



Instructions Manual

(applies to Firmware version 2.0.4553)



GOOSEMeter One

REFERENCE: HAEVMV02

EDITION: August 4, 2012

VERSION: 1

Instructions Manual V: 2.0.4553

Quality is the core reference for EuroSMC's activities, aimed to fully satisfy our customers' needs and expectations.

DISCLAIMER

The information, product specifications, and technical data contained in this document imply no contractual binding to EuroSMC's responsibility. The user is the sole responsible for the application of the products mentioned in this document. EuroSMC explicitly exonerates itself from liability to accidents or unwanted results, directly or indirectly derived from mistakes made in the writing of this document. Copying or reproducing all or part of this document is not allowed without the explicit written permission from EuroSMC. Due to continuing development and quality improvements, EuroSMC reserves the right to make changes in their products without notice.

INDEX

PACKING LIST 4

1. GENERAL 5

2. APPLICATION 6

3. OPERATION..... 6

4. CUSTOMER SERVICE 14

PACKING LIST

1	Test set GOOSEMeter One
1	Warranty and Product registration instructions
1	Instructions Manual
1	Universal Power supply adapter (European plug)
1	USB 2.0 cable (L: 2m, 6 ft.)
1	Standard Ethernet RJ-45 cable (L:2m, 6 ft)
1	Special Touch panel Pen. (Nintendo DS Standard)
1	Transport and protection soft bag.

1. GENERAL

PLEASE NOTE: To be able to use properly the information contained in this Manual it is important that the user has a good knowledge about the IEC-61850 Bus messages and its structure

Introduction

As a consequence of the more frequent IEC-61850 application on the electrical substations and the separation between the network communications world and the electrical protection world the GOOSE Meter ONE raise as the tool to facilitate the transition.

GOOSEMeter One work connecting to an IEC-61850 network in any free RJ-45 connector. From this moment it starts to sniff all the GOOSE messages that are circulating on the network, and creates a list in the screen of all the "Datasets" issued by all the publisher devices existing in the network. If the user want to analyze the content of the messages (its data and time) in one of those datasets only need to subscribe by selecting it with a click. Then the user will be able to assign a name to the different data on which he could be interested, filter or not the different data show the History with the changes that happened along the time, etc. All in all a personalized analysis on each case.

GOOSEMeter One is a hand held device, very intuitive thanks to its display TFT and operative system Windows CE, and very easy to control through the touch panel and rotary encoder.

We recommend that you fully read and understand the present manual before using the GOOSEMeter One for first time. However, the customer support from SMC is at your service 24/7 to help with any question regarding application or how to control the device.

2. APPLICATION

- Checking all the IEC-61850 publishers and its data.
- Translator from IEC-61850 messages name and behaviour to an electrical environment.

3. OPERATION

Supply

The GOOSEMeter ONE Works connected to the Main Supply through the Adapter supplied with the unit.

Warning: DO NOT USE other adapters to supply the equipment. This may damage it.

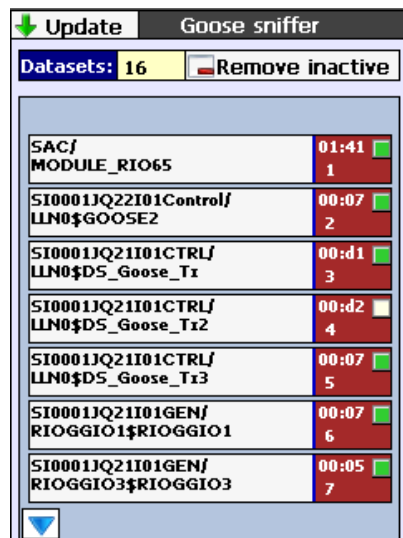
Connection to the IEC-61850 BUS

Use the RJ-45 cable supplied with the unit to connect to the network. Other Standard Ethernet cables can be used also.

NOTE: To connect directly with an IED a crossover cable may be used (not supplied with the unit).

Using the GOOSEMeter

3.1. Initial Window. IEC-61850 published dataset detection.



In this window the user find a list of the Publisher datasets in the network. If the window is empty, it means that there are not any GOOSE messages in the network.

Each one has a NAME (which usually defines the publisher ID) and associated there are: an order number (ex. 1), the destination ID MAC address (if there is any. - ex. 00:d1) and also a colour status indicator which works as follows:

- **White:** In this very instant a GOOSE message was published
- **Green:** a GOOSE message was published short time ago and the correlative sequence is correct.

- **Grey:** There is no new GOOSE messages from long time ago (Inactive)
- **Red:** There is an error in the correlative sequence of the GOOSE messages received. If this is a momentary problem and the sequence is restored the indicator will come back to Green colour.

NOTES:

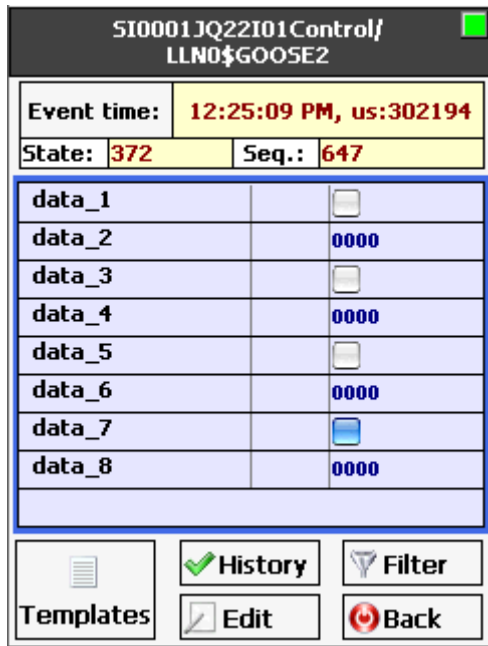
- If a GOOSE message contain more than 64 data will not be shown in this window.
- The GOOSEMeter discriminates between GOOSE messages using only the dataset name. If there is more than one GOOSE message with the same dataset name only one will be shown in the window. Usually it provokes an error in the sequence, when different correlative numbers are present.

By clicking on one of the datasets name the system access to the detailed list of data contained in the GOOSE message.

The push button "Remove inactive" allow the user to erase from the screen the inactive datasets (Grey colour) if desired.

The push button "Update" open a new program (GOOSEMeter update) which allows connecting with the SMC servers, downloading a firmware update and installing it in the unit. Obviously, the GOOSEMeter One must be connected to an Ethernet network with Internet access, not to an IEC-61850 network. After the update has finished the unit need to be restarted to activate the new firmware.

3.2. Window to show the data contained in the selected Dataset



This window show the status information of the content in the last GOOSE message received in the selected dataset:

- **Event time:** Time of day, with micro seconds resolution, of the last event.
- **Seq.:** Sequential number of the last GOOSE message containing the same information. It can be also interpreted as the number of GOOSE messages received with a correct sequence number and no change in the information or status until the actual moment. If there is an error in the sequence number, the colour indicator will turn to RED colour and the sequence number will reset to zero. It will also reset to zero when the message brings a change in status or information
- **State:** Indicate the number of changes that happened until now in the information or status of the GOOSE message.

- **Data_1, data_2,** All the Data contained in the GOOSE message. The binary ones have associated a colour indicator which, when in BLUE colour, indicates a change on its status. It can be assimilated to a N.O. contact open (white) or a N.O. contact close (Blue).

As an example, let's analyze the above screen on this manual:

- **Seq** is on 647. It means that there were 647 GOOSE messages with a proper sequential number and no changes from one to the next, after the last change.
- **State** indicates 372. It means that there were 347 status or information changes.
- **Data_7** is a binary status data. The blue colour indicates that the status is "closed". For the remaining data in the screen, they all are "open"

The push button "History" open a screen on which a list of the status changes in the GOOSE message is shown. The last change always appears in the upper part of the list. There is information about the time when the change happen and the data that has changed. It shows only the data that had changed.

The push button "Filter" allows the user to filter only by the selected data, both in the data screen and in the History screen.

To select the data that we want to apply the filter, highlight them using the rotary encoder. Then click on the encoder itself and a filter symbol will appear in the line of the data selected as in the example screen below.

SI0001JQ21I01CTRL/ LLNO\$DS_Goose_Tx		
Event time:	11:52:47 AM, us:222656	
State:	1	Seq.: 8146
data_1		<input type="checkbox"/>
data_2		0000
data_3	<input type="checkbox"/>	<input type="checkbox"/>
data_4	<input type="checkbox"/>	0000
data_5	<input type="checkbox"/>	083D9DF178
data_6		0000
<div style="display: flex; justify-content: space-between; margin-top: 10px;"> Templates History Filter </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> Edit Back </div>		

The push button "Edit" allows the user to personalize the data name making it a better suited one for recognition, if desired. To do so, click on the actual data name and then click on Edit". A keypad will show up in the screen which will allow to enter the new name.

Once the user has assigned new names to the data desired, it may be saved into a Template which will remain in the instrument memory for further use. To do so, click on the push button marked as "Templates" then, if what the user want to do is to save a new template click on the button "Save new template" and the keypad will show up to enter the desired new template name.

If the users want to assign an existing template to a dataset, just click on the push button marked as "Load new template". A selection screen containing all the available Templates will show up. Just select the desired one by clicking on it and select.

Save template

Set default text

SI0001JQ21I01CTRL_LLNO_DS_Goose_Tx

1	2	3	4	5	6	7	8	9	0
q	w	e	r	t	y	u	i	o	p
a	s	d	f	g	h	j	k	l	«
z	x	c	v	b	n	m	.	_	@
Shift	<input type="checkbox"/>	Space	Enter						

Cancel

Ok

3.3. LED indicators.



In the instrument front panel, there are three LED indicators as shown above. The meaning of each of them is described below starting from left to right.

- **Full Memory (when yellow):** As we select one dataset for analysis all its GOOSE messages remain in the instrument memory. It could be overflow if the analysis time is very long. In this situation the GOOSE messages may be lost. In this case, a reset of the unit is needed to delete the memory content and start again.
- **GOOSE Activity (red):** Indicates the GOOSE messages activity in the network.
- **Ethernet link (blue):** It lites in Blue colour when the Ethernet is established. It may take several tens of seconds or even one or more minutes to establish the connection depending on the network

3.4. - Connection with an external computer.

Not yet implemented in this firmware version!

4. CUSTOMER SERVICE

We in SMC congratulate you for your election of one of our test sets, and thank you very much for using equipment of SMC.

To contact with our technical support department please go to the following link

http://www.eurosmc.com/web_ing/support_i.asp

Then fulfil the questionnaire there and submit your question.

If you prefer to call please use one of the following phone numbers, depending on where you are:

Europe, Africa, Middle East: +34 91 849 8980

Asia/ Pacific: +852 3590 2499

Latin America: +511 625 97 65

United States, Canada: +1 918 622 5725