

X90-OPUS: GNSS Board Reset

Date: 24 November 2014

If an X90-OPUS fails to track satellites it may be possible to 'reset' the Trimble GNSS board. (Alternatively it could be a hardware issue.)

These instructions describe how to reset the board and check for lost activation keys.

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1. Download HCLoader from the web: <u>http://x90gps.com/out/hcloader/index.html</u>

> Download the Trimble Reset utility: <u>http://x90gps.com/out/TReset/ConfigurationToolbox_v6_9_0_5.zip</u>

Extract it from the ZIP file and install it on your computer.

2. Connect the GPS head to a serial port on your computer. Insert a fully charged battery in the GPS, turn on the GPS and wait 30 seconds for it to fully boot. Start HCLoader.

Note: If you start the HCLoader.exe program and you see Mandarin Chinese characters, you can switch to English by clicking on the menu option 'L' and then 'E'. Exit program and restart.

HCLoader will attempt to communicate with the GPS on COM 1.







The 'Reciever Setup' will be shown:

Gage

Item	Parameter	Update
Model of the receiver	1904	
Receiver No.	18526	Apply
Date of manufacture	2014-01-04	
Option	No	Register
Version	8.01	
Memory	16MB	
Sample Interval(second)	5 s	
Mask Angle(degree)	0	
Data Log	Auto	
Data Log Session	Manual	
Port Configration	Normal mode	
Work Mode	No auto base	
Correction Port	Port 1	
Format of Correction	CMR	
Remain battery	A:100%	
Register Code	83689-13186-32102	Default
Expired Date	No Limit	

Verify that the 'Expired Date' is set to 'No Limit' If there is another date listed, the receiver has lost its registration code. Contact iGage or the CHC factory with the 'Receiver No.' (18526 for the receiver shown above) You will be supplied with a new registration code which you can enter using the 'Register' button.

Click on 'Exit' to return to the main HCLoader menu.

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<u>F</u> ile	Edit Connection	<u>T</u> ools	<u>L</u> anguage	<u>V</u> ie
	Receiver Setting Memory		🚧 💥 _{Link} Break	Se
	Update Register			
	COM	F3	(bdb	
	GPSMon			-
	Options			

4. Click on 'Tools: COM'



5. Type the command "ST,B1", then click Send:

1	ie communa		
		COM1, 9600	
	J		
	Command ST,B1		<u>S</u> end
			ExIL

6. Click on 'Exit', then close HCLoader by clicking the X in upper-right corner:



7. Start the Trimble Configuration Toolbox from your desktop:



8. Click on 'Communications: Receiver Details...' to verify that you are connected to the GNSS board:



Tools	*		Configuration Toolbox	_	
	<u>F</u> ile	Communications	<u>H</u> elp		
	Get File		1		
1	Transm	it File			
_	Activate	e File			
	Delete F	File			
	Receive	er Details			
	Reset R	eceiver			
	Port	+			
			,		

The Toolbox will return:

Receiv	ver Details	
		_
Туре:	BD950	
Version:		
Firmware:	2.32 5/3/07	
Boot:		
Port Settings:		
Output:	PORT1:38400,n,8,1	
Input:	PORT1:38400,n,8,1	
Supported Protocols:	DCOL,NMEA	
	OK]	

verifying that you are connected to the internal GNSS board.



9. Click on 'Communications: Reset Receiver...':

*		Configuration Toolbox –	<
<u>F</u> ile	Co <u>m</u> munications	Help	
Get File			
Transmi	t File		
Activate	File		
Delete Fi	ile		
Receiver	Details		
Reset Re	ceiver		
Port	۶.		
COM1	:38400,n,8,1,n		11.

Check both option boxes:

Reset R	eceiver
Reset Receiver an	id:
Erase <u>B</u> attery	v-Backed HAM
<u>R</u> eset	Cancel

Click the 'Reset' button, then



Verify the reset by clicking 'Yes'.

After a few seconds you will see:





Click OK.

Wait 30 seconds, then turn the receiver off.

Take the receiver outside, turn it on, then allow it to acquire a new ephemeris. It may take 10 minutes for it to begin tracking satellites again.

If this does not fix the receiver, contact iGage. The most likely next step is to send the receiver in for service.