# 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 | | |
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## 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.

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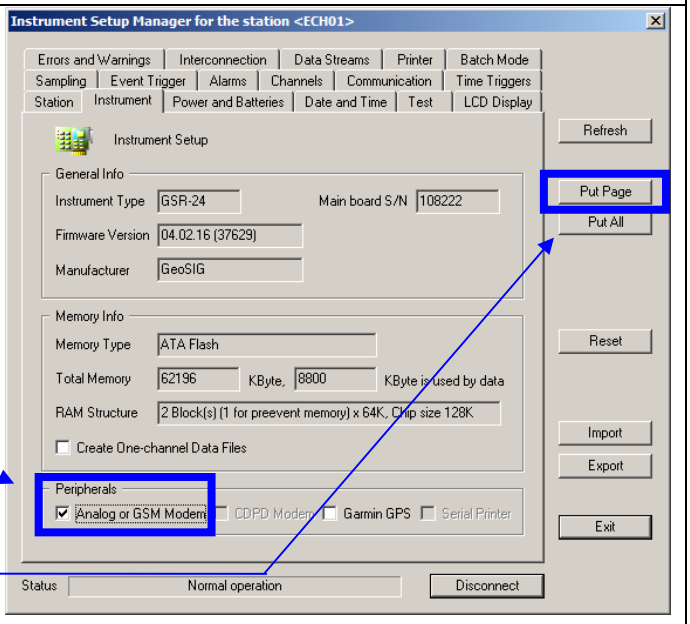
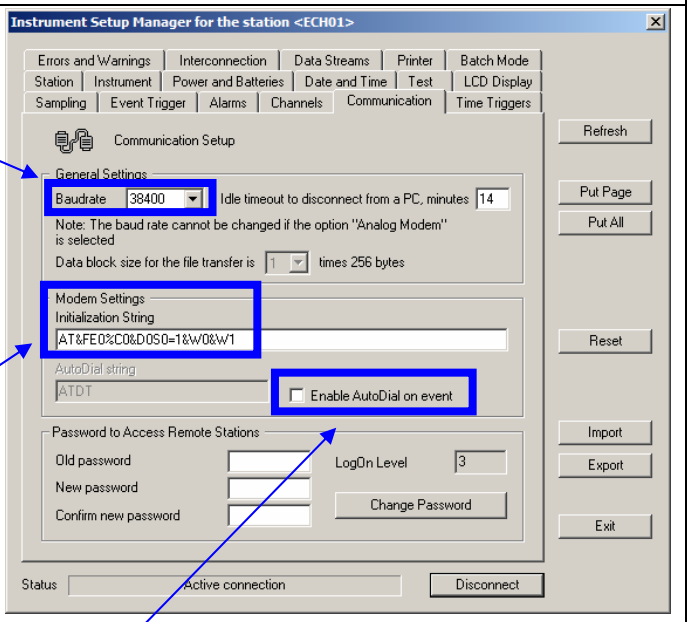
| Using GeoDAS, connect the GSR station COM port to the GSR RS-232 connector | |
| Login to the GSR station | |
| Open the Instrument Setup Manager window | |
| Go to INSTRUMENT tab.<br><br>Tick the ANALOG or GSM Modem:<br><br>Press the PUT PAGE button to save the change. Acknowledge and warning message. Only if datastream, is enabled, the modem can not be set- |  |
| Go to COMMUNICATION tab.<br><br>Baudrate must be set to 38400 bauds:<br><br>In case of supplied modem *US ROBOTICS 3Com*, change the initialization string to:<br><br>**AT&B0&C1&A3&F0&D0&H0X1E0V1/Q2S0=1**<br><br>In case of newer supplied modem *US ROBOTICS USR Model 5631*<br><br>**AT&B0&C1&A3&F0&D0&H0X1E0V1S0=1**<br><br>In case of GSM modem *SIEMENS TC-35*, change the initialization string to:<br><br>**AT&FE0V1&D0S0=1+CSNS=4&W**<br><br>Disable Auto-Dial. Refer to operating manual for a description of the use of auto-dial. |  |

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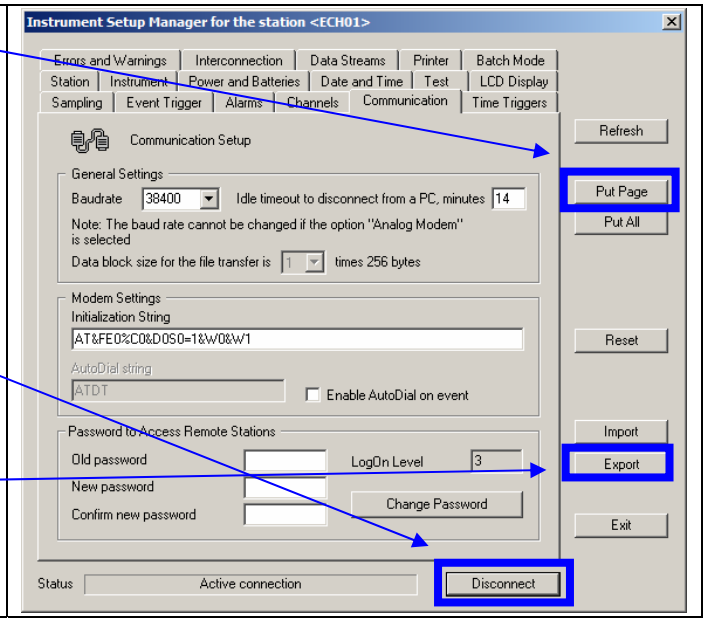
| Press the PUT PAGE button to save the change.<br><br>A message will come:<br>"You are about to change the critical modem settings, which require the instrument to be restarted. Please note that you will be logged out automatically and the next login can be performed in several minutes only".<br><br>Check the LCD display of the GSR until it start to operate normally (reset is finished). Then press the button CONNECT:<br><br>Additionally you can use the EXPORT button to save this new configuration under a name like station_name-modem. |  |

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| Review the settings. | |
| Logout b pressing the DISCONNECT button. | |

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| 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

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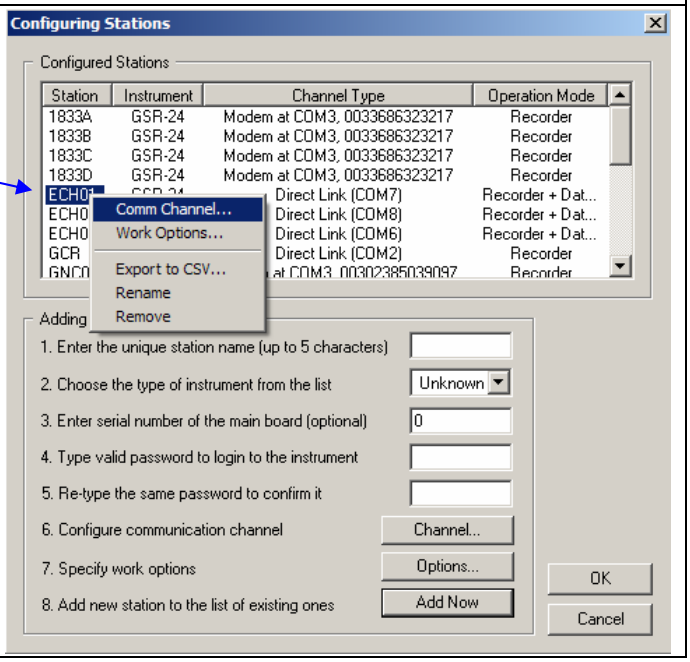
| Connect other Modem to T+T line | |
| Connect power supply to Modem and switch on Modem | |
| Connect other Modem to PC | |
| Start GeoDAS | |
| In menu, select SETTINGS / CONFIGURE STATIONS.<br><br>In the list, select your station and do a right click on its name. Select COMM CHANNEL: |  |

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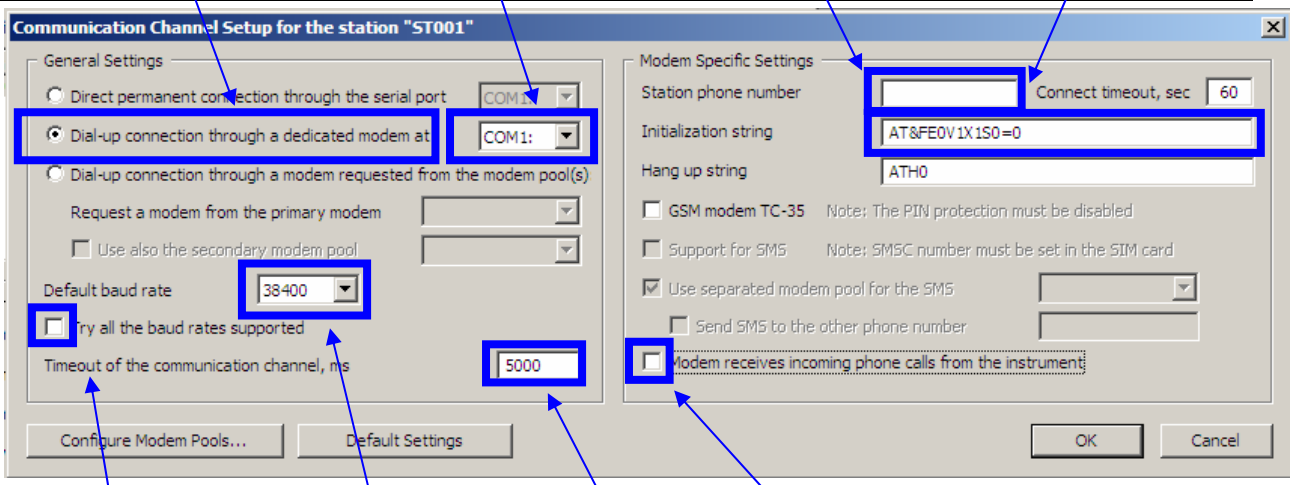
| Select DIAL-CONNECTION through a dedicated modem | Select the COM port where the modem is attached to the PC. | Update the modem initialization string. (see below) | Enter here the phone number of the GSR station. Add 'T' or 'P' in front to select tone or pulse dial<br>*E.g.*<br>*T123456 = Tone dial*<br>*P123456 = Pulse dial* |

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| Disable TRY ALL THE BAUDS RATE | Select 38400 bauds | Enter 5000 for the timeout. | Disable auto-answer of the modem. This is related to the AUTODIAL function of the GSR. |

**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**

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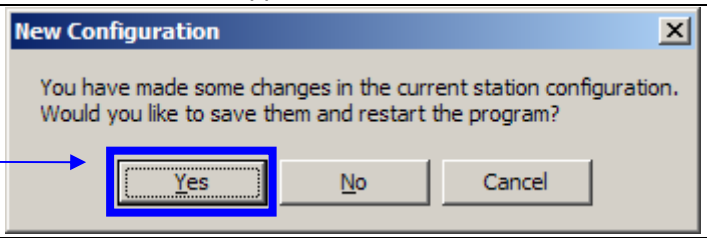
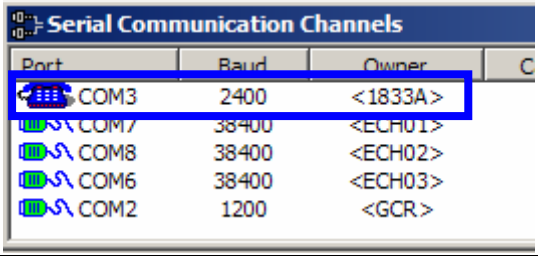
| Review the configuration. | |
| Press the OK button. | The window will disappear. |
| Press again OK in the station list window.<br>A warning message indicates you that the GeoDAS program will have to restart according to the change you performed.<br>Press YES button. |  |
| You should see now in the SERIAL COMMUNICATION CHANNELS a modem at the selected COM port. |  |

## 5 Establish Link

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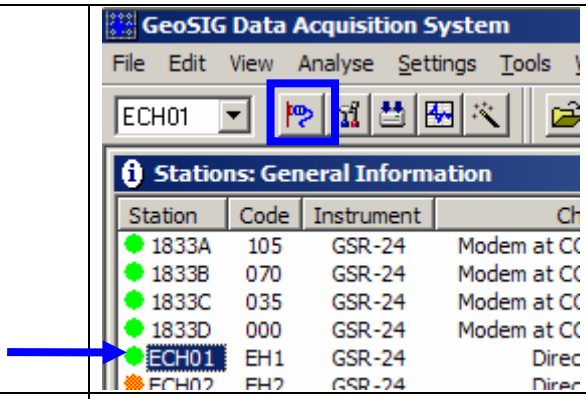
| In the station list, select the station you configured for modem operation. |  |
| Press the CONNECT button. | Modem dials and GSR Modem takes the call.<br>The serial communication channels window will show for the modem the call progress. |
| Wait that the modem link is established. | Check the CD 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.