

eLocator eT-10



electia

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1. Areas of use, precautions and recommendations

1.1 Examples of areas of use

Examples of situations where an eT-10 can be useful

- The car owner (private or in a corporation) who's gotten his/her car stolen and would like to know where it is.
- The person in charge for fleet management in a delivery firm or logistics company.
- The hunter who would like to know where his sporting dog is.
- The car rental company who would like to know where their cars are or have been.
- Someone who is afraid of assault while he/she's out jogging.
- Those who regularly sends valuable goods between each another.

You can receive the unit's position in the following ways:

You can send a command SMS to your eT-10, which will make it respond with an SMS. This SMS can contain either the current position of your unit in Longitude and Latitude or a link to Google Maps which will show you the units position on a map (this link you can either type in on your computer, or if you have a Nokia N-series cell phone (or similar model with an advanced web reader) you can use and see the location in your cell phone.

The eT-10 can automatically send its position in the following ways:

Via SMS to a pre-programmed number (Interval after configuration)

Via SMS while exceeding the speed limit set by you (see configuration)

Via SMS while going outside of your pre-defined area (Geofence)

Via SMS if the temperature gets too high (60°C or 140°F)

Via SMS to up to 5 pre-programmed numbers when the SOS button is pressed.

The eT-10 can send its position automatically to a pre-assigned, internet connected computer.

Simultaneous online tracking of up to two units via your computer and Google Earth or by online tracking via web interface and server software, supporting up to 5000 units.

Capable of logging 54 000 positions which can be checked if the unit is plugged in to a computer.

1.2 Precautions and recommendations

For the unit to be fully functional you need a SIM-card from a company offering SMS and GPRS services with a network covering the area you plan to use your eT-10 in. We recommend that you choose a subscription before a pre-paid option since it can be difficult to check your balance since you do not always have your eT-10 at hand. We also recommend you to do some own research covering the bigger companies since pricing vary. A good idea is to check how the operator you use in your cell phone is in pricing, if you are satisfied with their coverage in general. As long as you're only operating in city areas it's rarely any problem with the GSM network coverage, but if you're out in the countryside the coverage can vary.

When it comes to finding a fitting location for your unit, wherever you'd like to use it. Remember to try to put it with as little cover between the unit and the sky and if possible

with the antenna pointing skywards. Also remember to put the device in a covert place if it's used in case of your vehicle gets stolen.

eT-10 is *not* made for using in wet places or places with high humidity. If you want to use your eT-10 in such or similar places please see to that the unit is put in a water protective bag.

When mounting the unit for permanent operation it is important that the device is provided a continuous external power. If the external power is cut off, the unit's battery will keep it running for between 8-30 hours (from fully charged) depending on how the unit is configured. If your eT-10 is left without voltage for a longer time than the battery can handle the device will be turned off. When the unit starts to receive power again you will have to manually start up the device before it can function properly again. This is made by pressing the power button located in the lower left corner of your eT-10.

2. General information

2.1 Externals



eT-10 seen from below



Lower right corner with buttons and LEDs

To the left we have the eT-10 seen from below. The USB-port is marked with orange and this is where you are supposed to connect any cable with a USB connector.

The picture on the right illustrates the buttons and LED-lights of the device. Below you have a brief explanation of what they indicate and/or what they can be used for.

The LED marked with red is the power LED. While the unit is on and in operating mode it will flash slowly with red. If this LED is lighting with an orange light this indicates that the unit is being charged or is being supplied with voltage. If the unit is turned on while connected to an external power source this LED will light orange and flash red.

The LED marked with green indicates contact with GPS Satellites. This LED will flash only when in contact with a GPS Satellite and light if it's trying to get contact without succeeding.

The LED marked with blue is indicating contact with the GSM network. This LED will flash while transferring/receiving data via the GSM or GPRS network.

The button marked with yellow is the power button. Press this button to start the unit. This will make the power LED to start flashing quickly and it will keep doing this until the unit exits the startup mode and enters operating mode.

If you want to shut the device down, simply press this button for two seconds (or until the power LED stops flashing). The unit will keep flashing its LEDs until the shut down procedure is finished and the unit is turned off.

This button is also used for setting the starting point for the Geofence function, please see further down this manual to learn more about this.

The left button marked with purple is the SOS button. If you have defined one or up to five SOS numbers in the eT-10 the unit will send an SMS to all those numbers if the SOS button is pressed twice within two seconds. This SOS-SMS contains the current position of the unit, if it's accessible, depending on the GPS-contact in the current position, either in Longitude/Latitude or with a link to Google Maps.

2.2 Contents of the box

eT-10 unit

1100mAh Li-Ion Battery

CD-ROM (With manual in PDF-format, drivers and software)

Power adapter for charging via 230V-wall socket

Power adapter for charging via 12V-cigarette socket

USB-cable for connection to computer

Protecting leather bag

2.3 Technical specifications

GSM/GPRS

GSM/GPRS-Module: Sincom300 Quad-Band GSM Module (GSM900/1800/1900MHz)
GSM Antenna: Built-in

GPS

GPS Module: 20-channels SRIF III
Protocol: Protocol fulfilling NMEA-0183
GPS Antenna: Active built-in high-sensitive antenna
Precision: Distortions up to 5m in good conditions
Update frequency: 1Hz
Startup time: Cold start: 42s
Warm start: 35s
Hot start: <30s

Electrical

Operative voltage: 3,3V
Recharging voltage: 4,5-5V
Power consumption, stdby: 15mA
Power consumption, active: 80mA
Battery: Li-Ion at 1100mAh

Seize

Seize: 68x47x17 (mm)
Weight: 50g (Battery included)

2.4 Available services and accessories

- Water protecting bag
- Power adapter for permanent mounting, 12V
- Server software for simultaneous tracking of more than 2 eT-10:s
- Tracking service via web interface, <http://www.protracking.eu>

2.5 System requirements

Windows XP (Home or Professional, *not Vista*)
1GHz Intel Pentium 3 Processor (or equivalent) or better
256MB RAM
720MB free space on hard disk drive (32bit system)
1,2GB free space on hard disk drive (64bit system)

3. Startup

3.1 Charging your eT-10

First you need to identify the unit in the package. Then remove the battery cover and install the battery in the unit. Put the cover back and connect your eT-10 to the wall socket via the charger and let it charge for about 8 hours the first time, this is to make sure that your unit's battery will reach full capacity. Please make sure that the power LED lights up with an orange light. This indicates that your eT-10 is being charged. If you, later on, connect your unit while it's turned on the power LED will light orange and flash red.

3.2 Installing software and configuring of your router and fire wall

To start installing the software necessary for the eT-10 to work properly is partly bundled with the unit and comes on a CD-ROM and the rest are available for download at windows update.

3.2.1 Step 1

First of all you need to have "Microsoft .NET 2.0" installed on the computer you want to do the configuration of our eT-10. If you do not already have this we recommend you to install the file named "dotnetfx.exe" which is located on the CD (for 32bit Windows XP). After that you must go online to windows update to get the latest updates. If you are using 64bit XP the correct version of Microsoft .NET 2.0 is available on windows update.

3.2.2 Step 2

After installing “.NET 2.0” it’s time to install the configuration and tracking software, the file is called “eLocator PC Suite_Setup.exe”



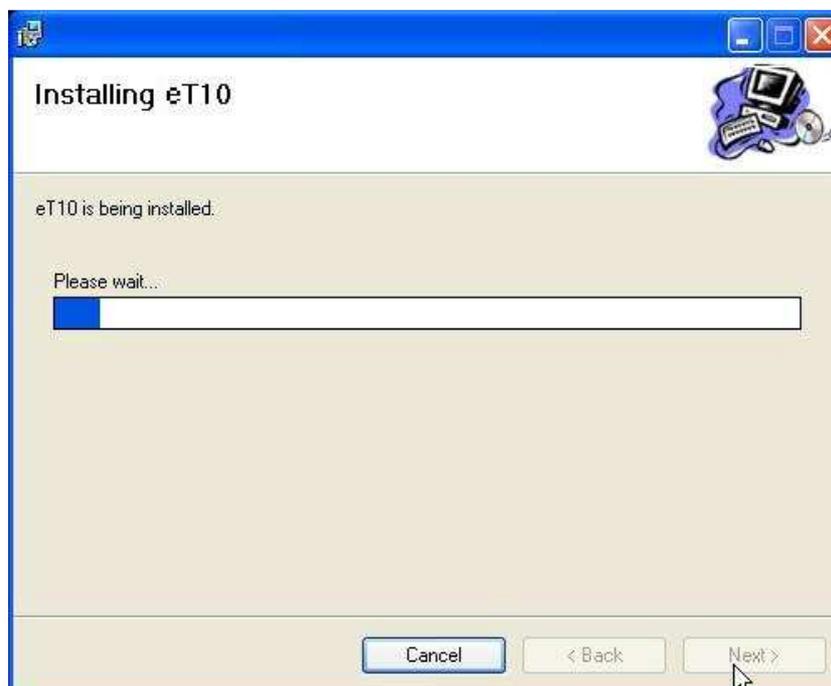
Click "Next >"



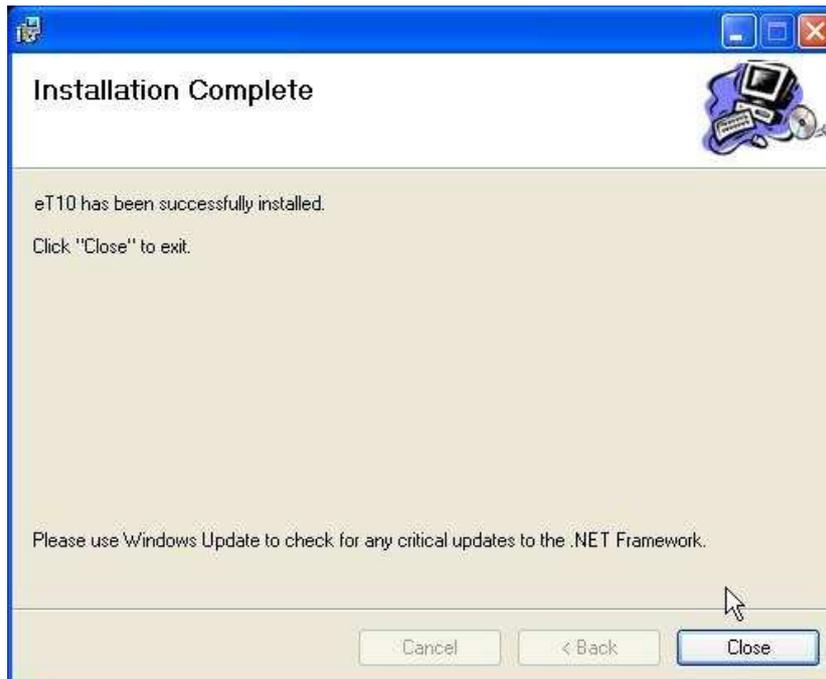
Choose where to install the program and whether to install for all users or only for you, then click "Next >"



Click "Next >" to start the installation



The software is being installed, please wait



The installation is completed. Click "Close" to exit the installation guide.

3.2.3 Step 3

Now it's time to install Google Earth. The installation file is provided on the CD-ROM. It's named "Google_Earth_AZXD.exe". Double click on the file and follow the installation instructions. After the installation has completed, start the program and install any updates available.

3.2.4 Step 4

In this step we will make the basic configuration for your eT-10. To start doing this, take the SIM-card you plan to put in your eT-10 and put it in your cell phone. Start with removing any existing contacts. Then you create two new contacts. One named "SET" and one named "TIMER". The contact named TIMER you give your own cell phone number (or the number you will use to control your eT-10). The contact SET you should give a 26-digits number and how to define this number you can learn in chapter 4.2.1.

If you have multiple devices we recommend you to define these in some way, both in your cell phones phonebook and physically so that it is easy to know which device is which.

If you want to use the SOS-SMS function you should also define one to five SOS numbers. This you do by adding contacts named SOS# (where "#" is exchanged by a digit between, and including, 1 and 5).

After configuring the SET and TIMER contacts (and installed the SIM-card in your eT-10 of course) your eT-10 is ready to be used, as long as you do not plan to use it for tracking via PC or a server. But if you only require being able to get SMS-response with the units' location you are ready for take-off. The rest of the instructions in 3.2.X are about preparing your device for being able to track your eT-10 via a computer.

3.2.5 Step 5

Before proceeding with this step your eT-10 must be fully loaded (and have its SIM-card inserted). In this step we are going to install device drivers so that your computer can understand and interact with your eT-10. This is made by inserting the CD-ROM into your CD-ROM drive. Then connect your eT-10 to your computer with the USB cable. When you've done it this should pop up.



Here you should choose the second alternative, "Install from a list or specific location (Advanced)". Then click "Next >".



You will then face this screen. Choose the first of the two main options, "Search for the best drivers in these locations". Also choose to include a specific location in the search, then click browse and choose the map "driver" on the CD-ROM. Click "OK" and then "Next >". The install guide will then search for drivers and installs them. This might take some time. When finished the guide will show you a screen telling you that your unit has been successfully installed.

4. Configuration

4.1 Configuration by computer

4.1.1 Checking IP, Port and IMEI#

Now it's time to find some information needed to get your eT-10 up and running so that you can track it via your computer. We recommend you to write down these information we are about to find, since these will be useful later on. For a start we are going to find out your computers external IP-address. The easiest way to do that is to go to <http://www.whatismyip.com>. You will then face the screen below, and your IP-address will be in the place marked with red.



This quartet of three-digit-groups works like an address for your computer on the internet, similar to your home address when someone wants to send you a postcard. Write this address down since we will need it later on.

Please observe that your IP-address do change once in a while, on some occasions every time you shut off your computer, unless you have a router on your network. But even if you have a router your IP-address will still change sometimes. When this happens you will see the effect that your eT-10 stops to report its position to your computer. What you need to do then is to check your IP-address again and change it in your eT-10, either by plugging it into your computer or by sending it an SMS containing your new IP (see chapter 4.2.2.1, the command for changing APN-configuration by SMS).

When you've found out what your IP-address is it's time to choose a port number for your tracker to communicate with your computer. If you do not know what a port is and would like to learn more about it please pay a visit at:

http://en.wikipedia.org/wiki/TCP_and_UDP_port

As an example we have chosen to use port 49200, but you should be able to choose any port between 49152 and 65535. This port range is called the "dynamic ports" or the "private ports".

Depending on how your network is configured you should take the following steps to allow communication between your eT-10 and your computer:

1. If you have a computer that connects directly to the internet, without a router or a firewall you do not need to do neither 2 nor 3. Just proceed to the bottom of this page to find out your trackers IMEI-number.
2. If your computer connects to the internet through a router you need to configure your router so that it allows your tracker to communicate with your computer. You do this by doing a so called "Port Forwarding". The first thing to do is to consult the manual of your router. If this does not help you, the page <http://www.portforward.com> could be useful. If these two does not help you we recommend you to call the support for your router.
3. If you have a firewall you have to allow communication for the tracking program, most often the firewall will pop up a window asking you if you want to allow it or not the first time the program try to connect. You *must* allow the program to communicate or the tracking program won't work.

When you have chosen and eventually allowed and port forwarded correctly you need to find one more piece of information before we're ready to start tracking! This is the IMEI-number of your eT-10 and is easily found on the white sticker located on the inside of your tracker's battery cover. Carefully write this down since only the correct number will make it work. One single digit wrong and tracking will not be possible. If your tracker is in a remote location, but set up and turned on you can also send an SMS to the unit to make it send an SMS back, containing its IMEI-number. How to type in the SMS you can see in chapter 4.2.2.3.

4.1.2 Configure your eT-10 by computer

Now it's time to configure your eT-10 to function at its best for your personal use. If you want to do this by SMS or putting the SIM-card in a cell phone, please skip this chapter and look further down the manual. If you want to configure your eT-10 by using a computer, turn on your eT-10 and then connect it to your computer using a USB-cable and start the program.

4.1.2.1 USB Menu



When the program has started this is the first window you will see. To start configure your eT-10 you must first open your device. To do this your eT-10 must be up and running and connected to your computer via USB. When this is fulfilled you will find it in the menu named "Vid:0x0471 Pid:0x0000". Choose that device and then click "Open". Wait for the program to connect to the unit (you will see that the text on the Open button will change to "Close" when program is ready). When this is done all you can do on this page is to click "Information" which will give you some info regarding your units IMEI-number, hardware and software version, how much power there is left in the battery, how much free space there is in the memory (this is for the log feature) and which number is used as SMS Centre Number.

Remember to only connect one eT-10 at the time. Connecting multiple eT-10s to your computer at the same time will cause problems of which Electia cannot be held responsible.

4.1.2.2 Settings Menu



If you click on the “Setting”-option up in the row this is what you will face. In this menu you can do configurations regarding phone numbers and configure the log feature.

If you would like to change how the unit uses the log feature, start with clicking on the “Read” button. This will make the program “read” how the unit is set today. When that is done, start with choosing whether your unit should log its position by time or by distance. When you have made your choice, put a marker in the box in front of your choice and give a number in the box next to your choice. If you have chosen to log by distance we recommend you to choose a number of meters larger than 50 since lower numbers might cause unnecessary many logs even though your device does not move, this is caused because of drifting positions, caused by GPS signal disturbance. Your eT-10 is capable of logging some 54 000 waypoints in total. When you are satisfied with the configuration, click “Confirm” to set the current configuration as the active one used by your eT-10.

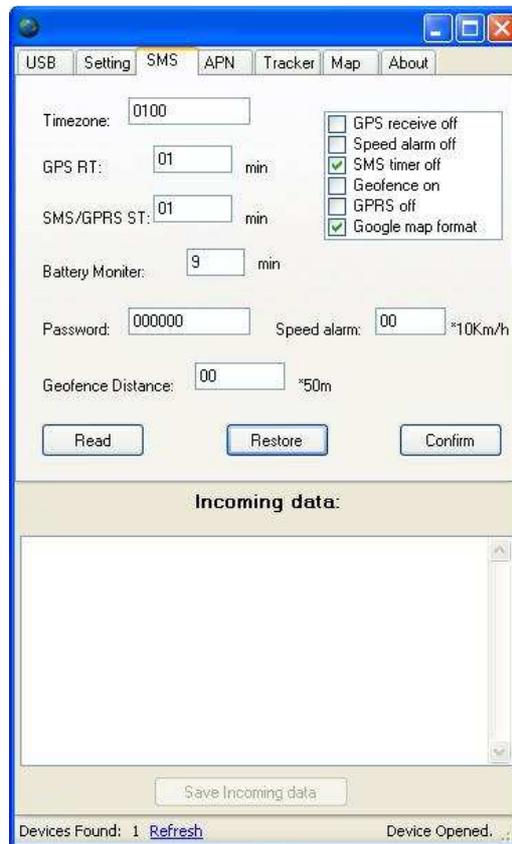
To add a new contact in your eT-10s phonebook, start with entering a name for the contact in the “name” field. Then enter a number to a cell phone in the “Phone no” field. Click “Save” to save your new contact to your eT-10 (the contact will be stored on your et10s SIM-card). Names that your eT-10 can recognize and use are the following:

“SOS1”, “SOS2”, “SOS3”, “SOS4” and “SOS5”. The contacts with these names will receive an SOS-SMS if the SOS-button on your eT-10 is pressed twice within two seconds.

“TIMER”. This contact should have the number of the cell phone from which you want to be able to send command-SMS from.

“SET”. This contact should have a phone number consisting of 26 digits which tells your eT-10 how you want it to function. The easiest way to define this number is by using the menu “SMS” which we will cover on the next page.

4.1.2.3 SMS Menu



In this menu you will find plenty of interesting options, including whether to send data via GPRS, how often to check for position via GPS and much more.

Starting up left we first find a line to configure which time zone you're in. If you are ahead of GMT you simply type the amount of hours before you are in the format HHMM (H for Hour and M for minute). This means that GMT+4 would be 0400. If your time zone is located "behind" GMT you will have to put a "-" before the digits, this means that if your local time is GMT-6 you should type -0600.

The next setting bears the name "GPS RT" where "RT" means Reception Timer and here you should give the interval (in minutes) which you want the unit to wait between it checks for its position via GPS signals. For constant checking, please type "00".

Next setting is "SMS/GPRS ST" which configures how often your eT-10 should send out its position via SMS (to the contact named "TIMER") and/or GPRS (to the IP-address and port you define in the "APN Menu"). This value is also defined in minutes between 01 and 99. To set this unit not to send out its position, type value "00".

"Battery Monitor" is the next setting and accepts a value 0-9. If the value is 0 the function will be disabled, if 1-9 this will be the interval, in minutes between which your unit will check its battery level. If the battery is low your unit will send out a warning SMS to the "TIMER" contact.

The "Password" setting takes a six-digits code which will be the password which someone who is not in the phonebook of your eT-10 will have to use if they want the position of your eT-10 (see 4.2.2.2).

Next option is "Speed alarm". Here you can choose if you would like your eT-10 to send an SMS to the "TIMER" contact each time your unit is moving faster than the speed defined by

you. The value you type in here is being multiplied by 10 to get the speed limit, this means that if you would like the effective speed limit to be 70Km/h you insert 7 ($7 \times 10 = 70$). We do not recommend you to choose a value which result in a speed limit lower than 50Km/h since this can cause the unit to send unnecessary messages because of drifting positions (because of clouds, bridges, tunnels, skyscrapes and other possible disturbing objects) in low speeds. For this function to work the GPS RT setting has to be set to constant contact ("00").

Next setting is "Geofence Distance". This function makes your eT-10 to send an SMS to the TIMER contact if your unit finds itself outside an area assigned by you. You choose a distance, in meters, here which will be multiplied by 50 to get the final distance. This means that if you would like the distance to be 1000m (1Km) you would give the value 20 ($20 \times 50 = 1000$). Then you take your unit to the place you want to be the "point of origin", let it start up properly and then press the power button twice within two seconds. The power led will then start flashing rapidly and when it returns to flashing normal your point of origin has been saved and Geofence is active.

In the upper right corner we have a couple of "on and off functions".

The first one, "GPS receive off" will make your eT-10 stop searching for its position, which will make most functions useless. All though this can be useful if you use your eT-10 as a safety if your vehicle gets stolen, since this will increase your eT-10s battery time (to start the GPS receive from a remote location, simply send an SMS, check 4.2.2.1 for more info).

The second function is "Speed alarm off". With this function you can easily turn on and off the Speed alarm function, without erasing the settings.

Third option is "SMS timer off", this is a smart choice if you have set up your computer and related stuff so that you are able to track your eT-10 by computer since this function turns off the automatic sending of SMS (please note that this does not turn off the sending of data via GPRS and that your unit still can respond on location demanding SMS).

The next option is "Geofence on" and a tick in this square will make the Geofence function to start.

Fifth function is "GPRS off". This is a good box to tick if you do not track your eT-10 via computer, or if you have put your eT-10 in a permanent mounting in your vehicle to use if it gets stolen, since then you can turn the function on by using an SMS if it does which saves some money on the bill from the phone operator. Please observe that this does not turn off the log function.

A tick in the last box will make your eT-10 send links to Google Map (with a marker on its position) rather than its position in longitude and latitude when it sends SMS containing its position.

Good to know regarding GMT is that the same area will have different time zones in different parts of the year. The table below will explain further.

Country	Summertime	Wintertime
Great Britain	GMT+1	GMT
Norway	GMT+2	GMT+1
Finland	GMT+3	GMT+2

Sweden

GMT+2

GMT+1

4.1.2.4 APN Menu



This is the APN screen and here you will find plenty of configurations regarding tracking via computer. If you are not going to use this function you can simply skip this step. Please make sure that you could save some money by turning off the GPRS sending by putting a tick in the “GPRS off” on the SMS Menu.

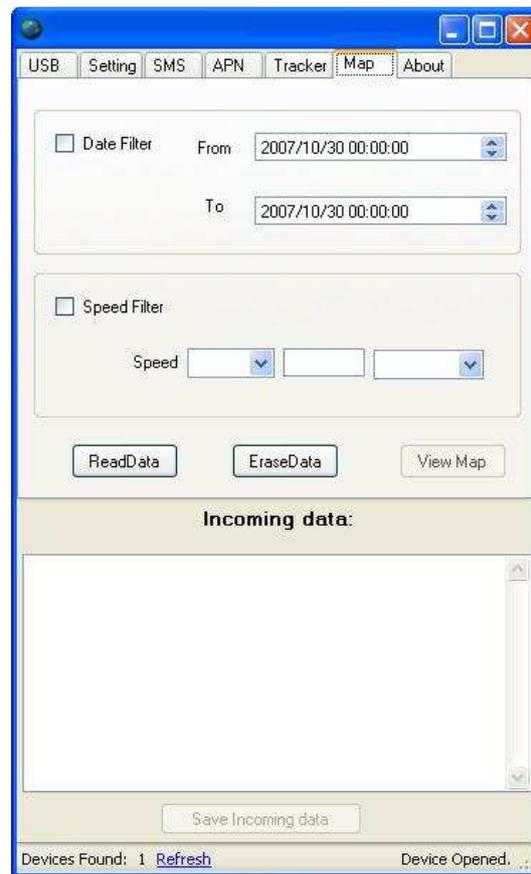
The first thing to do is to press the “Read” button. This will make the program read the current settings.

The first setting to type in is the name of the apn-server that your operator uses. A list of some of the most common operators can be found in chapter 6. If you cannot find your operator there we recommend you to either search on the internet or call the support of your operator.

The next two pieces of information to fill in is username and password to the GPRS network. These are most commonly found in the same location as you found the APN-address.

When this is done all you have to do is filling in your external IP address (because you did write it down didn't you?) and the port you have chosen and forwarded in chapter 4.1.1.

4.1.2.5 Map Menu



Here is the menu under which you can choose which logged waypoints you want to watch. First thing to do is to click “ReadData”. This will make the program read the logged data from your eT-10 and show it in the window below in longitude/latitude.

If you want to erase the data saved in your eT-10, simply click “EraseData”. If you want to see all the waypoints recorded, just click “View Map”.

If you want to restrict which waypoints you want to view you can choose either by date or by speed, or both. To set a date filter, just click in the box next to the text “Date Filter” and choose a “from” date and a “to” date.

If you want to filter so that you only see waypoints recorded in a speed above or below a velocity you define in the center box. In the left box you define if you want the speed to be the maximum or the minimal speed to be shown and in the righter box you can define which unit you want (Km/h, Miles/h or Knots).

When you’re done with choosing your filters, click “View Map”. This will make Google Earth start and show you the waypoints that got through the filter.

As you might have noticed we did not talk about the Tracker Menu, you will find a walk-through on this menu in chapter 5.

4.2 Configuration of SIM-card and by SMS

4.2.1 Configuration of your SIM-card

If you do not have access to a computer it's still possible to configure your eT-10 if you have a cell phone. Just insert your SIM-card in the cell phone and create a contact named "SET". The phone number you give this contact will decide how your eT-10 will work. See below how to do!

Digits:	Function:	Value and result:	Note:
1-5	Time zones	For GMT+X, type 00X00 For GMT-X type 10X00	
6-7	GPS-Receptions Interval	Any number, 01-99, for GPS-reception interval in minutes.	00 will result in consistent contact
8-9	Report-Interval	Any number, 01-99, for SMS/GPRS-report interval	00 shuts the function off
10	Battery monitor	1-9 for number of minutes between check of battery level.	0 shuts the function off
11-16	Password	6-digits code from 000000 to 999999	
17-18	Geofence	A number 01-99 that will be multiplied by 50 (i.e. 03×50=150 meter)**	00 shuts the function off
19-20	Speed alarm	A number 01-99 that will be multiplied by 10 (i.e. 11×10=110 Km/h)	00 shuts the function off
21	Log	0 will make your eT-10 to log by time 1 will make your eT-10 to log by distance	
22-26	Log Interval	If by time: 00001-99999 seconds If by distance: 00050-99999 meters*	

**Please note that if logging by distance we recommend you to choose 50 meters as the lowest value since a lower value might cause unnecessary logging caused by bad connection with the GPS Satellites/driftng.*

***Please note that if using the Geofence function we recommend you to set the lowest effective distance to 200 meters. This is to avoid alarming and SMS-messages caused by bad connection with the GPS-Satelites/driftng.*

Example:

Name: Number:
SET 00100050386543210011100200

- 00100 (Pos. 1-5) : Time zone: GMT+1
- 05 (Pos. 6-7): GPS-position will be checked every fifth minute
- 03 (Pos. 8-9): The tracker will report its position via GPRS/SMS every third minute
- 8 (Pos. 10): Tracker will check its battery level every eight minute. If it's low it will report to the contact named TIMER by SMS.
- 654321 (Pos. 11-16): Password of the tracker is 654321
- 00 (Pos. 17-18): Geofence-function is shut off
- 11 (Pos. 19-20): Speeding alarm is set to 110 km/h
- 1 (Pos. 21): Log function is configured to log per distance
- 00200 (Pos. 22-26): The eT-10 will log its position once each 200 meters.

4.2.2 SMS-Commands

Did you install your eT-10 in a remote location? Would you like to change a setting, get it's IMEI-number, or maybe get it's position directly in your phone? Check below and you will find an SMS-command for almost anything!

4.2.2.1 Configuration commands

S,SET:TTTTMMRRBPPPPPGHHLIIII	Reconfigure the SET-contact, see 4.2.1, or 4.2.3
S,SOFF	Shuts off the automatic sending of SMS
S,SON	Starts the automatic sending of SMS
S,ROFF	Shuts off the reception of GPS-data
S,RON	Starts the reception of GPS-data
S,SPDOFF	Shuts off the speeding alarm
S,SPDON	Starts the speeding alarm
S,GEOFENCEOFF	Shuts off Geofence
S,GEOFENCEON	Starts Geofence
S,GPRSOFF	Shuts off GPRS-reporting
S,GPRSON	Starts GPRS-reporting
N,NAME:number	Change "NAME" by a name readable by your eT-10 and number with a cell phone number(se 4.2.3.1 for more info). This will register a new contact.

N,NAME:D	Removes the NAME contact (i.e. "N,SOS4:D")
N,NAME:?	Makes your eT-10 respond with an SMS with the number of contact with name "NAME" (i.e. "N,TIMER:?")
S,F	Resets your unit to default configuration.
POWER OFF,IMEI	Shuts your unit off (change "IMEI" with your units IMEI-number)
A,apn-adress,username, password,ip-adress,port	Changes your APN-configurations, see below.
A,CLR	Clears your APN-configurations

4.2.2.2 Position inquire

S,LF:NORMAL	Makes your position-demanding SMS to be in Longitude/Latitude
S,LF:GOOGLEMAP	Makes your position-demanding SMS to be in Google Maps format.
W	Generates an SMS-report, IF your number is in your eT-10s phonebook
W,PPPPPP	Change "PPPPPP" with your eT-10s, password to get a location report by SMS. This is only for those with a phone number NOT stored in the phonebook of your eT-10.

4.2.2.3 Status inquire

S,?	Generates a status report by SMS with information on how the SET contact is configured and how the unit is functioning.
A,?	Generates an SMS report containing the configuration of the units APN settings.
I,?	Generates a responding SMS containing the battery level, the level of the free memory and your units IMEI-number.

4.2.3 Detailed description of the SMS commands

For *all* command-SMS you send from the TIMER contacts number is that they all generates an SMS-response from the eT-10, no matter if the commands are correctly typed, or if the unit somehow does not succeed with executing them, the unit will always respond as long as it has contact with the GSM network. If you send an SMS to your unit and does not receive an answer we recommend you to “pay a visit” to your unit since it’s probably either out of battery or out of the GSM-networks range.

“S,SET:ZZZZRRTTBPPPPPPGGSSLIIIII”

The SET contact you created in your SIM-card before you inserted it in your eT-10 can be reconfigured by simply sending an SMS to your unit. The message should follow the syntax “S,SET:” followed by 26 digits in a row without any spaces or other characters. How to define the 26 digits you can see below together with the headline.

“S,SET:ZZZZRRTTBPPPPPPGGSSLIIIII”

“ZZZZ” you should change to a number defining which Time Zone you are operating in (in GMT format). If you, for an example, would like to operate in GMT+7 you should type 00700 (first digit is 0 for “+”, the rest are the time in 12h XX:XX format). If you instead operates in GMT-5 you should type 10500 (first digit is 1 for “-“ and the others 05.00, without “.”). The first digit gives the eT-10 an indication of which side of GMT you are on, if GMT+X then you should have 0 as your first digit. If “-“ you should define the first digit as 1.

“S,SET:ZZZZRRTTBPPPPPPGGSSLIIIII”

“RR” change for the interval in minutes you want your eT-10 to Receive GPS-signals. To tell the unit to receive signals as often as possible, type “00”. So if you, for an example, want your unit to receive GPS signals every 6th minute, type “06”. Assignable numbers are “00”-“99”

“S,SET:ZZZZRRTTBPPPPPPGGSSLIIIII”

“TT” here you should define how often you want your unit to Transmit its position by SMS or GPRS. Assignable numbers are “01”-“99” and “00”. Defining this value to “00” will turn of the automatic sending of data by SMS and GPRS.

“S,SET:ZZZZRRTTBPPPPPPGGSSLIIIII”

“B” should be exchanged by a number defining how often you want your eT-10 to check its battery level. If your eT-10 at such a check finds that it’s low on battery it will send a warning message by SMS to the contact TIMER. Definable numbers are “1”-“9” and “0”. Choosing “0” will turn of the function.

“S,SET:ZZZZRRTTBPPPPPPGGSSLIIIII”

“PPPPPP” these six digits should be replaced by a six-digit code. This is the code that someone whose number does not exist in the phonebook of your eT-10 has to type when asking for its position by SMS. Please observe that this code cannot be changed by SMS, so you *have* to type in the same code as you did when you configured it. If you have forgotten your code, send an SMS with the following syntax to receive an answer with the current SET

configuration, including your password. "S,?". Please note that this command can only be sent from the TIMER contact.

"S,SET:ZZZZRRTTBPPPPPPGGSSLIIII"

"GG" these numbers are supposed to define the distance of the radius of the Geofence function. The value you give will be multiplied by 50, so if you for an example would like the effective range to be 800 meters you should give the value of $\frac{800}{50} = 16$. If you want a lower effective range that results in a one-digit value, please note that you have to put a "0" in front of it. If you instead want the effective range to be 1500 meters you should define the value of $\frac{1500}{50} = 30$. If you do not want to use this function, please define "00" as your value.

"S,SET:ZZZZRRTTBPPPPPPGGSSLIIII"

"SS" These positions defines the speed for the Speed limit function. The value in these positions will be multiplied by 10, so if you for an example would like the effective speed limit to be 130Km/h, you should give the value of $\frac{130}{10} = 13$. Please observe that there has to be two digits in the value, so if you would like the effective limit to be 80Km/h, please define the value of $\frac{80}{10} = 8$ as "08".

If you wish to turn this function off, please assign these positions the value "00".

"S,SET:ZZZZRRTTBPPPPPPGGSSLIIII"

"L" in this position you should define how you want the log function to work. If you define this digit to "0", it will log by time (how long you will define in the next five digits). If you instead define this digit to "1", your unit will log by distance. See next part for further instructions

"S,SET:ZZZZRRTTBPPPPPPGGSSLIIII"

"IIII" These are the last five digits. They define how often the log function should log its position.

If you choose to log by time, this value will be meaning seconds, so "00005" will be once every five seconds, "00060" will mean log once every minute and "00120" will mean once every 2 minutes.

If you instead choose to log by distance, your unit will log its position every time it checks with the GPS and calculates that it has moved more than your defined value. The value will be defined in meters, so "00100" will be every 100^{ed} meter and "02000" will be every 2nd kilometer.

Please note that you have to assign five digits and that you should not give an effective value of below 50, if you are logging by distance, since this can cause unnecessary logging even though the eT-10 is not moving. This can be caused by bad connection with the GPS-Satellites which results in so called "drifting positions".

"N,NAME:number"

With this command you can create new contacts in your eT-10s phonebook without having to access the unit physically. Change "NAME" for "SOS1", "SOS2", "SOS3", "SOS4" or "SOS5" and number for the phone number of your unit. So if you want to register the contact "SOS2" with number 0703506070 you should type as following: "N,SOS2:0703506070".

"A,apn-adress,username,password,ip-adress,port"

This command is very, very useful if you have your eT-10 installed in a vehicle or something similar and rarely have physical access to your unit and want to use it to track your unit via your computer and the included software. This is because that your IP-address will change once in a while, which will make it necessary to change the ip-adress registered in your eT-10.

"apn-address"

This first part should be exchanged by your operators APN-address. This address is unique for every operator and some operator's apn-addresses can be found under headline 6, if it is not listed there we recommend you to check your operator's website or to call their support.

"username" and "password"

This info you will probably find in the same spot as the APN-address, since it's the username and password which is required to get on to the GPRS-network, which also varies from operator to operator.

"ip-adress"

Here you should give your external IP-address, how to find your IP you can read about in 4.1.1

"port"

Here you should define the port number you choosed in chapter 4.1.1.

Example:

Let us say that you have T-Mobile as your operator. That would mean that your APN-address would be "general.t-mobile.uk" and your username to be "user" and your password "pass". In this example we have IP-address 112.62.145.94 and that you have port forwarded port 49200.

Your message should then look as following:

"A,general.t-mobile.uk,user,pass,112.62.145.94,49200"

If you do not want to change something, let's say that you have already made this configuration once and do not want to change anything else than the IP-address. Then your message would look like this:

"A,,,,,112.62.145.94,"

Please note that the only thing that should separate these different pieces of information should be the comma, no spaces, nothing but the commas.

"W,PPPPPP"

Send this message, with the "PPPPPP" changed for the six-digit code assigned in the SET contact, to receive an SMS with the location of your unit if your current number is not registered in the phonebook of your eT-10.

Please observe that you do not have to give the password if you exist in the phonebook, either as a "TIMER" contact or an "SOS#" contact. If you exist there you only have to type "W,?".

4.3 Description of the Speeding alarm and Geofence functions

4.3.1 Speeding alarm

This function allows you to be warned at once if your eT-10 is moving faster than a speed you decide. If your unit exceeds this speed your eT-10 will start to send SMS-messages to the contact named "TIMER".

4.3.2 Geofence

This function can make your eT-10 work as an alarm. The Geofence function will check the GPS position every time the device receives one and if it's activated it will check if the current position is inside the range defined by you. If it's not it will start sending alarm messages to the TIMER contact with its position and speed.

To define a point of origin (the spot from where the range you define will start) take the unit to that spot, let it start up properly and then press the unit's power button twice within two seconds. This will make your eT-10 to save its position as point of origin.

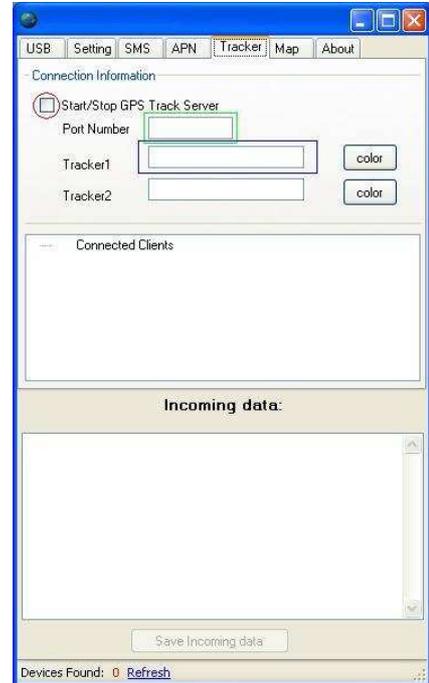
We do not recommend you to choose an effective distance lower than 200 meters since this could cause unnecessary false-alarms because of temporary bad connection with the GPS-Satellites (clouds etc.), so called drifting positions.

5. Tracking via GPRS for privates

Now you're done with configuring your eT-10 and it's time to start using it! This chapter is about how to track your unit with aid of your configured computer in case you've missed the configuration, please take a look at chapter 4.1.



Click in the marked square to get on to the Tracker menu



Fill in the blue and green squares with info and then click the red one

In the blue square you should type in your eT-10s IMEI-number, please be very careful on this point since one single digit missed or in the wrong place and the tracking will not work. In the green square you fill in your port number. A smart thing could be to copy-paste this numbers (both IMEI- and port numbers).

If you have two trackers which you would like to track simultaneously, fill in your second trackers IMEI-number in the "Tracker2"-field. Please note that you should use the same port number for both your trackers if you want to track them simultaneously. If you plan to do this it can be a very good idea to click the "color"-button next to the IMEI-number to change color of the trace of your trackers so that it will be easier to know which tracker is where.

6. APN-list

We have gathered a small list of some of the operators and their APN-information here, if your operator is not on our list, please check out their website or call their support.

Country:	Operator:	APN:	Username:	Password:
Norway	Netcom	internet.netcom.no	netcom	netcom
Norway	TalkMore	internet.netcom.no	netcom	netcom
Norway	Telenor Mobil	internet	guest	guest
GB	3	three.co.uk	guest	guest
GB	Jersey Telecom	pepper	abc	abc
GB	O2 (Contract)	mobile.o2.co.uk	faster	password
GB	O2 (Pre-pay)	payandgo.o2.co.uk	payandgo	payandgo
GB	Orange(monthly)	orangeinternet	user	pass
GB	Orange(Pre-pay)	orangewap	Multimedia	Orange
GB	T-Mobile	general.t-mobile.uk	user	pass
GB	VirginMobile	goto.virginmobile.com	user	[space]
GB	Vodafone(Contract)	internet	web	webs
GB	Vodafone(Pre-pay)	pp.vodafone.co.uk	wap	wap
Finland	Dna	internet	guest	guest
Finland	Elisa (Radiolinja)	internet	rlnet	internet
Finland	Saunalahti	internet.saunalahti	guest	guest
Finland	Sonera	internet	[blank]	[blank]
Finland	Song	internet.song.fi	song@internet	songnet
Sweden	Djuice	internet.djuice.se	NULL	NULL
Sweden	Tele2/Comviq	isplnk1.swip.net	gprs	internet
Sweden	Tele2 (3G)	internet.tele2.se	wap	wap
Sweden	Telenor (GPRS)	internet.vodafone.se	guest	guest
Sweden	Telenor (3G)	services.vodafone.se	guest	guest
Sweden	Telia	online.telia.se	NULL	NULL
Sweden	Tre (3G)	data.tre.se	void	void

7. More information

If you are interested in learning more about IMEI-numbers, APN, Port-Forwarding, Ports and IP-addresses? Please try the links below!

IMEI: <http://en.wikipedia.org/wiki/IMEI>

APN: http://en.wikipedia.org/wiki/Access_Point_Name

Port Forwarding:

http://www.portforward.com/english/routers/port_forwarding/routerindex.htm

Ports and IP-addresses: http://en.wikipedia.org/wiki/TCP_and_UDP_port

If you are interested in being able to track a very large number of trackers online via a simple web interface, from any computer connected to the internet (requires java, which is available for download free of charge), please visit our website <http://www.electia.se> or the website for tracking <http://www.protracking.eu>

8. FAQ

My eT-10 seems to start correct, but after a minute or so the blue LED stops flashing and I can't turn my unit off?

Please see to that you have inserted the SIM-card by opening the battery cover and removing the battery.

My eT-10 has suddenly stopped reporting its position to my computer?

This can have various reasons, but most probably it's because that your computer have received a new external IP-address, which results in that your eT-10s data will not reach your computer anymore. Please check <http://www.whatismyip.com/> and verify this IP-adress with the one registered in your eT-10 (easily checked by sending this line "A,?" to your unit by SMS). If these two IP-addresses does not match, please change the one registered in your unit, either by SMS (4.2.2.1) or by computer (4.1.2). If your IP-address hasn't changed, your eT-10 might have run out of battery or be outside the range of your GSM network, but any of these reasons would result in that you would not receive a responding SMS.

Please note that your unit has a battery time of about 30 hours without external power (from fully charged and with Reception timer, sending timer and logging every 10th minute). This means that if you have your unit permanently installed in your vehicle our unit will be charged every time you run your vehicle unless you install it directly so that it will have power supply even though your vehicle is turned off.

Please note that if the external power is cut off and your unit runs out battery it will not start again automatically, even though the external power gets back. You then have to manually start your unit by pressing the Power button.

My eT-10 does not respond to my SMS-commands

Please make sure that you created a contact named "TIMER" with the phone number you are trying to control your unit from.

If your unit has responded to your commands earlier, it might have run out of batteries or it might have gotten outside the area of coverage of your operator. It will then receive your messages when it comes back into the area of coverage for your operator and execute your commands then.

This manual may be updated and you will always find the latest version on our website:

<http://www.electia.se/>

DECLARATION OF CONFORMITY

Hereby Electia AB declares that the eT-10 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC, EMC 2004/108/EG and RoHs 2002/95/EG.

Härmed intyga Electia AB att SDA-9 står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG, EMC 2004/108/EG och RoHs 2002/95/EG.

CE



At the end of its life, those products should NOT be disposed of in household rubbish. Seek the advice of your local authority on correct, environmentally friendly disposal.

Batteries

Do not dispose of used batteries in the household rubbish! They should be deposited at a collection point for used batteries.

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