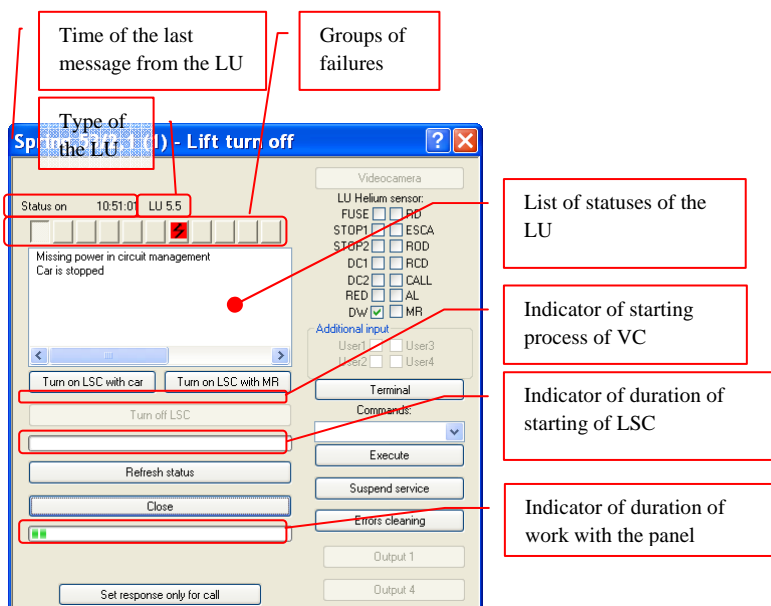


- Presence of additional information from the elevator's control station.

The controlled elevator may have several failures simultaneously. The status panel shows the most important one. Icons and corresponding groups of failures are listed in the following order: the first icon is the most important (voice communication call) and the last one is the least important (additional information).

In the case of occurrence of failure of the elevator the icon pulses – it means that the elevator has new failures or there is a call. For detailed description of the elevator's status you need to (being in the Operator mode) make double click of the left mouse button on the icon. Then the dialog window will appear. It contains detailed information about the elevator's condition. This window is described below. After closure of the panel the failure icon stops to pulse - it means that this failure was checked by the operator. Moreover, you can put off elimination of the failure. In this case the background color of the icon becomes yellow.

Being in the «Operator» mode you can see the dialog window of detailed status by double click the left mouse button on the rectangle of the elevator in the status panel or on the icon of the elevator in the address panel:



Name of the panel contains information about geographical position of the elevator, and name of the higher-priority group of failures.


The field «Status on» shows the time of the last message from the LU.

The field «Type of the LU» shows type and version of the LU which controls this elevator.

Eleven squares shows presence of different types of failures. Squares are listed from left to right (from the most important to the least important). The icon of the leftmost square is shown in the status panel. There is the list of all failures and messages from the LU below icons of failure groups.

Buttons «Turn on LSC with the car» and «Turn on LSC with MR» are designed for starting loudspeaker connection with the elevator cage or machine room.

The button «Turn off LSC» stops loudspeaker communication. In the example the legend on the button «Turn off LSC» is gray – it means that loudspeaker communication is not active and it is impossible to stop it. That's why the button is inactive. After starting of LSC, using one of the buttons, all other buttons (except the button «Turn off LSC») of the elevator's control panel become inactive, i.e. their legends become gray. There is the indicator of waiting of actual starting of LSC between the buttons «Turn on LSC...» and the button «Turn off LSC». This

moving indicator  appears after clicking the button « Turn on LSC with car» or button « Turn on LSC with MR» and disappears after receiving of information about actual starting of LSC from equipment.

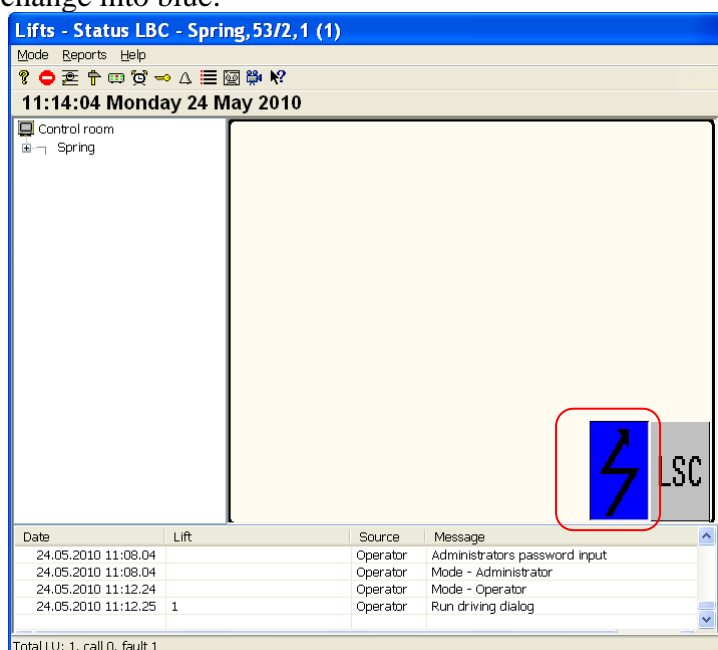
There is the line below the button «Turn off LSC» which shows a relative duration of conversation. In the case of filling of the half of this line the conversation lasts 50% of allowed time. Each conversation through loudspeaker communication has its allowed duration. This duration is specified in the field «LSC on-time (sec) » in the panel of general parameters (menu «Mode»\«General parameters...»). After reaching of this time limit the conversation automatically stops. In the case there is a call for LSC (in the Status Panel its rectangle has the icon of the bell) call of the panel of detailed status leads to changing of its status into loudspeaker communication.

The button «Refresh status» is designed for forced request for status of this elevator. After its clicking (in the case of connection with the elevator) time of the last status will change and this status will be displayed in the panel.

The button «Close» ends work with the panel of detailed status of the elevator and closes it.

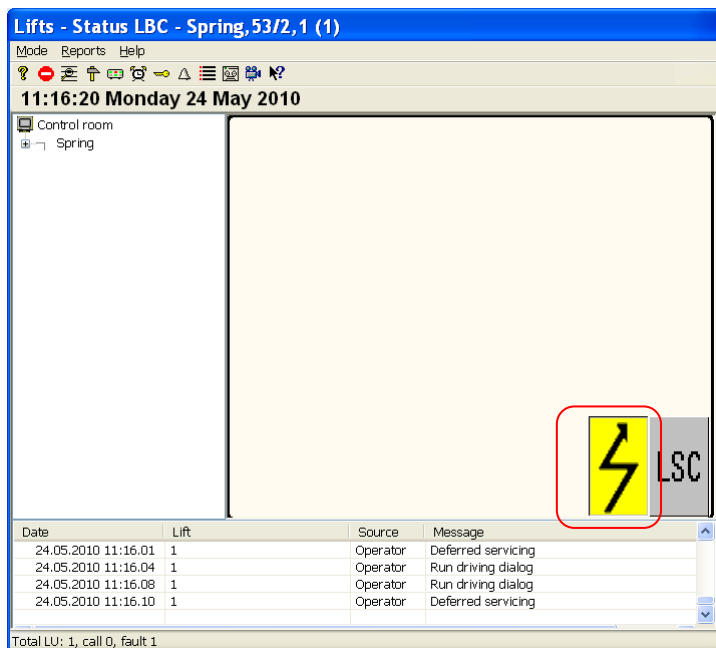
Below the button «Close» there is one more line showing duration of the current work with the panel of detailed status. Duration of work with the control panel as well as duration of voice communication can be limited. This duration is specified in the field «Interaction time with LU (sec) » in the panel of general parameters (menu «Mode»\«General parameters...»)

The button «Set the reaction only on call» allows the operator to set for the elevator the special mode of processing of messages from the LU. In the case of this mode only messages with the call for Dispatcher will lead to new indication (pulsing and sound accompaniment). After clicking the button «Set response only for call» the legend on the button will change into «Set response for all events». Moreover, in the status panel background color of the icon will change into blue:



To annul reaction only on call you need to click the button « Set response for all events».

Clicking the button «Suspend service» sends the message to the program containing the notion that the information was considered by the operator but the operator will not take any actions at the moment. MPultPro saves the status (list of failures) of the elevator. After this disappearance and appearance of saved failures does not lead to indication of new status by blinking of sound accompaniment. Moreover, background color of the elevator's icon in the status panel becomes yellow:



Occurrence of failures after clicking the button « Suspend service» will lead to indication of new status by blinking and sound accompaniment. It distinguishes processing of new statuses in the mode « Suspend service» from processing of new statuses in the mode « Set response only for call».



The button «Reset of failures» is designed for sending of the special command to the lift unit. This command clears signs of all current failures of the elevator. Signs of some failures are saved in the lift unit and are sent to the program even in the case these failures are gone. The light button «Errors clearing » is designed for reset of such failures.

The button «Execute» executes the command chosen in the list above. You can choose the command by double clicking the left mouse button on the black triangle. The full list of available commands will appear. The command “Turn off lift” is always available. The command "Switch on the current" is available only in the case of remote starting of the elevator. This allowance is given in the field «Allow to power lifts» of the panel of general parameters (menu «Mode»\«General parameters...»). Execution of the command "Switch on the current" is protected by the password which can be set in the menu option «Mode»\ «Password change...»\ «Password setup for lift activation ». In the case the lift unit supports smooth switching off of the elevator the list of commands has the additional command «Safety shutdown ».

The button «Videocamera» is designed for starting of the module of viewing of information from the videocamera. Parameters of the viewing module can be set in the group of fields «Camera-recorder parameters » in the parameters panel of the lift unit. You can enter the Windows prompt to the field «Command string». This prompt will be executed after clicking the button «Videocamera». The button «Videocamera» is inactive in case the command prompt not defined.

The group of fields «Additional inputs» shows the status of four additional inputs in the case the lift unit supports processing of these inputs. In the case additional inputs are not supported all fields in this group are inactive (have gray legends). Name and other parameters of inputs can be changed for all lift units (the menu option “Mode”\”Additional input settings...” in the Administrator mode) or for the particular lift unit (the menu option “Setup reaction for extent input” which appears after clicking the right mouse button on the icon of the elevator in panels of Addresses and Statuses in the Administrator mode). Parameters set for the particular elevator have the highest priority. I.e. in the case the input 1 has parameters set for all units and for the particular unit simultaneously, parameters set for this unit are in action.

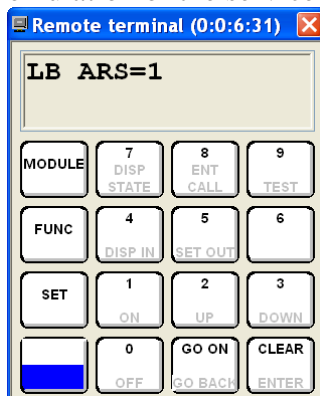
Buttons (in the abovementioned example) with legends «Output 1» and «Output 4» are designed for two outputs of the unit. In the case the lift unit does not support additional outputs

these buttons are inactive (have gray legends). Status of outputs ( - on,  - off) is displayed to the left of buttons. You can change the legend on the button and other parameters of outputs in the Parameters panel of outputs. Parameters can be set for all lift units (the menu option “Mode”\”Outputs settings...” in the Administrator mode) or for the particular lift unit (the menu option “Output parameters setup for one LU” which appears after clicking the right mouse button on the icon of the elevator in panels of Addresses and Statuses in the Administrator mode). Parameters set for the particular elevator have the highest priority. I.e. in the case the output 1 has parameters set for all units and for the particular unit simultaneously, parameters set for this unit are in action.

The button «Terminal» activates program emulators for service devices for adjusting of lift units and elevators' control stations. Not all lift units support this adjustment mode. In the case the LU supports emulation of service devices for adjusting of the lift unit and control station, after clicking the button «Terminal» the following menu will appear:

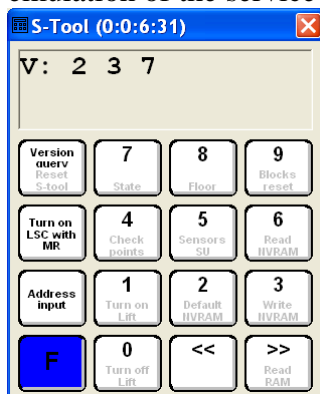
- Interaction with control station
- Interaction with LU.

In the case of choosing of the option «Interaction with the control station» the dialog window of emulation of the service device for the elevator's control station appears:



Work with the emulation program is the same as work with the real device described in the appropriate documentation.

In the case of choosing of the option «Interaction with LU» the dialog window of emulation of the service device for adjusting of the lift unit appears:




Work with the emulation program is the same as work with the real device described in the documentation.

Windows of emulation programs of service devices are placed always on top of other forms and windows. From the moment of running the emulator of the service device works in parallel with MPultPro and on top of the window of MPultPro. In such a way several emulators of service devices can be ran simultaneously and they can work even after closure of MPultPro.

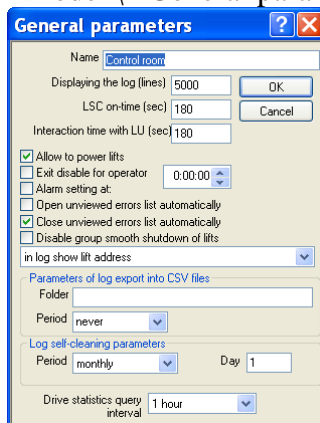
In the case the LU supports emulation of service devices only for one type, i.e. only for adjusting of the lift unit and control station, after clicking of the button «Terminal» the following dialog window of the emulator of the appropriate service device will appear:

4. Additional settings of MPultPro

Adjusting of the program is made in the Administrator mode. Displaying of new failures of elevators and logging of them do not take place in the Administrator mode. But messages from lift units are saved in the program and will be processed after switching to the Operator mode. To switch to the Administrator mode from the Operator mode you need to use the menu option «Modes»\ «Switch to the Operator mode» or click the icon  in the toolbar. Then enter the password which allows to switching to the Administrator mode.

General parameters

General parameters are set in the dialog panel which can be opened using the option «Mode»\ «General parameters» of the program's main menu. The panel has the following view:



In the field «Name» you need to enter the text name of the dispatching room. For example - «MUE Sibirlift».


The field «Displaying the log (lines)» contains the number of latest records in the log available for real-time viewing by scrolling of the Log Panel. Earlier events can be viewed in the menu option «View log...». Value of this parameter depends on the computer's performance. Specifying of big number of records may lead to long delay during viewing of the log in the Log panel.

In the field «LSC on-time (sec)» you need to enter the maximum duration of conversation with the elevator cage or machine room. After achieving of this limit LSC automatically stops. The relative duration of LSC is shown in the dialog panel of the elevator's detailed status with the help of the special indicator.


In the field «Interaction time with LU (sec)» you need to enter the maximum duration of work with the dialog panel of the elevator's detailed status panel. After achieving of this limit the form automatically closes. In the case the field has the value 0 the automatic closure of the panel does not take place and duration of work is not limited. Duration of work with the panel is shown by the special indicator.

In the case of checking the box «Allow to power lifts» in the dialog panel of the elevator's detailed statuses the command «Switch on the current » appears in the list of the field «Commands». This command switches on the elevator.

Checking of the box «Exit disable for operator» prohibits the Operator to use the option «Exit» and makes impossible to close MpultPro in the Operator mode.


Checking of the box «Alarm settings at:» allows alarm. The time is set in the next field. In this time the sound saved in the file Clock.Wav_ is reproduced. The sound stops after clicking the icon  in the toolbar or automatically stops after 30 seconds. To change the sound you need to paste the file Clock.Wav containing new sound to the folder MPultPro.

In the case of checked box «Open unviewed errors list automatically» MPultPro automatically opens (in the case of occurrence of new failures) the dialog panel containing the

list of elevators which have not viewed failures, i.e. blinking in the status panel. You can open this panel manually in the Operator mode by clicking the icon  in the toolbar or by pressing of the button F4. The aim of the list of not viewed failures is to help the dispatcher to at once open the panel of detailed statuses of the elevator which has new failure. In this case the operator does not need to look for the blinking rectangle in the status panel.

Checking of the box «Close unviewed errors list automatically » leads to automatic closure of the list of new failures (closure of its dialog panel) in the case the list is empty, i.e. all elevators with failures are viewed.

The box «Disable group smooth shutdown of lifts » is checked in the case the smooth switching off of elevators is not used. In the case of checking of this box the menu option «Mode»\ «Shutdown smoothly all lifts...» becomes inactive. Also you can not smoothly switch off all elevators of the dispatching room, all elevators of the street and all elevators of the building by the right mouse button clicking in the Address panel.

The list  allows choosing type of identification of the elevator in the column «Lift» of the log. In the case the box «in log show lift address » is checked the column «Lift» will show the address of the elevator's position. In the case the box « in log show lift identifier» is checked the column «Lift» will show the short name of the elevator set in the parameters panel of the elevator.

The group of fields «Parameters of log export into CSV files» specifies to which folder and how often records of the log will be exported. Export of the log is designed for analysis of work of equipment outside MPultPro, i.e. by other program tools. These program tools can be designed by operating organizations or by outside organizations. In the field «Folder» you need to specify the folder where files with exported records of the log will be created. In the case the field «Folder» is empty CSV files will be created in the folder MPultPro\CSV. In the field «Period» you need to choose the period of automatic export of records of the log into CSV files. Swapping out of records will be carried out in the beginning of each period. The starting point of the period is midnight. In the case of 1 hour period swapping out will be carried out in the beginning of each hour, in the case of 4 hour period – in 0,4,12,16,20 o'clock, in the case of 12 hour period – two times: in 0 and 12 o'clock. The format of the CSV file is given in description of the log.


In the course of running of MPultPro the message log (file MPultPro.Log) grows continuously. It lowers performance of the program's work. The message log needs to be cleared periodically. You can do this manually by executing options of the program menu or automatically, i.e. by specifying rules of clearing for the program. The group of fields «Log self-clearing parameters » specifies these rules. In the field «Period» you need to specify the periodicity of automatic clearing. In the field «Day» in the case the clearing takes place one time per week you need to specify the number of the day of week (from 1-(Monday) to 7-(Sunday)). In the case the automatic clearing takes place one time per month you need to specify the day of month (from 1 to 28). In the case the option «Every day» is chosen in the field «Period» the value of the field «Day » is not used. The clearing it will take place in 0:30. The sequence of the clearing is the following:

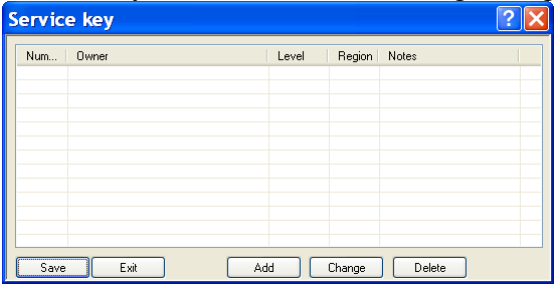
- The file of the current log MPultPro.Log is copied to the folder MPultPro\LOG to the file Pnnnnnnn.Log, where nnnnnnn is the sequence number of the file in the folder.
- The file of the current log MPultPro.Log is cleared. Now it has only latest records. Number of records left is specified in the field « Displaying the log (lines) ».

Lift units of latest modifications can accumulate statistics on work of gears of elevators' doors. Namely number of starts, duration of work of the main gear and doors' gear. MPultPro can check up this statistics. To activate the process of checking up of the statistics you need to choose (in the field «Drive statistics query interval ») the interval according to which MPultPro will refer to lift units for the current information about operation of gears. The read information is saved in the folder STAT in the form of single files for each lift unit which supports saving of

statistics. Report on statistics of operation of gears can be viewed by choosing of the menu option «Reports»\ «Lift drives operation statistics ». Report on operation of the elevator can be viewed in the Administrator mode by choosing of the option «Lift drives operation statistics in the form of report». This option appears after the right mouse click on the appropriate elevator in the Address and Status panel. Moreover, you can view statistics of operation in the graphic mode: choose the option « Lift drives operation statistics in the form of diagram». This option appears after the right mouse click on the appropriate elevator in the Address and Status panel. Checking up of statistics of elevators' operation leads to increase of transmitted information through the network «Ob». It can lead to increase of expenses in the case of usage of paid communication channels.

List of service keys

Lift units and local bus controllers can be switched to the technical maintenance mode with the help of service keys. Service keys should be inserted to the special connector of these devices. Equipment informs MPultPro about the number of the inserted service key. It saves the information to the Log and displays it in the form of specified statuses. Each key has its unique number and settled on maintenance personnel. To increase message comprehensive MPultPro can add the key number by first and second name of the operator - owner of the key. To create the look-at table «Key number» <-> «Full name of operator» you need to switch to the Administrator mode, click the icon  in the toolbar or use the menu option «Mode»\ «List of service keys...». Then the following dialog panel will appear:



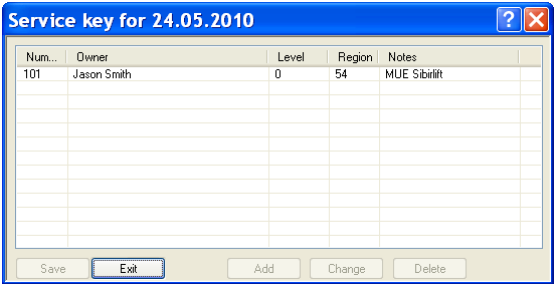
The 'Service key' dialog box features a table with five columns: 'Num...', 'Owner', 'Level', 'Region', and 'Notes'. The table is currently empty. Below the table, there are five buttons: 'Save', 'Exit', 'Add', 'Change', and 'Delete'.

By clicking the button «Add» you can add binding of the service key in the dialog panel:




The 'Key parameters' dialog box contains input fields for 'Number' (101), 'Owner' (Jason Smith), 'Priority' (1), 'Region' (54), and 'Note' (MUE Sibirilt). It also includes 'Save' and 'Cancel' buttons.

Fields «Priority», «Region» and «Note» contain auxiliary information. In the case the service key with the number entered in the field «Number» was input into the device the value of the field «Owner» will be sent to the log. Ready list of service keys after clicking the button «Save»:



The 'Service key for 24.05.2010' dialog box shows the table with one entry: Number 101, Owner Jason Smith, Level 0, Region 54, and Notes MUE Sibirilt. The 'Exit' button is highlighted.

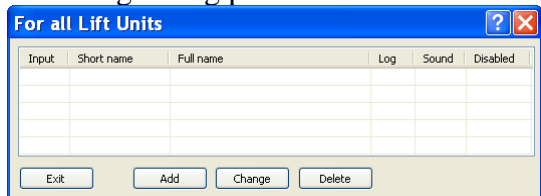
After this the log will be added by messages:

Date	Lift	Source	Message
24.05.2010 15:40:36		Operator	Start
 24.05.2010 15:40:37	1,53/2, Spring	Lift	Inserted SK 101 Jason Smith

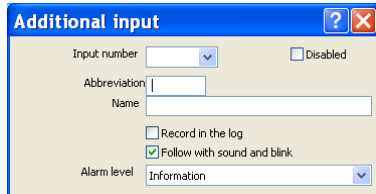
Adjusting of additional inputs

Lift units LU6 or LU 6.1 Pro have four additional inputs. MPultPro can display status of these inputs. You can set names, levels of alarm and other parameters of inputs. Parameters can be set for all lift units or for the particular lift unit. In the case you've set parameters for all lift units and for the particular lift unit simultaneously, parameters for the particular lift unit will be in action.

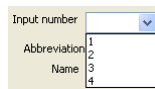
Parameters for all lift units can be set in the Administrator mode by using of the menu option «Mode»\ «Additional input settings... ». After choosing of this option we will see the following dialog panel:



which contains the list of described inputs. To add description of the input you need to click the button «Add» and then in the parameters panel:



Enter:



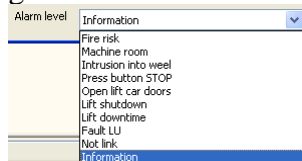
In the field «Input number» choose the number of the input from the pop-up menu.

In the field «Abbreviation» you need to enter the name which will be displayed in the panel of detailed status of the elevator.

In the field «Name» you need to enter the name which will be displayed in the log.

The box «Record in the log» makes MPultPro to display the value of the field «Name» in the log in the case of appearance and disappearance of potential on the described input.

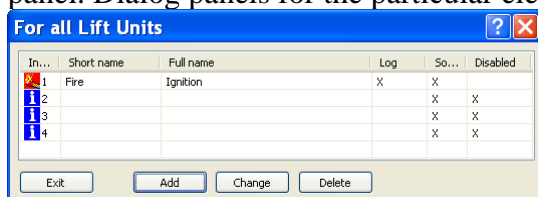
In the case of checked box «Follow with sound and blink» appearance of potential on the input will be supported by blinking of the icon in the elevator's rectangle and sound.



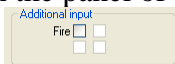
In the field «Alarm level» you need to choose the value from the pop-up list. Level of alarm determines type of the icon in the status panel in the case of appearance of potential on the input. Icons of different statuses are shown in the section 3 of this manual.

Checking of the box «Disabled» allows ignoring appearance of potential on the input.

Adjusting of parameters of additional inputs for the particular elevator is made in the Administrator mode by choosing of the menu option "Setup reaction for extent input". This option appears after right mouse clicking on the elevator in the status panel or in the address panel. Dialog panels for the particular elevator are the same as for all elevators:



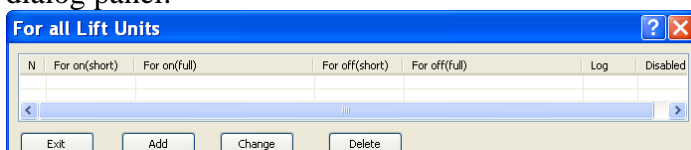
As an example, the input 1 has the name «Fire» and corresponding level of alarm. Other inputs are forbidden. In the panel of detailed statuses the group of fields «additional inputs» has the following view:



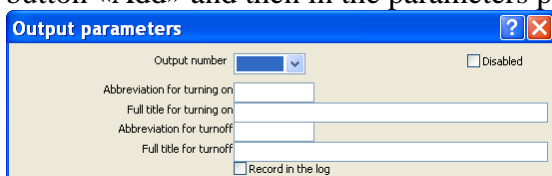
Adjusting of additional outputs

Lift units LU6 or LU 6.1 Pro have two additional outputs. MPultPro allows switching on and switching off these outputs. You can set names for switching on, switching off and for additional parameters. Parameters can be set for all lift units or for the particular lift unit. In the case you've set parameters for all lift units and for the particular lift unit simultaneously, parameters for the particular lift unit will be in action.

Parameters for all lift units can be set in the Administrator mode by using of the menu option «Mode»\ «Output settings...». After choosing of this option we will see the following dialog panel:



This contains the list of described outputs. To add description of the output you need to click the button «Add» and then in the parameters panel:



In the field «Output number» you need to choose value 1 or 2 from the pop-up list.

In the field «Abbreviation for turning on» you need to enter the line which will be displayed in the light button in the case the output is switched off and it can be switched on.

In the field «Full title for turning on» you need to enter the line which will be displayed in the log in the case switching on of the output and during confirming of switching on of the output.

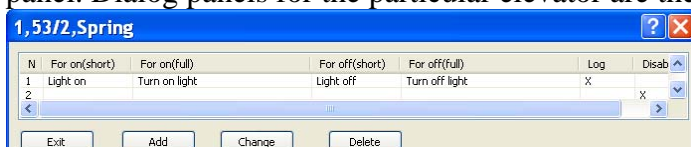
In the field «Abbreviation for turnoff» you need to enter the line which will be displayed in the light button in the case the output is switched on and it can be switched off.

In the field «Full title for turnoff» you need to enter the line which will be displayed in the log in the case switching off of the output and during confirming of switching off of the output.

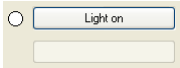
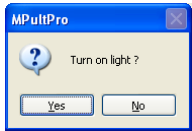
In the case the box «Record in log» is checked the log displays full names during switching on and switching off of outputs.

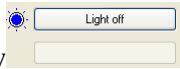
Checking of the box «Disabled» cancels reaction on status of the output and does not allow switching on /switching off the output.

Adjusting of parameters of outputs for the particular elevator is made in the Administrator mode by choosing of the menu option «Output parameters setup for one LU». This option appears after right mouse clicking on the elevator in the status panel or in the address panel. Dialog panels for the particular elevator are the same as for all elevators:



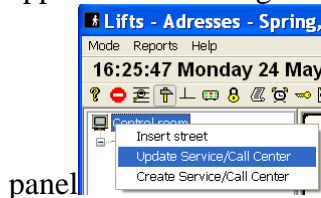
In the example, the output 1 has names; status of the output 1 is recorded. The output 2 is disabled. In the panel of detailed status control buttons of outputs will have the following view:



 . After clicking the button «Light on» the confirmation will appear.

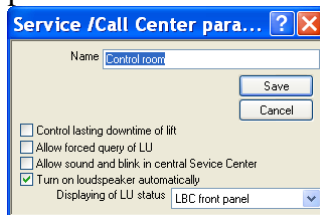
After confirmation control buttons of outputs will have the following view
 
 .

Parameters of the dispatching room

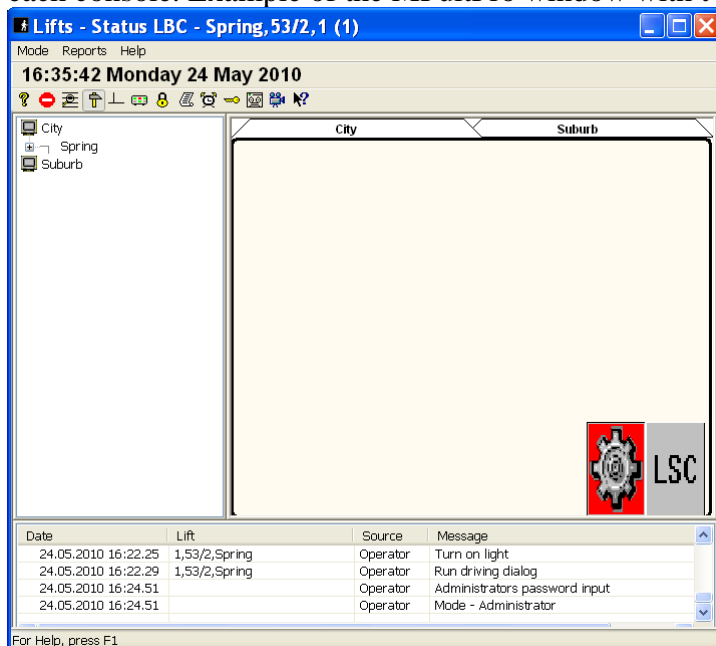
Additional settings can be made using the option «Change the dispatching room». It will appear after clicking of the right button on the line of the dispatching room in the Address



panel. After choosing of this option we will see the following dialog panel:



These settings cannot be set in the panel of general parameters since MPultPro can display several dispatching consoles simultaneously and settings can be set for each console. Example of the MPultPro window with two consoles.



Detailed information about displaying of several dispatching room will be given below.

The field «Name» allows creating the line which will be displayed to the left of the icon



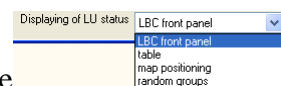
Checking of the box «Control lasting downtime of lift» starts the mode of checking of lasting downtime of the lift in periods of intense usage of elevators. Checking takes place two times per day: 8:30 and 18:30. In the case the elevator was out of order more than 1 hour before the checking the appropriate status is recorded. To stop or run the checking mode you need (in addition to checking or contrarily of the appropriate box) to reboot MPultPro. Control of lasting downtime of lifts' operation leads to increase of transmitted information through the network «Ob». It can lead to increase of expenses in the case of usage of paid communication channels.

In the case of checking of the box «Allow forced query of LU » MPultPro will send additional request for status to LU which did not send information for more than 10 minutes. Under normal operation of the network «Ob» the lift unit informs about changing of its status. However, in the case of temporary loss of connection with the LBC which maintains this LU these information messages can be canceled. Forced request for status of elevators' operation leads to increase of transmitted information through the network «Ob». It can lead to increase of expenses in the case of usage of paid communication channels.

The box «Allow sound and blinking in central Service Center» allows to change behavior of MPultPro for elevators information from which is transferred by the Server of LKDSDrv (Transmission network 'Ob'). At the same time, the sub network of this LU operates in the passive mode (in LKDSDrvCfg this sub network has the notion that the computer is connected to the slot 9). In the case this box is checked even if the LU is in the passive sub network appearance of new failures will be accompanied by sound and blinking. In the case the box is not checked rectangles of LU in the Status Panel will not blink and there will be no sound signal in the case of occurrence of new failures.

The box «Turn on loudspeaker automatically » is checked in the case of adding of new consoles. Checking of this box forces MPultPro to switch on LSC in the case of opening of the panel of detailed statuses (control panel) of the elevator (in the case there is a call from the dispatcher of this elevator). In the case the box is not checked you can switch on the voice communication by using of buttons. Necessity to automatically switch on LSC appears in cases when the status of one elevator is displayed in several dispatching computers, i.e. in several MPultPros. In this case the program receives calls from elevators only from one computer (on which automatic switching on of LSC should be done). All other computers deal with monitoring and technical maintenance.

In the field «Displaying of LU status » you can choose the type . Different variant of the Status Panel will be described later.



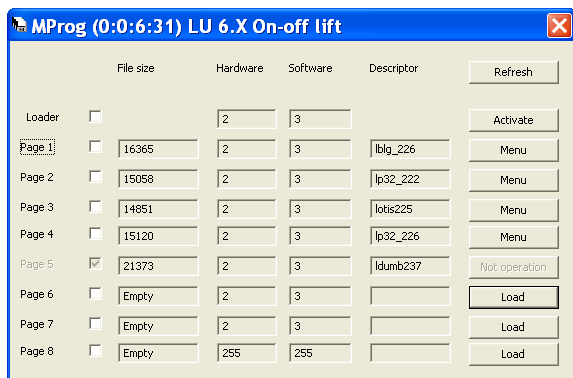
Settings of lift units

Notes for the elevator

There is the field «Note» in the group of fields «Lift reference parameters » of the lift parameters panel. You can see the value of this field by holding the cursor on the rectangle of the elevator in the status panel. Big value of information about the elevator or lift unit you can save in the note. For its opening click the right mouse button on the elevator and choose the option «Notes».

Downloading of the microprogram to the lift unit.

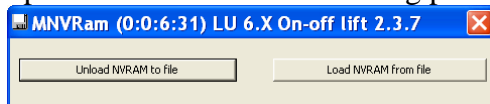
During operation modifying of microprograms of lift units takes place. It takes place in view of widening of functions and elimination of failures. New versions of microprograms can be found on WWW.LKDS.RU. Lift units LU6 or LU 6.1 Pro support remote downloading of the microprogram. To download the microprogram choose the option «Load microprogram» from the menu which can be opened by the right mouse button on the elevator. Then you will see the panel containing information about downloaded microprograms. For example:



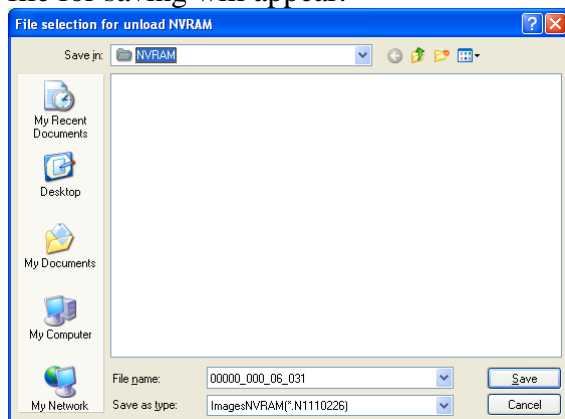
The process of downloading of microprograms is described in another document – manual on MProg. Memory of the device can have up to 8 downloaded microprograms + the microprogram made during creation (Loader). One of them is executed – active one (it specified by the box in the panel). Using downloading of the microprogram you can convert the lift unit of one type (connected to one type of elevators) into the lift unit of another type (connected to another type of elevators). Additionally to replacement of the microprogram you need to replace the interface board in the lift unit.

Saving and importing of settings of the LU.

Settings of the lift unit are saved in the non-volatile memory. Settings can be changed using the hardware or software service device. You can export settings of the unit in the form of file and import this file into the lift unit by choosing of the option «Load/Unload NVRAM» from the menu which can be opened by clicking of the right mouse button on the elevator. Such a saving allows creating the archive backup of settings in the case of failure of the unit. It also allows multiplying setting of one unit and applying them to several units. After execution of this option we will see the following panel:



Click the button «Unload NVRAM to file» to save it. Then the panel of choosing of the file for saving will appear:



In the case the mediator between the LU and MPultPro is the server of LKDSDrv the suggested file name will be the following:

<subnetwork>_<NM>_<Slot>_<Address_in_the_LB>.N<Type_of_LU><Version_of_LU><Version_of_M/P>

In the example the file has the name 00000_000_06_031.N1110226 where:

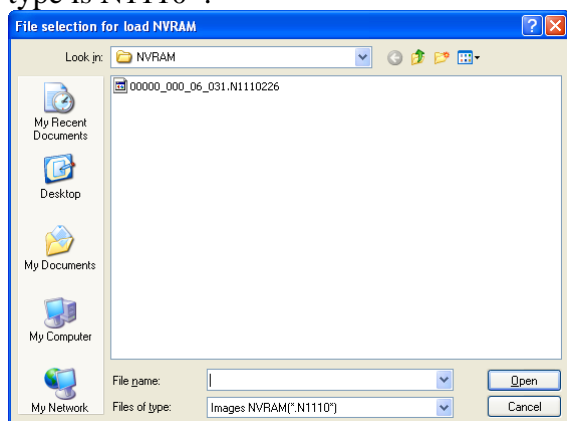
- 00000 – the number of the subnetwork
- 000 – the number of the NM

- 06 - slot
- 31 – address of the LU in the local bus of the LBC
- 11 – LU6
- 10 - LG_DI
- 226 – version of the microprogram

In the case the mediator between the LU and MPultPro is the server of LKDSPro the suggested file name will be the following:

<Index_of_the_LU>.N<Type_of_the_LU><Version_of_the_LU><Version_of_the_M/P>

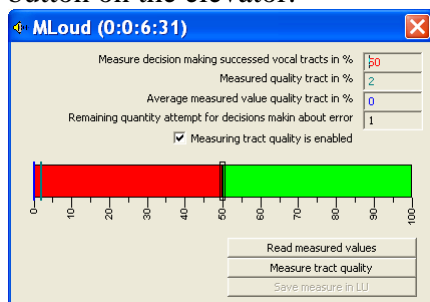
During importing of NVRAM (the button «Import NVRAM from the file») the panel will appear. This is the panel of choosing of the load file from the folder Common\NVRAM with the list of all files with the type N<Type_of_the_LU><Version_of_the_LU>*. In our example this type is N1110*:



After choosing of the file with NVRAM you need to click the button «Open» to start the loading process.

Adjusting self-checking of the vocal track.

Lift units LU6 or LU 6.1 Pro can check the quality of the vocal track. The checking mechanism should be switched on and adjusted. To adjust and switch on the checking choose the option «Self-test tuning of vocal track» from the menu which can be opened by the right mouse button on the elevator.



One checking is sending of 100 drops of sound level. The field "Measure decision making successes vocal tracts in %" shows how many drops should be registered by the unit to be considered properly operating.

The field "Measured quality track in %" shows status of the latest check, i.e. how many drops out of 100 were received by the unit. In the case the field shows the value more than 100 checks did not take place.

The field "Average measured value quality in %" shows the mean value of the field "Measured quality track in %".

The field "Remaining quantity attempts for decisions makes about error" shows how many times the "Measured quality track" should be less than "Measure decision making successes vocal tracts ". In the case of that value the lift unit will show the status "Fault voice route ". This status is registered and displayed by MPultPro.

The box "Measuring tract quality is enabled" allows to switch on and switch off the checking algorithm of LSC quality.

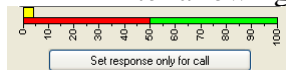
The turquoise mark on the scale shows "Measured quality in %". The blue mark shows "Average measured value quality in % ". The line between red and green parts of the scale – value of the field "Measure decision makes successes vocal tracts in % ". The line can be changed by hovering of the cursor on this line (form of the cursor will change) and clicking the left mouse button and moving the cursor.

The button "Read measured values" allows to read the latest values of results and settings (of above listed fields) from the LU.

The button "Measure track quality" makes the LU to measure quality when possible.



The button "Save measure in LU" saves the value of the field " Measure decision making successes vocal tracts in % " in the lift unit.

After allowing of measuring of quality of voice channel the indicator




appears in the panel of detailed statuses. This indicator shows the limit of the decision (red-green scale) and measured quality (yellow indicator).

Adjusting of the window of MPultPro

In the Operator mode you can not change the size of the window or its position on the screen. In the Administrator mode borders of panels become thicker . In the case of hovering of the cursor on borders the cursor changes its form into double-headed arrow. For example, . You can move borders of panels and of the whole program window by clicking and holding the left mouse button and moving of the mouse. To move the program window you need to hover the cursor on the name of the window, click and hold the left mouse button and move the program window to the needed position. After switching to the Operator mode position and size of the program window and panels are saved in the configuration file (MPultPro.XML). You can also adjust other properties of the Status panel and the Log panel. The Address panel does not have additional settings.

Adjusting of the Log panel.

In the Log panel (in the Administrator mode) you can adjust width of columns and type of displayed information in the column «Elevator».

In the case of hovering of the cursor on the border of columns the cursor takes the form of . You can move the border by clicking and holding the left mouse button.

The column «Lift» identifies the elevator related to the record of the log. This column

may display address of the elevator:

Date	Lift	Source	Message
25.05.2010 08:30:19		Operator	Mode - Operator
25.05.2010 08:30:19	1,53/2, Spring	Lift	Not link with MCS
25.05.2010 08:30:19	1,53/2, Spring	Lift	Fault voice route
25.05.2010 08:30:20	1,53/2, Spring	Operator	Run driving dialog

 or its short name

set in the parameters panel of the elevator.

Date	Lift	Source	Message
25.05.2010 08:30:19	1	Lift	Not link with MCS
25.05.2010 08:30:19	1	Lift	Fault voice route
25.05.2010 08:30:20	1	Operator	Run driving dialog

. Type of displaying can be chosen in the panel of general parameters, in the list


in log show lift address
in log show lift identifier
in log show lift address

.

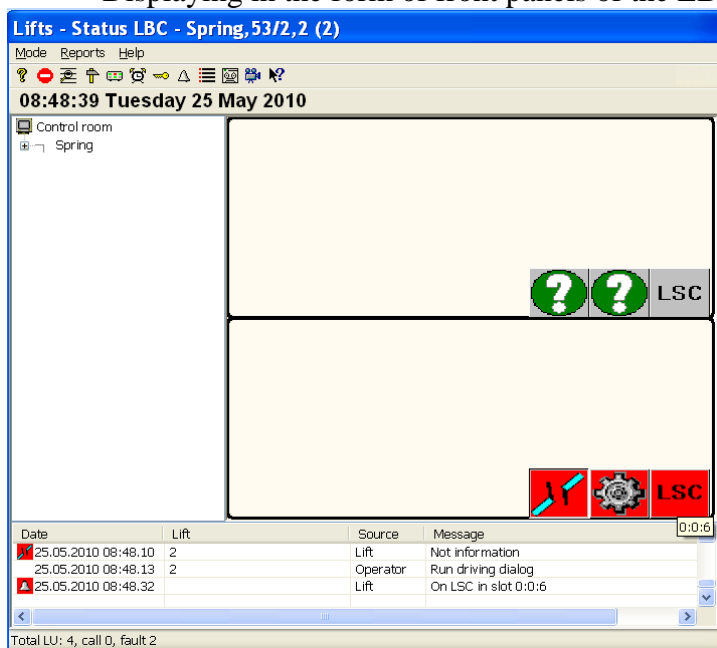
Adjusting of the Status panel.

The Status panel displays the current status in the form of colored rectangles or rectangles with images. Rectangles of status can be placed in the panel in different ways:

- In the form of front panels of the LBC
- In the form of table
- In the form of displaying on the map
- In the form of random groups

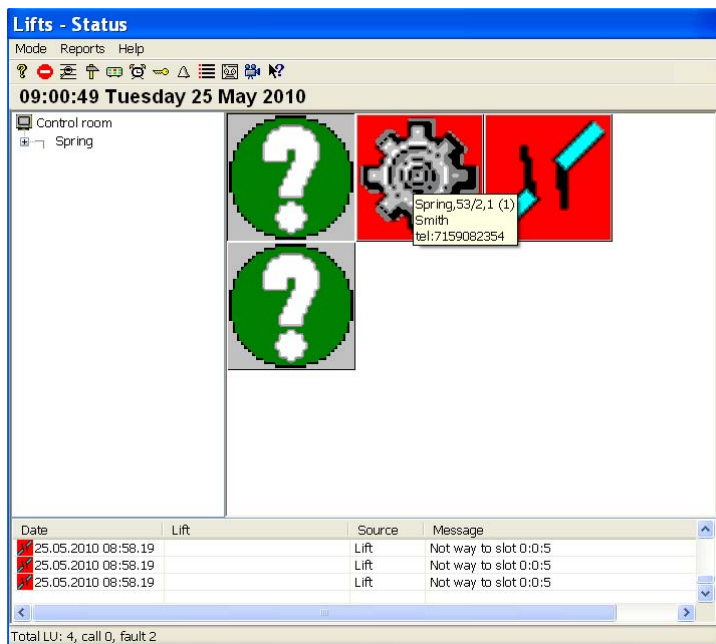
Type of displaying of statuses can be set in the field Displaying of LU status: LBC front panel of the parameters panel or in the panel of choosing of image. This panel appears after clicking of the icon  in the toolbar.

Displaying in the form of front panels of the LBC:



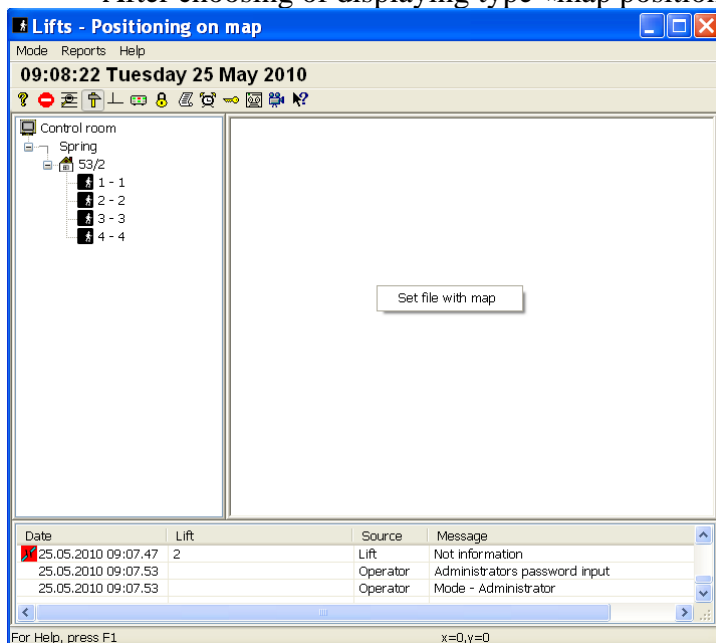
is available only in the case the source of information for all lift units is «The transmission network «Ob»» since all lift units are connected with a LBC. This type of displaying does not have additional adjustment. In the right-lower part of the rectangle of LBC status of vocal track of LBC is displayed. In the case the background is red voice communication is in progress. In the case of hovering of the cursor on the status rectangle of vocal track the pop-up help showing the address of this LBC in the network «Ob» in the format <Subnetwork>:<Node_module>:<Slot> appears.

Displaying in the form of table:



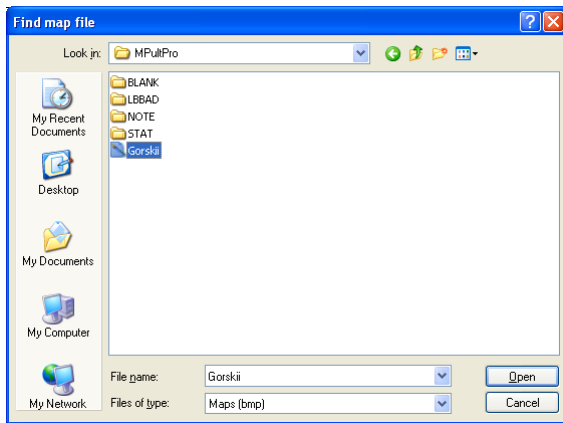
also does not require additional adjustment. Rectangles of elevators are displayed according to increasing of the unique code (from right to left, from top to bottom).

After choosing of displaying type «map positioning» the form of the window changes:



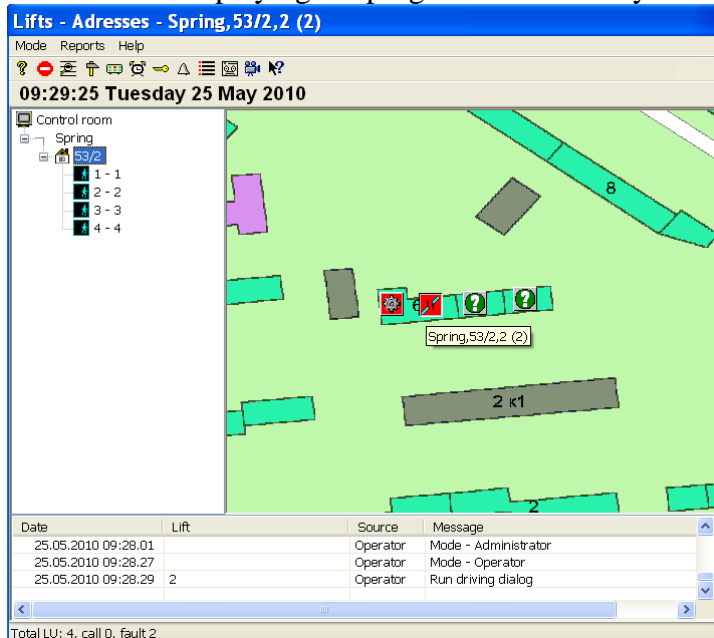
As distinct from previous types of displaying, displaying on the map requires adjustment. In particular, you need to specify the file of the map and place rectangles of elevators in the panel.

To specify the map click the right mouse button on the status panel and choose the option «Set file with map». Choose the file containing the map in the next panel:



After choosing of the type «map positions» the image from the specified file will appear in the Status Panel. However, there will be no status rectangles of elevators in the panel. These rectangles need to be taken from the Address Panel. For this purpose you need to click and hold the left mouse button on the chosen elevator in the Address Panel, move the cursor to the appropriate position of the Status Panel and release the button. To delete the elevator from this panel you need to click the right mouse button on the elevator and choose the option «Exclude from the map». To change sizes of all elevators displayed in this panel click the right mouse button on any elevator and choose the option «Change size of the image of the elevator». To move the elevator along the panel click and hold the left mouse button on the chosen elevator and move the cursor to the appropriate position and release the button. For more accurate moving of the elevator along the panel choose the elevator, click the left mouse button on its image (the image will become «sunken»), press and hold the button «Shift» and move the elevator to the appropriate position by arrows. In the case the elevator is in the map its image in the tree of the Address Panel will contain a turquoise color. In the case of existence of controlled elevators not displayed on the map the appropriate message appears.

After displaying the program window may have the following view:



Group changing of elevators' position on the map is available.

There are three types of group operations:

- moving
- aligning
- distribution

Elevators can be chosen on the map using the mouse. To make choosing you need to click and hold the left mouse button in the upper left part of the rectangle which contains marked

elevators and move the cursor to the lower right part and release the button. Chosen elevators will have a dotted frame. By making this action you will choose not only elevators which images are in the rectangle but also elevators which images cross the border of choosing rectangle.

After release of the left mouse button the menu with the following options will be opened:

- "Move marked group of lifts"
- "Line up on the level by left lift"
- "Line up vertically by top lift"
- "Allocate on the level"
- "Allocate vertically"

In the case of choosing of the option "Move marked group of lifts" you can move elevators to the appropriate position and click the left mouse button to complete moving. You can cancel the current moving by pressing the "Esc" button or by clicking the right mouse button.

The option "Line up on the level by left lift" allows displaying all chosen elevators in the form of the horizontal line which position aligns with the position of image of the leftmost elevator.

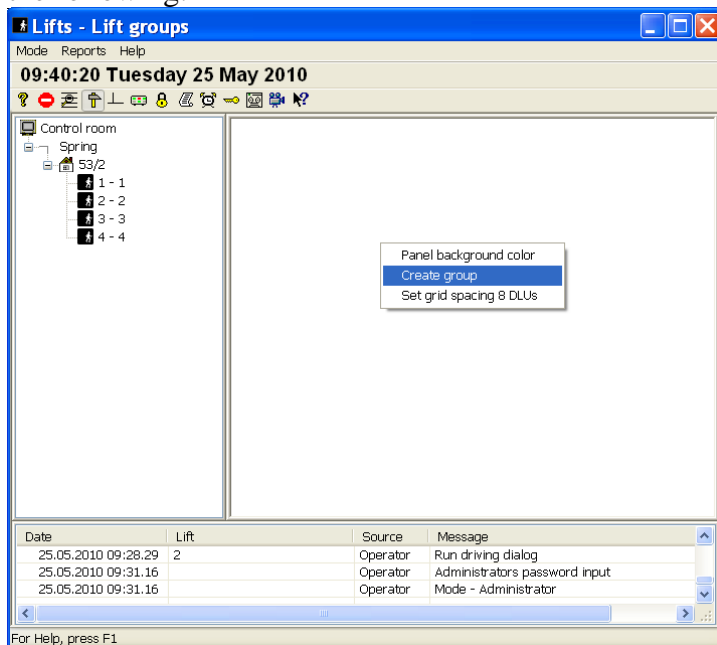
The option "Line up vertically by top lift" allows displaying all chosen elevators in the form of the vertical line which position aligns with the position of image of the uppermost elevator.

The option "Allocate on the level" allows displaying chosen elevators horizontally. In this case boundary elevators (the leftmost and the rightmost) are not moved. This option appears in the case more than two elevators are chosen.

The option "Allocate vertically" allows to display chosen elevators horizontally. In this case boundary elevators (the uppermost and the lowermost) are not moved. This option appears in the case more than two elevators are chosen.

The latest group changing can be canceled by using of key combination Ctrl+Backspace.

In the case of choosing of displaying «as random groups» the program window will be the following:



To create a new group (in the Administrator mode) you need to click the right mouse button on empty space of the panel and choose the menu option «Create group». This menu has the option «Panel background color». Using this option you can change the background color of the panel. To change the position of the group you need to click and hold the left mouse button inside the rectangle of the group, move the group to the appropriate position of the panel and release the button. To change size of the group hover the cursor on the right or left border of the group, click and hold the left mouse button, move the chosen border of the group and release the button. To change background color of the group, group parameters or to delete the group from

the panel click the right mouse button inside the rectangle of the panel and choose the appropriate menu option.

In the case the group has the checked box «no show new errors and blink» the background of the group is shaded. This box can be changed by the operator. For this purpose he should choose the appropriate menu option which will appear after the right mouse clicking on the group.

Elevators are taken to this panel from the Address panel.

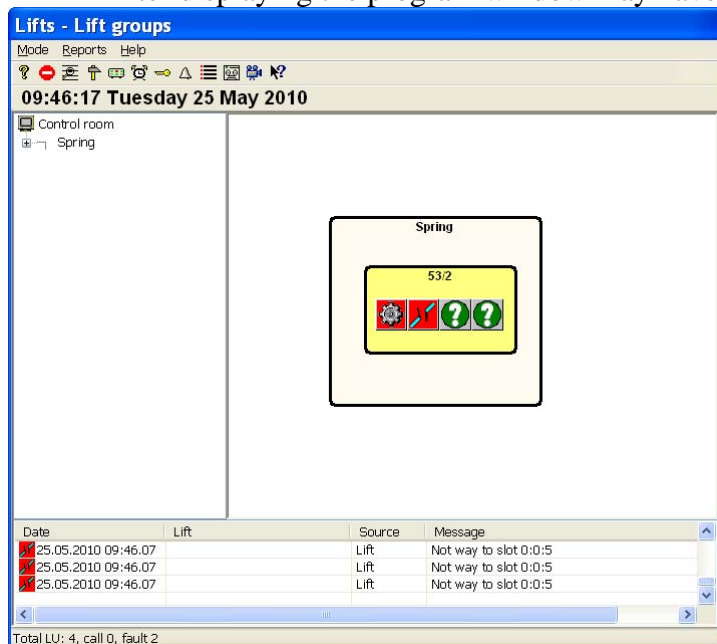
To move this elevator to this panel from the Address panel (in the Administrator mode) you need to click and hold the left mouse button on the chosen elevator in the Address panel, move the cursor to the appropriate group and release the button. To delete the elevator from the group you need to click the right mouse button on the elevator and choose the option «Remove from group». To change sizes of all elevators displayed in this panel click the right mouse button on any elevator and choose the option «Change size lift picture ».

You can move lift units of the whole building from the Address panel to groups of status Panel (if the building has no elevators placed in groups of LU). For this purpose (in the Administrator mode) click and hold the left mouse button on the image of the building in the structure tree and move the cursor to the appropriate position of the group and release the button.

You can move lift units of the whole street from the Address panel to groups of status Panel (if the street has no elevators placed in groups of LU). For this purpose (in the Administrator mode) click and hold the left mouse button on the image of the street in the structure tree and move the cursor to the appropriate position of the group and release the button.

To move the elevator along the panel click and hold the left mouse button on the chosen elevator and move the cursor to the appropriate position and release the button.

After displaying the program window may have the following view:



Group changing of elevators' position in the group is available.

There are three types of group operations:

- - moving
- - aligning
- - distribution
- - deletion

Elevators can be chosen on the map using the mouse. For this purpose you need to press the button Ctrl and click and hold the left mouse button in the upper left side of the rectangle containing chosen elevators, move the cursor to the lower right side and release the button. Chosen elevators will have a dotted frame. By making this action you will choose not only

elevators which images are in the rectangle but also elevators which images cross the border of choosing rectangle.

After release of the left mouse button the menu with the following options will be opened:

- "Move marked group of lifts"
- "Line up on the level by left lift"
- "Line up vertically by top lift"
- "Allocate on the level"
- "Allocate vertically"
- "Delete marked lifts from the group"

In the case of choosing of the option "Move marked group of lifts" you can move elevators to the appropriate position and click the left mouse button to complete moving. You can cancel the current moving by pressing the "Esc" button or by clicking the right mouse button.

The option "Line up on the level by left lift" allows displaying all chosen elevators in the form of the horizontal line which position aligns with the position of image of the leftmost elevator.

The option "Line up vertically by top lift " allows displaying all chosen elevators in the form of the vertical line which position aligns with the position of image of the uppermost elevator.


The option "Allocate on the level" allows displaying chosen elevators horizontally. In this case boundary elevators (the leftmost and the rightmost) are not moved. This option appears in the case more than two elevators are chosen.

The option "Allocate vertically" allows to display chosen elevators horizontally. In this case boundary elevators (the uppermost and the lowermost) are not moved. This option appears in the case more than two elevators are chosen.

The menu option « Delete marked lifts from the group » allows excluding chosen elevators from the group.

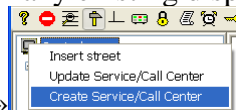
The latest group changing can be canceled by using of key combination Ctrl+Backspace.

You can set the discretization of placement of lift units' rectangles in the group by clicking of the right mouse button and choosing of the menu option «Set grid spacing 8 DLUs». To delete the discretization of placement you need to click the right mouse button and choose the menu option «Set grid spacing 1 DLUs».

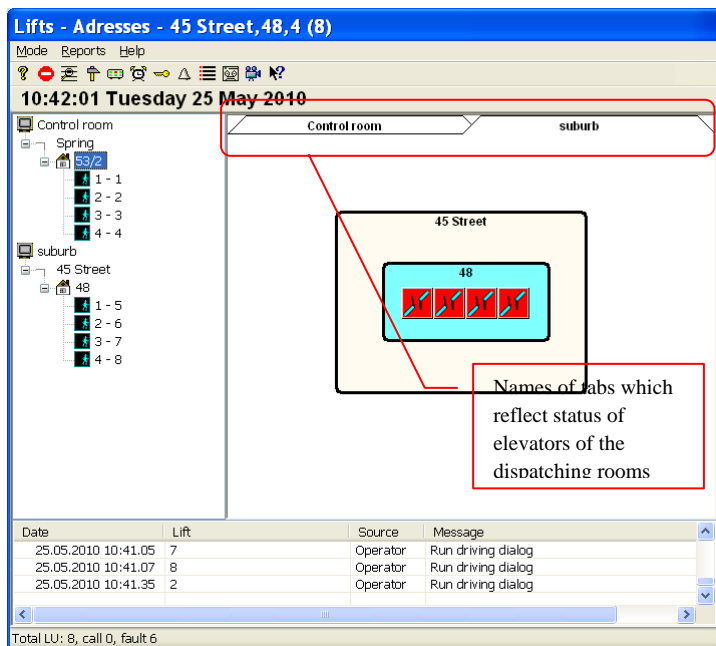
To bring back the initial placement of the program window and panels (which was during the first running of MPultPro) click the icon  in the toolbar and choose the menu option «Mode»\ «Primary position».

Use of several dispatching rooms.

In the Address panel of MPultPro you can add several dispatching rooms by clicking the right mouse button on any existing dispatching room and choosing of the menu option «Create

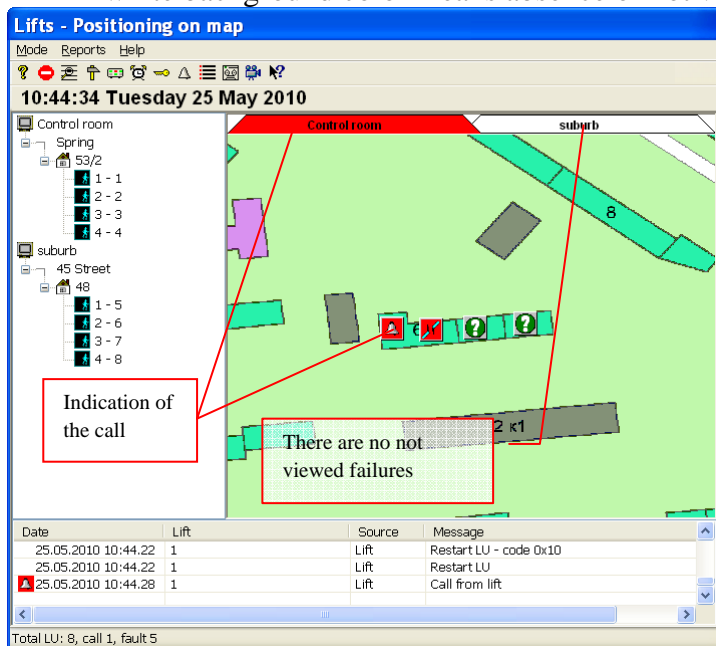


Service/Call Center ». A dispatching room can be a real dispatching room or random combinations of elevators. For example, combination of elevators of the city district. In the Address panel each dispatching room is displayed in the form of a single line with its streets. In the status panel of lift units (in all its types) each dispatching room has its own tab. The name of the tab is the name of the dispatching room. Example of the structure with two dispatching rooms:



Activation of the tab (left mouse click of the tab) leads to displaying of elevators' statuses in this tab. Background color of the tab's name reflects the general alarm status:

- red background color means that one or several LU of this tab have calls for dispatcher;
- red background with white dashes means existence of not viewed (blinking) failures
- white background color means absence of not viewed (blinking) failures in this tab



5. Work with the log.



All events and messages are saved in the Log. The current log is kept in the file MPultPro.Log and can be viewed in the Log Panel in the form of the list. Each record of the list consists of five fields:

- 1) «Date» - contains date and time (within the accuracy of the second) when the event took place and the icon describing the event. The icon may have the red background color in the case of failure's occurrence, yellow color in the case the failure took place when the service key was inserted (i.e. in the mode of technical maintenance) and no color in the case of disappearance of the failure. Icons are the same as in the dialog form of the detailed statuses of the elevator. In the

current line of the log the background color becomes blue showing that the line is current. At choosing of the current line you need to click the left mouse button on the date field of the line. In the case the record of the log is related to the elevator the appropriate square in the Status Panel becomes sunken. In the case of the right mouse button clicking on the field the action menu will appear;




- 2) «Lift» - contains short name of address of the elevator to which the event is related. In the case the event is not directly related to an elevator the field is empty. Displaying mode (short name or address) in this column can be set (in the Administrator mode) in the panel «General parameters». Moreover, in the case of clicking the left mouse button on the name of the column the menu containing two options will appear - «In column show lifts address/ID» and «Log sorting according to lift». In the case of choosing of the first option changing of the displaying mode will take place: short name will be changed into address and address will change into short name. Choosing of the second menu option allows sorting log records on the elevator.
- 3) «Source» - this field contains type of the source of the event and can have two values: «Lift» - in the case the message came from the elevator and «Operator» - in the case there were recorded actions of the operator of the dispatching elevator;
- 4) «Message» - this field contains the name of the event or actions of the operator;


You can use Up and Down arrows, keys PageUp, PageDown, Home, End to move between records of the Log. Displayed area of the log is limited by the number of lines set in the field «Displaying the log (lines)» of the dialog form «General parameters».

In the Operator mode the log is continuously updated. It makes difficult to view it. Clicking of the icon  in the toolbar leads to temporary stopping (on 10 minutes) of indication of new messages in the Log Panel (new events are saved but not displayed). Moreover, you can select for viewing messages from the current elevator. You can view messages from the current elevator by choosing of the menu option «Select messages of given lift ». This menu appears after clicking the right mouse button on the image of the elevator in the Status Panel, in the Address Panel, on the date of the event in the Log Panel. Ahead of schedule (before the period of 10 minutes) viewing of messages from the elevator can be stopped by clicking the icon  in the toolbar.

During running of MPultPro the size of the file MPultPro.Log (which contains the current log) constantly grows. There is a mechanism of automatic clearing of the log described during discussion of the panel «General parameters». You can clear the log automatically or manually. For this purpose you need to (in the Administrator mode) choose the menu option «Mode»\ «Clear log...». After confirmation of the necessity of archiving:

- The file of the current log MPultPro.Log is copied to the folder MPultPro\LOG to the file Pnnnnnnn.Log, where nnnnnnn is the sequence number of the file in the folder.
- The file of the current log MPultPro.Log is cleared. Now it has only latest records. Number of records left is specified in the field «Displaying the log (lines)» of the panel «General parameters».

Saved logs can be viewed in the Administrator mode. To view the previously saved log chooses the menu option «Mode»\ «Saved logs...» or click the icon  in the toolbar and choose the file with the saved log from the appearing dialog panel. In the status panel the name of the viewed file appears and the icon  in the toolbar becomes «sunken». To end viewing of the log click the icon . After this the field in the status line will be cleared and the program will switch to viewing of the current log.

Information from saved logs and information from the current log is used during creation of reports and viewing of the log in any range. To view the log in any range click the icon  in the toolbar or choose the menu option «Mode»\ «View log...». Then the form of viewing options will appear:

The dialog box 'Parameters of selection events' contains the following fields and options:

- Begin:** 18.05.2010
- End:** 25.05.2010
- Lift:** <all>
- Event:** <all>
- N SK:** 0
- Record type:**
 - ☒ All
 - ☐ Lift
 - ☐ Operator
- State type:**
 - ☒ All
 - ☐ Set
 - ☐ Set with service key in
 - ☐ Clear
- Owner:** [dropdown menu]
- Serviceman:** [dropdown menu]
- Buttons:** OK, Cancel

The panel allows to set:

- In fields «Begin» and «End»: time interval containing events.
- Choose (if necessary) events related to the elevator (by choosing from the pop-up list «Lift»).
- Choose the event in the field «Event» (by choosing from the pop-up list).
- Specify the source of the event - «Lift» or «Operator»
- Set the selection on appearance («Set», «Set with service key in») or disappearance («Clear»).
- In the field «N SK» (Number of the service key) you can set selection of messages from the elevator when the service key with the specified number was inserted into the lift unit.
- You can choose (from the pop-up menu «Owner») the owner of elevators messages from whom will be in the selection.
- You can choose (from the pop-up menu «Serviceman») the electrician who serves elevators messages from whom will be in the selection.

After clicking the light button «OK» the list of selected messages will appear in the form of preview before printing:

The window 'Lifts - [Log - Spring, 53/2, 1 (1)]' displays a log of events. The top bar shows the date and time: 11:06:45 Tuesday 25 May 2010. Below the bar are buttons for 'Print...', 'Next Page', 'Prev Page', 'One Page', 'Zoom In', 'Zoom Out', and 'Close'. The main area is divided into two columns, each showing a list of events with columns for 'Date', 'Address', and 'State'. The status bar at the bottom indicates 'Pages 1-2' and 'x=152,y=181'.

You can not print the selection results in the Operator mode. But it is available in the Administrator mode from the mode of preview by clicking the button «Print...» and by using the menu option «Mode»\ «Print log...»

In the case the computer has Microsoft Office Excel you can view the selection results in the EXCEL page by choosing of the menu option «Mode»\ «Log export into EXCEL...». Selection parameters are set in the same dialog panel that is used at viewing of the log.

Export of the log in CSV files

The group of fields «Parameters of log into CSV files» of the panel «General parameters» specifies to which folder and how often records of the log will be automatically exported. The menu option «Mode»\ «Log export into CSV text file ...» allows making manual export. The role of actions made in this option is different in the Operator mode and in the Administrator mode. In the Operator mode automatic extra export of the log to the folder specified in the console parameters takes place. In the case the automatic export of the log is forbidden this option is forbidden. Using this option in the Administrator mode you can select messages from the log and place them to the CSV file for further analysis. The dialog form used for selection of messages is the same as for viewing of the log.

Each record of CSV file consists of the following eleven fields separated by the symbol «;»:

1. Sequence number of the record
2. Date of the event in the form DD.MM.YYYY
3. Time of the event in the form HH:MM:SS
4. Code of the event
5. Decoding of the event
6. Bit features
7. Identifier of the elevator
8. Array of saved condition
9. The bit number of the saved status
- 10 The number of the message table of the elevator's control station
- 11 The message number of the elevator's control station/the number of the service key

Field 1 contains the unique sequence number of the log's record. The number of each next record is bigger on 1 number than the previous one.

Field 2 and Field 3 define the time moment of creation of the log's record.

Field 4 – the event code:

- 1 Start
- 2 Exit
- 3 Mode - Operator
- 4 Mode - Administrator
- 5 Lost link with LBC in slot %d:%d:%d
- 6 On LBS in slot %d:%d:%d
- 8 Restart LU - code 0x%02X
- 9 Restart in slot %d:%d:%d
- 10 On LSC in slot %d:%d:%d
- 11 Off LSC in slot %d:%d:%d
- 12 On LSC with lift car
- 13 On LSC with MR
- 14 Off LSC
- 15 Deferred servicing
- 16 Errors cleaning
- 17 Run driving dialog
- 18 Lift power-up
- 19 Lift power down
- 20 Export log into CSV file
- 21 Log truncate
- 22 Administrators password input
- 23 Lift power-up password input
- 24 Extracted SK in slot %d:%d:%d
- 25 In slot %d:%d:%d insert SK
- 26 Not way to slot %d:%d:%d

27 Appear way to slot %d:%d:%d
28 Busy COM port for IMI
29 Not exchange by IMI
30 Penetration in well
31 Expire ware in slot %d:%d:%d
32 LBC %d:%d:%d not define in net structure (LKDSDrvCfg)
33 Fault LB in slot %d:%d:%d
34 Fault current source 60v in slot %d:%d:%d
35 Emergency power in slot %d:%d:%d
36 Gradual shutdowns of lifts
37 Lift possibly long time not move
38 Lift probably long time not move
39 Turn-on outputs
40 Turn-off outputs
128 Inserted service key
129 Restart LU
130 Repeated doors backspacing
131 Intrusion in machine room
132 Missing power in circuit management
133 Press button STOP in lift
144 Open lift door
145 Break chain safeties
146 No work sensor US
147 Short circuit chain safety
148 Call
149 Unauthorized lifts move
160 Damage main driver by UKSL
161 Damage door drivers
162 Intrusion into well
163 Failures US
164 Event of the user
165 Open machine room
176 Lift between floors
177 No work sensor DC
178 Open doors well by US
179 Main driver turn on
180 RESERVE1
181 Jumper starters
192 Idle lift 1 hour
212 Not information
213 Not link
224 Lock RM without RMD
225 Refining call - from machine room
226 Fault voice route
227 Low bits statistics
228 High bits statistics
229 RESERVE29
230 RESERVE30
231 RESERVE31
232 States USER1
233 States USER2
234 States USER3

235 States USER4

236 Power backup LU

237 Alternating voltage in CS

Field 5 – symbol decoding of the event

Field 6 – bit features:

- a. Bit1:
 - i. =1 event is the action of the operator
 - ii. =0 event is the information from the equipment
- b. Bit2:
 - i. =1 event is related to appearance of the event (LSC is started)
 - ii. =0 event is related to reset of the status (LSC is stopped)
- c. Bit3:
 - i. =1 the service key is inserted into the LU (in the field 11 the number of the SK)
 - ii. =0 the service key is not inserted into the LU
- d. Bit4:
 - i. =1 event – is the message from the elevator's control station (the number of the message in field 10 and 11)
 - ii. =0 event is not the message from the elevator's control station
- e. Bit5:
 - i. =1 in the field 9 the number of the bit of the LU's status related to the event is set
 - ii. =0 event is not related to the status of the unit

Field 7 – globally unique identifier of the LU (the field GUID of the file MPultPro.xml) related to the event

Field 8 – bit condition of the LU in the moment of the event (Bit5=1). Is represented by 10 of 6-bit files. The field 8 is represented in the hexadecimal symbol type:

Bit	DATA X.X	Description
0	DATA1.0	Inserted service key (Mode of technical maintenance)
1	DATA1.1	Restart LU
2	DATA1.2	Repeated doors backspacing
3	DATA1.3	Intrusion in machine room
4	DATA1.4	Missing power in circuit management
5	DATA1.5	Press button STOP in lift
6	DATA2.0	Open lift door
7	DATA2.1	Break chain safeties
8	DATA2.2	No work sensor US
9	DATA2.3	Short circuit chain safety
10	DATA2.4	Call for the dispatcher
11	DATA2.5	Unauthorized lifts move
12	DATA3.0	Damage main driver by UKSL
13	DATA3.1	Damage door drivers
14	DATA3.2	Intrusion into well
15	DATA3.3	Failures US
16	DATA3.4	Emergency blockage
17	DATA3.5	Open machine room
18	DATA4.0	Lift between floors
19	DATA4.1	No work sensor DC
20	DATA4.2	Open doors well by US
21	DATA4.3	Main driver turn on
22	DATA4.4	The user bit
23	DATA4.5	Jumper starters

24	DATA5.0	Lock RM without RMD
25	DATA5.1	Specification of the call for the dispatcher: 0-cage / 1 - MR
26	DATA5.2	Fault voice route
27	DATA5.3	Low bits statistics of the moving status
28	DATA5.4	High bits statistics of the moving status
29	DATA5.5	RESERVE
30	DATA6.0	RESERVE
31	DATA6.1	RESERVE
32	DATA6.2	Status USER1
33	DATA6.3	Status USER2
34	DATA6.4	Status USER3
35	DATA6.5	Status USER4
36	DATA7.0	Power backup LU
37	DATA7.1	Alternating voltage in CS
38	DATA7.2	RESERVE
39	DATA7.3	RESERVE
40	DATA7.4	RESERVE
41	DATA7.5	RESERVE
42	DATA8.0	RESERVE
43	DATA8.1	RESERVE
44	DATA8.2	RESERVE
45	DATA8.3	RESERVE
46	DATA8.4	RESERVE
47	DATA8.5	RESERVE
48	DATA9.0	moving from the moment of the last request for status
49	DATA9.1	RESERVE
50	DATA9.2	RESERVE
51	DATA9.3	RESERVE
52	DATA9.4	RESERVE
53	DATA9.5	RESERVE
54	DATA10.0	RESERVE
55	DATA10.1	RESERVE
56	DATA10.2	RESERVE
57	DATA10.3	RESERVE
58	DATA10.4	no information
59	DATA10.5	no link with the LU

Field 9 – The number of the bit of the field 8 related to the event (Bit5=1). Can be calculated from the value of the field 4.

Field 10 – along with the field 11 identifies the message form the elevator's control station related to the event (Bit4=1).

Field 11 – the number of the service key (Bit3=1) or along with the field 10 the number of the message of the elevator's control station (Bit4=1)

6. Reports created by the program

Information saved in the Log can be used as a basis for creation of statistical reports about work of the dispatching system. As it was mentioned earlier the log can be exported in CSV files and using those reports outside MPultPro can be created.

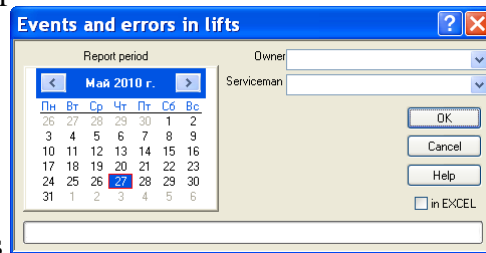
In the Administrator mode of MPultPro in the menu option «Reports-messages» you can receive the following reports:

- 1) Events and errors in lifts;
- 2) Lift errors that happened 2 and more times;
- 3) Lift maintenance performance;

- 4) Selected error;
- 5) Accidents connected with safety hazard of lift operation;
- 6) Work of lift serviceman
- 7) Lifts total downtime.
- 8) Lift drives operation statistics (Making of reports in the Operator mode is available)

The report “Events and errors in lifts”

This report contains information about failures with the duration of out-of-service time of more than 10 minutes which took place from 8:00 to 23:00. Out-of-services which occurred because of technical works and specified in the report «carrying out of technical works on elevators» are not taken into account in this report.



In the dialog form of report parameters the period of the report, additional parameters and type of the report are specified. Start and end dates of processing of log's events are specified in the field «Report period». Duration of the period can not be more than 7 days. Interval can be chosen by marking of dates using the mouse. Click and hold the cursor on the start date and move it to the end date. In fields «Owner» and «Serviceman» you can specify selection of elevators on owner and/or electrician of the elevator. In the case these fields are empty the report comprises all elevators. The option «in EXCEL» allows making the report in the EXCEL page. In the case the box «in EXCEL» is not checked the report is viewed by internal programs.

Algorithm of making of the report is the following:

1. all messages are displayed in the sorted order on the elevator and time of appearance;
2. the program searches for failures which took place in the period from 8:00 to 23:00 and without inserted service key;
3. the program searches for messages about disappearance of failures identified in the section 2. In the case the time interval is more than 10 minutes it is saved in the report;
4. then work with the section 2 continues till end of messages in the specified period.

In making of the report the coding form Pril1.1 is used. This coding form is located in the folder BLANK. The file ParDisp.Dat containing general parameters of reports is in the same folder. You should change it make the report correctly:

&5;Central department of the HUI
 &6;Novosibirks
 &7;Visotskogo st., b.31

The report “Lift errors that happened 2 and more times”

The report contains information about failures with the duration of out-of-service of more than 10 minutes and which took place 2 or more times regardless of the time of the day.

In the dialog form of report parameters the border value is specified. The report saves information about failures in the case they took places the specified number of times or more. Role of other fields is equal to role of fields in the parameters from of the report « Events and errors in lifts».

Algorithm of making of the report is the following:

1. all messages are displayed in the sorted order on the elevator and time of appearance;
2. the program searches for the message about the failure occurrence;
3. the program searches for messages about disappearance of the failure identified in the section 2. In the case the time interval is more than 10 minutes information about the failure is saved in the intermediate table;
4. then work with the section 2 continues till end of messages in the specified period;
5. the intermediate table is sorted on the elevator of type of failures;
6. the report contains information about failures in the case they were found the specified number of times or more in the intermediate table.

In making of the report the coding form Pril2.1 is used. It is in the folder BLANK.

The report “Lift maintenance performance”

The report contains time of technical works of the elevator which is defined as time periods from inserting of the Electronic Key to its removing during 8 hours up to 17:00 without considering of weekends.

In the dialog panel of the similar report panel « Events and errors in lifts» parameters of report are set.

Algorithm of making of the report is the following:

1. all messages are displayed in the sorted order on the elevator and time of appearance;
2. the program search for information about inserting of the service key which took place in the period 8:00 – 17:00;
3. then the program search for information about removing of the service key. The resulting time interval saved in the report;
4. then work with the section 2 continues till end of messages in the specified period.

In making of the report the coding form Pril3.1 is used. It is in the folder BLANK.

The report “Selected error”

The report contains information about one chosen failure with the time more than 10 minutes.

In the dialog form of report parameters in the field «Error» you need to choose the failure on which you need to make the report. Role of other fields is equal to role of fields in the parameters from of the report «Events and errors in lifts». Algorithm of making of the report is the following:

1. all messages are displayed in the sorted order on the elevator and time of appearance;
2. the program searches for the message about the occurrence of the chosen failure;
3. the program searches for messages about disappearance of the chosen failure identified in the section 2. In the case the time interval is more than 10 minutes it is saved in the report;
4. then work with the section 2 continues till end of messages in the specified period.

In making of the report the coding form Pril4.1 is used. It is in the folder BLANK.

The report “Accidents connected with safety hazard of lift operation”

The report contains information about incidents related to the security threat for the elevator regardless of duration. Detailed incidents mean the following incidents:

1. Intrusion into well;
2. Security circuit failure (Break chain safeties, Short circuit chain safety);
3. Unauthorized lifts move.

In the dialog panel of the similar report panel «Events and errors in lifts» parameters of report are set.

Algorithm of making of the report is the following:

1. all messages are displayed in the sorted order on the elevator and time of appearance;
2. the program searches for the message about the occurrence of above mentioned incidents;
3. the program searches for messages about disappearance of incidents identified in the section 2. The resulted time interval is saved in the report;
4. then work with the section 2 continues till end of messages in the specified period.

In making of the report the coding form Pril5.1 is used. It is in the folder BLANK.

The report «Work of lift serviceman »

The report contains information about periods when the service key was inserted into the lift unit. The dialog panel of parameters setting of the report is the following:

In fields «Beginning of » and «End of period» contain period of the report. In the field «Lifts list » you can select needed elevators by the left mouse clicking on the elevator's line or select all elevators of the list by clicking the button «Mark all». In the field «Service key No» you need to enter the numerical code of the service key using of which you need to follow. The option «in EXCEL» allows making the report in the EXCEL page.

Algorithm of making of the report is the following:

1. all messages are displayed in the sorted order on the elevator and time of appearance;
2. the program searches for the message about appearance of «SK is inserted» of the appropriate number;
3. the program searches for messages about disappearance of the service key identified in the section 2. The resulted time interval is saved in the report;
4. then work with the section 2 continues till end of messages in the specified period.

In making of the report the coding form Pril6.1 is used. It is in the folder BLANK.

The report «Lifts total downtime».

The report contains information about the total time of out-of-service of elevators which is caused by messages considering as the start of out-of-service of the elevator.

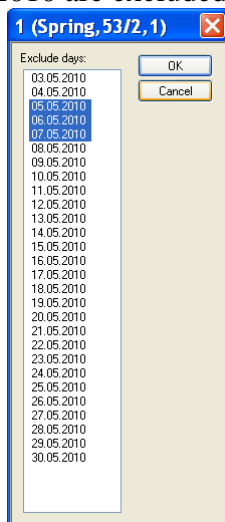
In the dialog form of report parameters

report parameters are specified.

Start and end dates of processing of log's events are specified in the field “Report period”. Duration of the period can not be more than 31 days.

In the field «Lifts list » you can see the list of all elevators of the system. Select (or cancellation of selection) can be made by clicking of the right mouse button on the appropriate line. In the case of you make the mark the line will change its color into blue and in the case you remove the mark the line will change its color into white. In the case of clicking of the right

mouse button the dialog window will appear. In this window you can select days of the report which are excluded from the report of this elevator (in the next example 05.05.2010, 06.05.2010, 07.05.2010 are excluded):



In the case the elevator has such selected days there is a symbol * before them.

To change all elevators click the light button «Mark all» below the list of elevators.

The field «List of errors» shows the list of failures which appearance is considered as the start of out-of-service of the elevator. Select (or cancellation of selection) can be made by clicking of the right mouse button on the appropriate line. In the case of you make the mark the line will change its color into blue and in the case you remove the mark the line will change its color into white. To change all elevators click the light button «Mark all» below the list of failures.

You can choose the viewing type of information:

- show time downtime
- show count downtimes

You can choose the limit number of downtimes:

- include all lifts (and without downtimes);
- include lifts with 1 or more downtimes;
- include lifts with 2 or more downtimes;
- include lifts with 3 or more downtimes;
- include lifts with 4 or more downtimes;
- include lifts with 5 or more downtimes;
- include lifts with 6 or more downtimes;
- include lifts with 7 or more downtimes;
- include lifts with 8 or more downtimes;
- include lifts with 9 or more downtimes;

The selected limit number of downtimes is compared with the total number of downtimes of the elevator during the period. In the case the total number of downtimes is equal or more than the limit one the information about the elevator is saved in the report.

Checking of the box «Exclude downtimes with SK in» allows excluding failures which took place with inserted service key into the lift unit.

Checking of the box «Exclude downtimes when a call» allows excluding failures which took place with the existence of the call from the elevator cage or from the machine room.

Checking of the box «Exclude downtimes with pressed STOP » allows excluding from the list those failures which took place when the STOP button in the elevator cage was pressed.

In the field «Exclude out-of-service» you can set the minimum duration of out-of-service in minutes which will be not saved in the report.

Algorithm of making of the report is the following:

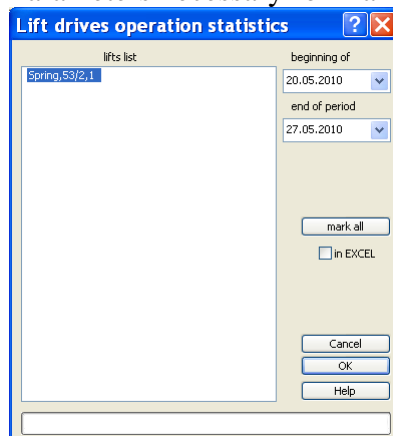
1. all messages are displayed in the sorted order on the elevator and time of appearance;
2. the program searches for the message about the failure occurrence which causes out-of-service of the elevator;
3. the program searches for messages about disappearance of the failure identified in the section 2. The resulted time interval is summed on the day and is saved in the report;
4. then work with the section 2 continues till end of messages in the specified period.

In making of the report the coding form IdleLift.1 is used. It is in the folder BLANK.

The report «Lift drives operation statistics».

The report shows number and duration of starting of the main gear and doors' gears. The statistics is checked up from the lift unit by MPultPro according to the period specified in the field «Interval of request for gears' statistics» of the panel «General parameters». Statistical data is saved in files of the folder STAT. This folder is in the folder of MPultPro. One file has information about one elevator. The name of the file has the following format: <GUID>.log. For example, for the lift unit which has the global unique identifier B0BBF383B2184054A92BF43D338C0794 the file name will be the following - B0BBF383B2184054A92BF43D338C0794.Log.

Parameters necessary for making of the report should be set in the dialog panel:



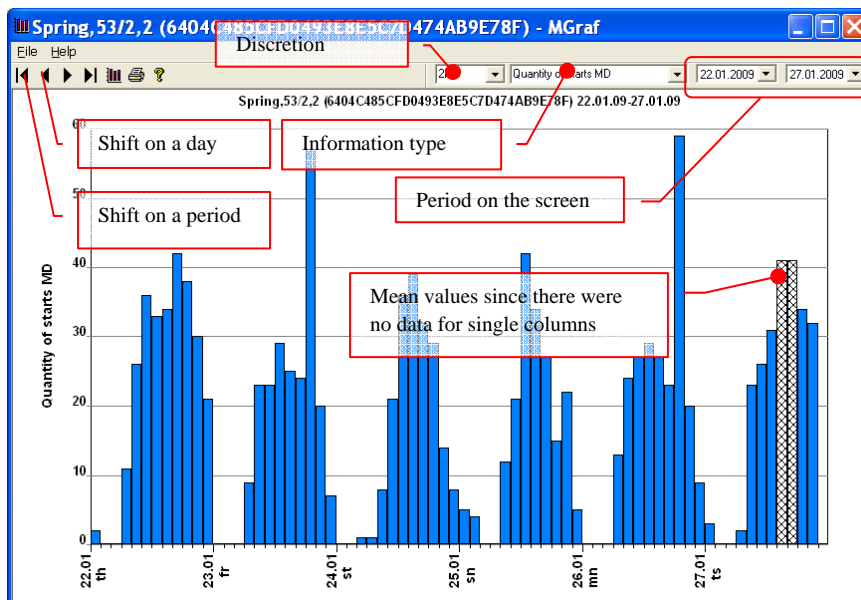
The file «Lifts list » has the list of elevators which statistics was considered, i.e. the folder STAT has the file with the GUID name of this elevator. Select (or cancellation of selection) can be made by clicking of the right mouse button on the appropriate line. In the case of you make the mark the line will change its color into blue and in the case you remove the mark the line will change its color into white. To change all elevators click the light button «mark all».

In the case the report is made for the individual elevator by clicking of the right mouse button the list of elevators will have one record.

In making of the report the coding form StatLift.1 is used. It is in the folder BLANK.

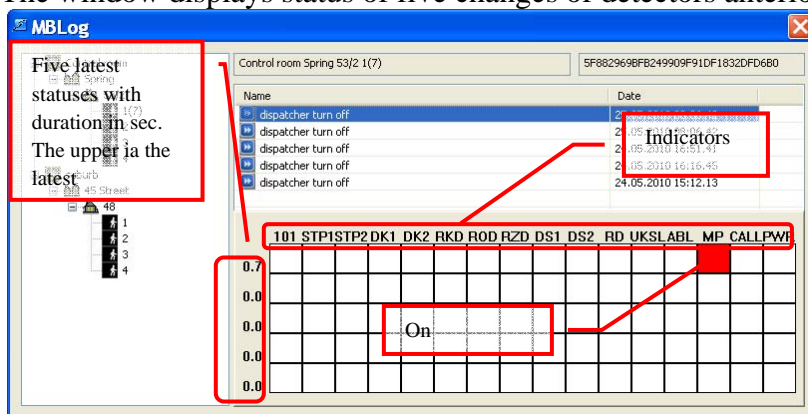
Operation statistics in the form of the graph

In the case of clicking the right mouse button on the icon of the elevator and choosing of the option «Lift drives operation statistics in the form of diagram» the panel will appear. This panel shows the statistics in the form of the graph. For example:



7. Analysis of emergency situations.

Some lift units can save statuses of checkpoints anterior to registering by the lift unit of the failure which leads to stopping of the elevator by the lift unit. MPultPro checks up status of such checkpoints and saves it files of the subfolder LBBAD. Decoding of data is made by the module MBLog which can be opened by choosing of the menu option «Mode»\ «Launch MBLog...». For the elevator which supports saving of checkpoints the module MBLog can be opened from the Status Panel. For this purpose click the right mouse button on the icon of the elevator and choose the option «Status sensor during fault (MBLog)» from the pop-up menu. The window displays status of five changes of detectors anterior to stopping of the elevator:



8. Listening of saved conversations

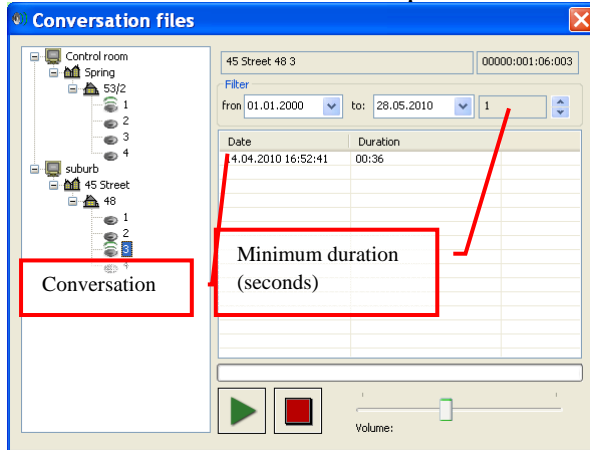
In the case the box «Save conversations of the dispatcher» is checked in the module LKDSDrvCfg, the server of LKDSDrv saves conversations of the dispatcher in the form of WAV files. The program creates subfolders according to years, months and days in the folder LKDSDrv\Wav. The format of the file is the following:

G0<year><month><day><hour><minute><second>_<subnetwork>_<NM>_<slot>_<address>.
Wav

For example the conversation which began on the 26.01.2010 in 10:59:35 with the LU in the subnetwork 1, NM7, slot 6 and address in the LB 1 will be saved in the file:

LKDSDrv\Wav\2010\01\26\G0100126105935_00001_007_06_001.Wav

Files can be listened by any appropriate programs. In MPultPro using the menu option «Mode»\ «Saved conversations...» you can choose the appropriate conversation. To view the archive of conversations of the appropriate elevator click the right mouse button on the rectangle of the elevator and choose the option «Recorded conversations». The panel will appear:




9. Entering of passwords

There are three passwords in MPultPro:

- For switching to the Administrator mode
- For starting of the elevator in the panel of detailed statuses in the case starting of the elevator is allowed
- For saving of parameters in the virtual service device which can be opened by clicking of the button «Terminal» in the panel of detailed statuses.

Initial value of all passwords is 123456

All passwords can be changed in the administrator mode by choosing of the menu option «Modes»\ «Changing of passwords...» or by clicking of the icon  in the toolbar.

10. The list of files of the folder MPultPro

The folder MPultPro contains:

- The Folder BLANK with coding forms of reports
 - IdleLift.1
 - IdleLift2.1
 - IdleLift3.1
 - ParDisp.Dat
 - Pril1.1
 - Pril2.1
 - Pril3.1
 - Pril4.1
 - Pril5.1
 - Pril6.1
 - StatLift.1
- The folder CSV with files of the log in the CSV format
- The folder LBBAD with files of prehistory of failures
- The folder LOG with files of saved logs
- The folder NOTE with files of notes of elevators


- The folder STAT with files of operation statistics of elevator's gears
- The file MPultPro.Log – the current log
- The file MPultPro.Bad – text file with messages about failures
- The file MPultPro.dmp – the latest status of elevators
- The file MPultPro.chm – answer wizard
- The file MPultPro.Exe – execution file of the module
- The file Alarm.wav_
- The file Clock.Wav_
- The file ringin.wav_
- The file stunned.wav_
- The file warn.wav_

Files of the *.WAV_ format – samples of sounds. MPultPro accompanies occurrence of new failures by sound signals. Sound data is in the file MPultPro.Exe. MPultPro also can use external files. For this purpose you need to change the type of files from *.Wav_ into *.Wav. Then (if needed) you can replace sound files by other sound files.

11. Additional parameters set in the start line.

During running of the program you can set a number of parameters of its work in the form of keys in the command prompt. For example:

`MpultPro -iDisp.XML -c192.168.2.20 -b`

In the case of specifying of the key `-b` in the form of detailed statuses of the elevator the type of the cursor will change into  at hovering on light buttons. It can be useful for the operator.

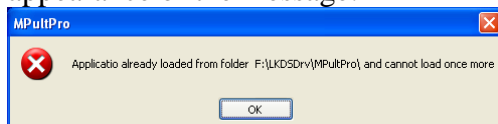
After the key `-i` you need to specify the configuration file which will be used by the module of MPultPro instead of the configuration file MPultPro.XML

The module MPultPro (using the DCOM protocol) can connect to the Server of LKDSDrv and to the service of LKDSPro which are ran on another computer. The notion that MPultPro can connect using DCOM is the key `-c` in the command prompt. Then follows (without spacing) address of the computer with remote services. For example:

`MPultPro -c192.168.2.20`

12. Running of several MPultPros in the same computer.

Attempt to run the second MPultPro from the folder LKDSDrv\MPultPro will lead to appearance of the message:



Prohibition on running of the second MPultPro from the same folder is connected with the fact that different files of data protocols (which are created by MPultPro during running) can not be used by several programs simultaneously.

There may be necessity to run several MPultPros in the case of using of the Terminal Server. To run several MPultPros simultaneously copy the folder MPultPro from the installation package to folders with names (for example) MPultPro2, MPultPro3 ... MPultProN according to

the number of additional MPultPros. The folder of the installed program will have the following folders:

- Common
- Docum
- DrvUSB
- ...
- MPultPro
- MPultPro2
- MPultPro3
- ...
- MPultProN
- ...
- Tools

At such a configuration you can run the file MPultPro.Exe from each folder MPultPro* simultaneously. Please remember that in the case of updating of the installation package only MPultPro in the folder MPultPro will be updated. You will need to make updating in folders MPultPro2, MPultPro3 ... MPultProN manually.

13. Usage of settings from MPult.

To switch to MPultPro from SW of previous versions based on MPult and ComCLB you need to copy the following files to the folder MPultPro:

- MPult\MPult.XML
- MPult\ KeyTab.txt

Moreover, you need to copy all note files from the folder MPult\NOTE to the folder MPultPro\NOTE

Passwords need to be entered again in the Administrator mode of MPultPro. Size of the window and positions of panels are also set in the Administrator mode of MPultPro.