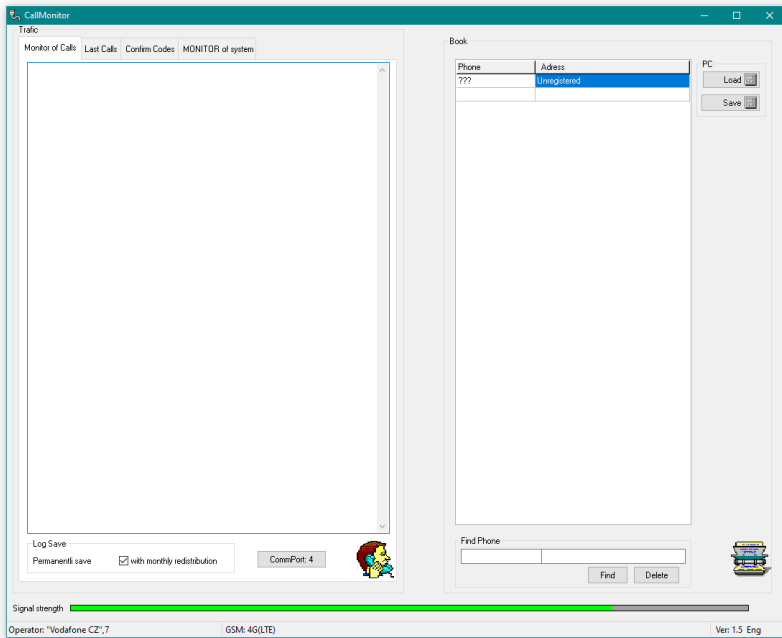


PROGRAM

# Call Monitor



## Installation and Usage Instructions V 2.3

From program version 2.0

## Basic features:

The CallMonitor program is designed for automatic handling of test (service) calls from emergency communication systems and their recording, or for recording emergency calls. The program also records missed deadlines for periodic test/service calls. To identify the device, CLIP is used in incoming calls.

- The program controls the Alphatech BlueGate Analog Brave 4G gateway (from gateway firmware 9.07), which ensures GSM communication.
- Only one gateway can be connected to each running instance of a program.

### Program mode for handling test/service calls:

- With each incoming call, the program checks whether the calling number is registered in the database. If so, it will answer (pick up) the call after the set number of rings. From the database, it will find out whether a confirmation code needs to be sent to confirm the receipt of the call. If it finds it in the database, it sends it 2 times in a row (greater reliability). Then they hang up – end the call. It then writes the date and time of the test/service call from the registered number to the appropriate database. If a confirmation code with a hook is used, the entry is made after hanging up by the counterparty.
- The phone numbers of all incoming calls are recorded – even unregistered numbers (for possible later registration).
- A list of devices that did not meet the required (set) period of test/service calls is automatically created daily from the table of last calls of registered numbers. The list can be created with a daily or monthly period.

### Program mode for recording emergency calls:

- With each incoming call, the program checks whether the calling number is registered in the database. If so, it records the ringing (and the number of rings).
- If a call is picked up from a registered number, it records the call.

## Installation

CallMonitor is portable, so it does not require any installation.

- Create a directory with the desired name and copy the CallMonitor.exe file from the downloaded zip archive into it.
- If you require a language mutation, copy the CallMonitorXX.ini file from the archive to the created directory. E.g. for the Czech version, the CallMonitroCZ.ini. Rename the file to CallMonitor.ini. If the program does not find a CallMonitor.ini file in the directory, it automatically creates its own English version.
- You can also create a language version yourself. In the CallMonitor.ini file created by the program, always rewrite the sentence on the right side from the "=" character into the desired speech and form. Save the file and test the translation (the new names must not exceed the fields provided for this purpose, or they must be completely visible). Adjust if necessary. Make changes only in the section under [Language]. Changing the notation above [Language] may corrupt the program's functionality.

```
[Form]
Top=110
Left=273
MaxLengthNumber=13
No Number=???
Unregistered=Unregistered
Periode=2
Rings=2
DirName=Data
MonthlyLog=1
MonthlyLogLastCalls=0
DailyLog=0
CommPort=3
[Language]
Language=Eng
CommPort=CommPort
Log Save=Log Save
Permanentli save Permanentli save
with monthly redistribution=with monthly redistribution
Find Phone=Find Phone
```

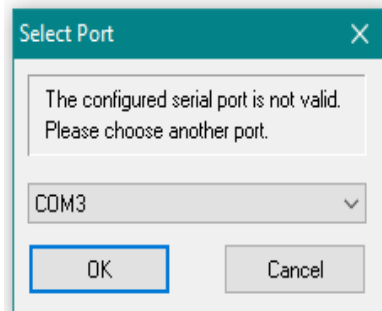
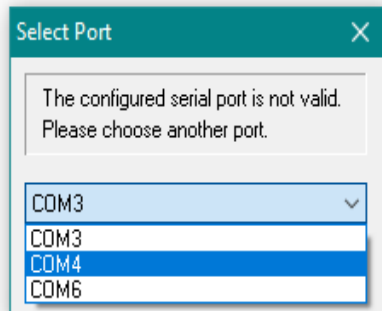
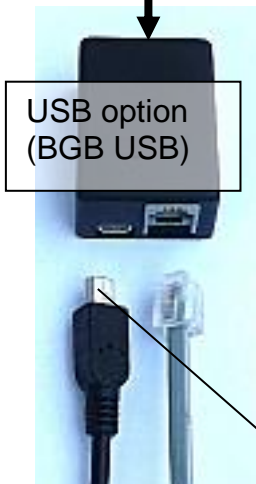
## Commissioning

- Connect the BlueGate Analog Brave 4G gateway to your computer via the USB option (see the gateway manual).



- Turn on the gateway and wait for it to log in to the GSM network (see the gateway manual).
- Launch the program.
- After a while, the program will create a list of available ports, from which you need to select the USB port to which the gateway is connected.

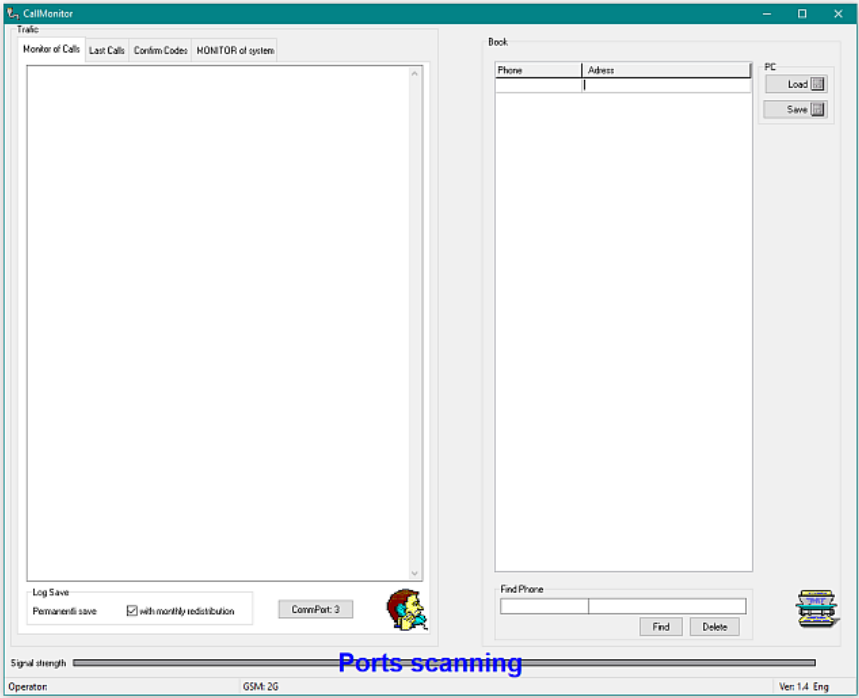
Phonelin



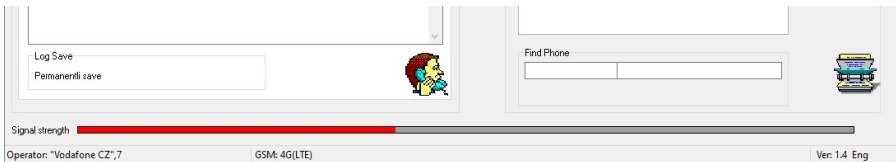
MiniUSB cable

- After entering the port, the initial basic window of the program will appear.

If there is no communication with the gateway, "Port scanning" will appear (Searching for USB ports – see later in the manual)



If the connection with the gateway is OK, after a while you will see information about the signal strength, the operator and the method of connection (2G/4G).



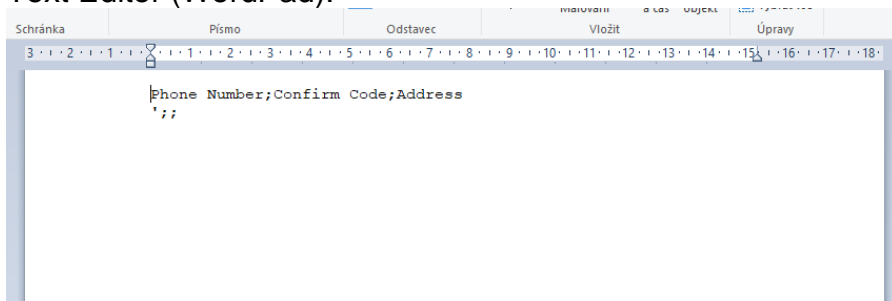
The program will automatically create a subdirectory "Data" into which it will store the monitored information (see below). It is ready for use.

### Registered Device Database

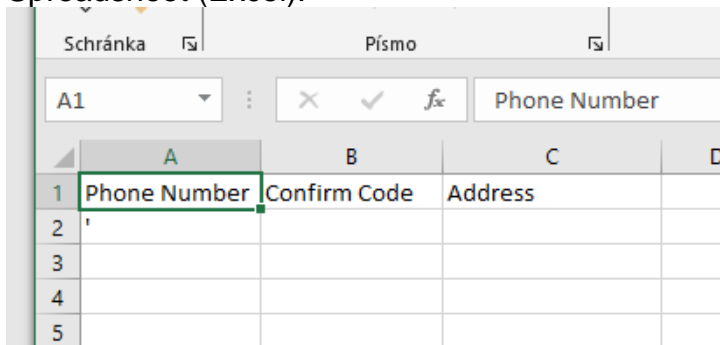
The database is for easy connection to spreadsheets or database programs such as Excel etc., in .csv format, where individual information for each phone number (= device) is separated by a semicolon ";".

The necessary pattern can be obtained by saving an empty database: After the first start of the program, click on "Save" in the PC field and create a "CallMonitor.csv" file (details on working with individual elements of the program are further in the manual). After opening the created file in a text editor, spreadsheet etc., you will see the header of the future database file and the first blank line.

### Text Editor (WordPad):



### Spreadsheet (Excel):



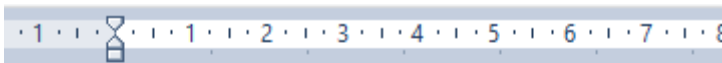
The names of individual columns (fields) are not important, what is important is the order of the information:

1. Telephone number in international form
2. Confirmation code (if used – not a condition) if not used, the field remains blank
3. Identification – e.g. the address of the location of the device, the name of the company or the phone number of the relevant worker, etc.

**Attention: No additional semicolons may be used in individual entries! This would result in an incorrect assignment of individual fields!**

Example of saving the numbers +42012345678 and +420987654321 to the file you are creating. The second number will have a confirmation code of 99.

### Text Editor (WordPad):

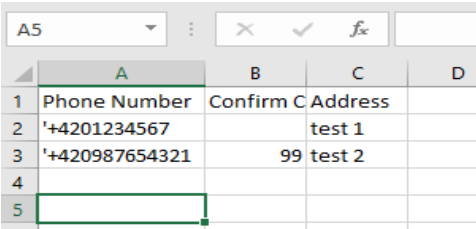


```
Phone Number;Confirm Code;Address
+4201234567;;test 1
+420987654321;99;test 2|
```

You can see how the individual data is separated by semicolons. In a line, without a confirmation code, there are 2 semicolons next to each other – there is actually a missing code between them.

Once you have filled it with all the data, save the file. If you used an empty file created by CallMonitor, then under the existing name, if you used a new file, you must enter the name CallMonitor.csv when saving.

## Spreadsheet (Excel):



	A	B	C	D
1	Phone Number	Confirm C	Address	
2	'+4201234567		test 1	
3	'+420987654321	99	test 2	
4				
5				

If you use a spreadsheet program to create a database, we recommend that you mark (set) the entire first column as text, or write an apostrophe "" before each phone number so that the phone number is stored as text. If you don't, the spreadsheet will treat the phone number as a large number. As a large number, it will try to convert the value into an exponential form (e.g., 123E5), so the phone number information will disappear.

The CallMonitor program for reverse conversion of .csv files into a spreadsheet solves this problem by inserting an apostrophe before each phone number.

To save the created database, select the .csv format with the ";" delimiter. The name will be CallMonitor.csv again

If the CallMonitor program was running when the database was created, you can load the database into the program using the "Load" button in the PC section – see below. When you start the program, the program loads this database automatically. The program analyzes the database and sorts the information into the appropriate tables.

Note:

- Write your phone number in the international form
- You can use digits and characters "\*",#,P,!" for the confirmation code – see below for the meaning of non-numeric characters "P,!"



## Description of individual program tabs

The screenshot shows the 'Call Monitor' application window. It features a top menu bar with 'Monitor of Calls', 'Last Calls', 'Confirm Codes', and 'MONITOR of system'. The main area is split into two panes. The left pane is titled 'Traffic' and contains a large empty rectangular area. Below it are controls for 'Log Save', 'Permanent save', a checkbox for 'with monthly redistribution', and a 'CommPort: 4' dropdown. The right pane is titled 'Book' and contains a table with two columns: 'Phone' and 'Address'. The first row has '???' in the 'Phone' column and 'Unregistered' in the 'Address' column. To the right of the table are 'Load' and 'Save' buttons. Below the table is a 'Find Phone' search box with 'Find' and 'Delete' buttons. At the bottom of the window, there is a 'Signal strength' bar (green) and status text: 'Operator: "Vodafone CZ";7', 'GSM: 4G(LTE)', and 'Ver: 1.5 Eng'. Three callout boxes point to specific elements: one to the top menu bar, one to the 'Book' table, and one to the signal strength bar and status text.

Display and selection of individual traffic tabs

Registered Number Database Table

Signal strength

Operator: "Vodafone CZ";7 GSM: 4G(LTE) Ver: 1.5 Eng

After establishing communication with the gateway, the name of the operator, the type of connection (2G, 4G) will appear here

and GSM signal strength in color:  
Green – Excellent Signal Strength  
Blue – sufficient signal strength  
Red – unsatisfactory signal strength

If you hover over any element of the program for a while, the appropriate help will appear.

# Registered Number Database Table

Registered Phone Numbers Column

Column of identifiers (addresses, device locations, etc.)


Loading the database from a PC

Saving the database on a PC

Book

Phone	Address
???	Unregistered
+4201234567	test 1
+420987654321	test 2

PC

Load 

Save 

Field to search the table by phone number (or part)

Field to search the table by identifier/address (or part)

Find Phone

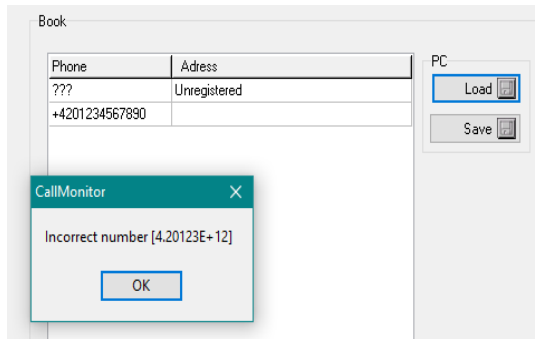
Find



Clear the selected row

Search by a specified field

- The database of registered numbers is loaded automatically when the program is started (if it has a name CallMonitor.csv) or by pressing the "Load" button.



If the program discovers an incorrect value when loading the database, it will report it (in the picture, there is a case of a bad conversion from Excel – Excel converted the number into an exponential form)

- Registered numbers cannot be edited in the table, only deleted. When you delete a number from a spreadsheet, the phone number is automatically removed from the other tables as well.
- Only the identifiers/addresses of individual numbers can be edited.
- New registered numbers can be added to the database either externally, in front of a text editor, spreadsheet, etc. Creating a database at the beginning of the manual, or it is possible to directly insert incoming unregistered calls by double-clicking on the desired number in the table of incoming calls (see below).
- The modified database can be saved again (under the appropriate name – CallMonitor.csv) using the "Save" button.

# Traffic Tabs

Traffic

Monitor of Calls   Last Calls   Confirm Codes   MONITOR of system

System Operation Monitor Tab

Tab the table of confirmation codes for registered numbers

Table tab of recent successful calls from registered numbers

Inbound call monitor tab of individual traffic tabs

Log Save

Permanentli save    with monthly redistribution

CommPort: 4

## Incoming Call Monitor Tab

Date and time of incoming calls to individual traffic tabs

Phone number of incoming calls of individual traffic tabs

Successful call from registered number

Identifier (address, etc.) of the registered number

Calling from an unregistered number

Selection to save a record of incoming calls to a file. When the selection is checked, the files are marked by months (records from the whole month in one file). Without checking, files are created daily.

The button displays the selected port for communication with the GSM gateway. To change the port, click the button. This will be similar to the port selection process used when the program was first started (see the previous one)

Log Save

Permanentli save



with monthly redistribution

CommPort: 4

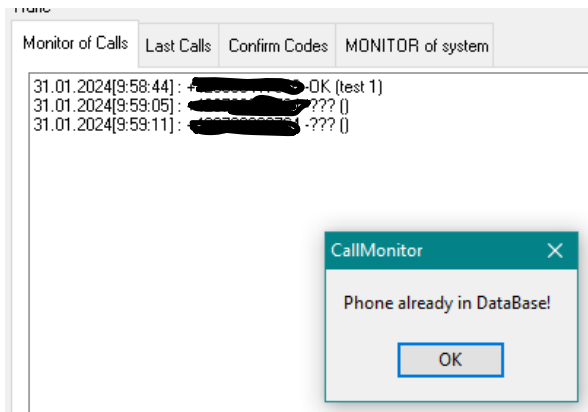


During an incoming registered call, a row with the relevant registration is automatically selected and displayed in the registered numbers database table for better identification.

### **Adding an incoming unregistered call to the registered numbers database**

If you click the left mouse button 2 times with the mouse pointer on the selected unregistered number, a new row with the selected phone number will be added to the database of registered numbers table. It is also possible to enter the necessary identifier into the table. At the same time, the table of confirmation codes will also be supplemented with a new number, into which you can enter (if necessary) the required code (see below). You can save the entire database again by clicking on the "Save" button (see previous).

When saving a new number to the database of registered numbers, the program checks whether the database does not already contain the requested number. If you accidentally click 2 times on a number that already exists in the database, the program will warn you



## Table tab of recent successful calls from registered numbers

Phone	Time
[REDACTED]	[31.01.2024]9:58:44
[REDACTED]	20.12.2023]16:08:52
[REDACTED]	20.
[REDACTED]	20.
[REDACTED]	20.
[REDACTED]	20.
[REDACTED]	20.12.2023]
[REDACTED]	20.12.2023]
[REDACTED]	20.12.2023]
[REDACTED]	20.12.2023]
[REDACTED]	20.12.2023]
[REDACTED]	20.12.2023]6:08:52
[REDACTED]	20.12.2023]6:08:52
[REDACTED]	21.12.2023]13:4
[REDACTED]	21.12.2023]13:4

telephone number

Date and time of the last call made for the registered number

Field to search by whole/part of a phone number

Delete a selected or searched row in a table

Number of days of required test/service call period  
If '-' is selected, the check is not performed

A list of phone numbers of devices that did not meet the correct test/service calls in the set period is stored in files on a daily or monthly basis

Find Phone:  Find Delete

Monthly Log Save

Periode of Calls:

The table shows a list of registered phone numbers with the date and time of the last recorded call. It is functional only in the program mode for handling test/service calls (for periods 1-9). The program scans the table every midnight and creates a list of numbers where the time from the call to the current date is greater than the set period. Lists can be saved by days or months according to requirements (as well as the length of the device list).

## Tab the table of confirmation codes for registered numbers

Traffic

Monitor of Calls Last Calls Confirm Codes MONITOR of system

Phone	Confirm
+4201234567	
+420987654321	*66

Registered phone number


Confirmation code

Field to search by whole/part of a phone number

The number of rings after which the program receives an incoming call from a registered number  
If '-' is selected, calls are not answered automatically – mode for recording incoming

Find Phone  Find

Rings for pickup 2 ▾



In the confirmation code table, each registered number can be assigned a code – a string of allowed characters – to confirm that the call has been answered. Of course, answering a call without acknowledgment can also be used (no code is inserted). The confirmation code is a kind of crutch for analog phone



systems, where the answer to the call is detected (unreliably) only from the end of the ringing tone. This problem does not need to be solved on digital systems (GSM, ISDN, IP, etc.), where the information about answering/ending a call is unambiguous. Then confirmation codes are not needed and the voice channel is clear without distracting tone dialing sounds.

Allowed characters in a string: 0123456789\*#P!

Special characters:

P – pause for about 3 seconds between transmitted characters

! – a special character (not transmitted) that tells the program that a code (a series of characters) before an exclamation mark will cause the caller to hang up the line (end the call)

Program mode for handling test/service calls (number of rings for receiving calls set to 1 and 9):

With each incoming call, the program checks whether the calling number is registered in the database. If so, it will answer (pick up) the call after the set number of rings. From the database, it will find out whether a confirmation code needs to be sent to confirm the receipt of the call.

- If it finds it in the database, it sends it 2 times in a row with a gap of about 7 seconds (greater reliability). Then they hang up – end the call.
- If everything goes well, it will enter the date and time of the test/service call from the registered number with the note "-OK" into the database registering correctly performed test/service calls
- If a confirmation code with a hook ("!" at the end of the code – see above) is used, the same entry is made after hanging up by the counterparty.
- If, when using a confirmation code with a hook ("!" at the end of the code – see above), the call is not terminated by the calling device, but by the program, an entry is also made to the appropriate database (the standard requires a test/service call, but does not specify the method of

termination). However, there will be a "-OK??" in the note as a warning about the not entirely correct course.

Program mode for recording emergency calls (number of rings for receiving calls set to '-'):

With each incoming call, the program checks whether the calling number is registered in the database.

- If so, it records incoming calls marked "RING" and the number of rings that have already taken place. There can be several records in the database in a row ("RING1", "RING2" ...). It is recorded when (time and date) the first bell (and possibly the next ring) came.
- If the call is answered (picked up) by the operator, a record with the note "-OK" is added

From the entire record, it is possible to find out if and when

- A emergency call came in
- The caller reached or did not reach
- Attendant response time to calls

## System Operation Monitor Tab

It is used to record all communication between the program and the GSM gateway. It is designed to diagnose potential problems using recorded (and possibly sent) log files.

The screenshot displays the 'MONITOR of system' tab within a 'Traffic' window. The interface includes a menu bar with 'Monitor of Calls', 'Last Calls', 'Confirm Codes', and 'MONITOR of system'. A large text area shows a log of messages, including 'OK', '+CPDS: 0,0,"Vodafone CZ",7', '+CSQ: 25,2', '+CPMS: "SM",0,20,"SM",0,20,"SM",0,20', and '+CREG: 0,1'. Below the log, there are three buttons: 'Log Save' with a 'Save' button and a 'Daily Log Save' checkbox, and 'CommPort: 4'. A cartoon character is visible in the bottom right corner.

button for one-time saving of recorded communication to a file (please use the ".mon" extension)

automatic daily recording of communication to files

port change button – see Incoming Call Monitor Tab

## Databases used and created

In the application directory:

**CallMonitor.csv** – database of registered numbers

The names of individual columns (fields) are not important, the order of the information is important, the data are separated by a semicolon:

1. **(Phone Number)** A phone number in the international form
2. **(Confirm Code)** Confirmation code (if used – not a condition) if not used, the field remains blank
3. **Identification** – e.g. the address of the location of the device, the name of the company or the phone number of the relevant employee, etc.

**Attention: No additional semicolons may be used in individual entries! This would result in an incorrect assignment of individual fields!**

In the Data directory:

**LogCallMonitor.csv** – continuous recording of incoming calls

By renaming it, you can sort by day, month, year – as needed. After renaming the program, it always creates a new LogCallMonitor.csv record. After the first incoming call is recorded, it writes down the header (names of individual columns) and the first data. The data is separated by a semicolon:

1. **(Date)** Date of incoming call
2. **(Time)** Incoming call time
3. **(Phone Number)** A phone number in the international form
4. **(Status)** Communication result (OK, OK??, RING)
5. **Identification** – e.g. the address of the location of the device, the name of the company or the phone number of the relevant employee, etc.

LogCallMonitor.csv is the basic source of data for possible further operations after conversion to a spreadsheet or other program (e.g. for listing on which days a particular number called, etc.)

Example:

Date; Time; Phone Number; Status; Adress  
19.12.2023; 13:22:10;' +42xxxxxxxxxxx; OK; Test 1  
20.12.2023; 13:39:30;' +42yyyy;???' ;  
21.12.2023; 13:42:44;' +42zzzzzzzzzz; OK; Test 2  
04.01.2024; 8:12:52;' +42xxxxxxxxxxx; OK; Test 1  
05.01.2024; 8:28:56;' +42aaaaa; OK??' ; Test 3

**Missed Calls 30.01.2024.csv** – a list of registered phone numbers that did not meet the required test/service call period. Lists can be marked by days or months – see the settings in the previous section. The data is separated by a semicolon:

1. (Date) Date of incoming call
2. (**Phone Number**) A phone number in the international form
3. (**Last Call Time**) Date and time of the last received call
4. (Number of **Days**) **Number of** days that have passed since the last call
5. Identification – e.g. the address of the location of the device, the name of the company or the phone number of the relevant worker, etc.

Example:

Date; Phone Number; Last Call Time; Number of Days; Adress  
29.01.2024;' +420xxxxxxxxxxx; 23.01.2024[7:36:10]; 6; Test 1  
29.01.2024;' +420zzzzzzzzzz; 25.01.2024[12:10:25]; 4; Test 2

**Communication 31.01.2024.mon** – automatic recording of all communication between the program and the GSM gateway during the day (see System Operation Monitor tab)



**Alphatech spol. s r.o.**

**Jeremenkova 88**

140 00 Praha 4

**tel. +420 244 461 016**

e-mail: [info@alphatech.cz](mailto:info@alphatech.cz)

Internet: <https://www.alphatech.cz>

our GPS coordinates (WGS 84)

N 50°02'35.5" E 14°25'42.0"

28.5.2024