Modem Configuration Procedure

Document Revision

Date	Description	Who	Checked	Approved
09.09.2008	First version	ST	ME	ALB
14.12.2012	Adjusted Modem Strings	MAE		

1 Introduction

This Technical note describes the basic steps to use a modem with a GeoSIG GSR recorder.

It is recommended to make a first test with the computer, the GSR and both modems at the same location. When the modem link operates at satisfaction, the GSR and its modem can be placed at final site and retested.

2 Material checklist

- Running GeoSIG instrument (GCR-16, GSR-18 or GSR-24)
- Analog / GSM Modem (US ROBOTICS or SIEMENS TC-35)
- □ Valid SIM card with GSM mode activated (to be checked with provider)
- □ GeoDAS software
- □ GeoSIG RS-232 cable
- Modem for computer (also internal modems are working)

3 GSR side configuration

The GSR should be pre-configured for normal operation using direct cable connection at 38400 bauds or the auto-bauds in the station configuration should be enabled.

Using GeoDAS, connect the GSR station COM port to the GSR RS-232 connector	
Login to the GSR station	
Open the Instrument Setup Manager window	
Go to INSTRUMENT tab.	Instrument Setup Manager for the station <ech01></ech01>
	Errors and Warnings Interconnection Data Streams Printer Batch Mode Sampling Event Trigger Alarms Channels Communication Time Triggers Station Instrument Power and Batteries Date and Time Test LCD Display Instrument Setup Refresh General Info Instrument Type GSR-24 Main board S/N 108222 Put Page Firmware Version 04.02.16 (37629) Main board S/N 108222 Put All Memory Info Memory Info GeoSIG Interconnection Interconnection
Tick the ANALOG or GSM Modem:	Memory Type ATA Flash Total Memory 62196 KByte, 8800 KByte is used by data RAM Structure 2 Block(s) (1 for preevent memory) x 64K. C/up size 128K Create One-channel Data Files Peripherals
Press the PUT PAGE button to save the change. Acknowledge and warning message. Only if datastream, is enabled, the modem can not be set-	Image: Analog or GSM Modern CDPD Modern Garmin GPS Serial Printer Status Normal operation Disconnect
Go to COMMUNICATION tab.	Instrument Setup Manager for the station <ech01></ech01>
Baudrate must be set to 38400 bauds: In case of supplied modem US ROBOTICS 3Com, change the initialization string to:	Errors and Warnings Interconnection Data Streams Printer Batch Mode Station Instrument Power and Batteries Date and Time Test LCD Display Sampling Event Trigger Alarms Channels Communication Time Triggers Refresh General Settings Baudrate 38400 Idle timeout to disconnect from a PC, minutes 14 Note: The baud rate cannot be changed if the option "Analog Modern" Put Page Put All is selected Data block size for the file transfer is 1 Times 256 bytes
AT&B0&C1&A3&F0&D0&H0X1E0V1/Q2S0=1	Modem Settings Initialization String AT&FE0%C0&D0S0=1&W/0&W/1 Reset
In case of newer supplied modem US ROBOTICS USR Model 5631	AutoDial string ATDT Enable AutoDial on event Password to Access Remote Stations DId password LogOn Level 3 Export
AT&B0&C1&A3&F0&D0&H0X1E0V1S0=1	New password Change Password Confirm new password Exit
In case of GSM modem SIEMENS TC-35, change the initialization string to:	Status Active connection Disconnect
AT&FE0V1&D0S0=1+CSNS=4&W	
Disable Auto-Dial. Refer to operating manual for a description of the use of auto-dial.	

Press the PUT PAGE button to save the change.	Instrument Setup Manager for the station <ech01></ech01>	×
A message will come: "You are about to change the critical modem settings, which require the instrument to be restarted. Please note that you will be logged out automatically and the next login can be performed in several minutes only".	Excuss and Warnings Interconnection Data Streams Printer Batch Mode Station Instrument Power and Batteries Date and Time Test LCD Display Sampling Event Trigger Alarms Channels Communication Time Triggers Refresh Communication Setup General Settings Refresh Baudrate 38400 Idle timeout to disconnect from a PC, minutes 14 Note: The baud rate cannot be changed if the option "Analog Modem" Put All is selected Data block size for the file transfer is 1 Times 256 bytes	e
Check the LCD display of the GSR until it start to operate normally (reset is finished). Then press the button CONNECT:	Modem Settings Initialization String AT&FED%C0&0050=1&W0&W1 AutoDial string ATDT Enable AutoDial on event	
Additionally you can use the EXPORT button to save this new configuration under a name like station_name-modem.	Password to Access Remote Stations Import Old password LogOn Level 3 New password Confirm new password Exit	
	Status Active connection Disconnect	

Review the settings.	
Logout b pressing the DISCONNECT button.	

Connect the modem to the GSR RS-232 connector	Use special modem <-> GSR cable
Connect modem to T+T line or set antenna for a GSM modem.	
Connect power supply to modem and switch on modem	
Turn OFF GSR and ON again.	Modem is initialized by GSR. It will load in modem the initialization string.

4 PC side configuration

Connect other Modem to T+T line	
Connect power supply to Modem and switch on Modem	
Connect other Modem to PC	
Start GeoDAS	
In menu, select SETTINGS / CONFIGURE STATIONS. In the list, select your station and do a right click on its name. Select COMM CHANNEL:	Configuring Stations Station Instrument Channel Type Operation Mode 1833A GSR-24 Modem at COM3, 0033666323217 Recorder 1833B GSR-24 Modem at COM3, 0033666323217 Recorder 1833D GSR-24 Modem at COM3, 0033666323217 Recorder + Dat Direct Link (COM6) Recorder + Dat Direct Link (COM6) Recorder + Dat GR Export to CSV Rename Recorder + Dat Direct Link (COM2) Recorder + Dat Adding Remove Instrument from the list Unknown ▼ Instrument Instrument 1. Enter the unique station name (up to 5 characters) Instrument Instrument Instrument Instrument Instrument 2. Choose the type of instrument from the l
	8. Add new station to the list of existing ones Add Now Cancel

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GXR Modem Configuration



Initialization strings:

In case of supplied modem *US ROBOTICS 3Com*, change the initialization string to: **AT&B0&C1&A3&F0&D0&H0X1E0V1/Q2**

In case of newer supplied modem US ROBOTICS USR Model 5631

AT&B0&C1&A3&F0&D0&H0X1E0V1



Review the configuration.	
Press the OK button.	The window will disappear.
Press again OK in the station list window.	New Configuration
A warning message indicates you that the GeoDAS program will have to restart according to the change you performed. Press YES button.	You have made some changes in the current station configuration. Would you like to save them and restart the program?
You should see now in the SERIAL	®: :::FSerial Communication Channels
You should see now in the SERIAL COMMUNICATION CHANNELS a modem at the selected COM port	Baud Owner C
You should see now in the SERIAL COMMUNICATION CHANNELS a modem at the selected COM port.	Image: Serial Communication Channels Port Baud Owner C € COM3 2400 <1833A>
You should see now in the SERIAL COMMUNICATION CHANNELS a modem at the selected COM port.	Baud Owner C Port Baud Owner C COM3 2400 <1833A> C COM7 38400 <ech01></ech01>
You should see now in the SERIAL COMMUNICATION CHANNELS a modem at the selected COM port.	Port Baud Owner C COM3 2400 <1833A> UNN COM7 38400 <ech01> SN COM8 38400 <ech02></ech02></ech01>
You should see now in the SERIAL COMMUNICATION CHANNELS a modem at the selected COM port.	Port Baud Owner C COM3 2400 <1833A> COM3 2400 <ech01> COM7 38400 <ech02> COM6 38400 <ech03></ech03></ech02></ech01>

5 Establish Link

In the station list, select the station you configured for modem operation.	GeoSIG Data Acquisition System File Edit View Analyse Settings Tools ECH01 Image: Setting Station Image: Setting Station Image: Setting Station
	Station Code Instrument Ch
	1833A 105 GSR-24 Modem at CC
	1833B 070 GSR-24 Modem at CC
	1833C 035 GSR-24 Modem at CC
	1833D 000 GSR-24 Modem at CC
	ECH01 EH1 GSR-24 Direc
Press the CONNECT button.	Modem dials and GSR Modem takes the call.
	The serial communication channels window will show for the modem the call progress.
Wait that the modem link is established.	Check the CD lamp on the modem are on
Check communication works well.	Check the modems LED's for activity.
Display the instrument setup manager window. Go to DATE AND TIME tab.	Check that time is correct and updating.
Go to the TEST tab.	Try to record a sensor test. Be sure that RECORD A TEST PULSE is enabled.
Close the window by pressing the EXIT button.	
Open the EVENT MANAGER window	Download the sensor test you created.
Press the disconnect button.	Modem hangs up automatically

Note:

For the same GSR, you can configure 2 stations, one for modem operation and one for direct link, but in such case, event data will be stored in 2 different directories.

As alternative you can have all the GSR operating with modem having their own station and use only one station in case a direct connection is required (site visit). It is recommended to name such station TEMP. It will operate at 38400 bauds. After a site visit, all the data file in the TEMP station data directory will have to be manually moved to their respective station data directory.