



# ABB

## The Company

We are an established world force in the design and manufacture of instrumentation for industrial process control, flow measurement, gas and liquid analysis and environmental applications.

As a part of ABB, a world leader in process automation technology, we offer customers application expertise, service and support worldwide.

We are committed to teamwork, high quality manufacturing, advanced technology and unrivalled service and support.

The quality, accuracy and performance of the Company's products result from over 100 years experience, combined with a continuous program of innovative design and development to incorporate the latest technology.

The UKAS Calibration Laboratory No. 0255 is just one of the ten flow calibration plants operated by the Company, and is indicative of our dedication to quality and accuracy.

EN ISO 9001:2000



Cert. No. Q5907

EN 29001 (ISO 9001)



Lenno, Italy – Cert. No. 9/90A



Sonehouse, U.K.

Information in this manual is intended only to assist our customers in the efficient operation of our equipment. Use of this manual for any other purpose is specifically prohibited and its contents are not to be reproduced in full or part without prior approval of the Technical Communications Department.

### Health and Safety

To ensure that our products are safe and without risk to health, the following points must be noted:

1. The relevant sections of these instructions must be read carefully before proceeding.
2. Warning labels on containers and packages must be observed.
3. Installation, operation, maintenance and servicing must only be carried out by suitably trained personnel and in accordance with the information given.
4. Normal safety precautions must be taken to avoid the possibility of an accident occurring when operating in conditions of high pressure and/or temperature.
5. Chemicals must be stored away from heat, protected from temperature extremes and powders kept dry. Normal safe handling procedures must be used.
6. When disposing of chemicals ensure that no two chemicals are mixed.

Safety advice concerning the use of the equipment described in this manual or any relevant hazard data sheets (where applicable) may be obtained from the Company address on the back cover, together with servicing and spares information.

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# 1 INTRODUCTION

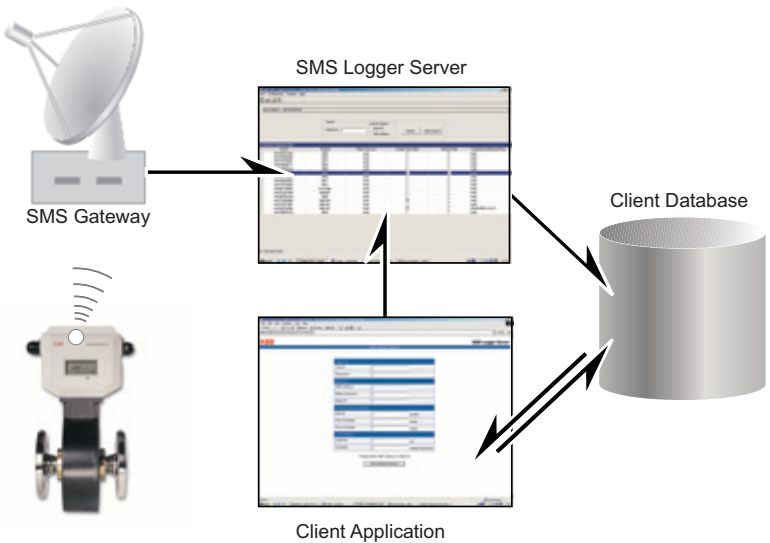
## 1.1 What is the SMS Logger Server?

The SMS Logger Server enables the monitoring and management of AquaMaster flow meters through an intuitive and user-friendly application. External client databases can be configured to receive the data from the Logger server.

Logger Server features:

- Integration with GPA SMS Gateway.
- An intuitive user interface.
- The capacity to administer up to 3000 AquaMasters.
- The ability to forward data to any ODBC compliant relational database (client database).
- An HTTP Interface to trigger requests.
- The ability to automatically transmit AquaMaster Firmware and SIM card changes.

The SMS Logger Server Application integrates with the GPA SMS Gateway. SMS Messages from the AquaMasters are received by the GPA SMS Gateway and forwarded to the Logger Server application.



### **...1.1 What is the SMS Logger Server?**

The SMS Logger Server provides the means to edit many AquaMaster parameters remotely. It can also request and then forward the data to a client database.

In addition, you can use the Logger Server HTTP interfaces to request information from the AquaMasters. The response reports for these requests are then forwarded to the client database.

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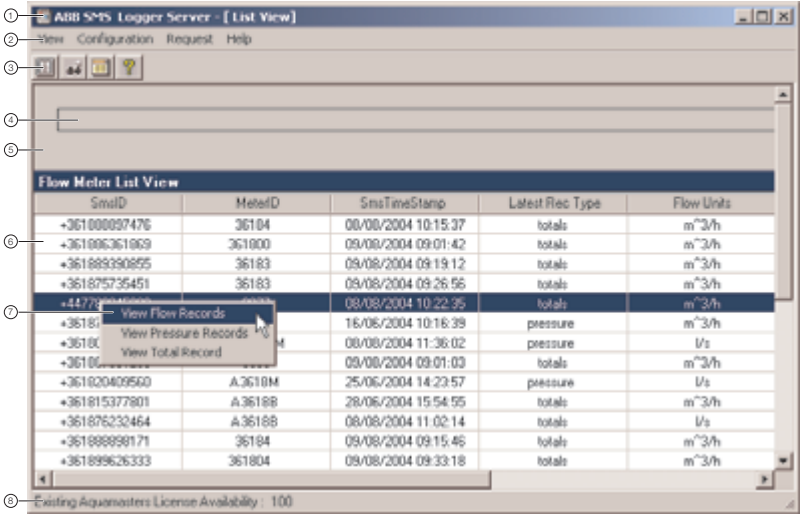
**Note.**

- The GPA SMS Gateway must be configured correctly before you can use the SMS Logger Server to receive data from the AquaMasters – see Appendix A.
  - If this is the first time that you have used the SMS Logger Server, no AquaMasters are listed. Once the SMS Logger Server has been configured correctly, data from the AquaMasters appears in the list view. The rate at which data appears depends on the time that the AquaMasters have been set to send their data. Typically, AquaMasters are set to send a report once per day; therefore it could take a day for the SMS Logger Server to display the reports.
-

## 2 SMS LOGGER SERVER INTERFACE

### 2.1 Receiving AquaMaster Data

To open the SMS Logger Server Application, either select **Start | Programs | ABB | ABB SMS Logger Server**, or double-click on the SMS Logger Server shortcut icon on the desktop. The main application window appears with the default list view:



#### ① Header Bar

Displays the title of the current view.


#### ② Menu Bar

Provides access to all the menu commands for the SMS Logger Server – see page 6 for further details.

#### ③ Toolbar

The toolbar buttons provide quick access to the SMS Logger Server views and the on-line help:

 – List view.

 – Event Log view.

 – AquaMaster Administration view.  – On-line help.

#### ④ Real-time Messages

An AquaMaster ID is displayed here if data is received while the SMS Data Logger is open.

#### ⑤ Filter Area

Controls for filtering data are displayed in this area when viewing the meter database and event log views.

### 2.1 Receiving AquaMaster Data

#### ⑥ – Views

There are three views:

- **List** – The default view. Displays the latest flow, pressure and total records from the AquaMasters – see page 7 for further details.
- **Meter Database** – Displays a list of all the AquaMasters that are connected currently to the SMS Logger Server – see page 9 for further details.
- **Event Log** – List of errors that the AquaMasters have reported, as well as any requests made through the client interface – see page 12 for further details.

#### ⑦ – Context Menus

The SMS Logger Server makes extensive use of context menus. A context menu appears when you right-click over a selected item.

#### ⑧ – Status Bar

The status bar displays license availability.

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## 3 MENUS

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### 3.1 View Menu

Menu Item	Description	Keyboard shortcut
List View	Opens the List view.	Ctrl + L
Meter Database	Opens the Meter Database view.	Ctrl + M
Event Log	Opens the Event Log view.	Ctrl + E
Exit	Closes the SMS Logger Server.	Ctrl + X

### 3.2 Configuration Menu

Menu Item	Description	Keyboard shortcut
External Database	The SMS Logger Server is capable of forwarding the data received from the AquaMasters to an external client database. You can use this feature to populate a client database with the data from the flow meters. Any ODBC compliant data source is supported.	Ctrl+A
Advanced Settings	Used to configure various settings of the SMS Logger Server.	Ctrl+B
External Clients	It is possible to use a web interface to trigger requests to the AquaMasters. This dialog box is used to list the users that have permission to make these requests.	Ctrl+U

### 3.3 Request Menu

Menu Item	Description	Keyboard shortcut
Text Command	Sends text commands to the selected AquaMaster(s).	Ctrl+T

### 3.4 Help Menu


Menu Item	Description	Keyboard shortcut
Help	Opens the on-line help.	F1
About SMS Logger Server	Opens the SMS Logger Server splash screen	Ctrl+U



## 4 LIST VIEW

### 4.1 Introduction

This view displays the latest flow, pressure and total records from the AquaMasters.

To open the list view, click the  button, select **View | List View** or press **Ctrl+L**.

Flow Meter List View							
SiteID	MeterID	SiteTimeStamp	Latest Rec Type	Flow Units	Pressure Units	Total Units	Tarif Units
+747688937476	74764	08/08/2004 10:15:37	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747686361868	7476	09/08/2004 09:01:42	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747689390895	74763	09/08/2004 09:19:12	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747675735451	74763	09/08/2004 09:26:56	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747686245062	74767	08/08/2004 10:22:35	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747675735452	747637	16/06/2004 10:16:39	pressure	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747601799003	7476604M	08/08/2004 11:36:02	pressure	l/s	Bar	m <sup>3</sup>	m <sup>3</sup>
+747687591230	74765	09/08/2004 09:01:03	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747620409560	A7476M	25/06/2004 14:23:57	pressure	l/s	Bar	(null)	(null)
+747615377801	7476638	28/06/2004 15:54:55	totals	m <sup>3</sup> /h	kPa	m <sup>3</sup>	m <sup>3</sup>
+747676232464	7476128	08/08/2004 11:02:14	totals	l/s	Bar	m <sup>3</sup>	m <sup>3</sup>
+747688898171	74764	09/08/2004 09:15:46	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747639626330	747004	09/08/2004 09:33:18	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747687567584	747665	09/08/2004 09:46:10	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747686245084	6876	09/08/2004 10:06:17	totals	m <sup>3</sup> /h	Bar	m <sup>3</sup>	m <sup>3</sup>
+747602251044	ABB028	08/08/2004 12:11:09	pressure	l/s	Bar	m <sup>3</sup>	l

**Note.** None of the displayed information can be edited.

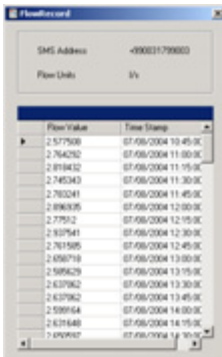
### 4.1.1 Context Menu

You can display additional information about an individual record by right-clicking over a record and selecting:

- View Flow Records.
- View Pressure Records.
- View Total Records.

### 4.1.2 View Flow Records

Displays the flow values for the selected AquaMaster:



Flow Value	Time Stamp
2.577508	07/08/2004 10:45:00
2.764252	07/08/2004 11:00:00
2.819432	07/08/2004 11:15:00
2.748343	07/08/2004 11:30:00
2.782381	07/08/2004 11:45:00
2.698385	07/08/2004 12:00:00
2.77512	07/08/2004 12:15:00
2.837541	07/08/2004 12:30:00
2.761585	07/08/2004 12:45:00
2.696718	07/08/2004 13:00:00
2.595629	07/08/2004 13:15:00
2.637962	07/08/2004 13:30:00
2.637962	07/08/2004 13:45:00
2.589764	07/08/2004 14:00:00
2.637648	07/08/2004 14:15:00
7.000007	07/08/2004 14:30:00

### 4.1.3 View Pressure Records

Displays the pressure values for the selected AquaMaster:

The screenshot shows a window titled "PressureRecord" with the following information:

SMS Address: +990031799003  
Pressure Units: Bar

Pressure Value	TimeStamp
-1.014	07/08/2004 10:45:00
-1.014	07/08/2004 11:00:00
-1.014	07/08/2004 11:15:00
-1.014	07/08/2004 11:30:00
-1.014	07/08/2004 11:45:00
-1.014	07/08/2004 12:00:00
-1.014	07/08/2004 12:15:00
-1.014	07/08/2004 12:30:00
-1.014	07/08/2004 12:45:00
-1.014	07/08/2004 13:00:00
-1.014	07/08/2004 13:15:00
-1.014	07/08/2004 13:30:00
-1.014	07/08/2004 13:45:00
-1.014	07/08/2004 14:00:00
-1.014	07/08/2004 14:15:00
-1.014	07/08/2004 14:30:00

### 4.1.4 View Total Records

Displays the Totalizer records for the selected AquaMaster:

The screenshot shows a window titled "TotalRecord" with the following information:

SMS Address: +990031799003  
Total Units: m<sup>3</sup>  
Tariff Units: m<sup>3</sup>

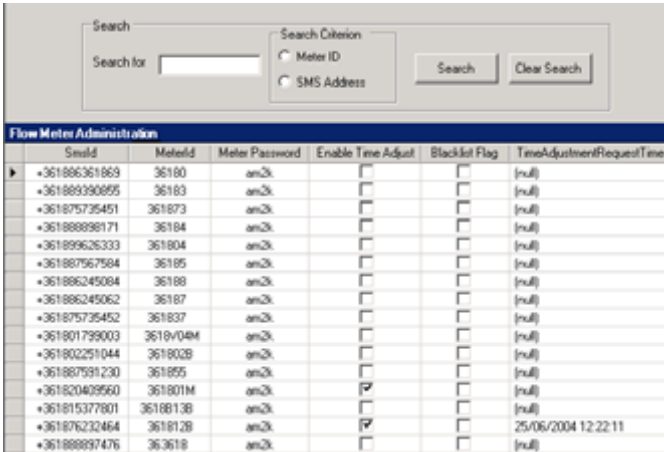
Total Fwd Val	Total Rev Val	Total Net Val	Total Tariff A	Total Tariff B	Total TimeStamp
56077	0	56077	0	0	08/08/2004 10:31:02

# 5 FLOW METER ADMINISTRATION VIEW

## 5.1 Introduction

This view displays a list of all the AquaMasters that are currently connected to the SMS Logger Server.

To open the AquaMaster administration view, click the  button, select **View | Meter Database** or press **Ctrl+M**.



SsnId	MsnId	Meter Password	Enable Time Adjust	Blacklist Flag	TimeAdjustment/RequestTime
+361886361869	36180	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361889390895	36183	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361875735451	361873	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361888998171	36184	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361899626333	361804	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361887567584	36185	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361886245084	36188	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361886245062	36187	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361875735452	361837	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361801799003	3618V04M	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361802251044	361802B	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361887591230	361855	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361820409560	361801M	am2i.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(null)
+361815377801	3618B13B	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)
+361876232464	361812B	am2i.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25/06/2004 12:22:11
+361888997476	363618	am2i.	<input type="checkbox"/>	<input type="checkbox"/>	(null)

## 5.2 Search for an AquaMaster

A search facility is available to make finding an AquaMaster easier. To search for one or more meters:

1. Type the text to search for.

---

**Note.** Use \* to search for one or more characters. For example, 68\* finds all meter IDs that start with 68. Use ? to search for a single character. For example, 68?3 finds the meter IDs 6803 and 6873.

---

2. Select whether to search for a **Meter ID** or an **SMS Address**.
3. Click **Search**. The search results are displayed in the data table. Click **Clear Search** to display all records.

### 5.3 Context Menus

Edit the settings of individual AquaMasters by right-clicking over a selected AquaMaster and selecting:

- Set Password.
- Time Adjust.
- Send Request.
- Delete FlowMeter.

#### 5.3.1 Set Password


You can set the password for single or multiple AquaMasters. To change the password:

1. Select the required AquaMaster(s).

---

**Note.** To select multiple AquaMasters, click in the far-left column marked with an arrow and drag downwards to select a range of AquaMasters. You can also hold the shift key down to select a range of records or hold the Ctrl key to select individual records.

---

2. Right-click and select **Change Password**. A dialog box appears.
3. Type the new **Password**.
4. Click the **Set Password** button.
5. Click  to close the dialog box. The new password is displayed for the selected AquaMaster(s).

### 5.3.2 Time Adjust

You can set enable or disable the time adjust for single or multiple AquaMasters.

If enabled, clock adjustments are sent automatically if the least time difference of the last ten logged values is negative or above a specified threshold limit. You can set the threshold value from the **Configuration | Advanced** settings dialog box.

To enable/disable the time adjust:

1. Select the required AquaMaster(s).

---

**Note.** To select multiple AquaMasters, click in the far-left column marked with an arrow and drag downwards to select a range of AquaMasters. Hold the shift key down to select a range of records or hold the Ctrl key to select individual records.

---

2. Right-click and select **Time Adjust** and either **Enable** or **Disable**.

---

**Note:** Clock adjustment requests can be sent using the **Text Command** (see Page 16 for details), pressing **Ctrl+C** or selecting **Request | Clock Adjust Request**.

---

### 5.3.3 Send Request

This is used to send a text request to a single AquaMaster. This request is similar to those sent via the requests menu, the only difference is that requests made using the menu also include the AquaMaster identification tags.

---

**Note.** You can send a text request to only one AquaMaster at a time.

---

### 5.3.4 Delete AquaMaster

The SMS Logger Server manages a number of AquaMasters limited by the license. You may need to delete a AquaMaster in order to accommodate a new AquaMaster.

To delete an AquaMaster:

1. Select the AquaMaster.
2. Right-click and select **Delete AquaMaster**. A confirmation message box appears asking if you are sure that the selected AquaMaster is to be deleted. Click Yes to delete the AquaMaster.

## 6 EVENT LOG VIEW

### 6.1 Introduction

This view lists any errors that the AquaMasters have reported, as well as any requests made through the client interface.

To open the Event Log, Click the  button, select **View | Event Log**, or press **Ctrl+E**.

The screenshot displays the 'Event Log View' interface. It features two main filter sections: 'View Log' and 'Purge Log'. Both sections have a 'Date Range' filter set from '18 August 2004' to '19 August 2004'. The 'View Log' section includes buttons for 'View Log' and 'Refresh Available Dates'. The 'Purge Log' section includes a 'Purge' button. Below these filters is a table titled 'Error Log Viewer' with the following columns: 'Sms Id', 'MeterId', 'Date & Time', 'AppSource', 'Error Source', 'Error Code', 'Error Text', and 'Message Text'. The table contains three rows of error logs, all originating from 'LoggerServer' with the error source 'Codec Error Info' and the message text 'SMS Logger Protocol Co'. A tooltip is visible over the third row, providing additional details: 'SmsId', 'MeterId', 'DateTime: 19/08/2004 13:59:41', 'AppSource: LoggerServer', 'ErrorSource: Codec Error Info', 'ErrorText', and 'Message: SMS Logger Protocol Codec Validation Error: The 'Add' element has an invalid value according to its data type. An error occurred at , (3, 11).'

Whenever the mouse pointer hovers over an error log entry, a tool tip appears that displays additional information.

### 6.2 Event Log Filter

You can filter the event logs using any one of the following criteria:

- Data Range.
- SMS ID.
- Meter ID.
- Source.

The available filter options change depending on which criterion you select.

Select the criterion and click **View Log**. The results are then displayed.

### 6.3 Purge Log

The Logger Server maintains a history of logs for a number of days limited by the history limit setting (This can be set from the advanced settings dialog. Either select **Configuration | Advanced Settings**, or press **Ctrl+A**). Any logs older than this limit are automatically purged. It is also possible to purge logs between a selected date range.

To purge logs:

- Either type the **From** and **To** dates or use the drop-down date picker and click **Purge Log**. All logs between the selected dates are removed from the list.

## 7 CONFIGURATION

### 7.1 Introduction

The configuration menu is used to configure the following:

- External Database.
- Advanced Settings.
- External Clients.

### 7.2 External Database

The SMS Logger Server can be configured to forward the data received from the AquaMasters to an external client database. Any ODBC compliant data source is supported.

To open the configuration dialog box, select **Configuration | External Database**, or press **Ctrl+B**. The Configure External Database dialog box appears:

The screenshot shows the 'Configure External Database' dialog box. It features a title bar with a close button. The dialog is organized into three main sections. The first section, 'DSN', includes three text input fields for 'System DSN', 'User Name', and 'Password', along with 'Test Connection' and 'Clear' buttons. The second section, 'Client Database Table - Column Mapping', contains two dropdown menus for selecting a table and column, each with an adjacent text input field. The third section, 'Database Output Format', has two radio buttons: 'Relational Tables' (selected) and 'Single table XML data'. 'OK' and 'Cancel' buttons are located at the bottom right.

Field	Description
DSN	
System DSN	The name of the system ODBC database.
User Name	If required, type the user name.
Password	If required, type the password.
Test Connection	Click this button to test the connection to an external database.
Client Database Table - Column Mapping	
Table Name	The name of the table into which data is to be appended. Select the table name from the drop-down list.
Column Name	The name of the column into which data is to be appended. Select the column name from the drop-down list.
Client Database Parsing option	
Relational Tables	If selected, all XML coding is removed.
Single table XML data	If selected, the data is appended as XML.

### 7.3 Advanced Settings

This is used to configure various settings of the SMS Logger Server.

To open the Advanced Settings dialog box, select **Configuration | Advanced Settings**, or press **Ctrl+A**. The Advanced Settings dialog box appears:

Field	Description
History Limit	The number of entries that can be held in the event log. As a new entry is received, the oldest entry is purged.
Default Password	The default password that is applied to new flow meters.
Positive Time Difference	An AquaMaster's internal clock is automatically adjusted if the last ten values are either: Negative or Positive and are greater than the selected positive time difference.
.SMS Gateway Url	Requests to flow meters sent from the SMS Logger Server or from a Client database are routed via this SMS Gateway. The format must be: <b>http:// IpAddress: Port</b> where IpAddress = The IP Address of the system where the GPA SMS gateway is installed and Port = The port to which the gateway listens for http requests.
Update License	This displays the number of flow meters that the SMS Logger Server can monitor. If you require additional flow meters, contact ABB to obtain a new license key. Once obtained, type the name of your company and your license key and click <b>Upgrade</b> .
Automatic Time Adjustment	This is the default setting that is applied to new flow meters.

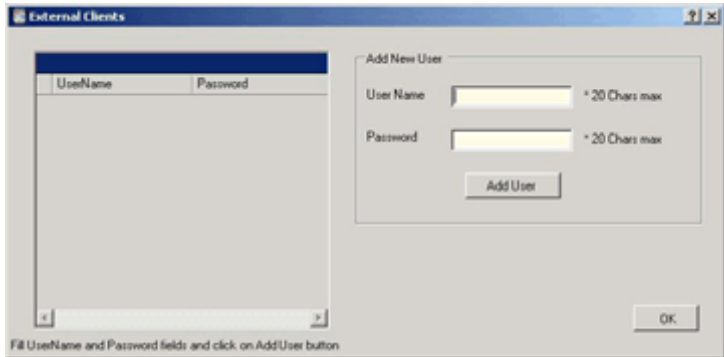


## 7.4 External Clients

It is possible to use the SMS Logger Server web interface to trigger requests to the AquaMasters (see Appendix B for details). This dialog box lists the users authorized to make these requests.

To add an authorised user:

1. Either select **Configuration | External Clients** or press **Ctrl+U**. The External Clients dialog box appears:



2. Type the user's **Name** and **Password** and click **Add User**. The new user is added to the list.

**Note.** To delete a user, right-click the user and select **Delete User**.

---

## 8 REQUESTS

---

### 8.1 Introduction

You can send a Text Command request to single or multiple AquaMasters. A text command request is similar to one sent via the Flow Meter Administration context menus.

---

**Note.** Requests made using this menu do not include the AquaMaster identification tags. You should therefore manually add the AquaMaster tags to the XML.

---

### 8.2 Text Commands


To send a text command:

1. Either select **Request | Text Command** or press **Ctrl+T**.

---

**Note.** You can also select a meter from the AquaMaster administration view (right-click and select Send Request | Text Command). The text command dialog box appears:

---



Send Command to a Flow Meter using this utility. Type the command in the textbox provided and click on Send Command button

SmsId

Password

Command

Send Command

2. Type the **Sms ID**, **Password** and the **Command**.

---

**Note.** If you requested a text command from the administration view context menu, the Sms ID field is not displayed as the Sms ID is populated automatically.

---

3. Click **Send Command**. The text command is sent to the AquaMaster.

---

## ...REQUESTS

---

### Text Commands

A text command message is made from up to 10 commands with a semi-colon following each command.

A command is either an AquaMaster Command Line Interface (CLI) request or one of the special mnemonics (ALM, DIB, TOT, VER).

---

**Note.** The SMS Logger Server's Text Command feature limits mnemonic requests to this subset of AquaMaster request mnemonics

---

CLI commands are made up of a '>' character followed by the required variable number.

The CLI format can also be used to send a change request for a particular variable by appending an equals character and the new value to the variable number.

For example:

TOT;ALM;	Requests a totaliser report and an alarm report.
>220;ALM; >255=1000;	Requests the value of variable 220, an alarm report and changing variable 255 to the value 1000.

Supported text commands are:

- ALM – Alarm report
- DIB – Device Information Block report
- VER – Firmware versions report
- TOT – Totalizer report

(Refer to the AquaMaster Quick Reference Guide or User Manual for a list of variable IDs and their meanings).

# APPENDIX A CONFIGURING THE SMS GATEWAY

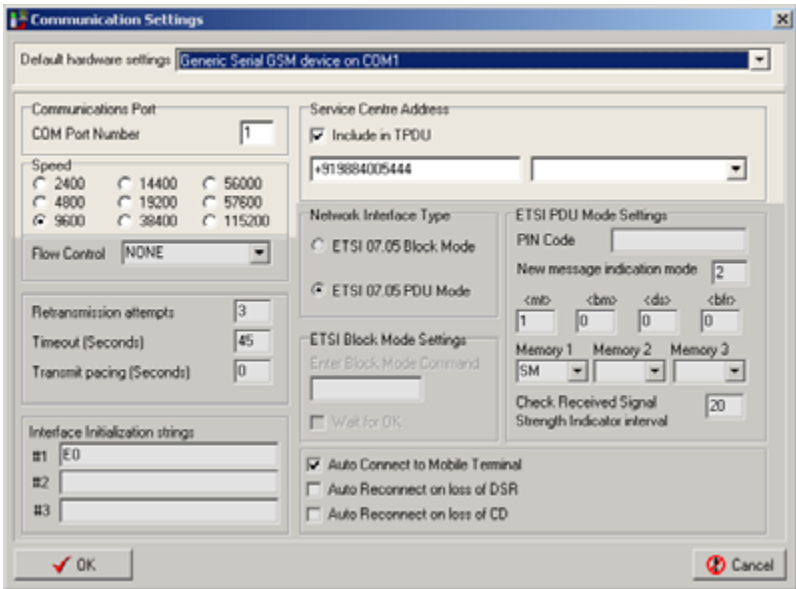
## A1 Configuring the GPA SMS Gateway

The GPA SMS Gateway must be set up and the Communication settings configured for the GSM device through which the SMS Gateway is listening to the Service provider.

To open the GPA SMS Gateway, either select **Start | GPA SMS Gateway** or double-click on the GPA SMS Gateway shortcut icon on the desktop.

## A2 Communications Settings

Select **Settings | Communications**, the communications dialog box appears:

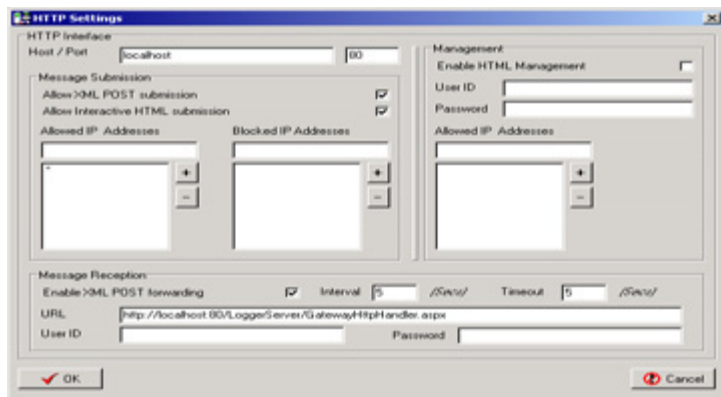


**Note.** Only the following communications settings may need to be configured:

Field	Description
Default hardware settings	Select the GSM device to be used from the drop-down list.
Communications Port	Type the number of the COM port to which the GSM device is connected.
Speed	Select the speed of the GSM device.
Service Centre Address	Select the SIM provider from the drop-down list. The telephone number is automatically populated in the left-hand field.

### A3 HTTP Settings

Select **Settings | HTTP Settings**. The Http settings dialog box appears:



Field	Description
HTTP Interface	
Host / Port	The IP Address and Port of the system where the SMS Gateway is installed.
Message Submission	
Allow XML POST submission	This must be enabled.
Allow Interactive HTML submission	This must be enabled.
Allowed IP Addresses	A list of addresses from which client requests can be triggered. To add an address, type the IP address and click the + button. To delete an address, select the address to be deleted and click the - button.
Blocked IP Addresses	A list of addresses that are not allowed to trigger requests. To add an address, type the IP address and click the + button. To delete an address, select the address to be deleted and click the - button.
Management	
Enable HTML Management	If enabled, management requests can be sent via a web server.
User ID & Password	The ID and password required to log on as a manager
Allowed IP Addresses	A list of addresses from which management requests can be triggered. To add an address, type the IP address and click the + button. To delete an address, select the address to be deleted and click the - button.
Message Reception	
Enable XML POST forwarding	This must be enabled, with the Interval and Timeout set to 5 seconds.
URL	The URL of the SMS Gateway handler. For example: http://IpAddress/LoggerServer/GatewayHttpHandler.aspx Where: IpAddress is the IP address of the system where the logger server is installed.
User ID & Password	The ID and password required to log on to the GPA system.

### B1 Introduction

To open the GPA SMS Gateway, either select **Start | GPA SMS Gateway** or double-click on the **GPA SMS Gateway** shortcut icon on the desktop.

The communications and HTTP settings must be configured before you can connect to the GSM terminal – see pages 18 and 19.


The SMS Logger Server must be running before the SMS Gateway connects to the GSM terminal, otherwise retrieved messages from the SMS Gateway may be lost.

To connect to the GMS Terminal:




Click the  button. The status bar displays the progress of the connection.



Click the  button. The SMS Gateway retrieves and forwards SMS messages as they arrive.



Click the  button. The SMS Gateway retrieves and forwards any SMS messages that are waiting on the GSM terminal's SIM card.

### C1 Introduction

In addition to the SMS Logger Server, three web pages are also installed onto your web server in order to make sending requests to AquaMasters easy. Once installed to the web server, these pages can be made available to any user that has access to the web server via your company intranet. In order to send a request you need a user ID and password. These are set from the **SMS Logger Server | Configuration | External Clients** menu.

The three web pages are:

- Send DIB Request
- Send Data Request
- Send Settings Request

### C2 Send DIB Request

- ① – Open your web browser and in the address bar type: **http://servername/loggerserver/dib.htm** where 'servername' is the name of your web server provided by your web or system administrator. The dib request page appears:

Login Info	
User Id	<input type="text"/>
Password	<input type="text"/>
Meter Info	
SMS Address	<input type="text"/>
Meter Id*	<input type="text"/>

\*Supply either SMS address or Meter Id

- ② – Type your **User Id** and **Password**.
- ③, ④ – Either type the **SMS Address** or the **Meter Id** of the AquaMaster.
- ⑤ – Click the **Send DIB Request** button. The request is sent to the AquaMaster via the SMS Logger Server.

### C3 Send Data Request

To open this page:

- ① – Open your web browser and in the address bar type: **http://servername/loggerserver/data.htm** where 'servername' is the name of your web server provided by your web or system administrator. The data request page appears:

**ABB** **SMS Logger Server**  
Send Data Request

Login Info	
② User Id	<input type="text"/>
Password	<input type="text"/>
Meter Info	
③ SMS Address	<input type="text"/>
⑤ Meter Password	<input type="text"/>
④ Meter Id*	<input type="text"/>
⑥ RecType	Flow ▾
⑦ Logger Channel Number	<input type="text"/>
⑧ Time From (yyyy/mm/dd hh:mm)	<input type="text"/>
Time To (yyyy/mm/dd hh:mm)	<input type="text"/>

\*Supply either SMS address or Meter ID

⑨

- ② – Type your **User ID** and **Password**.
- ③, ④ – Either type the **SMS Address** or the **Meter ID**.
- ⑤ – Type the **Meter Password**.
- ⑥ – Select the **Record type** from the drop-down list.
- ⑦ – Type the **Logger Channel Number**. Note. If you selected Totalizer as the record type, type 1.
- ⑧ – Type the **Time from** and **Time to**.
- ⑨ – Click the **Send Data Request** button. The request is sent to the AquaMaster via the SMS Logger Server.



## C4 Send Setting Request

- ① – Open your web browser and in the address bar type: `http://servername/logger/server/dib.htm` where 'servername' is the name of your web server provided by your web or system administrator. The dib request page appears:

The screenshot shows a web form with the following structure:

- ABB SMS Logger Server** (Page Header)
- Send Settings Request** (Section Header)
- Login Info** (Section Header)
  - User Id:
  - Password:
- Meter Info** (Section Header)
  - SMS Address:
  - Meter Password:
  - Meter Id\*:
- Flow & Pressure Settings** (Section Header)
  - Interval:  60-65535
  - Flow Schedule:  off/daily
  - Pres Schedule:  off/daily
- Total Settings** (Section Header)
  - Log Hour:  0-23
  - Schedule:  off/daily/weekly/monthly
- \*Supply either SMS address or Meter Id (Note)
- Send Settings Request (Button)

- ② – Type your **User Id** and **Password**.
- ③, ④ – Either type the **SMS Address** or the **Meter Id** of the AquaMaster.
- ⑤ – Type the **Meter Password**.
- ⑥ – The following settings are optional:
- Interval
  - Flow Schedule
  - Press Schedule
  - Log Hour
  - Schedule
- ⑦ – Click the **Send Settings Request** button. The request is sent to the AquaMaster via the SMS Logger Server.

---

## APPENDIX D XML COMMANDS

---

XML commands are used when the Configure External Database dialog **Single table XML data** option is selected – see page 13.

### <AckDib>

Set **true** to acknowledge a received DIB report.

Restriction = boolean

### <Addr>

Destination / originating address (SMS phone number).

### <Alarm>

AquaMaster meter alarm reporting.

This is decoded from any alarm codes within the report message data. An alarm code may correspond to one or more alarm conditions.

Value = AlarmCode

Restriction = nonNegativeInteger

Value = AlarmInfo

### <ApplId>

AquaMaster application program ID string.

### <BootId>

AquaMaster boot program ID string.

AquaMaster's Meter ID string.

### <ChangelInfo>

String of changed settings that can be kept in an event log.

Maximum length value = 255

### <CheckId>

Set **true** by the SMS Logger Server if the client databases should run meter ID / SMS address checks on the message data.

Restriction = boolean

### <ClockAdjust>

Value for adjusting AquaMaster's real-time clock:

+ve value for number of seconds to advance clock (Max. value 32400).

-ve value for number of seconds to rewind clock. (min value -32400).

Restriction = Integer

Min. value = -32400

Max. value = 32400

Log record request limits.

### <ErrCode>

String holding specific error code.

Restriction = string

Value = LOGERR\_UNDEFINED

Value = LOGERR\_INVALID\_SUPPLIER\_CODE

Value = LOGERR\_INVALID\_REQUEST\_FORMAT

Value = LOGERR\_INVALID\_REQUEST\_PASSWORD

Value = LOGERR\_INVALID\_REQUEST\_PARAMETER

Value = LOGERR\_NO\_DATA\_IN\_REQUEST\_RANGE

Value = LOGERR\_METER\_ALARM\_REPORTED

### <ErrSrc>

String holding module name that detected the error (for information purposes only).

### <ErrText>

String holding a more detailed explanation of the error condition (for information purposes only).

**<FlowRec>**

Flow record data.

Value = Timestamp

Value = FlowVal

**<FlowRecData>**

Flow record data.

Value = FlowUnits

Value = FlowRec

**<FlowUnits>**

Units string for reported flow values.

Restriction = string

Value = l/s

Value = l/h

Value = MLD

Value = m<sup>3</sup>/h

Value = Ugal/m

Value = Ugal/h

Value = MUGD

**<FlowVal>**

Flow value.

Restriction = decimal

**<FpLogNo>**

Acceptable range for specifying a flow / pressure logger channel number.

Restriction = positiveInteger

Min. value = 1

Max. value = 2

**<FpSchedule>**

Schedule for automatic reporting of flow and pressure reports.

Restriction = string

Value = off

Value = daily

**<IsDib>**

Set true by the SMS Logger Protocol Codec DLL if the received report is a DIB report.

Restriction = boolean

**<Location>**

Geographical location description for the AquaMaster.

**<LoggingInterval>**

Flow / pressure logging interval in seconds.

Restriction = nonNegativeInteger

Min value = 60

Max. value = 65535

**<LOGERR\_UNDEFINED>**

This is used for any error that does not have its own error string defined.

**<LogErr>**

Logger Error Reports.

Value = ErrCode

Value = ErrSrc

Value = ErrText

**<LogReq>**

Used to specify the type and time range of required records. If flow or pressure records are required an optional logger channel number can be specified. If this is not specified, then the reported data is from logger 1. This is ignored if the record type is not for flow or pressure records.

### <LogSettings>

Used for changing logger settings. Note that if the flow/pressure logging interval is changed the logger is reset automatically.

Set the **ResetFPLog** attribute to **true** to reset the flow/pressure logger regardless of the logger settings.

Value = FpLoggingInterval

Value = FlowRptSchedule

Value = PresRptSchedule

Value = TotLoggingHr

Value = TotRptSchedule

Value = ResetFPLog

### <MeterBore>

Pipe bore size (in mm) that the AquaMaster is configured to use.

Restriction = decimal

### <MeterId>

This can be used as a unique identifier for the meter.

### <nonEmptyString>

Type for a string that has minimum of 1 character.

### <Password>

AquaMaster admin level password string.

### <PresRec>

Pressure record data.

Value = Timestamp

type = Timestamp

Value = PresVal

type = PresVal

### <PresRecData>

Pressure record data.

Value = PresUnits

Value = PresRec

### <PresUnits>

Units string for reported pressure values.

Restriction = string

Value = Bar

Value = kPa

Value = psi

### <PresVal>

Pressure value.

Restriction = decimal

### <RecType>

String for associated record type.

Restriction = string

Value = flow

Value = pressure

Value = totals

### <ReqDib>

Set **true** to request the meter send its Device Information Block which includes the Meter ID.

Restriction = boolean

### <ResetFPLog>

Set **true** in a request to indicate the flow-pressure log should be reset or indicates that it has been reset if in a report.

Restriction = boolean

### <SmsTimestamp>

Service centre timestamp in read SMS message.

### <SupplierCode>

AquaMaster's supplier code.

Restriction = nonNegativeInteger

### <TarUnits>

Units string for totalizer tariff values.

Restriction = VolumeUnits

**<TextCmd>**

Text-based command string for request messages.

**<TimeDiff>**

TimeDiff is the difference in seconds between the Service Center Timestamp and the report's own timestamp.

The SMS message includes the time difference along with the AquaMaster time in the report. This allows automatic time correction to be made if the difference gets too much.

Restriction = Integer

**<TimeFrom>**

TimeFrom used in requests for specifying the start time of a range.

Restriction = dateTime

**<Timestamp>**

Timestamp (used as record timestamps and report timestamp).

Restriction = dateTime

**<TimeTo>**

TimeTo used in requests for specifying the end time of a range.

Restriction = dateTime

**<TotFwdRevType>**

Totalizer's total forward / reverse flow volume value type.

Restriction = Unsigned Integer

Min. value = 0

Max. value = 99999999

**<TotLogHr>**

Hour of day for that totalizer logger will write records.

Restriction = nonNegativeInteger

Min. value = 0

Max. value = 23

**<TotNetType>**

Totalizer's total net / tariff flow volume value type.

Restriction = Integer

Min. value = -9999999

Max. value = 99999999

Type for valid volume units string used in totalizer and tariff records.

**<TotRec>**

Totalizer record data.

Value = Timestamp

Value = TotFwdVal

Value = TotRevVal

Value = TotNetVal

Value = TotTarAVal

Value = TotTarBVal

**<TotRecData>**

Totalizer record data.

Value = TotUnits

Value = TarUnits

Value = TotRec

**<TotSchedule>**

Schedule for automatic reporting of totalizer reports.

Restriction = string

Value = off

Value = daily

Value = weekly

Value = monthly

**<TotUnits>**

Units string for totalizer forward, reverse and net values.

Restriction = VolumeUnits

### <UamId>

AquaMaster UAM program ID string.

### <VolumeUnits>

Definitions have been included as MPAP system removes the caret.

Restriction = string

Value = m3

Value = m^3

Value = l

Value = Ugal

Value = MI

Value = ft3

Value = ft^3

Value = Gal

---

**Note.** m3 and ft3 are equivalent to m^3 and ft^3 respectively.

---

# PRODUCTS & CUSTOMER SUPPORT

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## Customer Support

We provide a comprehensive after sales service via a Worldwide Service Organization. Contact one of the following offices for details on your nearest Service and Repair Centre.

### United Kingdom

ABB Limited  
Tel: +44 (0)1453 826661  
Fax: +44 (0)1453 829671

### United States of America

ABB Inc  
Tel: +1 215 674 6000  
Fax: +1 215 674 7183

### Client Warranty

Prior to installation, the equipment referred to in this manual must be stored in a clean, dry environment, in accordance with the Company's published specification.

Periodic checks must be made on the equipment's condition. In the event of a failure under warranty, the following documentation must be provided as substantiation:

1. A listing evidencing process operation and alarm logs at time of failure.
2. Copies of all storage, installation, operating and maintenance records relating to the alleged faulty unit.

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