ACG-5

PC SOFTWARE MANUAL

AUTOMETERS ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▫▫ **SYSTEMS**

OVERVIEW

The ACG-5 software enables the user to configure the Modbus LAN Protocols, set up the system, save files to disk and print at Test Certificate as proof of connectivity. It also enables local identification of each meter and when using ACG-5 local displays, set groups and allocate meters to local group formats.

SOFTWARE INSTALLATION

Additional Equipment required: 1 x USB A-B lead.

The ACG Gateway software is available as a free download from the Autometers website:
http://www.autometers.co.uk/software/acg

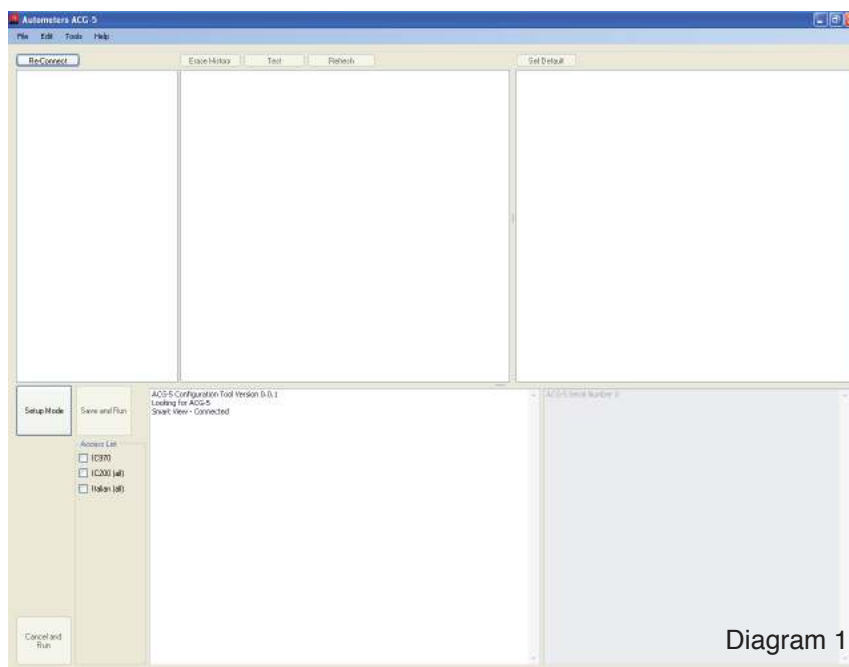Once downloaded simply double click on the ACG5 Gateway Icon.

The software will automatically load and place an icon onto your desktop.

HOW TO USE THE PC SOFTWARE.

Double left hand click your mouse on the ACG-5 icon on your desktop and the program will open.

Diagram 1

The ACG-5 software has been designed to monitor the complete range of Autometers Products and is defaulted to work on the IC5-7/9 kwh meters.

1. Select what type of meters you have installed (remember the ACG has been defaulted to IC5-7/9 so if you want to add other types (IC970, IC200 or the AD range of din meters please tick the appropriate boxes at the bottom left of the screen.

2. To set up the system press the setup button half way up on the left hand side of the screen, you will notice that all ACG remote screens connected and the ACG-5 gateway now shows setup mode.

3. Now set up the Primary 485 Modbus LAN (this is the communication LAN connecting any other ACG-5 gateways together or the BMS system. The ACG-5 can only operate on 2Wire RTU floating point high word first modbus

protocol.

1. Move the cursor to the top left hand side of the screen to the box that displays the words serial number, (you will notice that there is a box with the + symbol inside) move your cursor to the centre of the box (+) and left hand click your mouse, you will see two more boxes appear (see Diagram 2), select the configuration box (the same way as above) and you will see you can now select modbus range, baud rate, parity and selection of the terminator resistance. (See Diagram 3.)
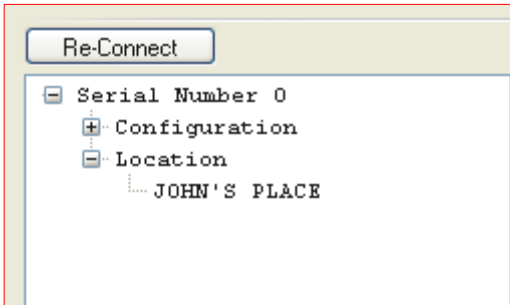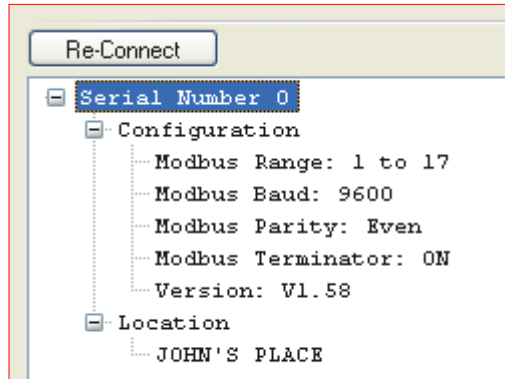

Diagram 2

Diagram 3

Repeat the above procedure to set the following.

MODBUS RANGE

If you have a number of ACG-5 gateways on your system each gateway will have to have its own range, i.e the first on the LAN would select 1-17 the second on the LAN would have to be 18-34 and so on.

Right click the modbus range on the drop down menu and select the range you require. (See Diagram 4.)

BAUD RATE

You can select the baud rate to 1200, 9600.19200, or 38400 (ACG defaulted to 9600)

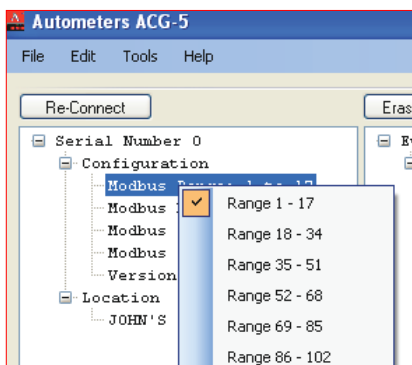Right click the modbus baud on the drop down menu and select the baud rate you require. (See Diagram 5.)
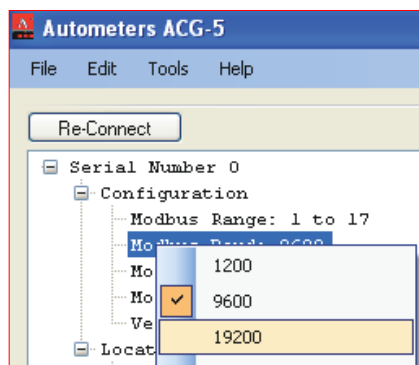

Diagram 4: Modbus Range

Diagram 5: Baud Rate

PARITY

You can select Odd, Even or None (ACG defaulted to even). Right click the modbus parity on the drop down menu and select the parity you require.
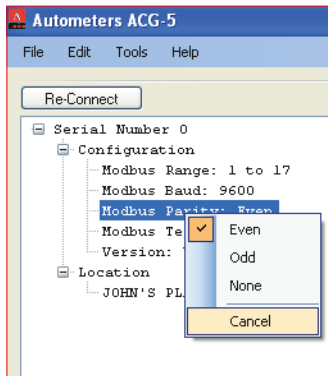

Diagram 6

MODBUS TERMINATOR

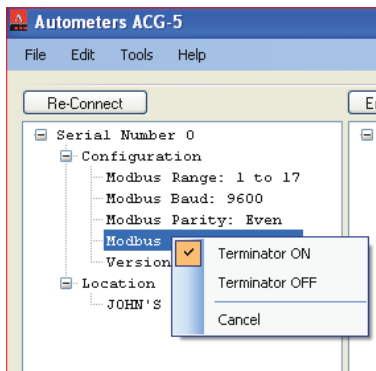Right click the modbus terminator on the drop down menu and select the ON/OFF.

Diagram 7

The terminator is either on or off; if you have more than one ACG-5 gateway on the system, the terminator should _only_ be turned on for the last ACG/Gateway on the LAN, on all other gateways the terminator should be off.

NAMING OF THE ACG-5 GATEWAY

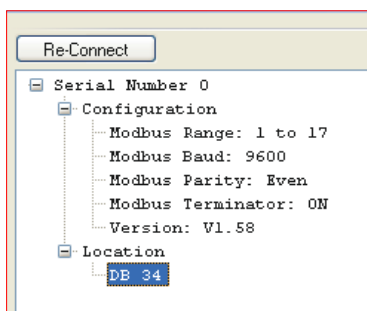To give a local name or identification of the ACG gateway there is a location field available.

Move your cursor to the + box next to the location field and then left click your mouse - right click your mouse on 'None' an information box will appear, enter the description you require (ie DB 34) there is a maximum of 14 characters. Then press ok, you will now see it appear below to the location field.

Diagram 8

TEST

To see what has been connected to the system (meters and displays) you must scan the system.
To avoid reading any old data, (if you have used the software before) press the erase history.

Then press test, you will see a box appear with a green status bar please wait until completed.
It will now show a history box and the time and date, left hand click the + in the centre of the box
and a list will appear showing meters and displays connected.

```
Event History
History:0: 11/07/2012 11:16
     Channel:  01    METER      709504      PASSED
     Channel:  02    METER      709505      PASSED
     Channel:  03    METER      709506      PASSED
     Channel:  04    METER      709507      PASSED
     Channel:  05    METER      709502      PASSED
     Channel:  06    METER      709501      PASSED
     Channel:  07    METER      709497      PASSED
     Channel:  08    METER      709493      PASSED
     Channel:  09    METER      709492      PASSED
     Channel:  10    METER      709495      PASSED
     Channel:  11    METER      709499      PASSED
     Channel:  12    METER      709498      PASSED
     Channel:  13    NOT USED
     Channel:  14    NOT USED
     Channel:  15    DISPLAY    000000      PASSED
     Channel:  16    DISPLAY    000000      PASSED
```

Diagram 9

If for any reason there is a broken connection the display will shown 'NOT USED'.

To repeat this exercise once all connections have been elected, do the following:

1. Click 'Save and Run' - The system status box will highlight all text in blue.
2. Push Setup Mode button and wait for data to respond.

If button is pressed too quickly the status display will read 'Smart box not ready'.
Wait approx 10 seconds then re-click 'Setup Mode' button. The status display will read 'Request Data'.

HOW TO GROUP METERS

If you are using the ACG-5 local displays you can group meters to individual displays, ie if you
have 14 meters and 2 displays connected you could either have all meters going to each of the
displays or create 2 groups and have 7 meters per display. If the meter group is left at 0 it will
automatically be shown on all displays. (See display right)

Displays

There are 8 display groups you can select 0-7.
If you allocate a meter to Group 0 it will automatically be shown on all displays

Examples (Diagram 10)

- Separating power and lighting on 4 distribution boards.
- For power meters set to Group 1
- For lighting meters set to Group 2
- For any unlocated inputs: set to Group 7. This will not appear on any display.

Power display	Lighting Display	Group display	Locked display
Power meters allocated to this display	Lighting meters allocated to this display	Group display Indicates Group ID and number of meters allocated to Group	Locked display Display in locked position. No programme access.

ENTERING LOCAL IDENTIFICATION OR NAMES FOR METERS

NB: To assist with programming - complete the below table before proceeding.

Channel:	Description:	Group:
Channel 1		
Channel 2		
Channel 3		
Channel 4		
Channel 5		
Channel 6		
Channel 7		
Channel 8		
Channel 9		
Channel 10		
Channel 11		
Channel 12		
Channel 13		
Channel 14		
Channel 15		
Channel 16		

To allocate names to particular meters move your cursor to the location field and left hand click the +in the centre of the box.

You will see a list of channels and the type of meter and serial numbers of the meter connected to each channel. To give a local name to a channel (remember the name you allocate to the channel will appear on any local displays you have connected the maximum number of charters is 14).

Move the cursor to the channel you require to name and right hand click, an information box will appear Dia.10) requesting the name and group you require (please group id below). Enter the description you require (max 14 characters) and the display group you would like the meter to appear in, and then press ok, you check that it is correct by checking the list.
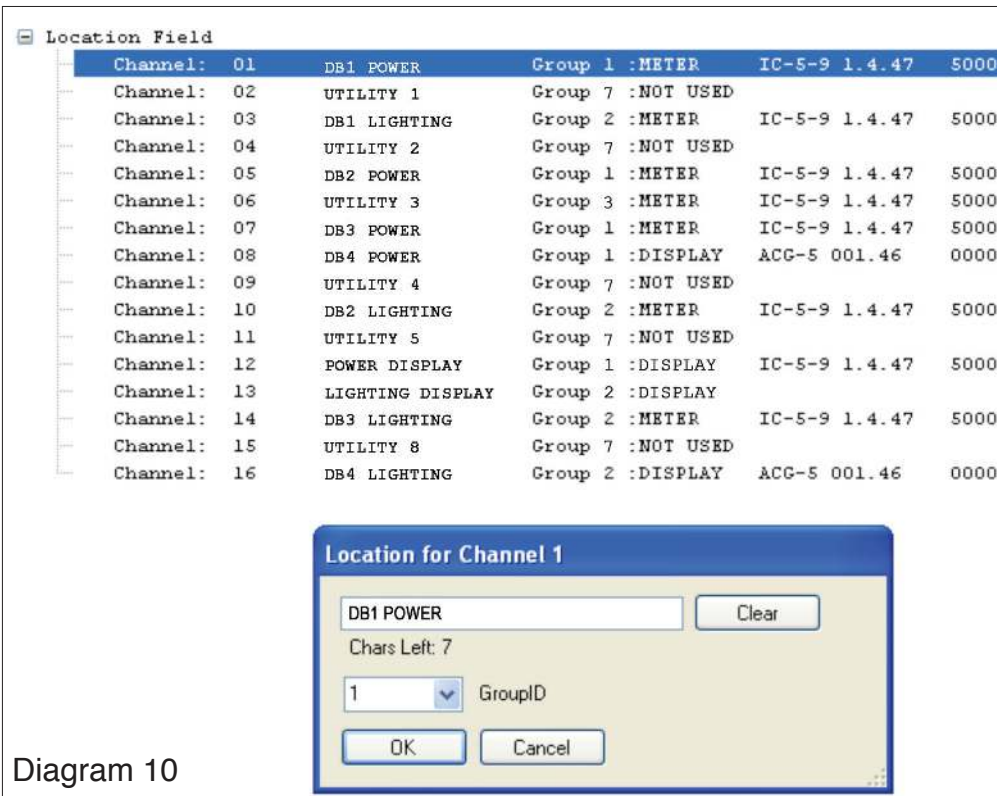
Diagram 10

You have now given the meter a local name and group ID.

PROGRAMMING THE SYSTEM

When you have completed all your settings for the system you require click:
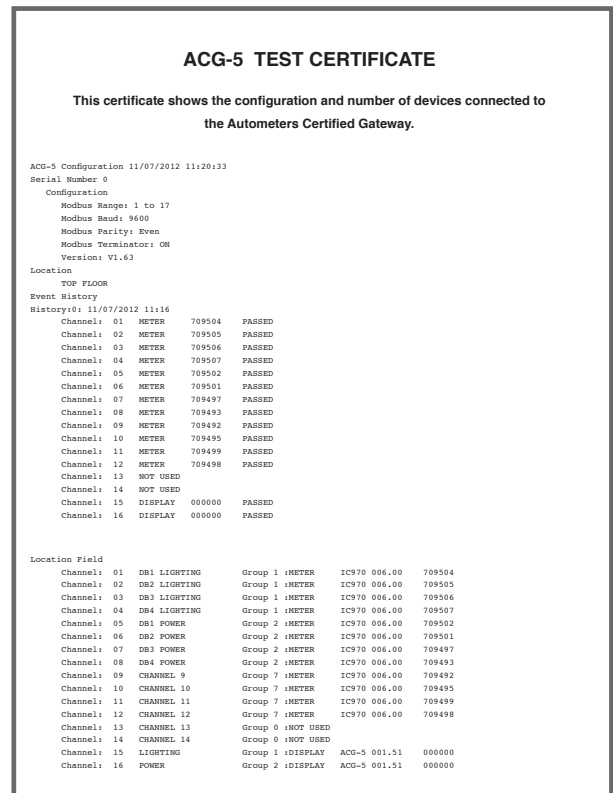
SAVE AND RUN

You will see that the ACG-5 gateway and any ACG-5 displays you have connected will say 'initialising', this will take a few moments. Once completed, the ACG-5 Gateway will check the number of meters connected and the number of displays connected. It will also show if the BMS is connected, the range of modbus addresses and the terminator is selected on or off.
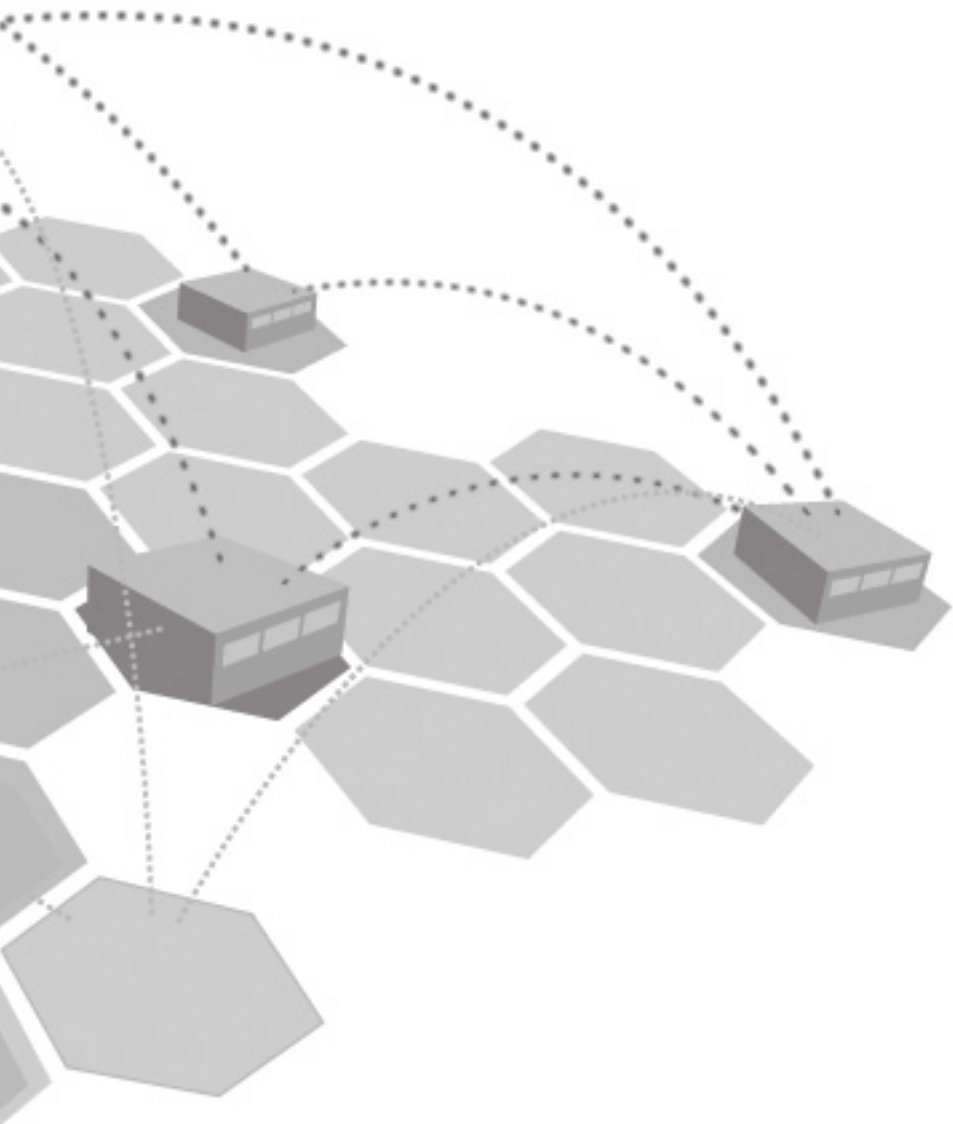
On the displays it will show the number of meters you have select to be read on each display and the group ID you have selected.

Press 'V' arrow to Group, press enter and the Group ID and number of meters allocated will be displayed. Press enter to return to main screen.

If you want to save the configuration to your computer, (which will allow you to print the test certificate) please press file in the top header and follow the windows instructions.

If you want to change or add any further meters or displays repeat the above.