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9601-DGS-LP V1.0.0 Remote Update and Ping Format

Introduction

The following gives the format for the remote update and ping messages that were added for the 9601-DGS-LP tracking unit. The 9601-DGS-LP can also handle the same remote update formats that the 9601-DGS can and will send back the same remote update responses to them. See the 9601-DGS Remote Update and Ping format documents for this format.

Remote Updates

This will arrive by SBD and will have the following format:

Name	Num bytes	Description
Header	1	Test “u” SBD Only Update. This is here to keep updates from happening accidentally.
Version	1	Version of update. Currently value is 1
Date Time Stamp	8	YY YY MM DD HH MM SS HH where every 2 characters are combined into a single byte.
Password	8	Safety mechanism
Tracking Mode Time between Reports	2	Binary number representing time between reports in minutes.
Tracking Mode Time to retry	1	Binary number representing time to keep on retrying in increments of 5 seconds. 0 means only try once and 255 means keep on trying until next report.
Test Mode Time between Reports	2	Binary number representing time between reports in minutes.
Test Mode Time to retry	1	Binary number representing time to keep on retrying in increments of 5 seconds. 0 means only try once and 255 means keep on trying until next report.
Emergency Mode Time between Reports	2	Binary number representing time between reports in minutes.
Emergency Mode Time to retry	1	Binary number representing time to keep on retrying in increments of 5 seconds. 0 means only try once and 255 means keep on trying until next report.
Emergency Report Flood	1	Binary number representing how many reports to send continuously before falling back to the value of ^TBRE A value of zero will use ^TBRE without sending any continuous reports.
Block Invalid GPS Reports and Test and Emergency mode Callable	1	Bits 0-2 - Binary number, 0-4, representing the status of block invalid GPS reports. Modes indicated are those that will block reports with an invalid GPS fix.0: Don’t block any reports 1: Block in all modes 2: Block in Tracking and Test modes 3: Block in Tracking and Emergency modes 4: Block only in Tracking Mode Bit 3 - TBR Half Minute Bit 4 – TBRT Half Minute

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		Bit 5 – TBRE Half Minute Bit 6 – Test mode callable Bit 7 –Emergency mode callable
Motion Sensor Awake	1	MSA Bit 0 – Normal mode MSA Bit 1 – Test mode MSA Bit 2 – Emergency mode MSA
DSC	1	Delivery Short Code byte for use with the SBDDSC command.
Output Pins	1	Byte where every bit represents the level an output pin should have.
Indicators	1	This has different bits to indicate whether changes should be made. Bit 0 – Callable – 0 indicates it will sleep between reports and 1 indicates it will stay awake between reports. Bit 1 – Update Callable – whether to update the callable setting on the modem. Bit 2 – Update Time – whether to update time between reports and time to retry. Bit 3 – Delivery Short Code – whether to update the delivery short code on the machine. Bit 4 – Update Block Invalid GPS Reports – whether to update block invalid GPS reports. Bit 5 – Update Test Time – whether to update test mode time between reports and time to retry. Bit 6 – Update Emergency Time – whether to update emergency mode time between reports and time to retry. Bit 7 – Update Emergency Report Flood – whether to update the emergency report flood setting
Indicators 2	1	Bit 0 – Update MSA Bit 1 – Update test mode callable Bit 2 – Update emergency mode callable Bit 3 – Update output pins
Checksum	1	Binary checksum to make sure data is correct and to keep from accidentally doing an update.

Receiving a remote update will cause the modem to make the update and then immediately start a new cycle. For an update to be made the header and version must be correct, date time stamp must be greater than last update, password must be correct, and the Checksum must be correct.

When the update is made this will send back a response of the following form:

Name	Num bytes	Description
Header	1	Test “v” SBD Only Response.
Version	1	Version of update. Currently value is 1
Date Time Stamp	8	YY YY MM DD HH MM SS HH where every 2 characters are combined into a single byte.
Status	1	0 successfully updated 1 Invalid Password 2 Old Date Time Stamp 3 SBD reports that are the wrong length, have a bad header, or an invalid checksum will be ignored and no response will be returned.
Tracking Mode Time between Reports	2	Binary number representing time between reports in minutes.
Tracking Mode	1	Binary number representing time to keep on retrying in increments of 5

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Time to retry		seconds. 0 means only try once and 255 means keep on trying until next report.
Test Mode Time between Reports	2	Binary number representing time between reports in minutes.
Test Mode Time to retry	1	Binary number representing time to keep on retrying in increments of 5 seconds. 0 means only try once and 255 means keep on trying until next report.
Emergency Mode Time between Reports	2	Binary number representing time between reports in minutes.
Emergency Mode Time to retry	1	Binary number representing time to keep on retrying in increments of 5 seconds. 0 means only try once and 255 means keep on trying until next report.
Emergency Report Flood	1	Binary number representing how many reports to send continuously before falling back to the value of ^TBRE A value of zero will use ^TBRE without sending any continuous reports.
Block Invalid GPS Reports and Test and Emergency mode Callable	1	Bits 0-2 - Binary number, 0-4, representing the status of block invalid GPS reports. Modes indicated are those that will block reports with an invalid GPS fix. 0: Don't block any reports 1: Block in all modes 2: Block in Tracking and Test modes 3: Block in Tracking and Emergency modes 4: Block only in Tracking Mode Bit 3 - TBR Half Minute Bit 4 - TBRT Half Minute Bit 5 - TBRE Half Minute Bit 6 - Test mode callable Bit 7 - Emergency mode callable
Motion Sensor Awake	1	MSA Bit 0 - Normal mode MSA Bit 1 - Test mode MSA Bit 2 - Emergency mode MSA
DSC	1	Delivery Short Code byte for use with the SBDDSC command.
Input Pins	1	Byte where every bit represents the level an input pin should have.
Output Pins	1	Byte where every bit represents the level an output pin should have.
Indicators	1	This has different bits to indicate whether changes should be made. Bit 0 - Callable - 0 indicates it will sleep between reports and 1 indicates it will stay awake between reports. Bit 1 - Update Callable - whether to update the callable setting on the modem. Bit 2 - Update Time - whether to update time between reports and time to retry. Bit 3 - Delivery Short Code - whether to update the delivery short code on the machine. Bit 4 - Update Block Invalid GPS Reports - whether to update block invalid GPS reports. Bit 5 - Update Test Time - whether to update test mode time between reports and time to retry. Bit 6 - Update Emergency Time - whether to update emergency mode time between reports and time to retry. Bit 7 - Update Emergency Report Flood - whether to update the emergency report flood setting

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Indicators_2	1	Indicators_2 Bit 0 – Update MSA Bit 1 – Update test mode callable Bit 2 – Update emergency mode callable Bit 3 – Output pins set (0 if not set because wrong version and 1 if they were set)
Checksum	1	Binary checksum to make sure data is correct and to keep from accidentally doing an update.

The date time stamp in the response will be copied from the update in the send. It will be assumed that this is unique and can be used to identify the update being made.

Ping Requests

When the unit receives this it will automatically send out a GPS report because of the SBD RING message or accidentally. What the ping really does it just causes the unit to send over a GPS report and not send back a remote update response.

Name	Num bytes	Description
Header	1	“p” SBD Only Ping. This is here to keep updates from happening accidentally.
version	1	Version of update. Currently value is 0
Password	8	Safety mechanism
Checksum	1	Binary checksum to make sure data is correct and to keep from accidentally doing a ping request.

Emergency Alert Acknowledge:

A new configuration was created to set the behavior of an active emergency mode. The message controls which interval to use (emergency or normal tracking) for the emergency state and whether the emergency flag should be set in the GPS reports. The following details the format of the SBD message

Name	Num bytes	Description
Header	1	“e” Emergency Alert Acknowledge.
Version	1	Version of update. Currently value is 0
Password	8	Safety mechanism (Remote Update Password)
Indicators	1	This has different bits to indicate whether changes should be made. Bit 0 – Override Emergency Interval – 0 indicates the emergency mode interval values ^TBRE and ^TTKTE will be used when sending reports. 1 indicates the standard tracking interval values ^TBR and ^TTKT will be used.
Checksum	1	Binary checksum to make sure data is correct and to keep from accidentally doing an update.