



Alcoframe Integration Module Settings Guide

ACFA PSIM 1.1

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1 Introduction into Alcoframe Module Settings Guide

On the page:

- [Purpose of the document](#)
- [General information about the Alcoframe integration module](#)

1.1 Purpose of the document

This *Alcoframe Module Settings Guide* is a reference manual designed for *Alcoframe* Module configuration technicians.

This Guide presents the following materials:

1. general information about the *Alcoframe* integration module;
2. configuration of the *Alcoframe* integration module;
3. working with the *Alcoframe* integration module.

1.2 General information about the *Alcoframe* integration module

The *Alcoframe* module is a component of *ACFA PSIM* Software System. It was designed to monitor and manage the *Alcoframe* breathalyzers. Configuring the *Alcoframe* breathalyzers in *ACFA PSIM* is partially possible.

Note.

Detailed information about the *Alcoframe* is presented in the official documentation for this system (manufactured by AO Laser Systems).

2 Supported hardware and licensing of the Alcoframe integration module

Manufacturer	AO Laser Systems Neudorf, 34 building A, Svyazi str., Strelna village, Saint-Petersburg, Russia, 198515 +7 (812) 612-02-88 office@lsystems.ru http://www.lsystems.ru/
Integration type	Low-level protocol
Equipment connection	Ethernet

Supported equipment

Equipment	Function	Features
Alcoframe	Breathalyzer	<ul style="list-style-type: none"> • Analysis time is no more than 1 sec. • Uptime to the next check is no more than 1 sec. given that there is no ethanol vapor in the previous exhalation. • Uptime to the next check is no more than 5 sec. given that there is some ethanol vapor in the previous exhalation. • The minimum threshold of detecting some ethanol vapor in the exhalation is 135 µg/l (0,3‰ in blood). • Temperature range is from +10°C to +40°C • The 'frame' sizes are 295x227x50 mm • The processing and analysis block sizes are 190x288x75 mm • The system capability is 50,000 hours (about 7 years) of the continuous operation (unlimited number of exhalations). • The technical maintenance and optional hygiene accessories, technical maintenance is minimal (wiping mirrors occasionally), mouthpieces and nozzles are not required.

Licensing

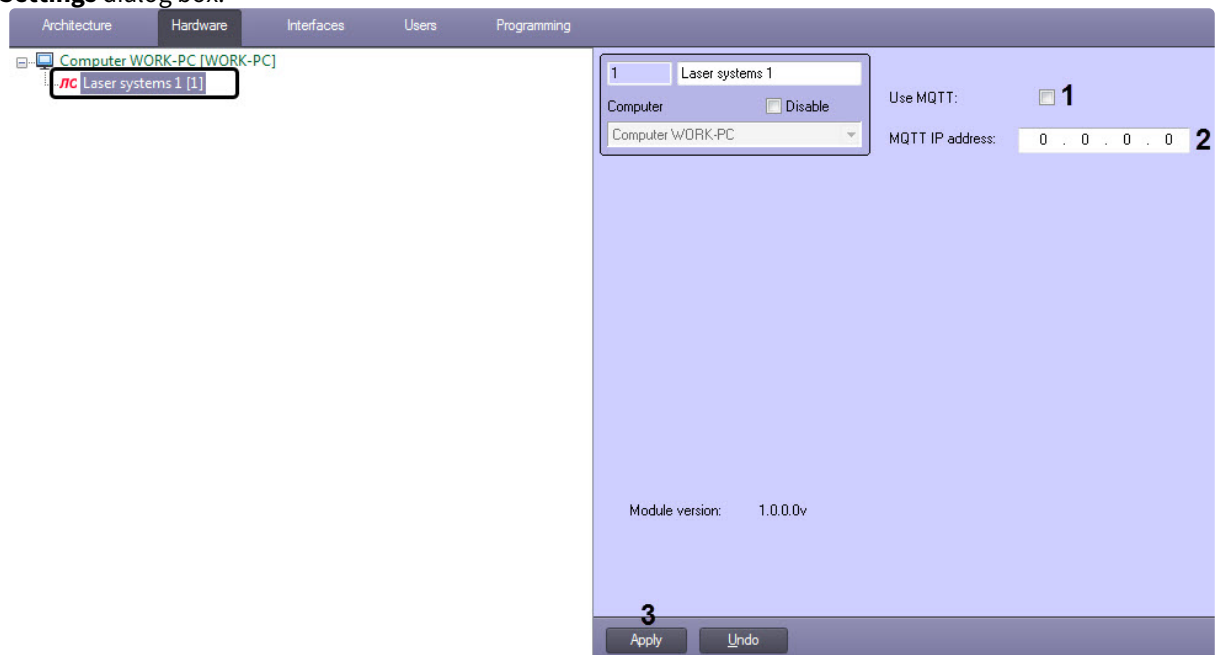
Per 1 breathalyzer.

3 Configuration of the Alcoframe integration module

3.1 Configuring the Alcoframe connection to ACFA PSIM

The *Alcoframe* breathalyzer connection to *ACFA PSIM* is configured as follows:

1. Create the **Laser systems** object on the basis of the **Computer** object on the **Hardware** tab of the **System Settings** dialog box.



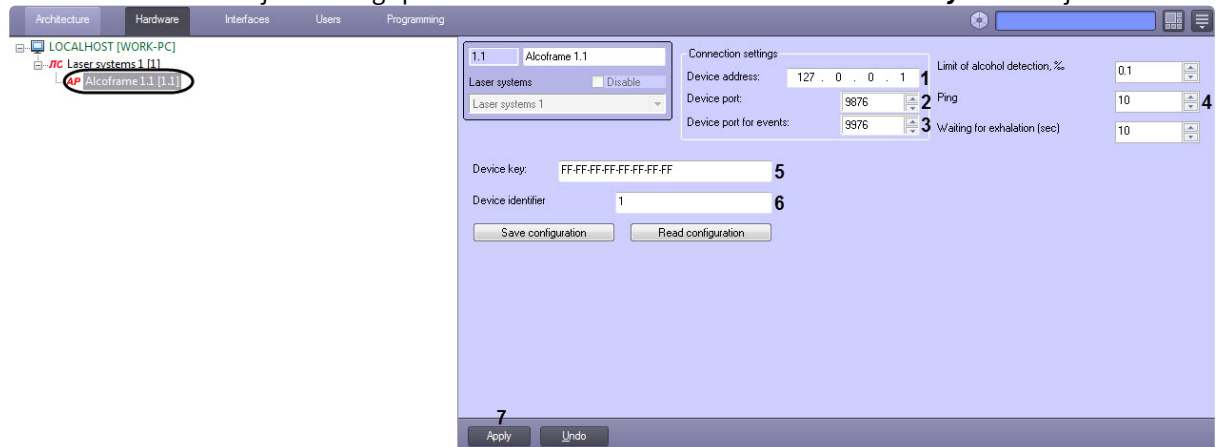
2. In order for the **Alcoframe** breathalyzer to operate using the MQTT protocol, do the following:

Note

In order for the **Alcoframe** breathalyzer to operate according to the standard protocol, go to step 3.

- a. Install the [Eclipse Mosquitto](#) MQTT protocol broker on a local or remote Server.
- b. Run the `mosquitto.exe` executable file from the installed application directory (the default directory is "C:\Program Files\mosquitto").
- c. In the manufacturer's official software for setting up the **Alcoframe** breathalyzer, specify the IP address of the MQTT protocol broker, i.e. specify the IP address of the Server on which the MQTT protocol broker is installed. The default broker port is 1883.
- d. Go to the **Laser systems** object settings panel:
 - i. Set the **Use MQTT** check box (1) to enable the use of the MQTT protocol.
 - ii. In the **MQTT IP address** field (2), enter in an explicit form the IP address of the Server on which the MQTT protocol broker is installed.
 - iii. Click the **Apply** button (3).

- Go to the **Alcoframe** object settings panel which is created on the basis of the **Laser systems** object.



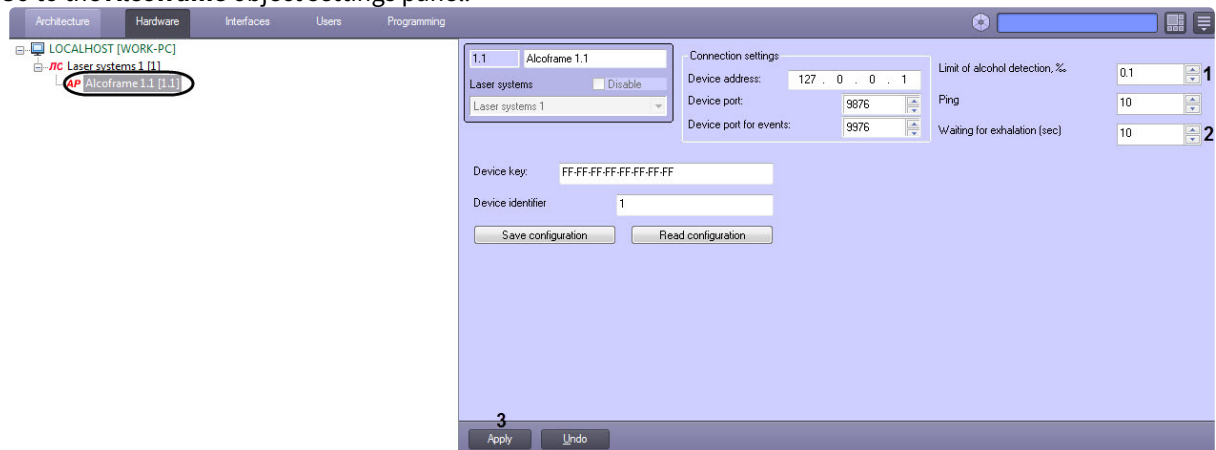
- In the **Device address** field (1), specify the breathalyzer IP address.
- In the **Device port** field (2), specify the breathalyzer port.
- In the **Device port for events** field (3), specify the breathalyzer connection port to *ACFA PSIM*.
- In the **Ping** field (4), specify the time period in seconds by which the connection between the *ACFA PSIM* Server and breathalyzer will be checked.
- In the **Device key** field (5), enter the access key to the breathalyzer (the key should be given by the *Alcoframe* breathalyzer vendor).
- In the **Device identifier** field (6), enter the breathalyzer number (See the official software of the *Alcoframe* breathalyzer vendor).
- Click the **Apply** button (7).

The *Alcoframe* breathalyzer connection to *ACFA PSIM* is now configured.

3.2 Configuring the Alcoframe breathalyzer

The *Alcoframe* breathalyzer is configured in the following way:

- Go to the **Alcoframe** object settings panel.



- In the **Limit of alcohol detection, %** field (1), specify the value of alcoholic content in permille, at which the **Alcohol level is exceeded** event will be generated.
- In the **Waiting for exhalation (sec)** field (2), enter the time in seconds during which the breathalyzer will be waiting for a person's exhalation after the **Test the alcohol level** command (see [Managing the Alcoframe breathalyzer](#)).
- Click **Apply** (3).

The *Alcoframe* breathalyzer is now configured.

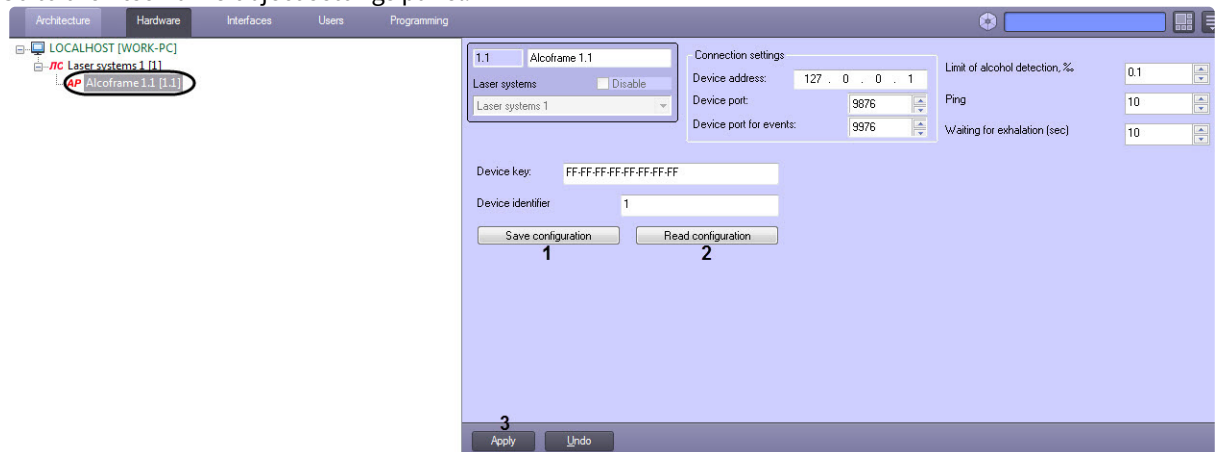
3.3 Managing the Alcoframe breathalyzer configuration

Note

To manage the *Alcoframe* breathalyzer configuration, it is necessary to connect the breathalyzer to *ACFA PSIM* first (see [Configuring the Alcoframe connection to ACFA PSIM](#)).

The *Alcoframe* breathalyzer configuration is managed as follows::

1. Go to the **Alcoframe** object settings panel.



2. Click the **Write configuration** button (1) to write the current configuration into the breathalyzer (see [Configuring the Alcoframe breathalyzer](#)).
3. Click the **Read configuration** button (2) to read the current breathalyzer configuration (see [Configuring the Alcoframe breathalyzer](#)).
4. Click **Apply** (3).

The *Alcoframe* breathalyzer configuration management is complete.

4 Working with Alcoframe breathalyzer module

4.1 General information about working with Alcoframe breathalyzer Module

The following interface objects are used for *Alcoframe* integration module operation:

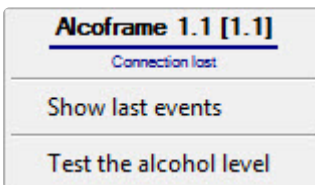
1. **Map.**
2. **Event Log.**

For a detailed description of configuring these interface objects, refer to the *Axxon PSIM* software package [Administrator's Guide](#).

For a detailed description of using these interface objects, refer to the *Axxon PSIM* software package [Operator's Guide](#).

4.2 Managing the Alcoframe breathalyzer

The *Alcoframe* breathalyzer is managed in the **Map** interactive window using the **Alcoframe** object functional menu:



Note

To open the object functional menu, right-click the object's icon.

The **Alcoframe** object functional menu commands description is given in the table.








Menu command	Function performed
Test the alcohol level	The alcohol level check is activated

As the result of testing the alcohol level, the following events are possible:

- Alcohol level is normal;
- Alcohol level is exceeded;
- Analysis error;
- Mirrors are dirty.

The *Alcoframe* object can have the following states:

<p>Alcoframe 1.1 [1.1]</p>	Disconnected
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<p>Alcoframe 1.1 [1.1]</p> 	<p>Connected</p>
<p>Alcoframe 1.1 [1.1]</p> 	<p>Waiting for exhalation</p>
<p>Alcoframe 1.1 [1.1]</p> 	<p>Breathalyzer body temperature is over the limit</p>
<p>Alcoframe 1.1 [1.1]</p> 	<p>Environment temperature is over the limit</p>
<p>Alcoframe 1.1 [1.1]</p> 	<p>Linewidth loss</p>
<p>Alcoframe 1.1 [1.1]</p> 	<p>Mirror error</p>
<p>Alcoframe 1.1 [1.1]</p> 	<p>Laser error</p>