

Lommy Eye

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History:

Date	Remarks
20140107	First version
20140130	Automatic operator shift and emergency server described
20140131	emergency server renamed to failover server
20140224	wolf-funtionality added.
20140327	MOVE-WAKEUP value 2 added. Parameter POS-DATA-MODE added. Parameter SMSENDER added.
20140415	New parameter: TEMP-INPUT
20140424	CONF: command described
20140428	STATEMASK new default value 840000000 (was 0)
20140522	RST field added.
20140606	CAP-VDelay: time changed from 100ms to 100s
20140714	New parameter: GSM-CONNECT-TIMEOUT and GSM-VON
20140916	STAT command added.
20141029	New parameter: GPS-SKIP
20141215	"Moving-bits" added.
20150302	TRANS field added. Radius added to GPS structure. Gps.Speed corrected to km/h.

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20150305	APPTYPE field added.
20150609	ANA field added.
20150625	"no wolf heard" alarm value changed to 8 (was 1)
20151111	MBIT only active while MOVE-WAKEUP=2
20160411	POS command added.
20160426	Wolf feature altered.
20160726	New parameter: MEAS-PULSE
20160816	direction added to GPS field
20170213	Gps.Speed corrected to meters/hour
20170310	Parameter MOVE-DELAY removed. Section explaining moving-reports rewritten.
20170327	New parameter added: TEMP-OFFSET
20170607	Note inserted in GPS structure: "Speed and Direction will be blank while Speed is below 10km/h"
20170607	Gps Speed is in km/h again!
20170802	pcb button will now erase any stored reports before rebooting and sending a report. New field: TEMP-EXT New parameter: TEMP-INPUT-EXT MOVE-WAKEUP=2 feature redefined New feature: VPORT LED's will be indicating on first report after reset.
20170913	Typo's corrected in VPORT-ALARM and VPORT-STATUS examples.
20171117	Parameter VPORT-LISTEN-INTERVAL has new default value=3600
20180102	TEMP-EXT field is now in milli-degrees
20180523	New parameter: OPT-CFG
20180820	Chronological sequence requirement in WEEK and SUN commands.
20180917	"Input triggered reports" section added.
20180926	Parameter BATT-LOWVOLTAGE added. Description of "Low battery" feature added.
20190115	New parameter: OPERATOR-HANDLING
20200512	Parameter GSM-CONNECT-TIMEOUT new default value: 120 (was 60)
20201104	Recovery Mode added
20210115	Complete re-write

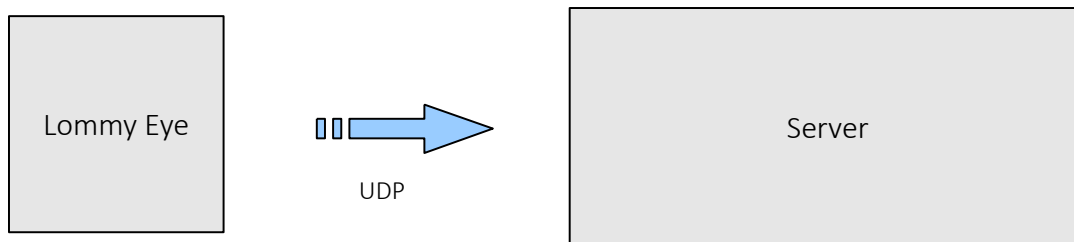
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General Description

This document describes the Lommy Eye project

The system consists of a Lommy device communicating with a server via UDP.

The device will periodically wake up and gather information about surrounding gsm cells and send these to the server.



LED's

The LED's will be indicating the device status, during the first report after each reset, caused by pressing the pcb button.

Red: Will be on if the supply voltage is ok.

Blue: Will give short flashes while GPS is searching. Will be on when GPS fix is achieved. Will be off if no GPS fix is achieved.

Yellow: Will be on when the device is connected to a base station.

When the report is sent, all LED's will be off.

REPORTING (Normal and Moving)

"Normal reports" are sent every **REPORT-INTERVAL**.

"Moving reports" are sent when moving is started, and every **REPORT-INTERVAL-MOVE** while moving. Also, a report is sent when moving is stopped.

GPS position is added to the reports, if **GPS-TIMEOUT** is set, and a GPS fix can be obtained.

If a GPS position is added, only the base cell information will be present in the report, not the neighbour cell information.

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Move wakeup feature

MOVE-WAKEUP = 1

A report is sent when movement is started.

A report is sent every **REPORT-INTERVAL-MOVE** so long as the device is moving.

A report is sent, when movement is ended.

MOVE-WAKEUP = 2

No report is sent at the start of movement and during movement.

A report is only sent, when movement is ended.

ECHO Mode feature

Mode 0 : Echo feature is disabled.

Mode 1 : The device will search for any EchoTag which is defined in the ECHOLIST.

If the rssi value of the EchoTag is above a parameterized limit, the device will be connected to the EchoTag. Periodically, the device will check that the connected EchoTag is still within radio range. (In this case, the rssi will not matter.) If the EchoTag is not responding, the device will retry a number of times. If the EchoTag is still silent, the device will start searching again.

A report is sent to the server if:

1. The device is unconnected and connects to a new EchoTag.
2. The device “hops” from one EchoTag to another.
3. The device loses connection and cannot find a new EchoTag.

Mode 2 : Like Mode 1, with the difference that a report is sent if:

1. The device is unconnected and connects to a new EchoTag.
2. The device loses connection and cannot find a new EchoTag.

Mode 3 : Like Mode 2, with the addition, that GPS position is only added if no EchoTag can be found or the EchoTag has changed. Used in “container mode”, see below.

CONTAINER feature

Is running if **ECHO-MODE** is set to 3 and **MOVE-WAKEUP** is set to 2.

“Normal reports” are sent as usual, but “moving reports” are only sent when movement is stopped, and if no EchoTag can be found or if the device has “hopped” to a new EchoTag.

GPS positions will only be added if no EchoTags can be found.

(**GPS-TIMEOUT** must be set, to enable gps positions)

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BEACON feature

The two ACT-bits "Beacon" and "Autobeacon" control the behavior:

"Beacon" ACT bit 0x00000002	"AutoBeacon" ACT bit 0x00000020	Behaviour
0	0	Beacon off
0	1	Beacon only on while no EchoTag is connected
1	x	Beacon on

While Beacon is on, the report interval is set to **REPORT-INTERVAL-BEACON**.

The device will periodically transmit a RF packet, enabling it to be tracked by a Flextrack Locator.

Button triggered reports

If the user presses the pcb button, the device will reboot.

Upon powering up, the device will create a report and send it to the server.

This report will include gps data (using timeout=120 sec).

Input triggered reports

Reports may be triggered by either of the two inputs.

The inputs must be enabled by parameter **OPT-CFG** (see parameters section).

If an enabled input changes state, a report will be sent.

PS: Input triggered reports are only enabled while RECOVERY-MODE is 0.

VPORT feature

If the parameter **VPORT-REPORT-MODE** is set, the device will listen for VPorts 11 seconds, every **VPORT-LISTEN-INTERVAL** second.

If **VPORT-REPORT-MODE** is set to 2, the device can handle RatTrap-VPorts.

The VPORT feature is described in a separate document.

WOLF feature

If the WOLFLIST is not empty, the device will be able to listen for "wolf"-items.

When the device is awakened by either g-sensor or one of the digital input changes state, the device will listen for "wolf"-items (RF).

If no wolf is heard, an ALARM is sent to the server.

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Recovery Mode

If the parameter **RECOVERY-MODE** is set, Recovery Mode is enabled:

RECOVERY-MODE = 1 : The Recovery Mode is "one-shot" and can only be re-armed by commands.

RECOVERY-MODE = 2 : The Recovery Mode is automatically re-armed, if Input 2 changes to idle.

Recovery Mode is triggered by Input2 (see parameter **RECOVERY-TRIG-LEVEL**).

When Input2 is triggered, Recovery Mode is started for the next **RECOVERY-DURATION** seconds.

During this time, reports are sent every **REPORT-INTERVAL-RECOVERY** second.

These reports will include a gps position, if available (see parameter **GPS-TIMEOUT-RECOVERY**).

Changing the standard parameter **REPORT-INTERVAL**, will end an ongoing Recovery Mode.

Commands:

RECOVERY-ON : Will (re-)arm the Recovery Mode, awaiting to be triggered by Input 2.

RECOVERY-OFF : Will end any ongoing Recovery Mode.

Important: Parameter **OPT-CFG** must be configured correct, to enable Input2

Low battery

It is possible to monitor and signal low battery, by setting parameter **BATT-LOWVOLTAGE** to the desired minimum level (in milli-volt).

E.g., if setting the parameter to 2600, the Eye will raise bit 2 in the SM field, if the battery voltage drops below this limit.

PS: The low bat monitoring is not useable when supercaps are mounted.

Server transmissions

Retransmissions

If the Lommy does not receive an ACK, it will retransmit the Data telegram after **REPORT-MIN-DELAY** seconds. The device will continue to reuse the same TNO if no ACK has been received from the server.

The Lommy will retransmit max **REPORT-MAX-RETRY** times.

New retransmissions will only be granted, once a Data transmission has been successful.

"Failserver"

If no ACK has been received from the server after 9 tries, the device will send a short report to a predefined "failserver".

If an ACK is received from the normal server, the Lommy will stop sending reports to the failserver.

If no ACK is still not received, the device will reboot.

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Parameters

REPORT-MIN-DELAY	sec (1800)	The minimum delay between sending reports to the server
REPORT-INTERVAL	sec (86400)	Time between reports
REPORT-INTERVAL-MOVE	sec (3600)	Time between reports while device is moved (g-sensor)
MOVE-WAKEUP	0-2 (0)	0 : Move wakeup feature disabled. 1-2 : Move wakeup feature enabled (See description later)
GPS-TIMEOUT	sec (0)	How long the device must wait for a valid gps signal. (if set to 0, no gps position will be added to the report)
GPS-SKIP	0- (3)	After achieving gps fix, the device will skip xx number of positions, to improve accuracy.
MOVE-SENSITIVITY	milli-G 0-6000 (350)	The sensitivity of the G-Sensor. (Move detection)
REPORT-MAX-RETRY	0-255 (3)	How many times will the device retry, if a server response (ACK) is not received.
REPORT-RETRY-DELAY	sec (1800)	The delay between (udp transmission) retries.
FLEXSTREAM-IP	text ("")	Server IP address and port, eg:"someserver.com:30000"
PIN	text ("")	SIM card pin code
APN	text (internet)	GPRS apn
USERNAME	text ("")	GPRS username
PASSWORD	text ("")	GPRS password
BEACON-INTERVAL	sec (5)	Time between sending RF packets, while Beacon is active.
REPORT-INTERVAL-BEACON	sec (3600)	Time between sending reports to the server, while Beacon is active
ECHO-INTERVAL	sec (60)	Time between checking for echo-tag presence
ECHO-THRESHOLD	dbm (-80)	Minimum signal strength from echo-tag, before the device will connect to it.
ECHO-MODE	0-3 (0)	See "ECHO mode feature"
ECHOLIST	list ("")	A list of ECHO Tag ID's, that the Eye will connect to. (Max 32) Value "ALL" means that the Eye will connect to any ECHO Tag.

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RELOAD-MIN-DELAY	sec (1800)	The minimum delay between downloading blocks of RELOAD data. (See "Commands" section)
FLEXSTREAM-CIRCULAR	0-100 (5)	Max number of items (reports) in the circular buffer.
GSM-VON	mV (3000)	Minimum voltage over super caps before report transmission is allowed.
GSM-CONNECT-TIMEOUT	sec (120)	Gsm connect timeout.
NOGSM-TIMEOUT	sec (86400)	If the device has not been able to connect to a gsm station during this time period, beacon will be started. Requires NOGSM-BROADCAST to be set to 1.
NOGSM-BROADCAST	0,1 (0)	If set to 1, beacon will be activated if gsm connection has failed for too long. (See NOGSM-TIMEOUT)
WOLF-LISTEN-PERIOD	sec (45)	See "WOLF-feature".
SMSENDER	list (+4550503185)	A list of phone numbers that are allowed to send SMS messages to the unit. The numbers MUST include the country code also. If set to "ALL", all senders will be accepted.
TEMP-INPUT	0-2 (0)	Temperature measurement source. (See field "TEMP") 0 = cpu temperature (default) 1 = External sensor (MCP9701) on input 1 2 = External sensor (MCP9701) on input 2
TEMP-INPUT-EXT	0-3 (0)	External Temperature measurement source(s). (See field "TEMP-EXT") 0 = none (default) 1 = External sensor (MCP9701) on input 1 2 = External sensor (MCP9701) on input 2 3 = both of the above
MEAS-PULSE	milli-sec (0)	If set to a value, a pulse with this length will be given on the output before measuring the two analog inputs. (the ANA data field) E.g. used to power up a sonar device before measuring the input value.
TEMP-OFFSET	milli-degrees (0)	Temperature offset in milli-degrees Celsius. (10000 = 10 degrees)
TEMP-OFFSET-EXT	list milli-degrees (0,0)	External Temperature offset in milli-degrees Celsius.
VPORT-STATUS-INTERVAL	sec (3600)	The device sends VPort status telegrams with this interval.
VPORT-LISTEN-INTERVAL	sec (3600)	The device listens for VPorts with this interval. The device will listen for 11 seconds each time.
VPORT-TIMEOUT	sec (7200)	If the device has not heard from a VPort within this time limit, the VPort is marked "mute". A VPort-alarm will be sent.

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VPORT-REPORT-MODE	0-2 (0)	0 = Never. VPorts are not used. 1 = Normal: VPort.fps defines min/max/hyst, which will trigger reports 2 = RatTrap: VPort.fps are ignored. Changes on certain counter values will trigger reports
OPT-CFG	Bitfield (0)	This is a hex number setting different options on the OPT2 board present in some models. bit 0-7: not used bit 8: Input 1 is used bit 9: Input 2 is used (see also Recovery Mode)
BATT-LOWVOLTAGE	mV (0)	Setting this parameter to a value bigger than 0, will enable monitoring and signaling of low battery (see "Low battery" description)
RECOVERY-MODE	0,1 (0)	0: Recovery Mode is disabled. 1: Recovery Mode is enabled. See description elsewhere.
RECOVERY-TRIG-LEVEL	0,1 (0)	0: A low level on Input2 which will trigger Recovery Mode. 1: A high level on Input2 which will trigger Recovery Mode.
RECOVERY-DURATION	sec (86400)	The duration of Recovery Mode.
REPORT-INTERVAL-RECOVERY	sec (3600)	Report interval while Recovery Mode is active (RECOVERY-DURATION)
GPS-TIMEOUT-RECOVERY	sec (180)	Gps timeout while Recovery Mode is active (RECOVERY-DURATION).
FAILSERVER	text ("")	FailServer IP address, eg:"somefailserver.com"
FAILSERVER-PORT	number ("30013")	FailServer port

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Commands

Commands can be sent to the device from the server, using the field `CMD[{name, value}]`.
These commands are supported:

RESET	
The device will restart immediately.	
RELOAD, server, type	Example: RELOAD,dragonfly.fwupdate.dk/fl/,3
Downloads a new Firmware or User Application (or both) from the given server. Type: 1 = Firmware 2 = User Application 3 = Both The new software will be downloaded in "chunks" of 20KB each with RELOAD-MIN-DELAY seconds in-between. Thus, downloading new firmware of 120KB will take around 3 hours. The device will <u>not</u> send any reports to the server while downloading is in progress. After download and install of the new software, the device will reset and include VER and FWVER in the very first report.	
CONF:parname,value (only by SMS)	Example: CONF:PIN,1234
Modify/add a configuration parameter in the unit. If the "parname" does not exist, it will be created in the configuration parameters.	
STAT (only by SMS)	
Sends a SMS message with the status of the unit, battery voltage etc.	
POS (only by SMS)	
Returns the current gps position. If no gps fix is achieved, a gsm position is returned instead. Examples: Time=16-04-11 07:38:51 Lat=N56.09.55 Lon=E009.32.37 Speed=0 Km/H Direction=237 Deg Sats=6 GSM<1,(238,1,348F,119,-81),(238,1,CD8,119,-86)>	
GETCONF	
The device configuration will be sent, the next time the device is connected to the server. (See also ACT bit 10)	
RECOVERY-ON RECOVERY-OFF	
See description of Recovery Mode.	

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Data telegram (Lommy to Server)

TNO	int	MANDATORY
The message number (-1 - -9999) ex: TNO[-552]		
ID	string	MANDATORY
Device ID ex: ID[1234567890]		
ECHO	structure	
ECHO information. Format: ConnStatus,ID ex1: ECHO[0,1122334455] - the device cannot connect to any echo tags. The last one heard was id=1122334455 ex2: ECHO[1,9988776655] - the device has connected to echo id=9988776655		
ICCID	string	
ICCID number of the sim card ex: ICCID[8945020184520719812]		
RST	int	
Reset cause. RST is automatically included in the first DataTelegram after power-reset. ex: RST[1]		
FWVER	string	
Firmware Software version. FWVER is automatically included in the first DataTelegram after power-reset. Also, the server can request the device to include FWVER (see ACT in AckTelegram) ex: FWVER[67]		
VER	string	
Application Software version. VER is automatically included in the first DataTelegram after power-reset. Also, the server can request the device to include VER (see ACT in AckTelegram) ex: VER[10]		
APPTYPE	string	
Application Software type. APPTYPE is automatically included in the first DataTelegram after power-reset. Also, the server can request the device to include APPTYPE (see ACT in AckTelegram) ex: APPTYPE[1000]		
TIME	string	
The date/time in the device. Format: YYYYMMDDHHmmss		

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If the date/time is not known by the device, this field will not be included.
 ex: TIME[20140107103208]

SM	UInt64	
Statemask bits of the device. This value must be hexadecimal. ex: SM[0]		
bit	description	
35	Lightsensor is triggered	
30	GSensor is triggered	
29	Beacon is on	
21	State of output	
17	State of input 2	
16	State of input 1	
8	Time is not set in device ("Lastgood")	
4	Button pressed	
2	Low battery detected	

GSM	structure	
Gsm cell information. Format: ServingTA, {ServingCellMCC, ServingCellMNC, ServingCellID, ServingLAC, ServingRssi}, {MCC, MNC, cellID, LAC, rssi}, ... So, the first value is "ServerTA". Next, a list of up to 16 gsm cells will follow. The first in the list, will be the serving cell. The rest holds the data for up to 15 neighbourgh stations. cellID and LAC must be hexadecimal. ex: GSM[2, {238, 2, 7D7A, 0036, 84}, {238, 20, 1AA6, 1772, 18}, {238, 1, 120B, 011A, 12}, {238, 2, 7D7B, 0036, 10}, {238, 1, 019D, 011A, 10}, {238, 20, 1AA5, 1772, 9}, {238, 20, 5D8A, 1772, 8}, {238, 20, 6BDF, 1773, 7}, {238, 20, 5D89, 1772, 7}, {238, 20, 1D0A, 1773, 7}, {238, 1, 1309, 011A, 7}]		

TOTSERVER	structure	
Format: CntTX, CntRX, CntGsmOn, SecGsmOn, CntReset CntTX: Number of telegrams sent by the device. CntRX: Number of telegrams received by the device. CntGsmOn: Number of times the Gsm module has been turned on. SecGsmOn: Number of seconds the Gsm module has been turned on. CntReset: Number of device resets. ex: TOTSERVER[451, 450, 423, 12605, 4]		

GPS	structure	
Gps data. Format: TimeToFix, Lat, Lon, Speed, Radius, Direction TimeToFix in seconds. Lat is Latitude Lon is Longitude Speed in km/h Radius in meters Direction in degrees Note: Speed and Direction will be blank if Speed is below 10 Km/h! ex: GPS[10, N56.04.8480, E9.46.4879, 86, 0, 248]		

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CAP	structure	
<p>Information about battery voltage. Format: VStart,VEnd,VDelay "VStart" : measured just before turning the gsm module on. "VEnd" : measured just after turning the gsm module off. "VDelay" : measured 100s after turning the gsm module off. All measurements are in milli-volts. The measurements relate to the previous report session. ex: CAP[3243,3173,3171]</p>		
TON	int	
<p>The number of seconds the gsm module was turned on. The measurement relate to the previous report. ex: TON[41]</p>		
TEMP	int	
<p>The temperature measured by the device. In degrees celcius. The parameter TEMP-INPUT determines the source of the measurement. ex: TEMP[23]</p>		
TEMP-EXT	array	
<p>The external temperatures measured by the device. In milli-degrees celcius. The parameter TEMP-INPUT-EXT determines which sensors are enabled. ex: TEMP-EXT[25300,27500]</p>		
ANA	array	
<p>The voltage measured at the two inputs. In mV. (See ACT in AckTelegram) ex: ANA[23,8760]</p>		
ALARM	array	
<p>Alarm ID's in the device. Alarm IDs> 0 : no alarm 8 : no wolf heard ex: ALARM[8]</p>		
WEEK	array	
<p>Sets a Weekday-calendar in the device. This will disable the traditional report interval system. The time entries will define 1-4 times to report each weekday (monday-saturday). If no entries are given (WEEK[] or WEEK[0]), the calendar is not used, and the device will revert to the standard report interval. Format: {HH,mm},... The entries must be in chronological sequence, like in this example: ex: WEEK[{8,0},{12,0},{20,0},{23,0}]</p>		

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SUN	array	
<p>Sets a Sunday-calendar in the device. This will only work if a Weekday-calendar is also defined. The time entries will define 0-4 times to report on sundays. If no entries are given (SUN[] or SUN[0]), there will be no reports on sundays. Format: {HH,mm},... The entries must be in chronological sequence. ex: SUN[{15,0}]</p>		

VPORT-STATUS	structure	
<p>Status of all heard VPorts. (max 5 VPorts in each telegram) Format: [Date,Time,{VPortVer,ID,Type,Count,Data,...}],...] "Date" : YYYYMMDD "Time" : HHMMSS "VPortVer" : version of the VPort-protocol "ID" : serial number of the VPort device "Type" : type of VPort "Count" : number of data values to follow "Data" : 1-7 data values (determined by Count) ex with 1 VPort: VPORT-STATUS[20170712,150134,{10,3091210008,5,4,1,2,3,4}]</p>		

VPORT-ALARM	structure	
<p>Alarm codes from one VPort. Format: [Date,Time,ID,Type,Alarm,...] "Date" : YYYYMMDD "Time" : HHMMSS "ID" : serial number of the VPort device "Type" : type of VPort "Alarm" : 1-7 alarm codes ex: VPORT-ALARM[20170712,150134,3091210008,5,3,3,3,3]</p>		

CONF	structure	
<p>The device configuration. Format: [Count,Last,{Parname,Parval}],...] "Count" : Incremental counter, starting from 0 every time the configuration is requested. "Last" : 0: More CONF-telegrams will follow. 1:The last CONF-telegram. "Parname" : name of the parameter "Parval" : value of the parameter ex: CONF[0,1,{APN,internet},{MOVE-WAKEUP,0},{REPORT-INTERVAL,86400}]</p>		

CRC	UInt16	MANDATORY	
<p>crc calculation of the message. Note that the CRC must be the last item in the telegram, and preceded with a "*" This value must be hexadecimal.</p>			

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Response telegram (Server to Lommy)

ACK	int	MANDATORY
Acknowledge to a Data telegram (-1 - -9999) ex: ACK[-552]		

NAK	int	
Not-Acknowledge (-1 - -9999) ex: NAK[-552]		

TIME	string	
Set the date/time in the device. Format: YYYYMMDDHHmmss ex: TIME[20140107111231]		

ACT	UInt32	
<p>Actions/Features to be enabled/disabled in the device. Each action has a bit:</p> <p>0x00000001 = Include sim card ICCID number in next report 0x00000002 = Enable BEACON 0x00000004 = Include Application SW type and version in next report 0x00000008 = Include Firmware SW version in next report 0x00000010 = Enable Extended Cell Info (SNMON) 0x00000020 = Enable "AutoBeacon" mode. 0x00000040 = Enable digital input lav-høj event 0x00000080 = Enable DateTime info in TAG/VPORT fields 0x00000100 = Include ANA in reports. 0x00000200 = Include TOTSERVER in next report. 0x00000400 = Send the device configuration immediately.</p> <p>This value must be hexadecimal. These bit assignments are shared with other projects, also using the SUT protocol!</p> <p>ex: ACT[A2]</p>		

WEEK	array	
<p>Sets a Weekday-calendar in the device. This will disable the traditional report interval system.</p> <p>The time entries will define 1-4 times to report each weekday (monday-saturday). If no entries are given (WEEK[] or WEEK[0]), the calendar is not used, and the device will revert to the standard report interval.</p> <p>Format: {HH,mm},...</p> <p>The entries must be in chronological sequence, like in this example: ex: WEEK[{8,0},{12,0},{20,0},{23,0}]</p>		

SUN	array	
<p>Sets a Sunday-calendar in the device. This will only work if a Weekday-calendar is also defined.</p> <p>The time entries will define 0-4 times to report on sundays. If no entries are given (SUN[] or SUN[0]), there will be no reports on sundays.</p> <p>Format: {HH,mm},...</p> <p>The entries must be in chronological sequence. ex: SUN[{15,0}]</p>		

SEED	UInt16	
Change seed value in the device. (Initial value in crc calculations.)		

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This value must be hexadecimal.
ex: SEED[1234]

ECHOLIST	array	
Set a echo-tag list in the device. (see description of ECHO mode feature) ex: ECHOLIST[4711,4712,3091210008]		

PARAM	array	
Set a parameter value in the device. (see description of Parameters) Format: {ParName,ParValue},... ex: PARAM[{REPORT-INTERVAL,25},{ECHO-MODE,2}]		

CMD	array	
Send a command to the device. (see description of Commands) Format: {CmdName,Value1,Value2,...ValueX} ex1: CMD[{RELOAD,someserver.com/folder,2}] ex2: CMD[{RESET}]		

WOLFLIST	array	
Set a wolf-tag list in the device. (see description of the WOLF feature) ex: WOLFLIST[4711,4712,3091210008]		

Ack telegram (Lommy to Server)

(only required if Response telegram carries more than ACK and TIME fields!)

ACK	int	MANDATORY
Acknowledge to a Response telegram carrying data. ex: ACK[-552]		