# Autoplugin **Therminal**

Brief User Manual

Rev A

# Description

Autoplugin Therminal-XC/XF is automotive climatic GSM-module intended for heater and ventilation remote control from mobile phone or smartphone. Voice call, SMS or Android/iOS application may be used to access Therminal. The applications use data transfer via proprietary secure internet server. In order to warm up the engine and the interior Therminal can control fuel and electric heaters, to ventilate the interior - climatic module, to cool the interior – engine start module.

# Getting Started

NB! The default value 1234 of user password introduced in command descriptions in this Manual. If the password was altered, new password value should be applied.

## Initialization

If you plan to control Therminal by typing SMS manually or from Android app via SMS, go to chapter Control by SMS.

For other control methods (voice call, iOS app or Android app via internet) it is necessary to perform a procedure called Quickstart. It is recommended to execute Quickstart from the phone of main user (administrator).  The procedure can be started in two ways:

1. Send SMS to GSM-module number: **1234 Quickstart**

2. Press and hold GSM-module's button until its embedded red LED indicator will flash from 10 to 14 times. Then release the button. LED indicator starts to flash by series of 10 flashes. During 3 minutes make voice call to GSM-module number and wait for busy tone.

NB! Quickstart can take up to 5 minutes. Don't make others voice calls and don't send additional SMS on GSM-module number. The procedure can't be restarted without reset of GSM-module to factory settings.

If Quickstart is successful, GSM-module will send SMS:

**NOTICE: registration successful, USERID: 123456789012345, PASSWORD: 1234**

Store this message. Fields USERID (Driver identificator) and PASSWORD is used in applications.

If Quickstart is unsuccessful, such type of SMS will be received:

**NOTICE: registration failed, GROUP: XXXXXXXXXXXXXXX, <GPRS and server settings>**

In order to control the module from app via internet it is necessary to find and eliminate the fault reason. And then re-register GSM-module on server (see Full User Manual, **Register** command). If you plan to use only voice calls to control GSM-module, just switch off internet access by command: **1234 Internet off** and go to chapter **Control by voice call**.

## Application Installation

Use Google Play to install the application in Android OS.

Use App Store in iOS.

The application's name for searching: *Therminal*

## Application setup

Open menu in the app: *Settings > Vehicle access.* Enter the field *Driver identificator* in iOS app. In Android app enter the field *GSM number*, confirm or request from Setup Master a value of field *Driver identificator*, check the field *Data transfer mode (Internet and/or SMS).*
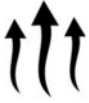
In menu *Settings > Application > Autosetup* choose *Apply.*
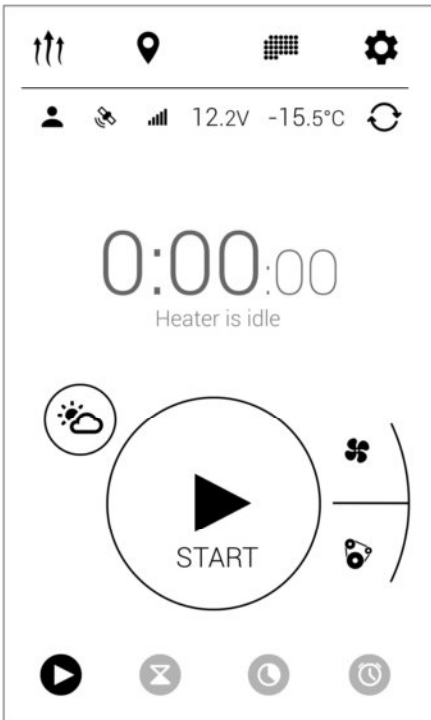
NB! Autosetup procedure can take up to 3 minutes.

# Heater Control from Application

↑↑↑ Open an application and select "Heating" section to have direct control for the heater. The Start/Stop on-screen button enables or disables selected mode of heater control and confirms notifications.

NB! For factory equipped fuel fired heaters with auxiliary heating mode (Ford, Volvo) the preheating control may be limited when the engine is running



Main tabs

Therminal status bar

Heating timer and heating status

Heating start/stop button, Weather button, engine start and ventilation control buttons

Start modes

## Immediate Start Mode

In Immediate Start mode Therminal sends start command instantly.

▶ Immediate Start mode is used as default mode at startup of Therminal. Select «Immediate Start» in modes list, if another mode is selected at the moment.

# Timer Mode

Timer Mode is intended to set delay value after which the heating will be completed.

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NB! Heater start command will be sent at the moment when calculated start time achieved. Network services availabilities are required.

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 Select «Timer» in modes list. Tap on current value of the timer to adjust another value. Push Start/Stop button to start timer.

# Limit Operation Time Mode

This mode is the same as Immediate Start mode, but operation time of the heater can be limited for current heating cycle without changing of "Heater operation time" setting.

Select «Limit operation time» in modes list. Tap on current value of operation time to adjust another value. Push Start/Stop on-screen button to start the heater.

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NB! Cycle duration can be selected only less than "Heater operation time" value.
If Weather button is active, operation time may be additionally limited by weather conditions

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# Pickup Time

In the "Pickup Time" mode user selects time during a day, at which the heating will be finished.

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NB! Therminal calculates startup time at 2 hours before the pickup time. Heater start command will be sent at the moment when calculated start time achieved. Network services availabilities are required.

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 Select « Pickup Time » in modes list. Tap on the current value of pickup time to adjust another value. Push Start/Stop button to activate the mode.

## Operation Time According to Weather Conditions

Heater operation time can be derived automatically according to weather conditions. Application uses vehicle location (if available) or smartphone location in calculations. The function works with both fuel and electric heaters. Push screen button with weather logo to activate the function.

The function needs internet access via Wi-Fi or mobile data.

NB! Being activated the function is applied to all of heater start modes, including schedules

## Ventilation and Engine Control Buttons

If equipment configuration allows control ventilation separately from heating and/or start the engine during heating, ventilation and/or engine control buttons will be available. Ventilation (for interior warm up) and engine start turns on according to the algorithm and current settings of Therminal.

Select required control mode by pressing corresponding screen button before heater startup.

NB! Being activated the buttons are applied to all of heater start modes, including schedules

## Status Bar

The app displays in status bar the values of interior temperature and battery voltage, and also several icons:

Driver icon. Highlighted icon means, that user is the active one or the driver. GSM-module will send all notifications to this user.

GSM-module signal strength icon. When the signal is week (1 or 2 elements of 5), connection failures can happen.

GPS/GLONASS signal presence icon. The highlighted icon means that vehicle location data is actual.
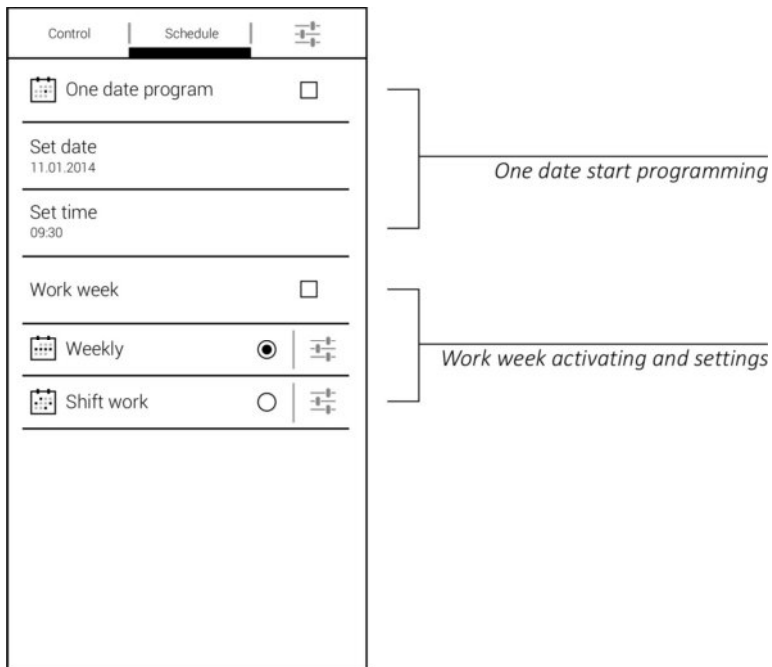
In Android app Refresh screen button is presented in status bar. It is active only in SMS data transfer mode (including the mode SMS/internet, when connection to the GSM-module via internet is absent). Pressing the button sends SMS with status request for status bar refreshing. In all other cases the status bar refreshes automatically.

Non-actual values of temperature and battery voltage are displayed unhighlighted in status bar.

# Schedules

NB! Schedules are stored in smartphone memory. Therminal calculates startup time at 2 hours before the schedule time. Heater start command will be sent at the moment when calculated start time achieved. Network services availabilities are required

NB! Ready time is set in the schedules (the moment at which heating will be finished)



*One date start programming*

*Work week activating and settings*

## One Time

One Time mode describes heating ready time for the certain date and time. The individual switch is used to enable or disable the schedule.

## Weekly

Two independent ready times for a day can be set for every day of the week. The schedule repeats every week.

## Shift Work

In the Shift Work mode workdays alternate with days of rest cyclically, independently of days of week.

| Control | | Schedule | | ⫤ |
|---|---|---|---|---|
| 1 | 7:15 ☑ | | 17:20 ☑ | |
| 2 | 9:45 ☑ | | ☐ | |
| 3 | 7:15 ☑ | | 17:20 ☑ | |
| 4 | ☐ | | ☐ | |

Today

Rest-day

Shift Work schedule logic:

1. It is necessary make a list of workdays and rest days in one cycle. The number of days in the list is the period of the schedule. Rest day is a day in the list with no one ready time. Workday is a day in the list with at least one ready time.

2. Two independent ready times for a day can be set for every day of the schedule.

3. Current day (today, up to 00:00) is set by pressing on day's index number in the list.

# Heater Control by Using Voice Call

## Heater Start and Stop

To start the heater make outgoing call on GSM-module's number and wait for busy tone. GSM-module will confirm command reception and launching in the application in case of control via internet, or will send SMS-confirmation, if SMS is used.

Make the second call to stop the operated heater.

# Heater Control by Using SMS

## Heater Start and Stop Commands

User can type following messages manually to control the heater:

**1234 Heater On**
Command starts the heater instantly for the maximum time
**1234 Heater On <time in minutes>**
Command starts the heater instantly for a <time in minutes>

Positive feedback from modem that the command received and executed: HEATER ON: accepted, <status>

**1234 Heater Off**
Command stops the heater instantly.

Positive feedback from modem that the command received and executed: HEATER OFF: accepted, <status>

# Feedback Messages

When some events occur, GSM-module sends notifications (feedback messages) to the driver's phone number:

**NOTICE: Heater started —** Heating started

**NOTICE: Heater stopped w/timer —** Heating is finished

**NOTICE: Heater start error —** Heater doesn't start up

**NOTICE: Heater stopped w/error—**Heating failure

# Additional Commands

Status request (battery voltage, temperature, balance, network signal):
**1234 Get status**

Location request:
**1234 Get location**

Balance request (get answer in operator format):
**1234 Get balance**

Driver identificator request for application set up:
**1234 Get ipaccess**

Web-console access request:
**1234 Get webaccess**

Connection status request:
**1234 Get ipstatus**

Full description of all the GSM-module commands is available by the link:
http://autoplugin.ru/support/en_full_description_therminal.pdf