

User's Manual

DEFA Tracking

DT20 - DT30

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Congratulations on your new DEFA Tracking and Positioning system

DEFA has more than 40 years of experience within production of electrical products for vehicles. Your DEFA Tracking system is your warranty for a quality product with a long service life. Quality is our top priority - both in our development and our production. Read the user's manual carefully and learn to use the functions of your DEFA Tracking system.

How to use your DEFA DT20/DT30

All functions of your DEFA Tracking system are registered upon configuration. You can communicate with the unit via SMS messages from your mobile phone. Only users registered in the DEFA tracking unit can send/receive messages to/from the unit.

All SMS messages must be sent to DEFA's central server at phone number

+47 41 71 66 00

DEFA DT20/DT30 can send different alarm messages to your mobile phone. See page 7 for further details.

In case of theft

DEFA Basic: If your vehicle is stolen without an alarm being triggered, e.g. if your car keys have been stolen, you must contact the alarm control centre on phone +45 70 25 05 90.

DEFA Basic Light: You have to take the necessary initiative to recover your vehicle.

SMS command survey

AC	Ask for a position
SON	Activate and set max. speed for triggering speed alarm
SOFF	Deactivate speed alarm
FON	Activate SMS fence alarm
FOFF	Deactivate SMS fence alarm
SUGSM+45xxxxxxxx	Create new user
DELGSM+45xxxxxxxx	Delete user
U	See stored mobile phone numbers
A1	Activate connected optional extras
D1	Deactivate connected optional extras

If you have more than one vehicle/boat registered you must write your
DEFA Tracking subscriber numer and a space
in front of the above commands when writing your SMS message

You will find your subscriber number in your welcoming letter from DEFA Security. It is a good idea to write down your subscriber number on the enclosed TrackCard so you always have it at hand.

On the following pages you will find a more detailed description of the individual functions and can see the associated replies you will receive on your mobile phone display.

Ask for a position

At any time you can ask for the position of your vehicle/boat via your mobile phone. Just send an SMS message consisting of the two letters **AC** (Ask Coordinate) to DEFA at phone number +47 41 71 66 00. See the enclosed TrackCard. Shortly after you have sent the SMS message to DEFA you will receive a reply on your mobile phone display among other things containing a position in the shape of longitude and latitude.

Command: **AC** (**Subscriber number AC** if more than 1 vehicle/boat)

Example: **AC** (**006888 AC** if more than 1 vehicle/boat)

Reply:	Abn. nr. <xxxxxx>	Example:	Abn.nr. 006888
	Lat.: <xxxxxx>N		Lat.: 778899N
	Lon.: <xxxxxx>E		Lon.: 112233E
	Speed: <xxx>km/h		Speed: <85> km/h
	Heading: <xx>		Heading: <NW>
	Ign.: <On//Off>		Ign:<On>

If DEFA DT20/DT30 is within GPS coverage the actual position will appear. If it is not within GPS coverage or in standby mode the **last position** within GPS coverage will be displayed. If you send an **AC** command to the unit it will “wake up”. After a short while you can send a new **AC** command whereafter you will receive the co-ordinates of the actual position.

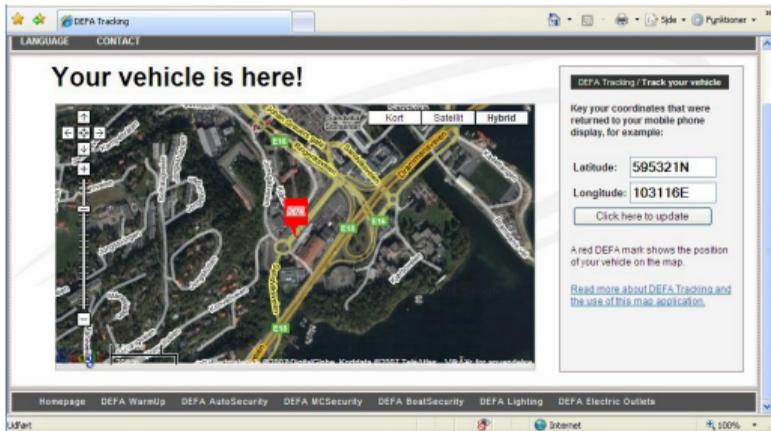
If the speed is 0 km/h the heading will not appear from the reply.

See the position of your vehicle / boat on a map

At www.defa.com you have free access to a map application enabling you to see where your vehicle/boat is situated. Enter the co-ordinates received in reply to your position request to see the actual position of the vehicle/boat on the map.

How to proceed:

1. Visit DEFA's homepage www.defa.com
2. Click the button "DEFA Tracking"
3. Enter the co-ordinates for latitude and longitude
4. Click "Find your vehicle" and the position will be shown on the map



Speed alarm

You can programme DT20/DT30 to send an alarm when the vehicle exceeds a pre-defined speed. The speed limit must be exceeded for more than 10 seconds before a speed alarm is sent. If a speed alarm is triggered you must drive **below** the pre-defined speed limit (e.g. 80 km/h) for at least 1 minute before the speed alarm can trigger again. Speed alarms are not sent to the alarm control centre, if any.

REMEMBER ! Subscriber number and a space before the command if you have more than 1 vehicle/boat.

ACTIVATE SPEED ALARM

SPEED ALARM ON

SMS command: SON <xxx> (km/h)

Example: SON080

Reply: Abn. nr.: <xxxxxx>
Speed Alarm On
Speed Alarm <xxx>

Example:

Abn. nr.: 006888
Speed Alarm On
Speed Alarm 080

In the example the speed limit is set to 80 km/h

DEACTIVATE SPEED ALARM

SPEED ALARM OFF

SMS command: SOFF

Reply: Abn. nr.: <xxxxxx>
Speed Alarm Off

Fence alarm - electronic fence (Standard. Always operational with the car ignition)

Your DEFA DT20/DT30 always registers the position when you switch off the ignition. If the object is moved more than minimum 250 metres *) from this position without ignition a fence alarm will be sent to all mobile phones registered in the unit. If an alarm control centre is registered in the unit the fence alarm will be sent only to the alarm control centre. *) The number of metres depends on the GPS coverage.

SMS fence alarm (Optional)

The SMS fence alarm is a double alarm working no matter whether the ignition is on or off. This means that an SMS fence alarm will be sent each time your vehicle/your boat leaves the pre-defined area (from 250 metres depending on the GPS coverage). SMS fence alarms are not sent to an alarm control centre, if any.

An SMS fence alarm deactivates the function. If you want to continue receiving fence alarms you must re-activate the function by sending a new SMS command.

ACTIVATE SMS FENCE ALARM**SMS FENCE ALARM ON****SMS command:****FON****Reply:**

Abn. nr.: <xxxxxx>

Fence Alarm On

DEACTIVATE SMS FENCE ALARM**SMS FENCE ALARM OFF****SMS command:****FOFF****Reply:**

Abn. nr.: <xxxxxx>

Fence Alarm Off

Movement alarm - Only motorcycle

When your DEFA DT20/DT30 is configured for a motorcycle the built-in movement sensor will automatically be activated 2 minutes after you switch off the ignition. If the motorcycle is “moved” in a certain pattern for more than 30 seconds a “Movement Alarm” will be sent to your mobile phone.

No alarm will be sent to the alarm control centre, if any.

Create more users

Upon installation of DT20/DT30 your own mobile telephone number will be stored in the unit and you will be registered as a user. You can create additional users - and of course, you can delete them again.

CREATE NEW USER

NEW USER

SMS command: SUGSM+47xxxxxxxx

Example: SUGSM+4712345678

Reply: Abn. nr.: <xxxxxx>
GSM Stored<+45xxxxxxxx>

Example: 006888
GSM Stored +4512345678

DELETE USER

If you want to delete a user remember to add the unit's DEFA subscriber number and a space before the command. This to secure that the user is deleted only in this specific unit and not in all units in which he/she may be registered.

SMS command: xxxxxx DELGSM+47xxxxxxxx

Example: 006888 DELGSM+4723456789

Reply: Abn. nr.: <xxxxxx>
GSM Deleted +47<xxxxxxxx>

Example: 006888
GSM Deleted +4723456789

See stored mobile phone numbers

You can see the mobile phone numbers stored in the unit memory by sending the SMS message **U** (for User) to DEFA's centrally located server at phone number +47 41 71 66 00. It's useful from time to time to check stored numbers and see whether some of them should be deleted.

SEE STORED MOBILE NUMBERS

Command: **U** (**Subscriber number U** if more than 1 vehicle/boat)

Example: **U** (**006888 U** if more than 1 vehicle/boat)

Reply:	Abn. nr.: <xxxxxxxx>	Example:	Abn.nr. 006888
	+47xxxxxxxx		+4712345678
	+47yyyyyyyy		+4723456789

REMEMBER ! Subscriber number and a space before the command if you have more than 1 vehicle/boat.

Output

DEFA DT20/DT30 has an output enabling you to remote control e.g. car heaters etc. or activate/deactivate other optional extras. The function must be set up and configured by the workshop engineer.

ACTIVATE OUTPUT (SU)

SMS command:

A1

Reply:

Abn. nr.: <xxxxxx>

Output On

DEACTIVATE OUTPUT (SU)

SMS command:

D1

Reply:

Abn. nr.: <xxxxxx>

Output Off

REMEMBER ! Subscriber number and a space before the command if you have more than 1 vehicle/boat.

Power saving mode and response times

When the ignition is turned off the unit enters into power saving mode. The power saving mode is time-dependent and has 3 status levels. The below table shows when the DEFA Tracking unit changes from one level to another. The actual power saving status determines the average power consumption. The unit lowers its power consumption among others by switching the GSM module and GPS receiver on and off.

Status	Normal DT20 + DT30 50mA	Standby Level 1 DT20: 4.5 mA DT30: 15mA	Standby Level 2 DT20: 2.0 mA DT30: 3.5 mA
Car/Boat	-	After 12 hours	After 7 days
MC	-	After 2 hours	After 48 hours

When the unit is in power saving mode the GMS module checks for incoming SMS messages only at regular intervals which influences the response time. The response time is the time elapsed from the moment you send the SMS command and until you receive a reply from the unit. The response time varies according to the power saving mode level. The below times are the normal response times - **after you have switched off the ignition.**

Status	Normal	Standby Level 1	Standby Level 2
Position request	Immediately	Approx. 5 minutes	Approx. 60 minutes
Alarm	Immediately	Immediately	Immediately

Internal backup battery supply:

DEFA DT20/DT30 will be powered by the internal backup battery if the mains power is disconnected. In this case the information on the previous pages does not apply. The DT20/DT30 will enter direct into standby mode with a response time of approx. 15 minutes. A power alarm will be sent immediately if the mains power is removed. The alarm is not sent to the alarm control centre.

Updates and responsibility

In general the DEFA Tracking systems are maintenance free. DEFA Security automatically conducts any necessary updates and if there anything for you to take action upon in this connection you will be contacted. However, as customer it is your responsibility to secure that the system is always intact and correctly connected.

Technical specifications

	DT20	DT30
Weight:	128 gram	170 gram
Size:	85 x 55 x 17mm	90 x 70 x 30mm
Power consumption:		
• Ignition on:	50 mA	50 mA
• Ignition off:		
• Normal:	50 mA	50 mA
• Standby - level 1:	4.5 mA	15 mA
• Standby - level 2:	2.0 mA	3.5 mA

Limitations and approvals

Subject to modification and improvement of future products and documentation without prior notice.

DEFA Tracking DT20/DT30
is certified according to:



DT20: (E1) 10R-025093

DT30: (E1) 10R-023952

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Common

Self-extinguishing plastic cabinet

Voltage: 8-30 volt

Temperature range:
-20 til + 50 grader C

**Operating hours on
built-in battery:** 48 hours

Output:
Active minus: Max 500 mA

GSM:
GPRS class 10
Dualband 900/1800 MHz



