Clock function in datalogger **ELPRO**

1) How do detect dataloggers, which have only a timer and no clock, the correct measuring date and the correct measuring time?

HOTDOG DTx, **DHx** and **ECOLOG TN2** feature a quartz-controlled timer and a software-clock. Time-information like the start time, reprogram time etc. are buffered in the datalogger. The PC-software calculates with the aid of the Julian Calendar in each case the correct measuring time. We have to discern between the start / stop- and the endless-mode for the calculation of the correct point of time. Following parameter will be used for the calculation:

a) Start / Stop-mode: start time (will be saved in the datalogger, when it starts, based on the PC-time), memory interval, number of measured value until measure point X (datalogger is not in the stop mode yet) or the whole memory (datalogger in the stop mode).

b) Endless mode: evaluation time (PC-time at the moment of the read-out), memory interval, number of measured value until measure point X, delta between the last storage and the PC-time near the evaluation.

ECOLOG TN3 / **TN4** / **TPx** / **THx, ECOLOG-NET xxx** have a hardware-real time-clock. This real time is the basis for the presentation of the measured value. The real time will be tested on its authenticity with each evaluation and taken over as reference time. If there is a deviation of more than +/- 2 hours between the PC-time and the reference time, the evaluation will be denied. The real time clock has to be readjusted first. The changes of the clock will be documented in the Status with a time-stamp (see page 3). The PC-software calculates with the aid of this reference time and Julian Calendar in each case the correct measuring time.

The shown clock time on the display, which is given from the hardware-real time-clock, is only an auxiliary time, essentially for the option: direct print on a log printer (without PC). This time can be changed over the keypad. A change of the clock time has no influence to the measured value. The measured data are collected independently to the clock time trough a second, stand-alone quartz-controlled timer.

The quartz of the clock has a typically deviation in room temperature (25°C) of +/- 10 to 20 minutes a year. There is a maximum deviation of 1 hour a year when there are changeable temperature conditions in the range of -20°C to +55°C. This deviation is only relevant with long memory interval and only for the oldest measure points.

2) What happened with the measuring data when there is a clock change (summer- / wintertime)?

Technically it means that there is an adjustment of the scale about an hour at the moment given. That although the real time continues. The change of the summer- / wintertime would not be considered. The time given is significant for the evaluation as basis-time for all measured values. Accordingly diagramed is the whole data record. There is an offset-time to GMT visible in the audit trail (elproLOG QLS software, see page 3).

In this note, there is no "correct" diagram of the summer- / wintertime, because it has been proven as absurd, to display the pushed scale in the diagram. This is the same difficulty, like sending datalogger over different time zones. Also there isn't a pushed scale in the diagram.

Clock function in datalogger

3) What happened if the datalogger has been programmed und evaluated in different time zones?

If there has been programmed a certain log-start-time, the PC-time is controlling and not the time shown on the display. The datalogger saves only a difference value between the real-time and the log-start-time. Variances between PC-time and datalogger-time would not be considered and can result in a wrong Start Time!

Notice: At any rate the data-record remains unchanged and correct. Only the time-basis adjust itself, like the flight plan from airlines. For a better report, the software elproLOG QLS saves all files with a timestamp furnished with the deviation to GMP.

Clock function in datalogger ELPRC

Set the clock of an ECOLOG

1) By keyboard

STATUS OF DATALOGGER

Ecolog TH1 Module ID:	63139 - V8.03 [PII:10072285]
Initialized on:	19.03.2002 11:42:27
Last reprogrammed:	02.03.2009 09:12:55
Module Tag:	DEMO Sales
Module time:	02.03.2009 09:16:08 --- [RAM IMG-BMP destroyed]
Time set info:	ID: #19 by Keyboard
	set to 02.03.2009 09:16:00 on 02.03.2009 10:40:46

2) By elproLOG software - extended setup - set date and time

STATUS OF DATALOGGER

Ecolog TH1 Module ID:	63139 - V8.03 [PII:10072285]
Initialized on:	19.03.2002 11:42:27
Last reprogrammed:	02.03.2009 09:12:55
Module Tag:	DEMO Sales
Module time:	02.03.2009 09:18:39 -- [RAM IMG-BMP destroyed]
Time set info:	ID: #20 by Command
	set to 02.03.2009 09:18:34 on 02.03.2009 09:17:25

3) By elproLOG software - extended setup - programming of battery change time

STATUS OF DATALOGGER

Ecolog TH1 Module ID:	63139 - V8.03 [PII:10072285]
Initialized on:	19.03.2002 11:42:27
Last reprogrammed:	02.03.2009 09:12:55
Module Tag:	DEMO Sales
Module time:	02.03.2009 09:19:53
Time set info:	ID: #21 by Battery Change
	set to 02.03.2009 09:19:50 on 02.03.2009 09:19:50

Time-set Counter
After each change, it will raise about 1

AUDIT TRAIL and ACTION LOG

Doubleclick on entry for more details

Ecolog TH1 Modul ID:	63139 - V8.03 [PII:10072285]
Lesezeit:	02.03.2009 11:57:19
Modulbeschreibung:	DEMO Sales
Datenbeschreibung:	
File:	

AUDIT - TRAIL

Date / Time	Computername	User (System)	User (Custom)	Action
02.03.2009 11:57:21 (GMT +03:00)	ELP-S05	admin		New File created (LoggerTime)

Local time   Offset to GMT