

HD2011NMT

NOISE MONITORING STATION WITH REMOTE CONTROL

Gianni Mossa

APPLICATION FIELDS

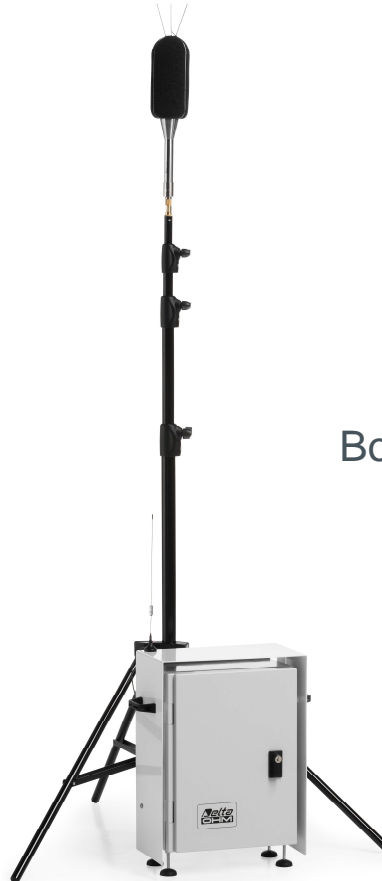
Noise Monitoring Station with Meteo parameters acquisition

- stand alone use or in a network of NMT
- Type of installation
 - Permanent
 - Semi-permanent
 - portable


Suitcase Version
IP67





Box Version
IP65



APPLICATION FIELDS

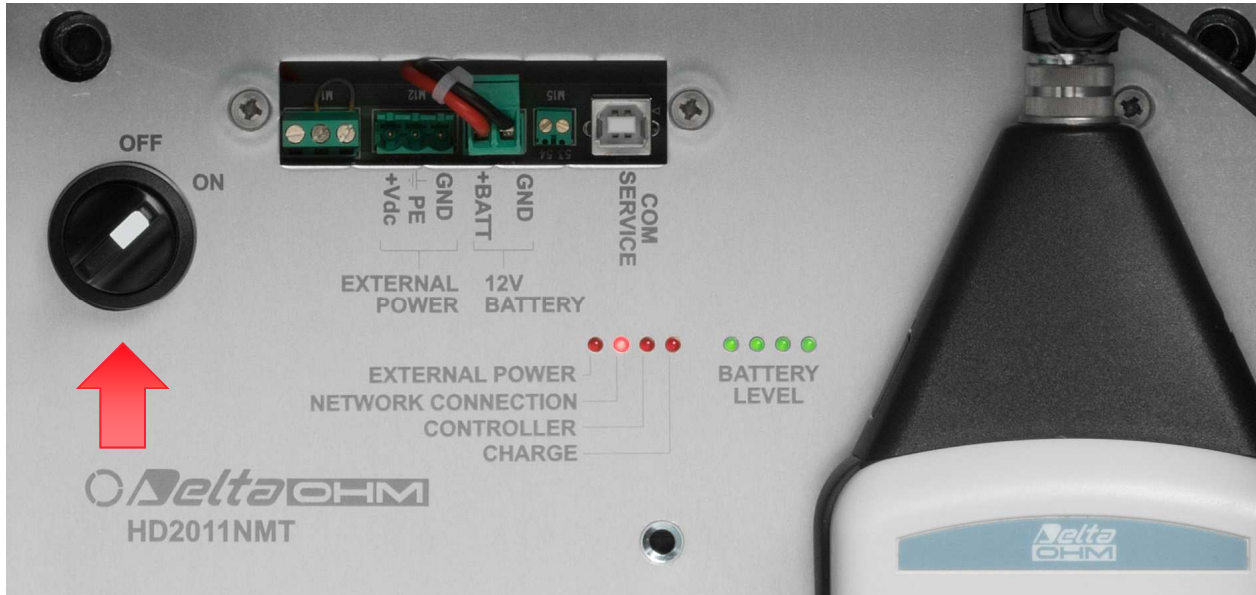
-  Outdoor long and medium term Noise measurements

-  Monitoring of:
 - Road traffic noise
 - Railway traffic noise
 - Airport noise
 - Wind turbine noise
 - Construction sites noise
 - Industrial plant noise

-  City Noise Mapping



INSTALLATION AND PUT IN USE



- Put in use with a simple ON/OFF switch
- Auto initialization
- Battery level LED status (can be checked remotely also)

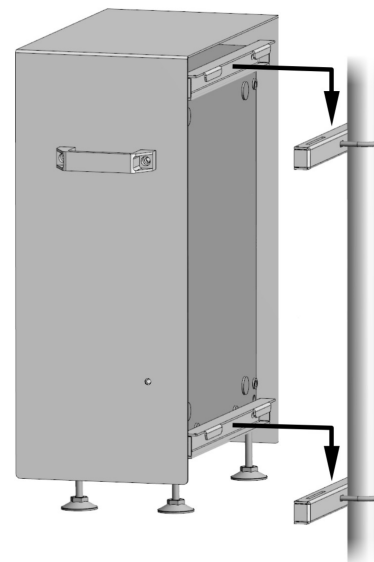
- LED for 3G modem status and correct communication verification



INSTALLATION AND PUT IN USE



- Pole mount
- Tripod mount for **permanent** installation h=4mt
- Pole mounting system
- System for meteo sensors mounting



- Positioning of outdoor microphone protection on **portable** tripod h=4mt
- Bracing system (option)



OUTDOOR MICROPHONE PROTECTION WITH WINDSHIELD, RAIN PROTECTION AND BIRDSPIKES

- Protection can be easily dismantled to access the microphone for acoustic calibration purposes
- **CIC electric calibration system** (can be automatically managed using NS4 software)
- Preamplifier including internal heater to avoid condensation



POWER SUPPLY

Permanent installation

- **Mains 220V** with backup lead-acid battery
- **Solar panel** with backup battery in case of absence of insolation
 - 18 Ah
 - 55 Ah *
 - 70 Ah *
 - 100 Ah *



* Can only be installed outside the box



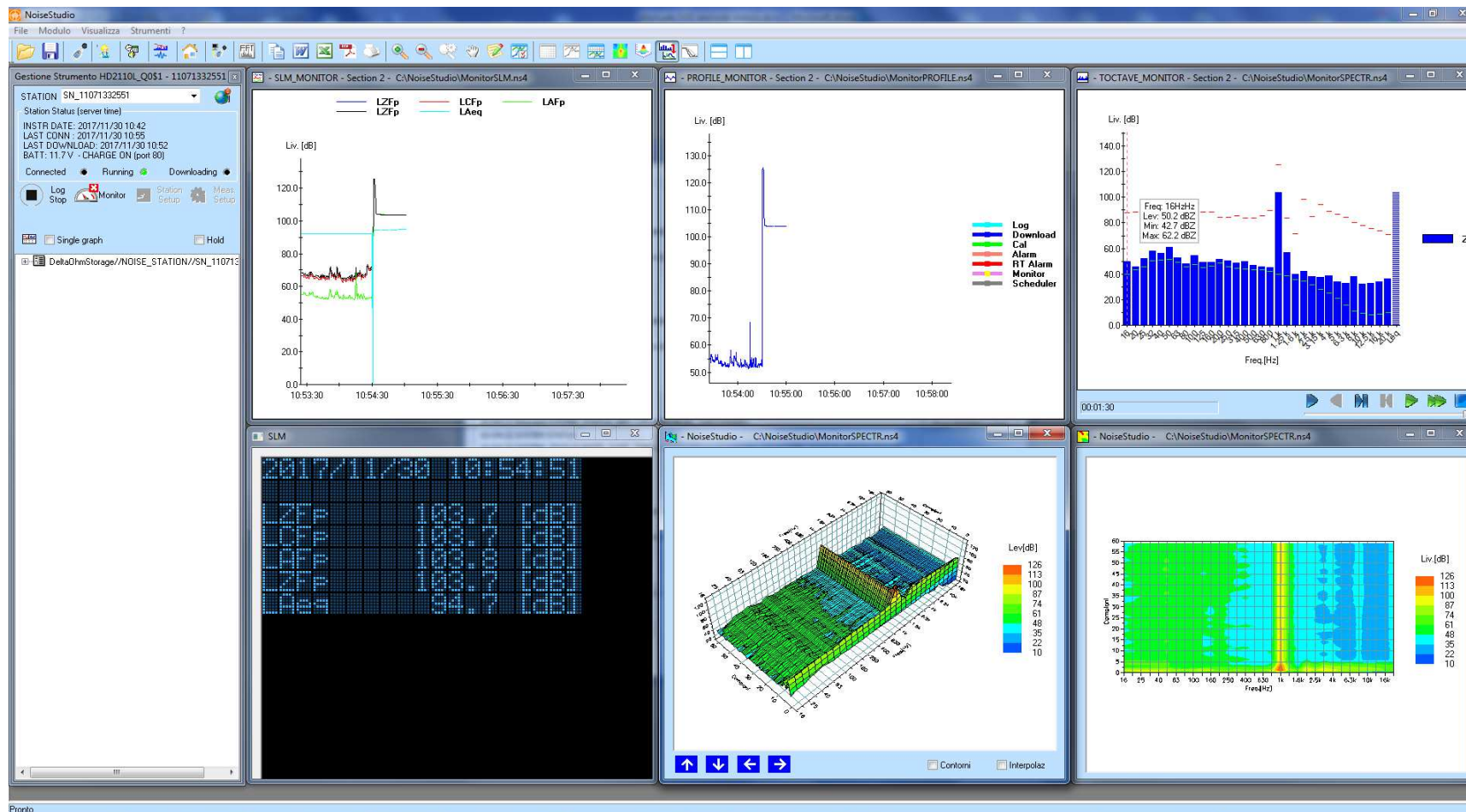
Portable installation

- Rechargeable Lithium battery
 - Autonomy > **48 hours**
 - Autonomy > **7 days**

REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”

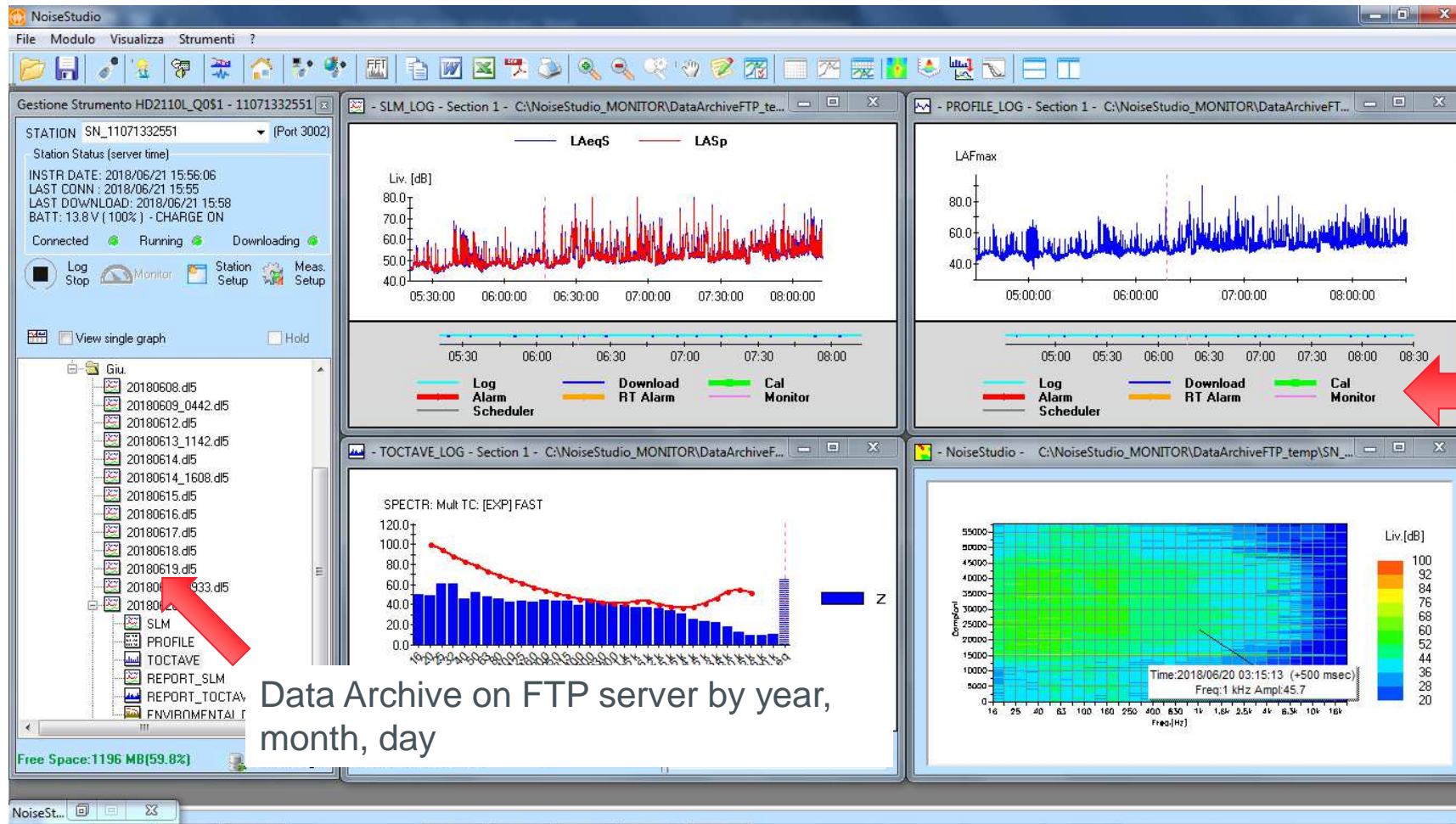


REAL TIME DISPLAY: MONITOR MODE



REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”

STORED DATA DISPLAY

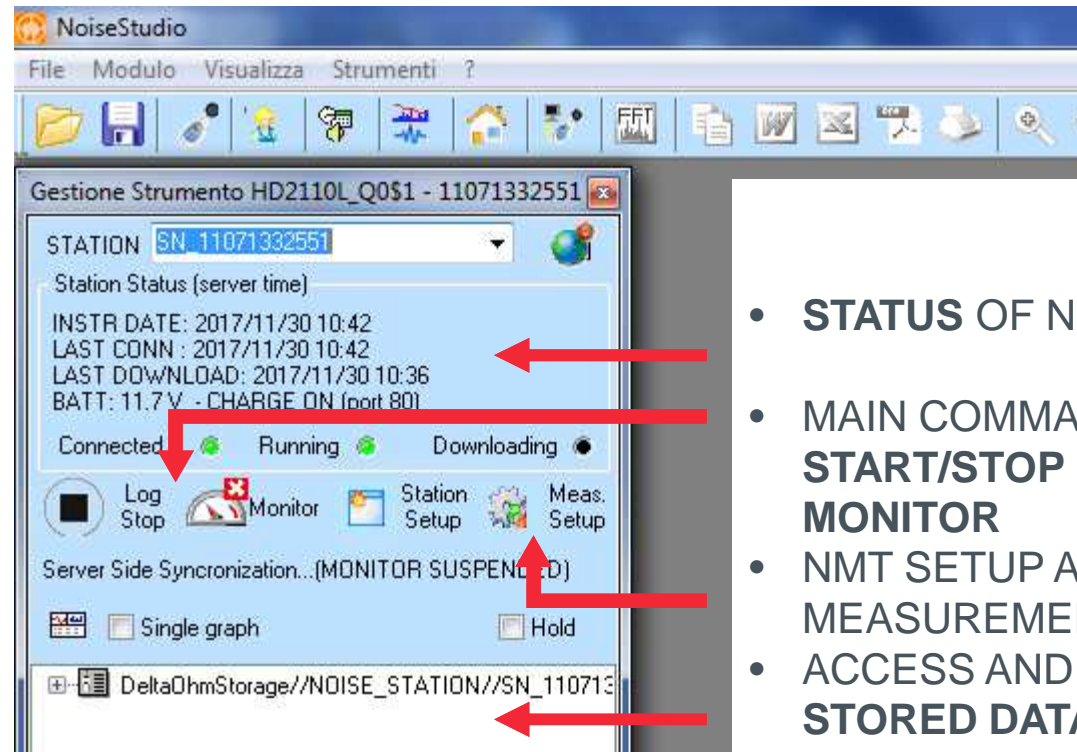
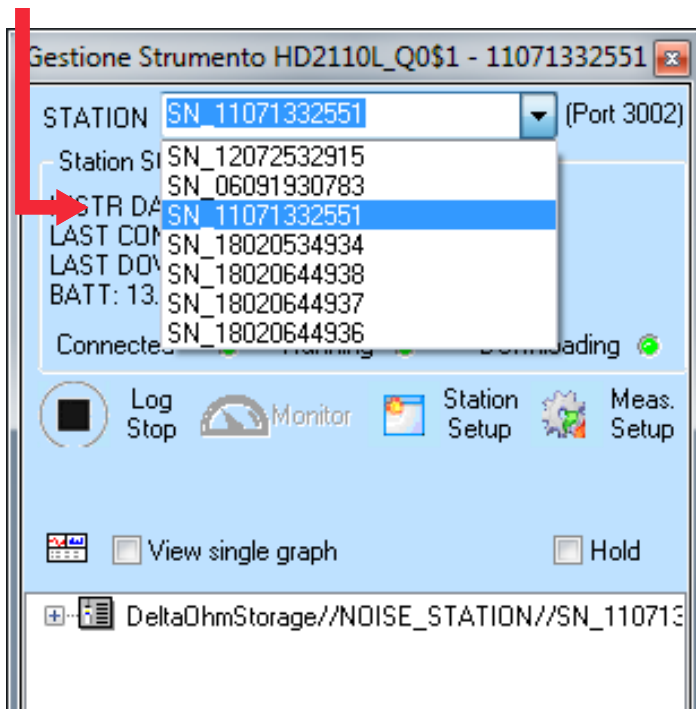


Status bar with indication of:

- Log
- Download NMT>server
- Alarm
- Real Time Alarm
- Scheduler active
- Auto Calibration active
- Monitor active

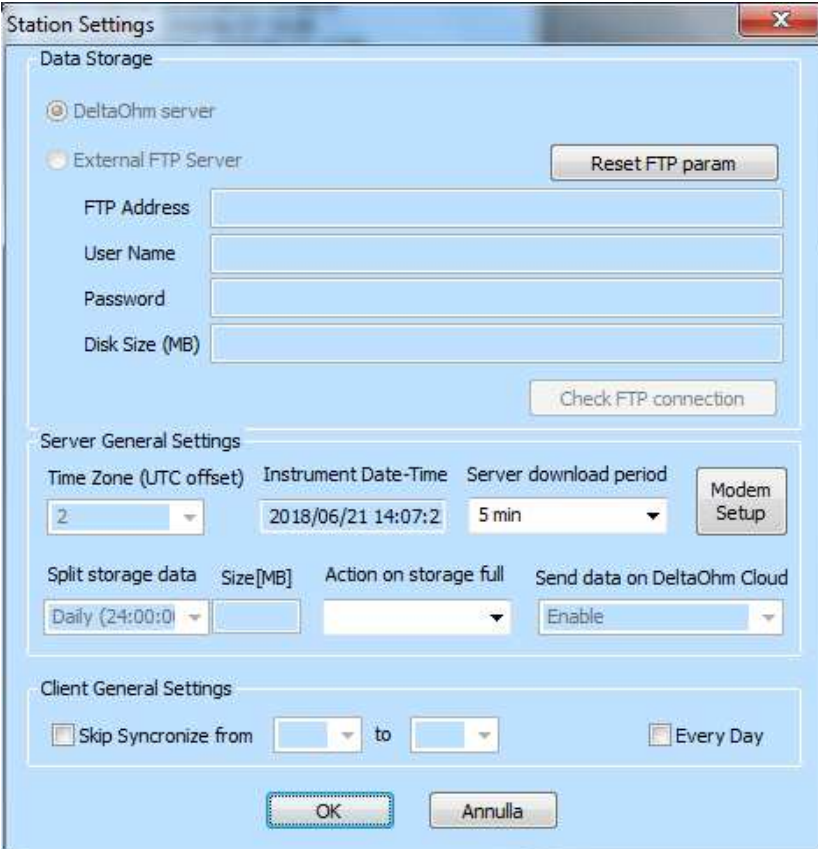
REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”

SELECTION AND MANAGEMENT OF NMT INSTALLED ON THE NETWORK



- **STATUS OF NMT**
- **MAIN COMMANDS: START/STOP LOG AND MONITOR**
- **NMT SETUP AND MEASUREMENT SETUP**
- **ACCESS AND DISPLAY OF STORED DATA ON FTP SERVER OR LOCALLY**

REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”



SETUP DATA STORAGE SERVER

- On **Delta Ohm server** (FOC 200MB for about 10dd continuous recording)
- On **custom external FTP server**

- Remote 3G modem setting via SMS commands
 - Connection interval
 - APN

- Automatic data upload on Cloud Server

REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”



DATALOGGING SETTING

- Continuous
- Single
- Time intervals

AUTOMATIC CALIBRATION SETTING (CIC)

- 3 time slices with daily repetition
- Selection of acoustic descriptor for calibration check



SETUP STRUMENTO

Comenti | Global Parameter | Datalogging | Environmental Parameters | Alarms | Configurazioni

SHORT TIME HISTORY

☒ Wide Band Interv: 1/32 sec LeqS A

TIME HISTORY

☒ Wide Band Interv: 1/8 sec LFmx A

☒ Wide Band Interv: 1/2 sec

SLM 1	LeqS	A	SLM 4	Llp	A
SLM 2	LSp	A	SLM 5	Leq	A
SLM 3	LFp	A			

☒ Spettro 1/3 OCT Interv: 1/2 sec Media EXP Peso Media FAST

RAPPORTI

☒ Wide Band Interv: 1min

SLM 1	Leq	A	SLM 4	L3	
SLM 2	L1		SLM 5	OL	
SLM 3	L2				

☒ Spettro 1/3 OCT

☐ Statistica

SETTING OF MEASUREMENT PARAMETERS *

- Time and frequency parallel weightings
- Time history log with differentiated time sampling from 1/32s to 1h
- Acquisition of 1/3oct frequency spectra with 1/2s sampling
- Acquisition of 'Report' integrated parameters with sampling from 1s to 1h
- Statistics with sampling from 1s to 1h

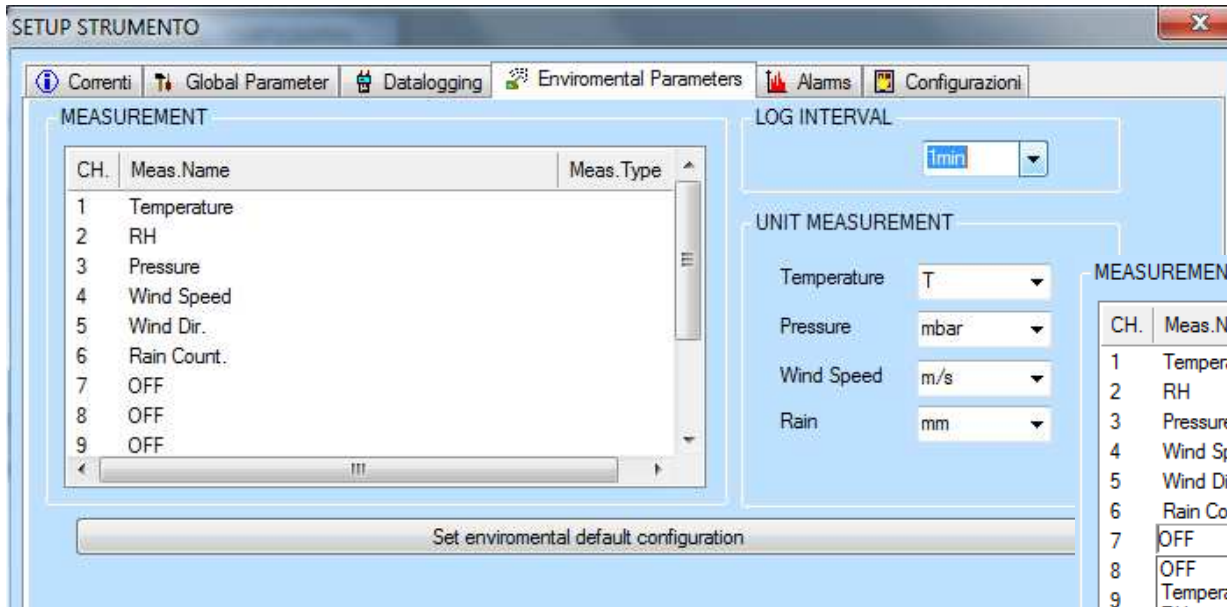
* Depending on installed sound level meter

MEASUREMENT PARAMETERS (Depending on sound level meter installed)

	INTEGRATION TIME	PARAMETER	
TIME HISTORY	1/32 s	1 "Short" Lx,eq	x = A, C o Z
	1/8 s	1 parameter selectable ¹ : <ul style="list-style-type: none"> Lxyp Lxpk "short" Lx,eq 1) Only LAFp for HD2010UC e HD2010UC/A	x = A, C o Z; y = F, S o I x = A o C x = A, C o Z
	1/2 s	5 selectable parameters: (3 for HD2010UC and HD2010UC/A): <ul style="list-style-type: none"> Lxyp Lxpk "short" Lx,eq Lx,eq 	x = A, C o Z; y = F, S o I x = A o C x = A, C o Z x = A, C o Z
	1/2 s	Third octave spectrum 16 Hz ÷ 20 kHz (25 Hz ÷ 12,5 kHz for HD2010UC and HD2010UC/A)	Averaging LIN, Exp FAST or SLOW

	INTEGRATION TIME	PARAMETER	
REPORTS	1s ÷ 1h	5 selectable parameters : <ul style="list-style-type: none"> Lxyp,max Lxyp,min Lxpk,max Lxpk,min Lx,eq L1 ÷ L4 Overload 	x = A, C o Z; y = F, S o I x = A, C o Z; y = F, S o I x = A o C x = A o C x = A, C o Z 1% ÷ 99%
		Third octave spectrum 16 Hz ÷ 20 kHz (25 Hz ÷ 12,5 kHz for HD2010UC and HD2010UC/A)	Averaging LIN
		Statistical distribution	
EVENTS	Event duration	5 selectable parameters: <ul style="list-style-type: none"> Lxyp,max Lxyp,min Lxpk,max Lxpk,min Lx,eq L1 ÷ L4 Overload 	x = A, C o Z; y = F, S o I x = A, C o Z; y = F, S o I x = A o C x = A o C x = A, C o Z 1% ÷ 99%
		Third octave spectrum 16 Hz ÷ 20 kHz (25 Hz ÷ 12,5 kHz for HD2010UC and HD2010UC/A)	Averaging LIN
		Statistical distribution	

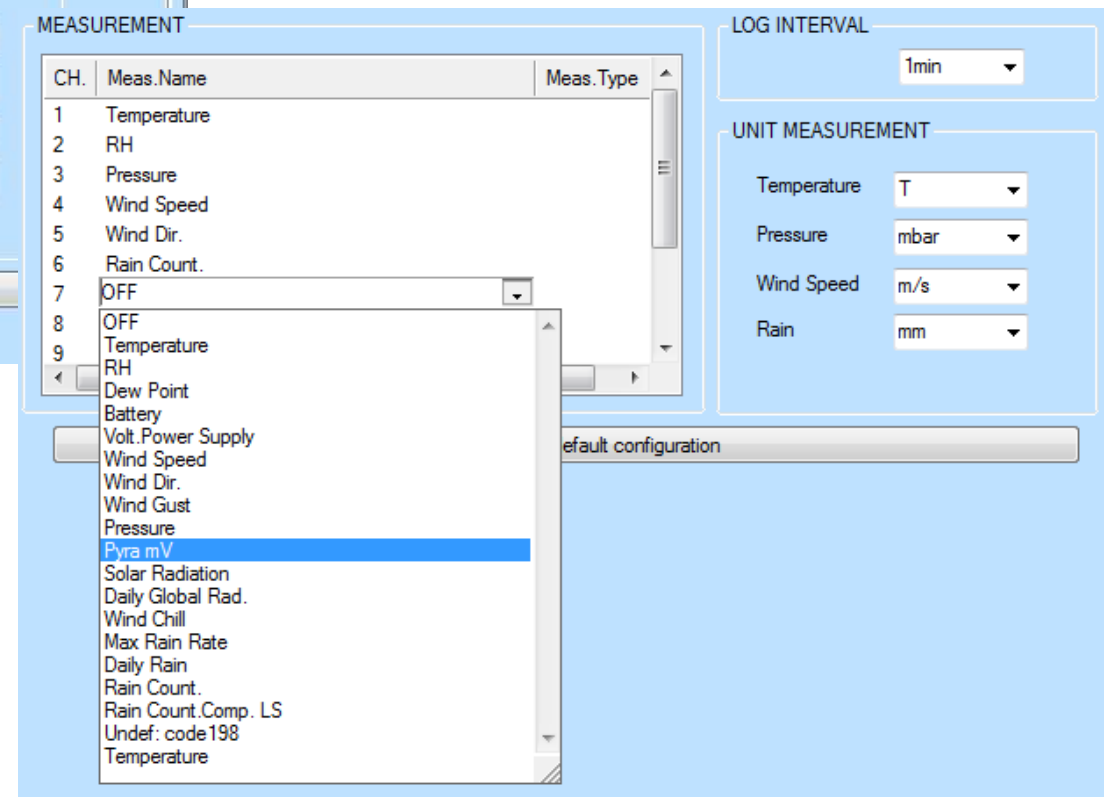
REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”



ENVIRONMENTAL PARAMETERS ACQUISITION

(depending on installed sensors)

- Parallel sampling from 1min to 1h



REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”



MANAGEMENT OF **ALARMS** : AUTOMATIC EMAIL NOTIFICATION

- Remaining **battery capacity**
- Remaining **storage size**
- Initial calibration **OFFSET**
- **Noise Threshold** exceedings
 - Alarms on levels calculated on stored data
 - Alarms real time with relais activation
- **Environmental parameters** exceedings

The screenshot shows the 'SETUP STRUMENTO' window with the 'Alarms' tab selected. The interface is divided into several sections for configuring different types of alarms. Red arrows from the text on the left point to these sections:

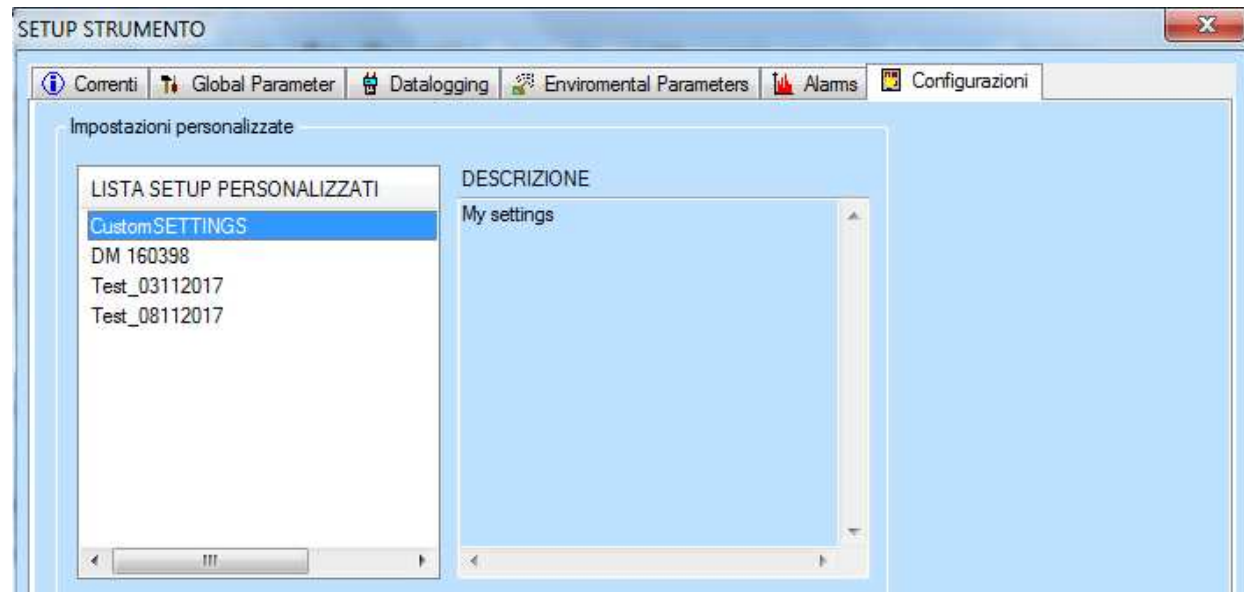
- BATTERY ALARM:** Includes fields for email addresses (Address1, Address2, Address3, Address4), a 'Test email sending' button, and checkboxes for 75%, 50%, and 25% battery levels. The 'Mail Object' is set to 'batt low' and 'Mail Text' is 'advise low batt'.
- STORAGE SIZE ALARM:** Includes 'Storage Size [MB]' (2000) and 'Used[MB]' (Files 65 size). It has checkboxes for 75% and 50% alarms. 'Mail Object' is 'disk full' and 'Mail Text' is 'advise disk full'.
- CALIBRATION LEVEL ALARM:** Includes an 'Enable' checkbox, 'Max Delta Cal[dB]' (0.1), 'Mail Object' (Calibration OFFSET), and 'Mail Text'.
- NOISE LEVEL ALARM:** Includes checkboxes for 'Alarm on logged data' and 'Alarm on real time data'. It has dropdowns for 'Channel' (Lfp:A and Lfmx:A), 'ON Limit[dB]', 'ON Duration[sec]', 'OFF Limit[dB]', and 'OFF Duration[sec]'. It also includes 'Action on alarm' settings with 'Send Mail' checkbox, 'Mail Object', 'Mail Text', and 'Contac1' dropdown. 'Test' buttons are present for each.
- ENVIRONMENT LEVEL ALARM:** Includes an 'Enable Alarm' checkbox, 'Channel' (Wind Speed), 'ON Limit', 'ON Duration[sec]', 'OFF Limit', and 'OFF Duration[sec]'. It also includes 'Action on alarm' settings with 'Send Mail' checkbox, 'Mail Object', 'Mail Text', and 'Contac1' dropdown. A 'Test' button is present.

REMOTE MANAGEMENT: SOFTWARE NS4 “MONITOR”



CUSTOM SETUP MANAGEMENT

- Creation, storage and upload of custom setups to NMT





HD52.3D ULTRASONIC ANEMOMETER

- No rotating parts / Reduced Maintenance
- Possibility to detect the following parameters:
 - Wind speed
 - Wind direction
 - Temperature
 - Relative humidity
 - Atmospheric pressure
 - Solar radiation

HD2013.2 CAPACITIVE RAIN SENSOR *

* Other sensors available (please contact factory)



GPS SENSOR

- Time synchronization
- NMT position

INTERNAL TEMPERATURE SENSOR

- To check compatibility of enclosure internal temperature with correct operation of electronic devices contained inside

NETWORK ARCHITECTURE

APPLICATION SERVER

- Located at DO

NETWORK ACCESS

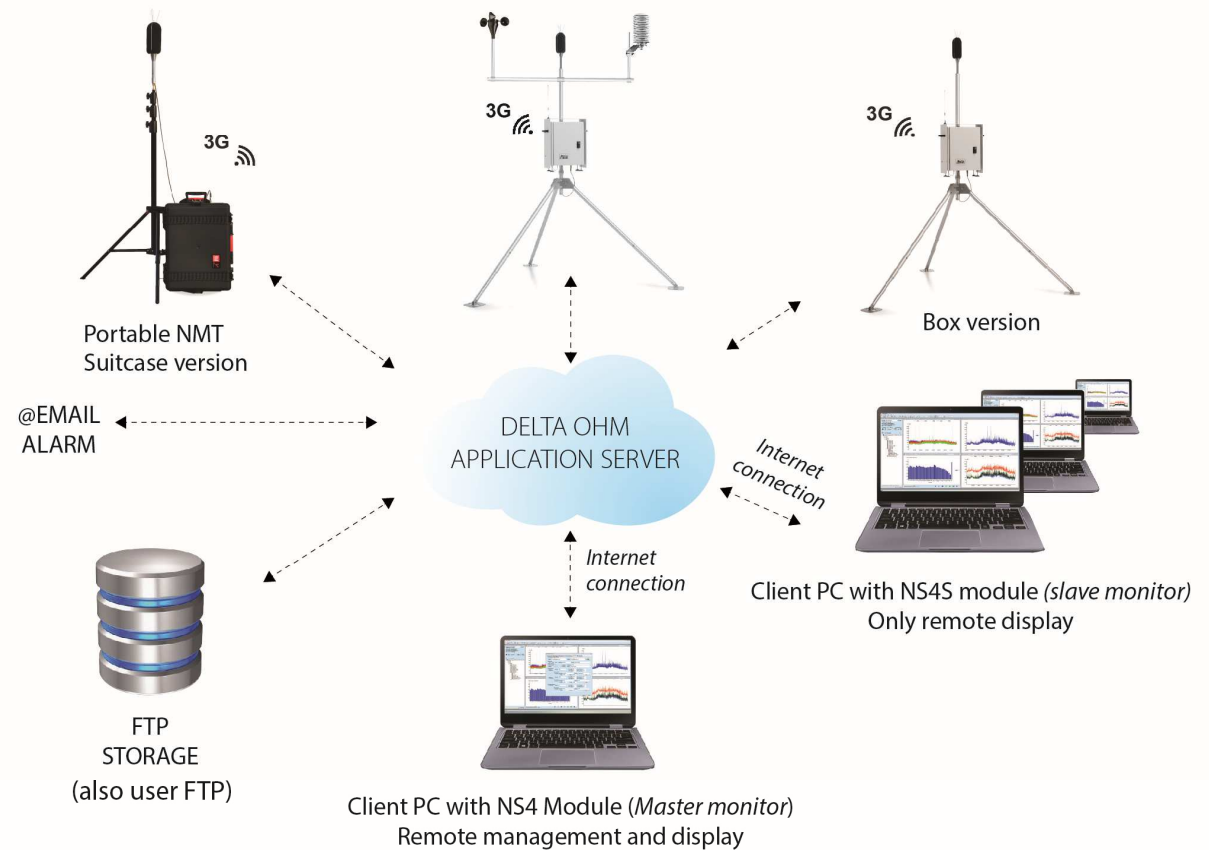
- Any NS4 client having an internet connection

STORAGE

- On Delta Ohm FTP (200MB included storage space) or on customer's FTP

COMMUNICATION

- 3G/TCP-IP with integrated modem.

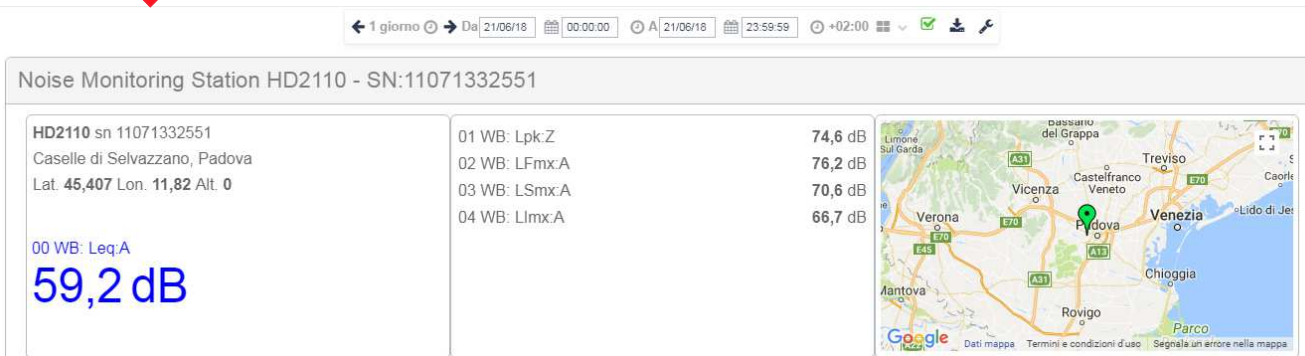
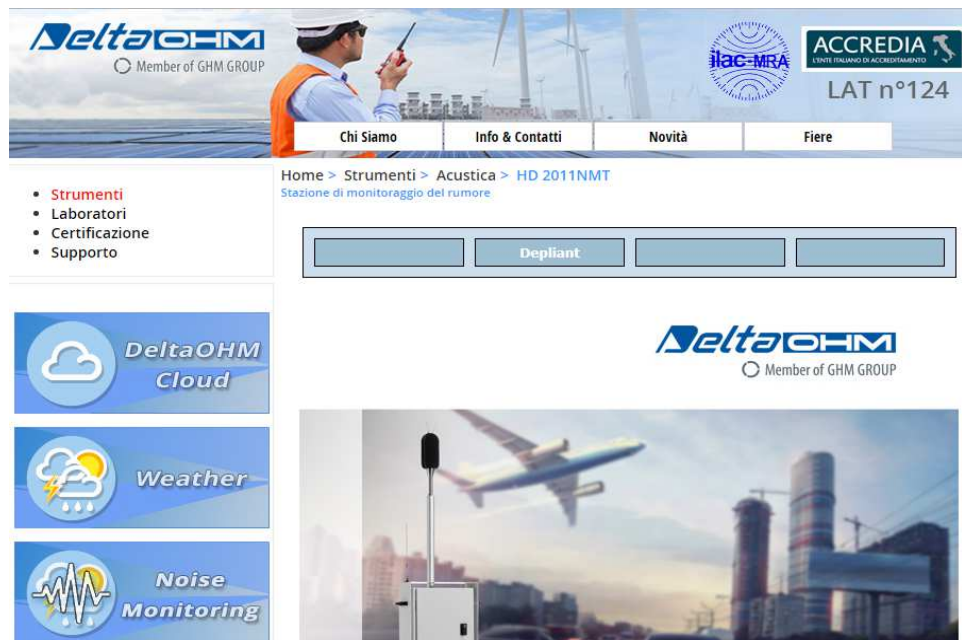


CLOUD INTERFACE

DELTA OHM CLOUD



DEMO NOISE



Delta Ohm Cloud



Delta Ohm Cloud



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HOME



RETI



STRUMENTI



UTENTI



VISUALIZZAZIONI

Strumenti e Parametri

115



	Numero Serial ▾	Etichetta	Rete	Stato		Parametro	Qualificatore	Unità di Misura	Scala	Offset	Formato
	Mostra Tutto	Mostra Tutto	Mostra Tutto	Mostra Ti ▾							
1	99999999	Stefano Device	default network	Connesso	▲						
2	18020644938	HD2X10	Fonometri famiglia HD2110	Connesso							
3	18020644937	HD2X10	Fonometri famiglia HD2110	Connesso							
4	18020644936	HD2X10	Fonometri famiglia HD2110	Attivato							
5	18020534934	HD2X10	Fonometri famiglia HD2110	Connesso							
6	18013165	HD50L1NTV with d26 Firmware in iChip	HD50 Network	Attivato							
7	18010511	HD35APG	default network	Connesso							
8	18009322	18009322	ufficio tecnico	Connesso							
9	18007479	18007479	ufficio tecnico	Connesso							
10	18002973	IT - Sala Server	Lab Network	Connesso							
11	18001621	HD50G14bNBTV	HD50 Network	Connesso							
12	17034861	17034861	Production Network	Connesso							
13	17034860	17034860	Production Network	Connesso							
14	17034859	17034859	Production Network	Connesso							
15	17034858	17034858	Production Network	Connesso							
16	17029315	HD35EDLMT + HD52	HD35 Meteo	Connesso							
17	17029206	17029206	R&D office	Attivato	▼						

Delta Ohm Cloud



Delta Ohm Cloud

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RETI

STRUMENTI

UTENTI

VISUALIZZAZIONI

Strumenti e Parametri

	Numero Seriale	Etichetta	Rete	Stato	Parametro	Qualificatore	Unità di Misura	Scala	Offset	Formato
	Mostra Tutto	hd2x	Mostra Tutto	Mostra Tu	<input checked="" type="checkbox"/> 00 WB: Leq:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 00 WB: Lpk:C	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 01 WB: LFmx:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 01 WB: Leq:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 01 WB: Leq:C	2 - 0	dB	0.1	0.0	3.1
					<input checked="" type="checkbox"/> 01 WB: Lpk:C	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 01 WB: Lpk:Z	2 - 0	dB	0.1	0.0	3.1
					<input checked="" type="checkbox"/> 02 WB: LFmx:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 02 WB: LSmx:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 02 WB: Leq:Z	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 03 WB: LFmx:A	2 - 0	dB	0.1	0.0	3.1
					<input checked="" type="checkbox"/> 03 WB: LImx:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 03 WB: LSmn:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 03 WB: LSmx:A	2 - 0	dB	0.1	0.0	3.1
					<input type="checkbox"/> 04 WB: LImx:A	2 - 0	dB	0.1	0.0	3.1

Visualizza Aggiorna Seleziona ...

Delta Ohm Cloud



Delta Ohm Cloud


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HOME


RETI


STRUMENTI


UTENTI


VISUALIZZAZIONI

Strumenti e Parametri

Visualizza 12072532915 ×

← 1 giorno → Da 21/06/18 00:00:00 A 21/06/18 23:59:59 +02:00    

00 WB: Leq:A [2]

