

Sound level meter

DB 200



I -	.....	5
II -	.....	6
III -	.....	7
III-1	.....	7
III-2	.....	8
IV -	.....	9
IV-1	.....	9
IV-2 I/O.....	.....	9
IV-3 /	.....	10
IV-4	.....	10
IV-5	.....	10
IV-6 About.....	.....	11
V -	.....	11
V-1	.....	11
V 1-1	.....	11
V 1-2	.....	11
V 1-3	.....	11
V-2	.....	12
V 2-1	.....	12
V 2-2	.....	12
V 2-3	.....	12
V 2-4	.....	13
V 2-5	.....	13
V-3	.....	14
V 3-1	.....	14
V 3-2	.....	14
V 3-3	.....	14
V 3-4	.....	15
V 3-5	.....	15
V-4	.....	16
V 4-1	.....	16
V 4-2	.....	16
V 4-3	.....	16
V 4-4	.....	17
V 4-5	.....	17
V-5	.....	18
V 5-1	.....	18
V 5-2	.....	18
V 5-3	.....	19
V-6	.....	19
V 6-1	.....	20
V 6-2	.....	20
V 6-2	.....	20
V-7	I/O	21
V 7-1 I/O	.....	21

VI -	22
VI-1	22
VI-2	22
VI 2-1 L - St	22
VI 2-2 L - Leq	23
VI 2-3 Leq - St	24
VI 2-4 S1 + S2	24
VII - PC	25
VIII -	25
IX -	26
IX-1	26
IX-2	26
IX-3	26
IX-4	28
IX-5	28
IX-6	28
IX-7	28
IX-8	28
IX-9	28
X -	29
X-1	29
X-2	29
XI -	30
XI-1	30
XI 1-1 Sheet.....	30
XI 1-2 , 0°	30
XI-2	30
XI-3	31
XI-4 A-C-Z 가	31
XI-5 Metrology.....	32
XI 5-1	32
XI-6	33
XI 6-1 I/O	33
XI 6-2 / /	33
XI-7	34
XI-8	34
XII -	35
XII-1	35
XII-1	35
XIII - LDB200 Software.....	35

| -

DB200

DB200
LDB200

LCD

5가

- Mode 1 : (See p.11)
- Mode 2 : (See p.12)
- Mode 3 : (See p.14)
- Mode 4 : (See p.16)
- Mode 5 : 2 (See p.18)

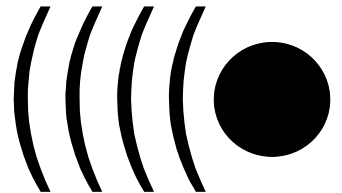
DB200

- : , ,
- : ,
- : ,
- : , 가

I/O

- 0-10V DC
-
-

가 :



|| -

L :
 L-St :
 L-Leq :
 L-St :
 S1+S2 : 2

LXeq : X-가 가
 LXeqM : X-가 가
 LXeqm : X-가 가
 LXE : X-가
 LXY : X-가 ; 가 :Y
 LXYmax : X-가 ; 가 :Y
 LXYmin : X-가 ; 가 :Y
 LUpK : U-가
 Echant. :
 DI : 가 가 :

X : 가 : A,C Z (L, Leq, LE)
 U : 가 : C Z (Lpk)
 Y : 가 : (F) : Fast, (S) : Slow, (I) : Impulse

Man :
 I/O : I/O
 SXX : , 25
 RST : ,
 Sto. :
 S1 : 가
 S2 : 가
 S1+S2 : : 가
 00/00:00:00 : (/ : :)
 00/00:00 : (/ :)
 00:00:00 : (: :)
 18/11 :
 00:00 : (:)
 Pond. : A, C Z 가
 Cte : 가 : Fast-Slow-Impulse
 S/S : : /
 C.Cl :
 Corr. :

L01 - L10 - L50 - L90 - L95 : ,

DB200 sound level meter

III -

III 1 -



LCD : 240 X 160
, 16 /



: 8

/ 가

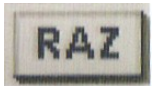
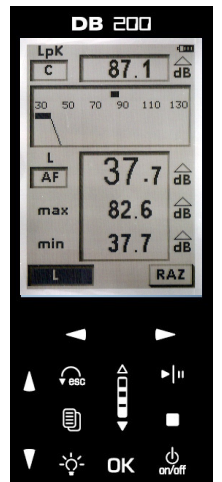
III 2 - -

/

- 가 : Slow, fast or Impulse.
- 가 : A, C or Z.
- 가 : L, L-St, L-Leq or Leq-St.

3D

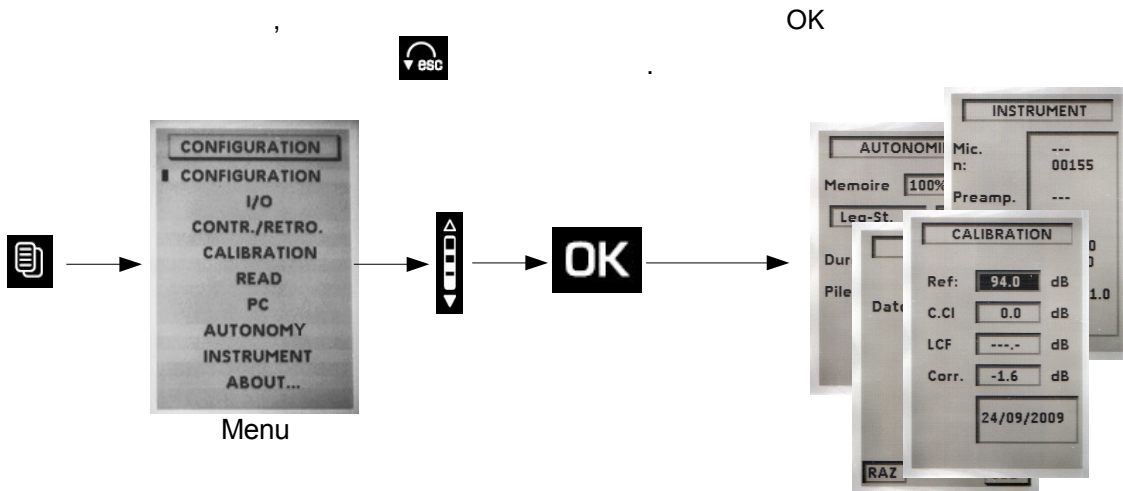
- :
- :
- :



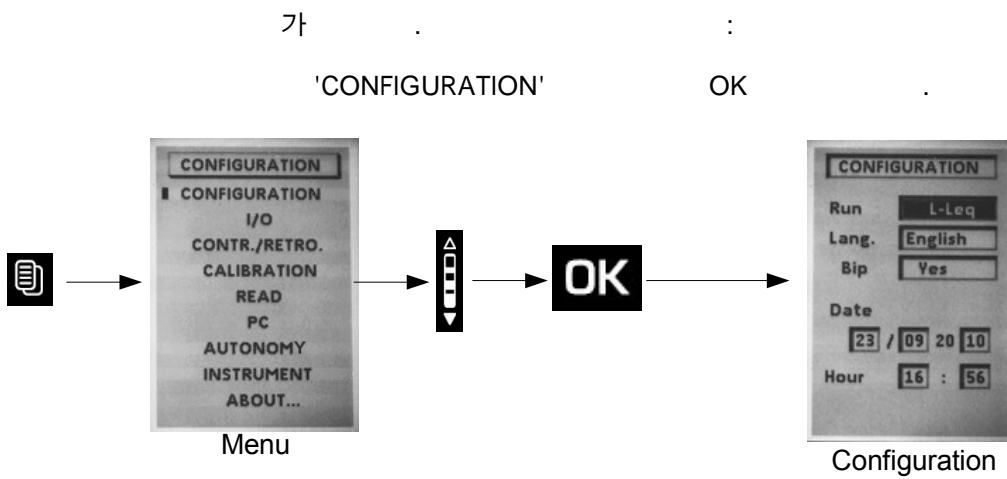
ON / OFF

ON / OFF

IV -



IV 1 -



- Run : : L, L-St, L-Leq, Leq-St or S1+S2.
- Lang. : : French or English.
- Bip :
- Date / Hour :

가

IV 2 - I/O

I/O 2.5mm

I/O 1 L-St, L-Leq Leq-St

I/O 1

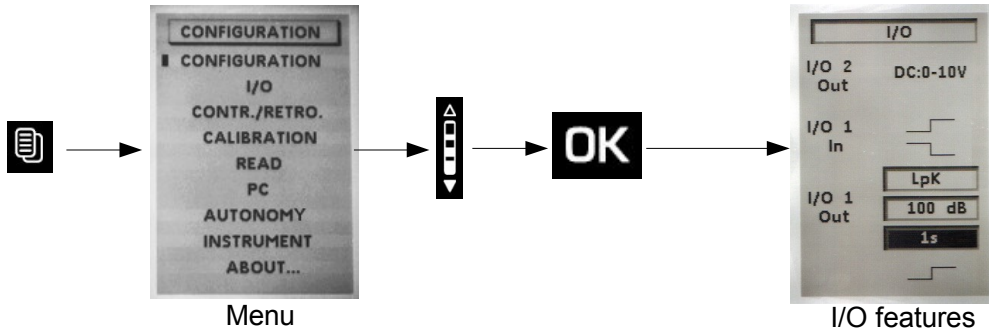
가

- : L, Leq, LPK
- : 1dB
- :

(1s 1s 10s)

I/O 2 : DC

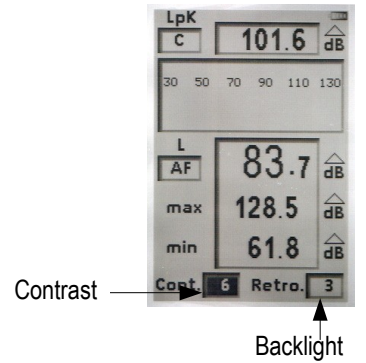
0-10V



IV 3 - /

가 :

- Cont. 1 7
- Back.L 1 3

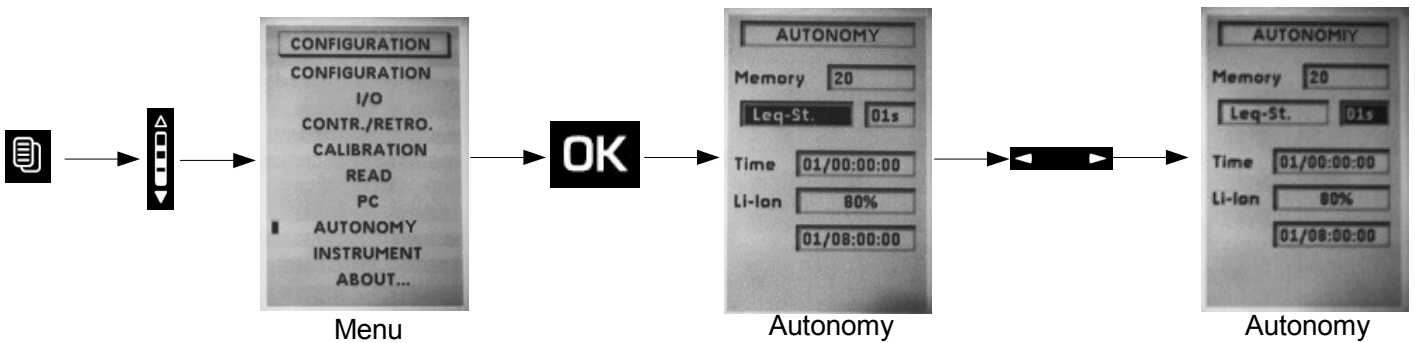


IV 4 -

가

- L-St Leq-St

가 : AC

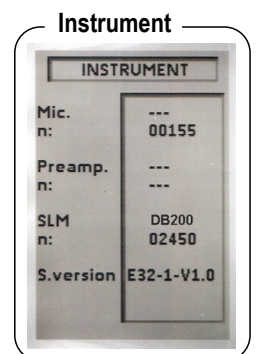


IV 5 -

DB200

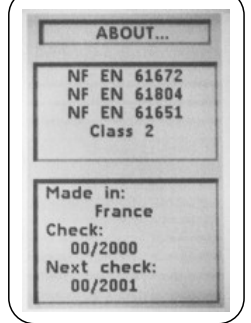
-
-
-

:



IV 6 - About

About



V -

V 1 -

- 가
-
-

V 1-1

1 - L mode : 1 'L'

2 - 가 가 : Fast (F) - Slow (S) - Impulse (I)

A 가 : LAF - LAS - LAI

C 가 : LCF - LCS - LCI

Z 가 : LZF - LZS - LZI

2

3 - 가 : 3

V 1-2

V 1-3

, 2가 :

-
-

RST : OK

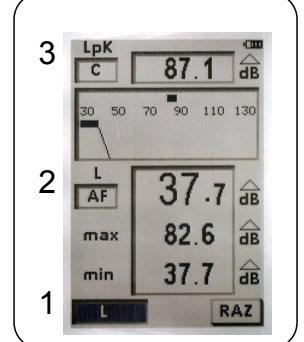
- LAF
-
-



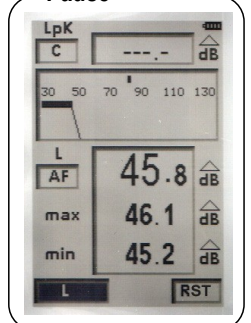
RAZ activation



Procedure



Pause



NOTE 가

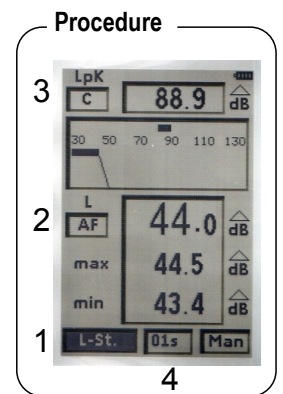
V 2 -

- 가
-
-

가 :
1s, 2s, 3s, 5s, 10s, 15s, 30s, 60s.

V 2-1

- 1 - L-St mode : 1 'L-St'
- 2 - 가 가 : Fast (F) - Slow (S) - Impulse (I)
- A 가 : LAF - LAS - LAI
- C 가 : LCF - LCS - LCI
- Z 가 : LZF - LZS - LZI



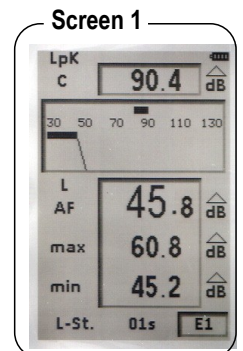
- 2
- 3 - 가 : 3
- 4 - : 4
1s, 2s, 3s, 5s, 10s, 15s, 30s, 60s

V 2-2

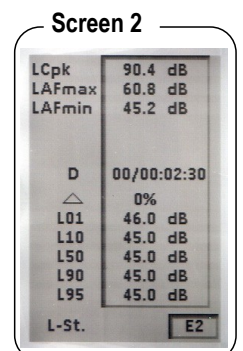
I/O : : p.21 < Launching a measurement in I/O mode >

V 2-3

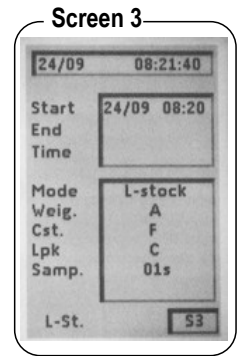
3가
S1 :



- S2 :
- LUpk :
- LXYmax : 가
- LXYmin : 가
- D : (DD/HH:MM:SS)
- % :
- : L01 - L10 - L50 - L90 - L95.



- S3 :
- Start :
 - End :
 - Time :
 - Mode : (L-Stock)
 - Weig. : 가 (A)
 - Cst : 가 (F)
 - Lpk : 가 (C)
 - Samp. : (01s)



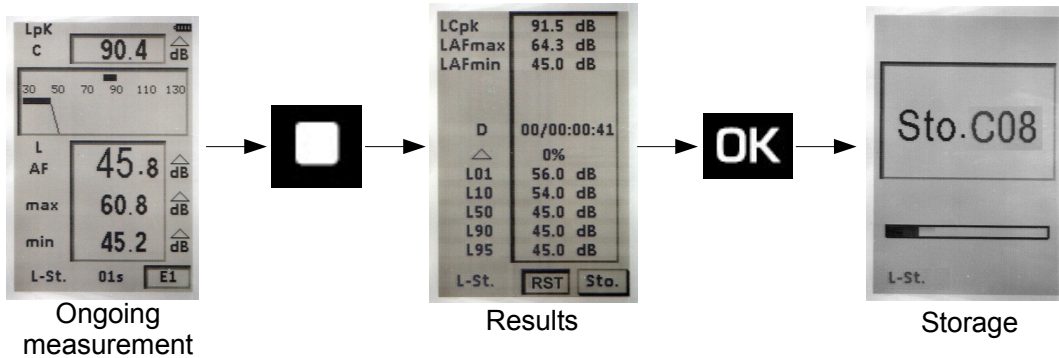
V 2-4



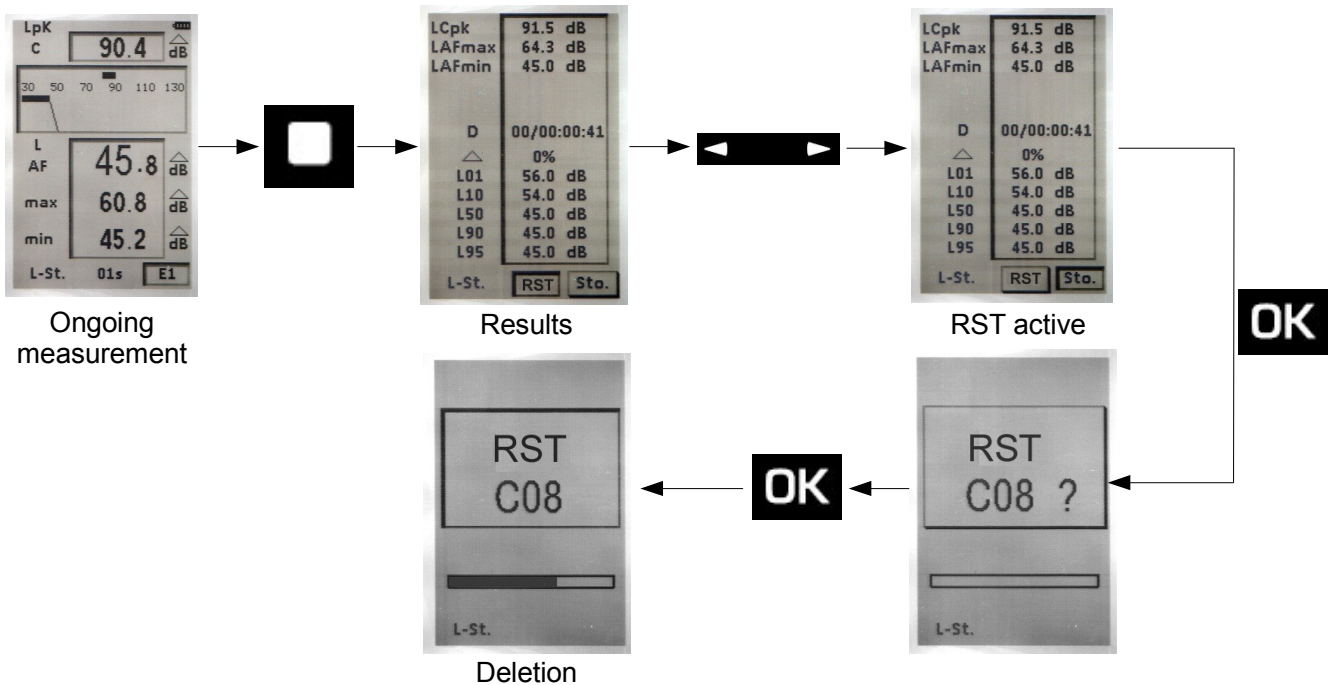
NOTE : (-) I/O (I/O)

V 2-5

- 가 : Sto. OK



- 가 : RST OK

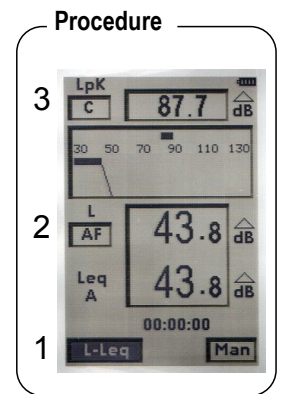


V 3 -

- LXY : 가
- LXYmax and LXYmin :
- Lupk :
- LLeq : 가 가

V 3-1

- 1 - L-Leq mode : 1 'L-Leq'
- 2 - 가 가 : Fast (F) - Slow (S) - Impulse (I)
- A 가 : LAF - LAS - LAI
- C 가 : LCF - LCS - LCI
- Z 가 : LZF - LZS - LZI



2

- 3 - 가 : 3
- C Z

V 3-2

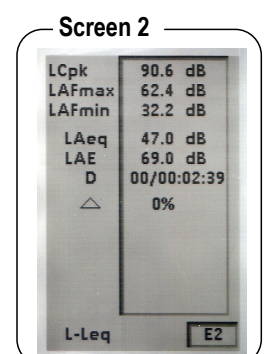
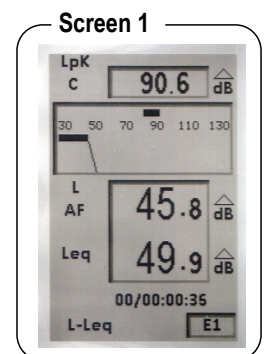
I/O : : p.21 < Launching a measurement in I/O mode >

V 3-3

3가

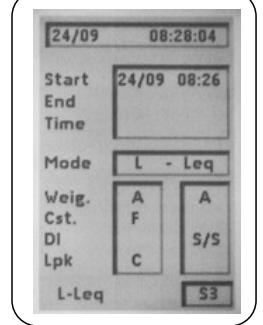
- S1 :
- LXY : 가
 - LLeq : 가 가
 - LUpk :
 - : DD / HH: MM: SS

- S2 :
- LUpk :
 - LXYmax : 가
 - LXYmin : 가
 - LLeq : 가 가
 - LXE : 가
 - D : (DD/HH:MM:SS)
 - % :



- S3 :
- ()
 - ()
 - (L-Leq)
 - L, Leq 가 : Weig.
 - L 가 : Cst
 - Leq : S/S (/)
 - L 가 : Lpk

Screen 3

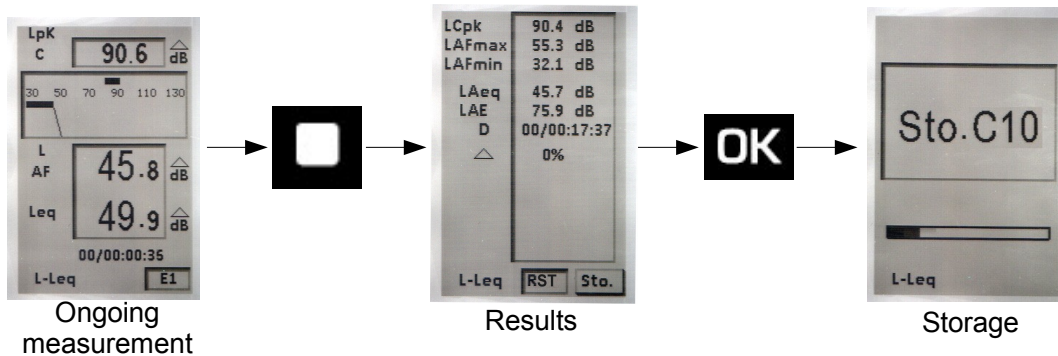


V 3-4

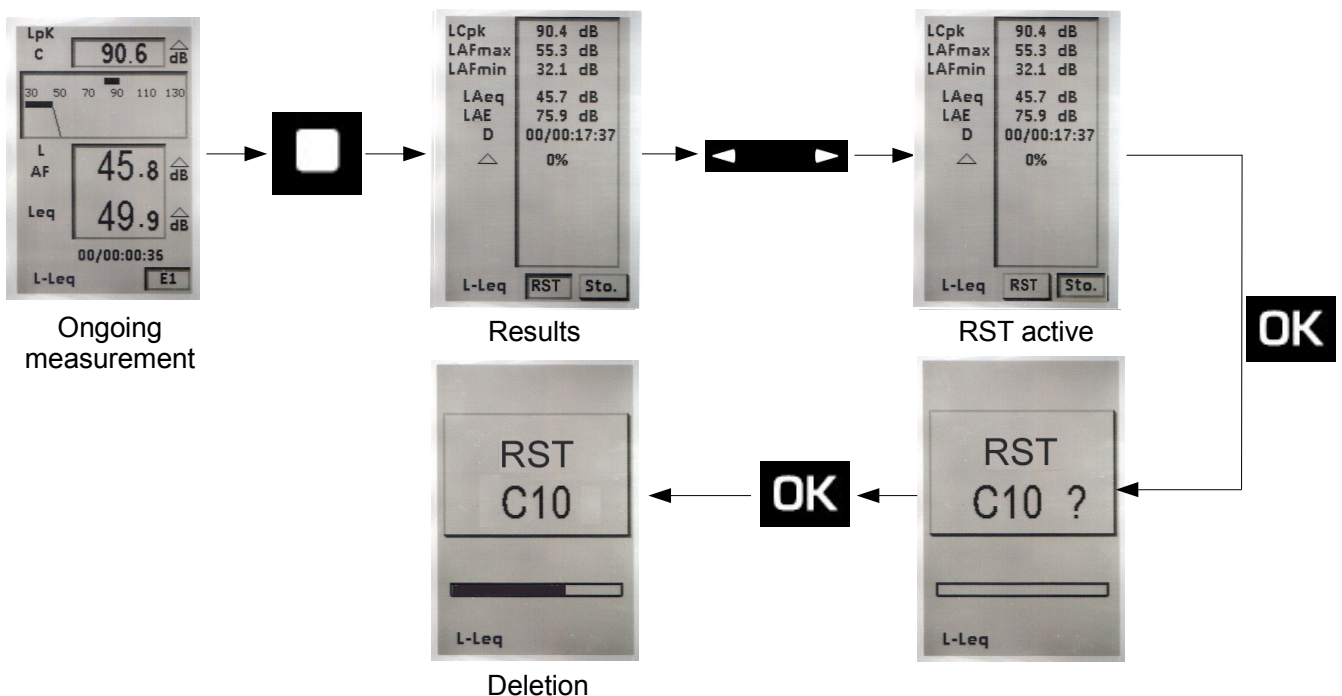


V 3-5

- : Sto. OK
- 가



- : RST OK
- 가



V 4 -

- LXeq, DI : 가 가
- LUpk :
- (DD/HH:MM:SS)

Integration time :

(DI) . 1s, 2s, 3s, 5s, 10s, 15s, 30s, 60s.

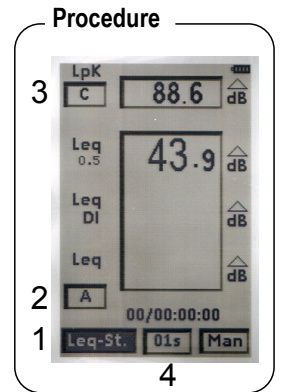


가

0.5s

V 4-1

- 1 - Leq-St mode : 1 'Leq-St'
- 2 - 가 가 : A 가 - C 가 - Z 가
2
- 3 - 가 : 3
C Z
- 4 - : 4
1s, 2s, 3s, 5s, 10s, 15s, 30s, 60s



V 4-2

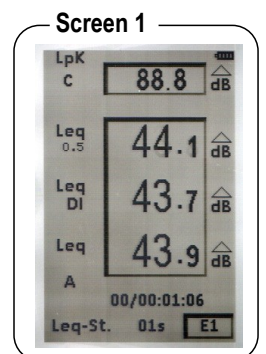


I/O : p.21 < Launching a measurement in I/O mode >

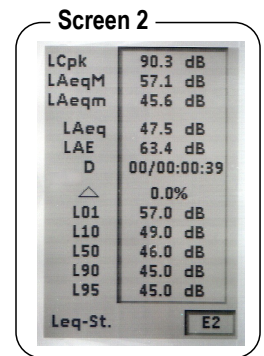
V 4-3

3가

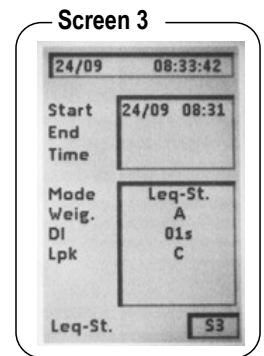
- S1 :
- LXeq0,5 : 0.5s 가 가
 - LXeqDI : 가 가
 - LUpk :
 - (DD/HH:MM:SS)



- S2 :
- LUpk : 가
 - LXeqM : 가
 - LXeqm : 가
 - LXeq : 가
 - LXE : 가
 - D : (DD/HH:MM:SS)
 - % :
 - : L01 - L10 - L50 - L90 - L95.



- S3 :
- -
 -
 - : Leq-St
 - Leq 가 : Weig.
 - Leq : DI
 - 가 : Lpk



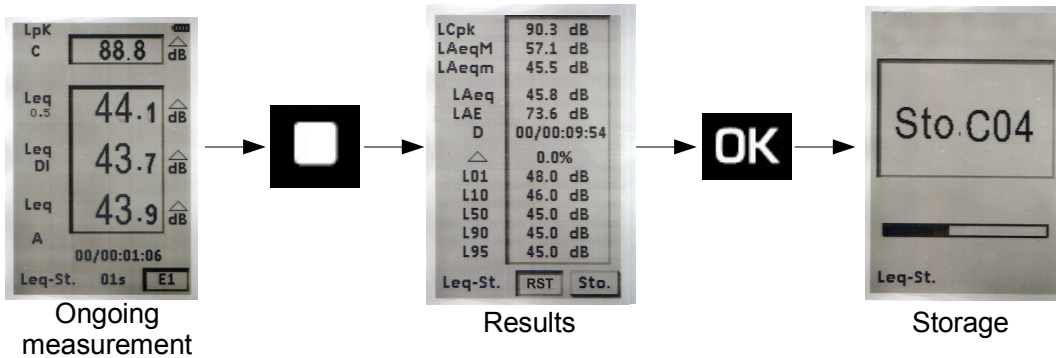
V 4-4

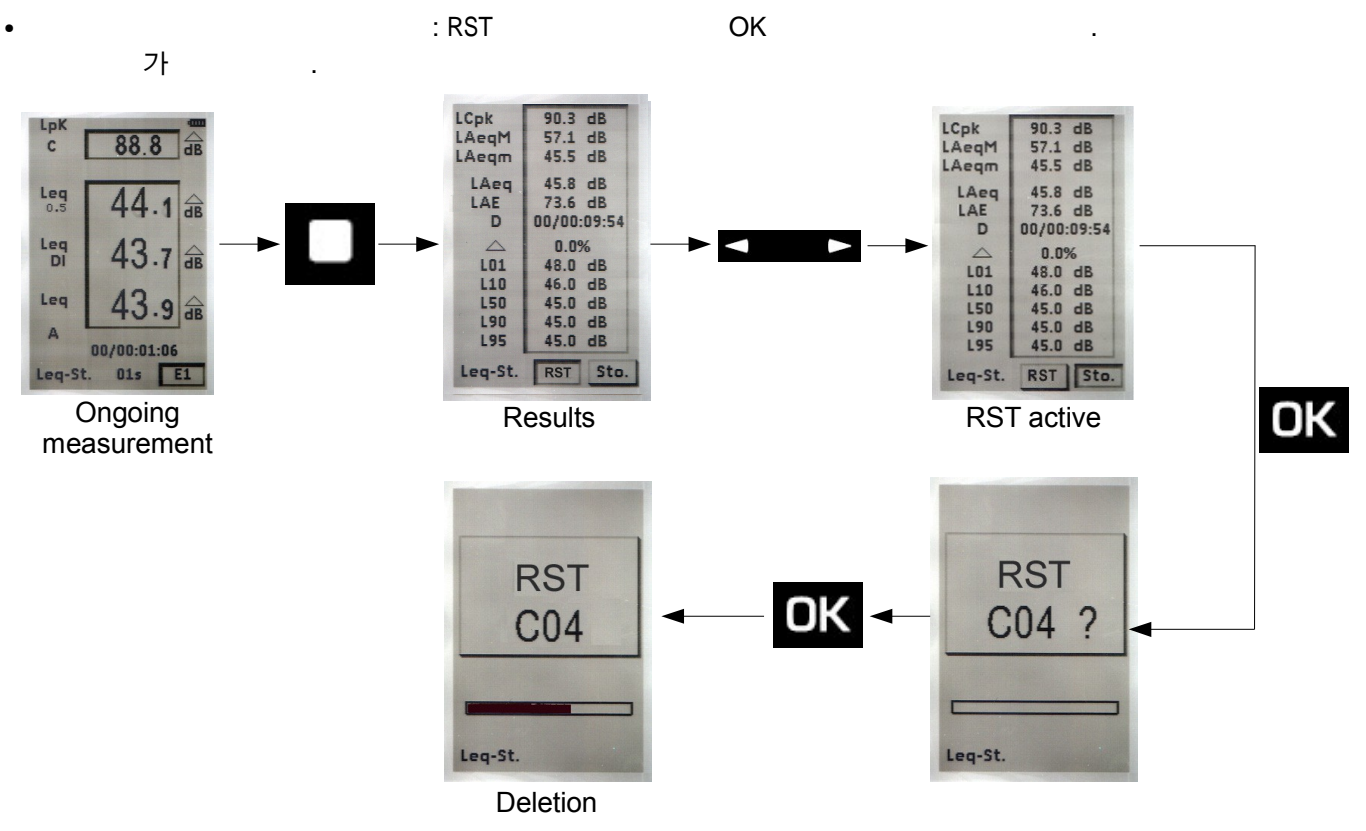


NOTE : (-) I/O (I/O)

V 4-5

- : Sto. OK
- 가





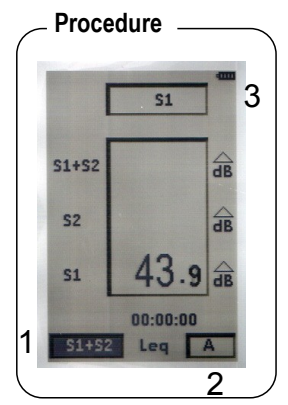
V 5 -

가 ,

V 5-1

1 - S1 + S2 mode : 1
'S1 + S2'

2- 가 : A 가 - C 가 - Z 가 (LIN)
2



V 5-2

S1 3 S1 ▶|⏸

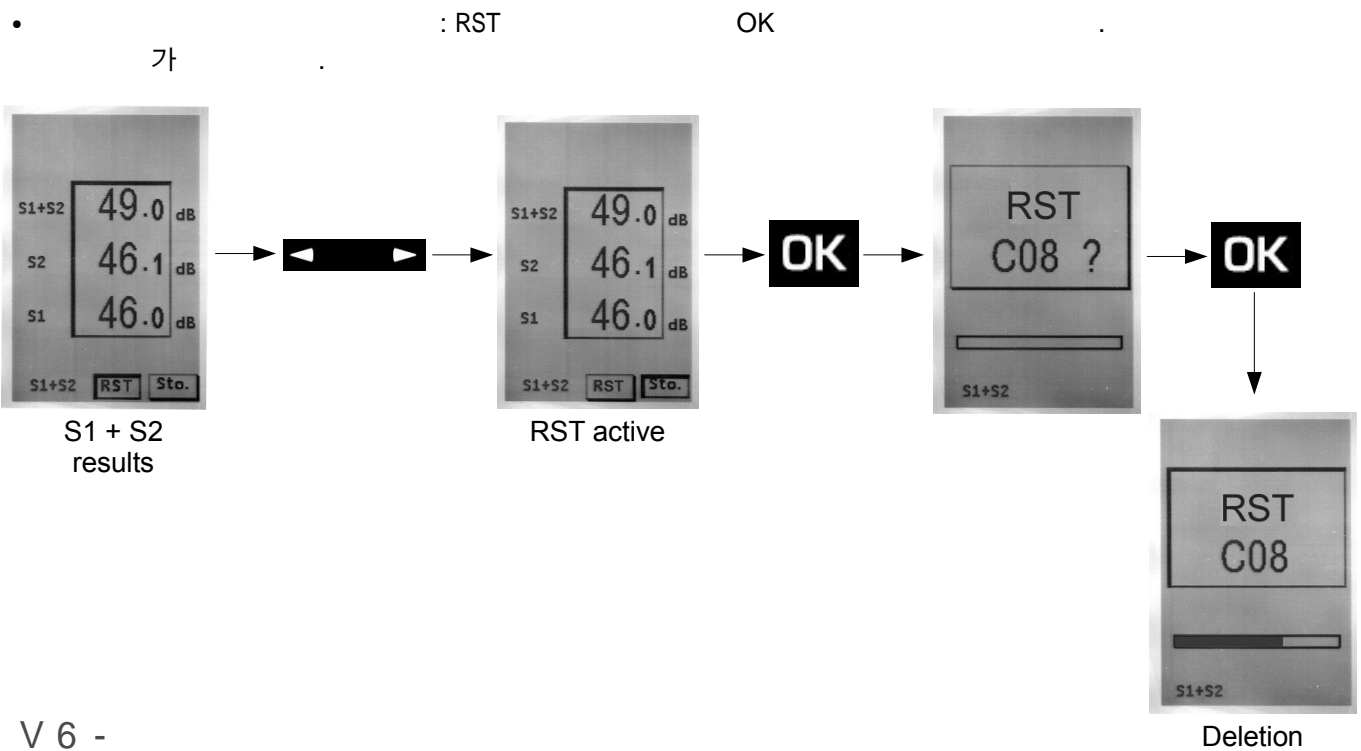
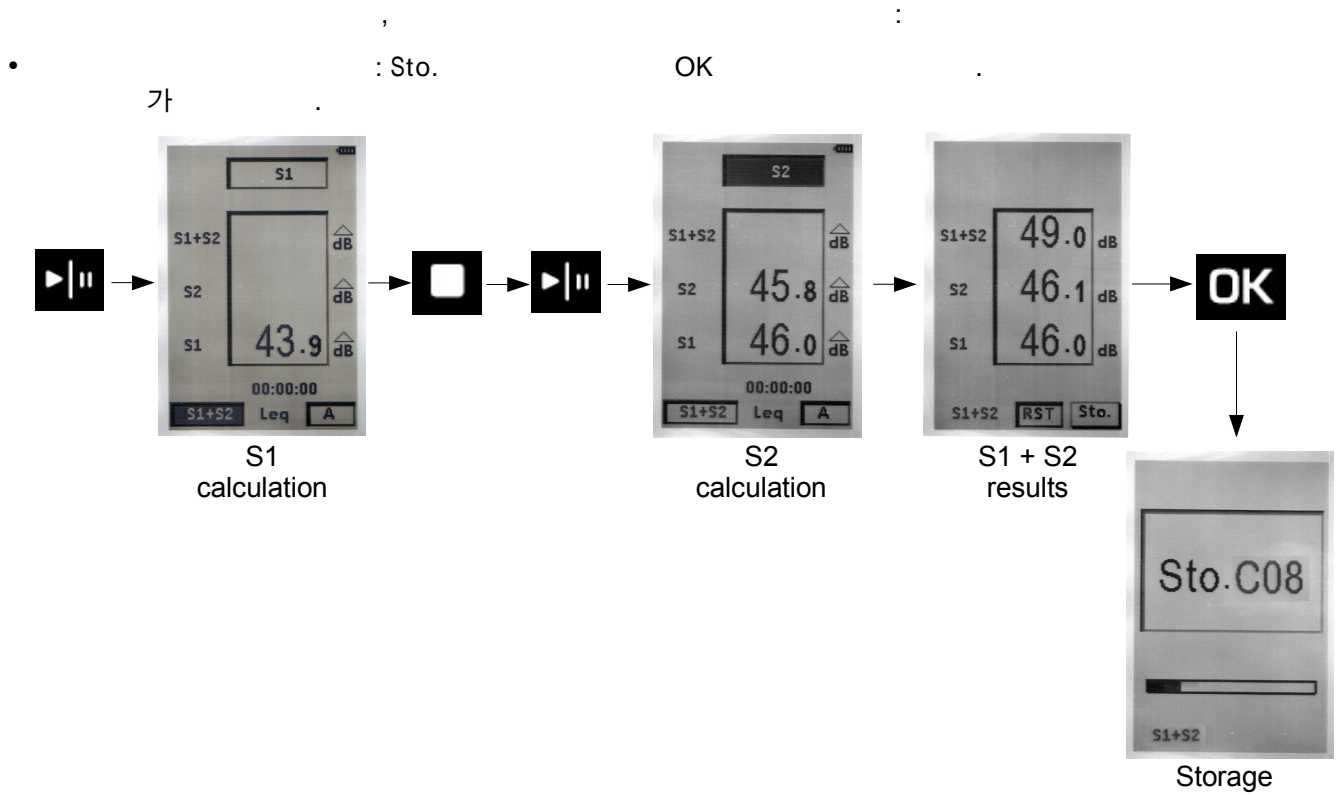
(LXeq)

S1 3 S1 ▶|⏸

S1 S2 가

가 'S1 + S2'

V 5-3



V 6 -



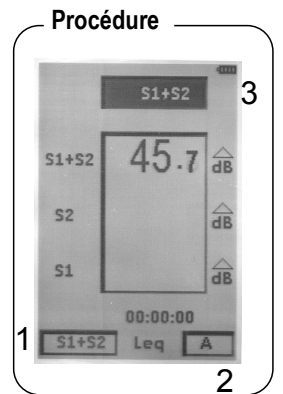
가

Example : outdoor heat pump in a background noise of day.

Estimate the sound level of a heat pump without the background noise of day, to estimate the possible nuisance of the heat pump in a noise environment less noisy as the one present the night.

V 6-1

- 1 - S1 + S2 mode : 1
- 'S1 + S2'
- 2 - 가
- 가 : A 가 - C 가 - Z 가
- 2



V 6-2

- (S1), (S2)
- (LXeq)
- S1
- S2 ()
- S1 S2 가 가 'S1 + S2'

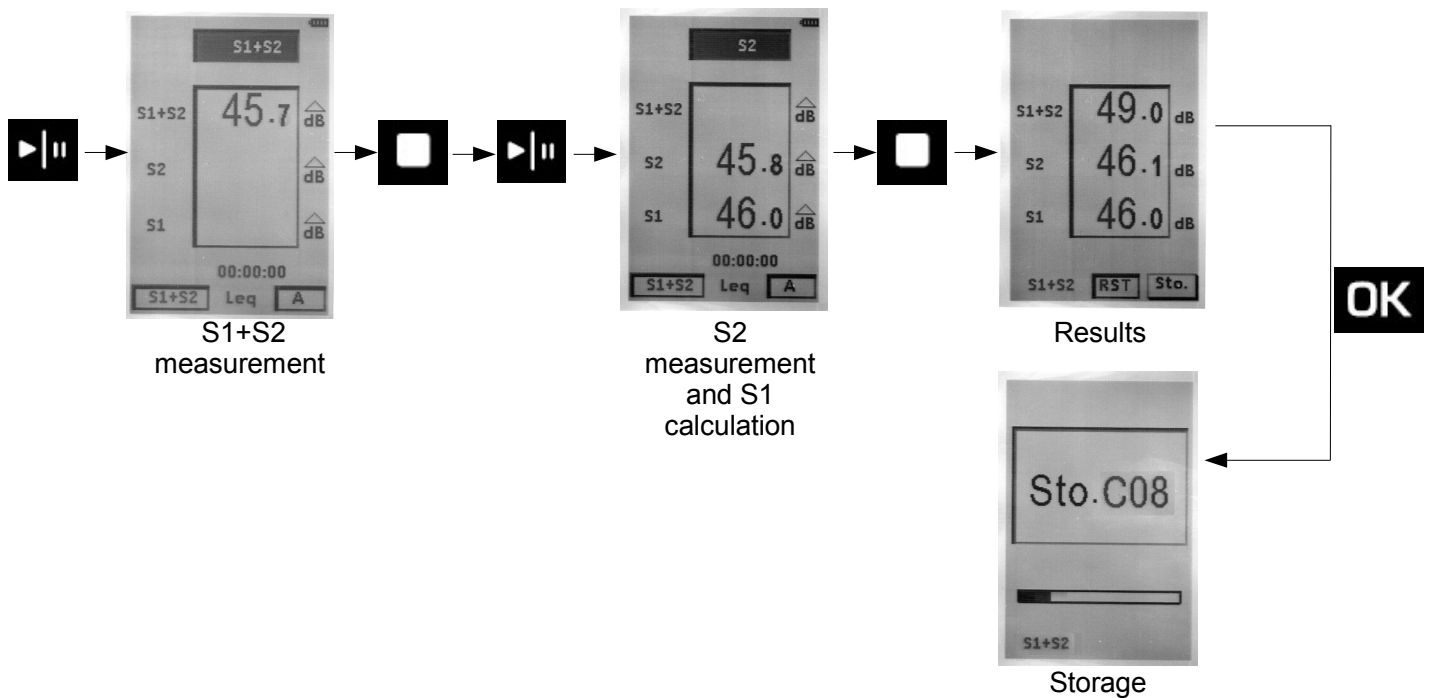
'S1 + S2'

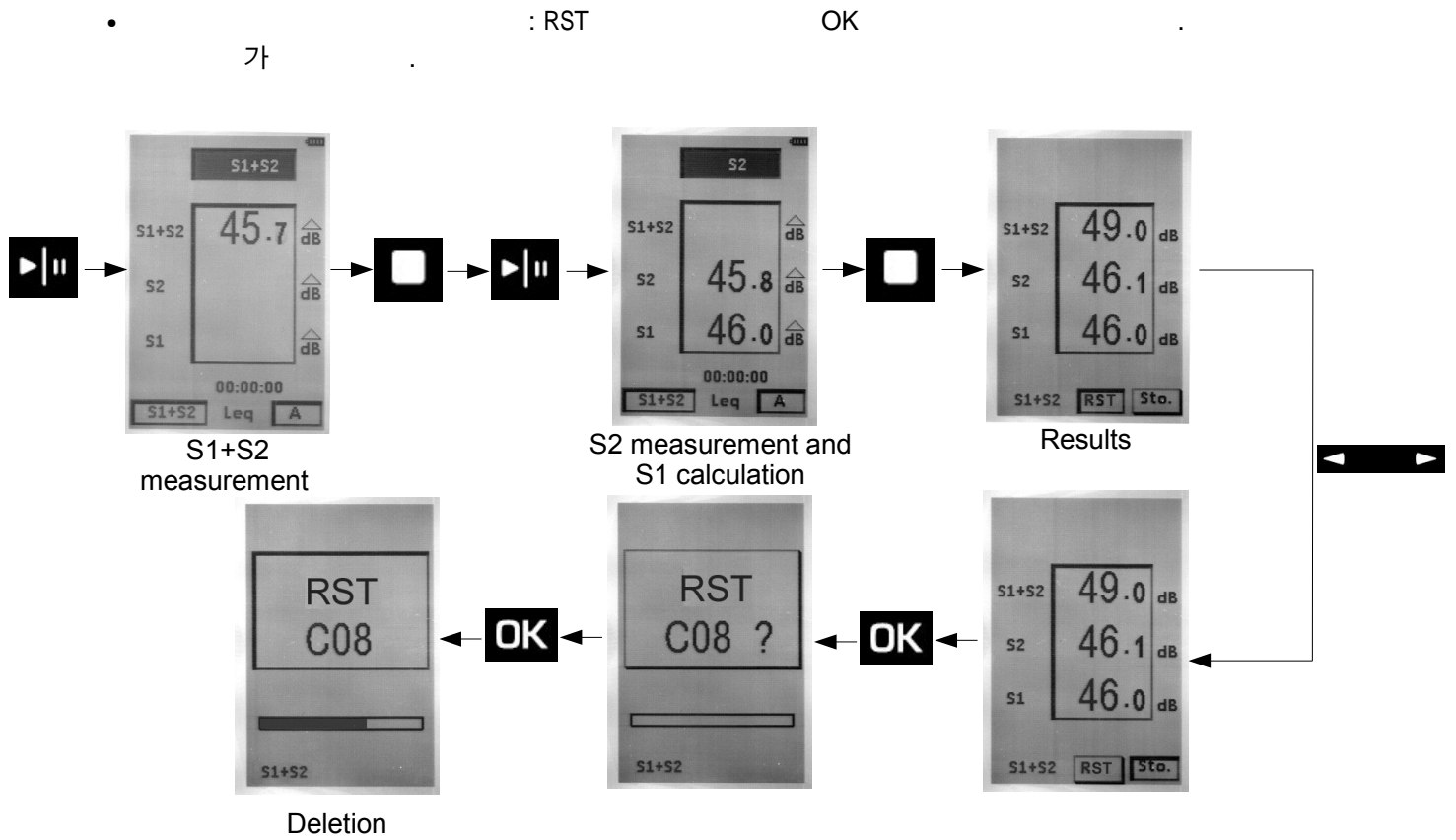


: S1 + S2 S1 , S2

V 6-3

- 가 : Sto. OK





V 7 -

I/O

가

V 7-1 I/O

L-St, L-Leq, Leq-St

I/O

• OK

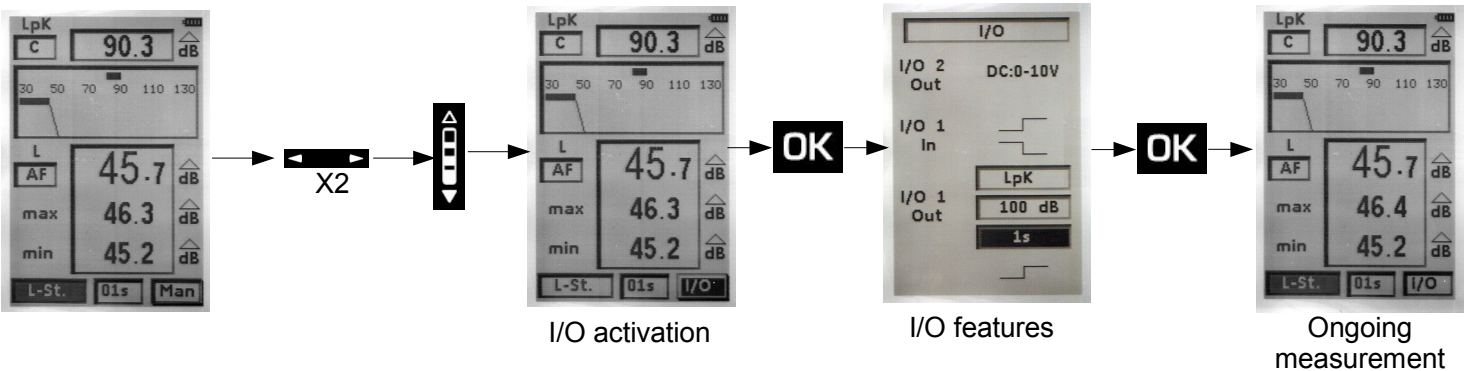
• OK

I/O

NOTE

(-) I/O

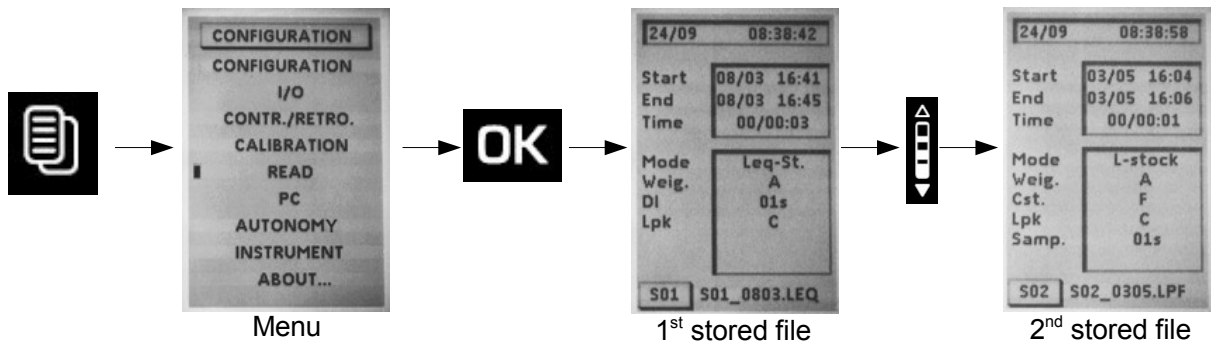
가



VI -

VI 1 -

- READ
- (C01) (S01_1811LPF)
- : L-St, L-Leq, Leq-St, S1 + S2.
- : 가 , , , ...



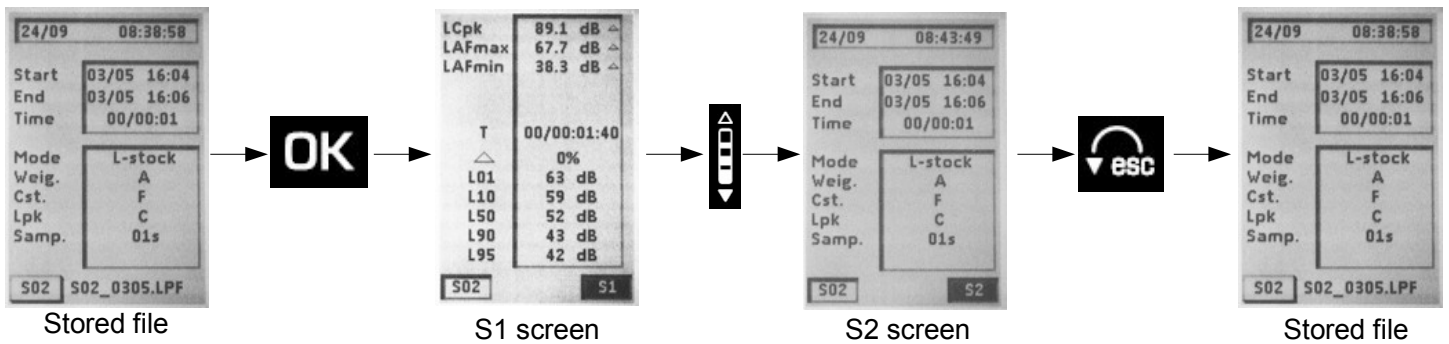
VI 2 -

VI 2-1 L - St

- > S1 'OK'
- LUpk :
 - LXYmax : 가
 - LXYmin : 가
 - D : DD/HH:MM:SS
 - % :
 - : L01 -L10 – L50- L90- L95

- > S2
- -
 - DD/HH:MM:SS
 - : L-St
 - 가 : Weig
 - 가 : Cst
 - 가 : Lpk
 - : Samp.

> ESC

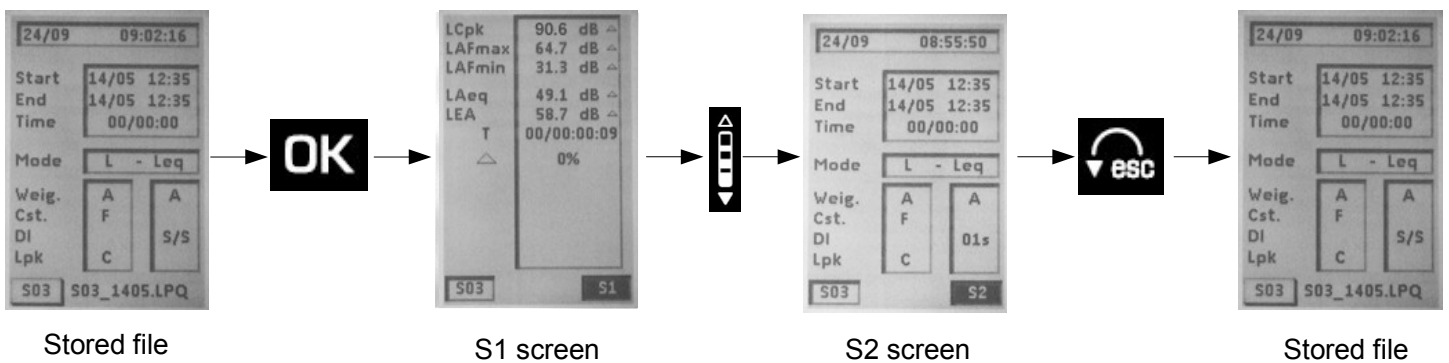


VI 2-2 L - Leq

- > S1 'OK'
- LUpk :
 - LXymax : 가
 - LXymin : 가
 - LXeq : 가 가
 - LXE : 가
 - D : DD/HH:MM:SS
 - % :

- > S2
- -
 - DD/HH:MM:SS
 - : L-Leq
 - 가 : Weig
 - 가 : Cst
 - : S/S (Start/Stop)
 - 가 : Lpk

> ESC

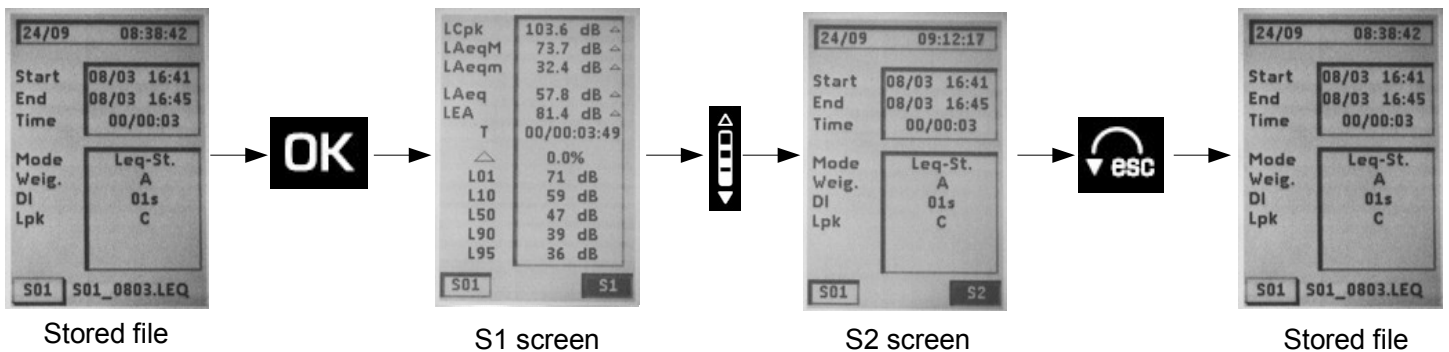


VI 2-3 Leq-St

- > S1 'OK'
- LUpk :
- LXeqM : 가
- LXeqm : 가
- LXeq : 가 가
- LXE : 가
- D : DD/HH:MM:SS
- % :
- : L01 - L10 - L50 - L90 - L95.

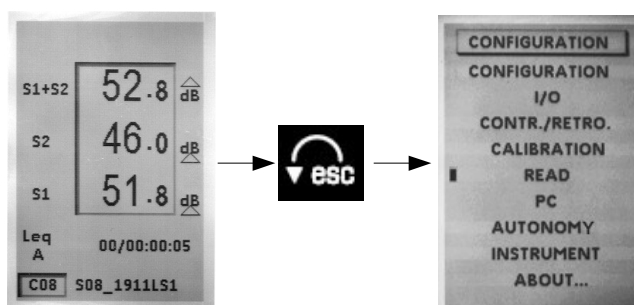
- > S2
-
-
- DD/HH:MM:SS
- : Leq-St
- 가 : Weig
- Leq : DI
- 가 : Lpk

> ESC



VI 2-3 S1 + S2

- S1 + S2 : 가
- S2 : S2 가
- S1 : S1 가
- 가 가
- 가 가
- > ESC

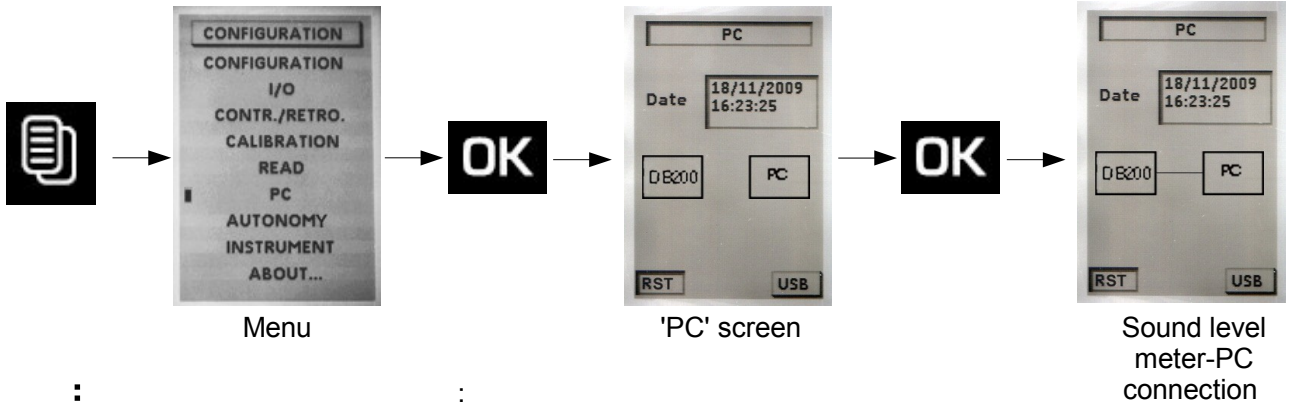


VII - PC

LDB200

USB

- USB PC OK
- PC OK
- USB PC가 OK

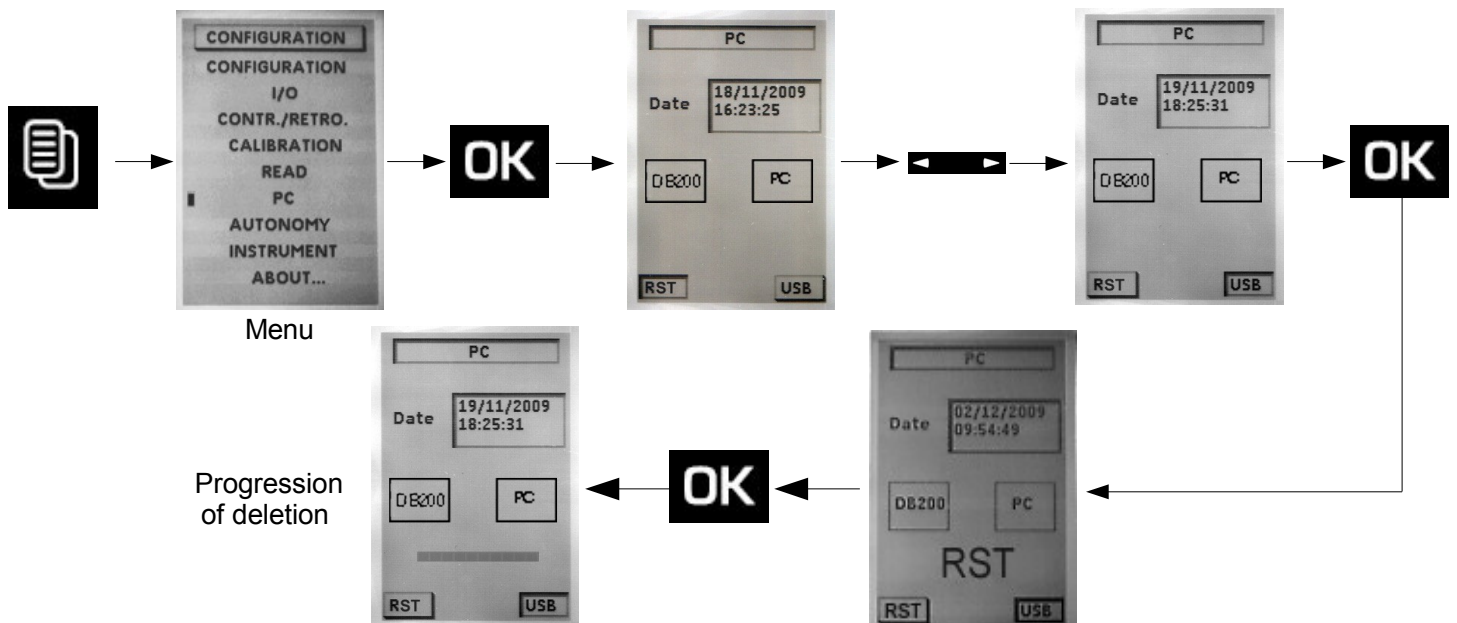


- L-St mode : S01_2409LPF
 - L-Leq mode : S05_2409LPQ
 - Leq-St mode : S03_2109LEQ
 - S1+S2 mode : S04_2409LS1
- With S01 : order number ; 2409 : day month ; LPF : extension

VIII -

- PC ()
- (LDB200)

- PC OK
- RST 가 OK
- OK 가





> ESC

IX -

IX 1 -

, 가

IX 2 -

-
-
- , (가 , , , ..)
- , 가
- CAL200

IX 2 -

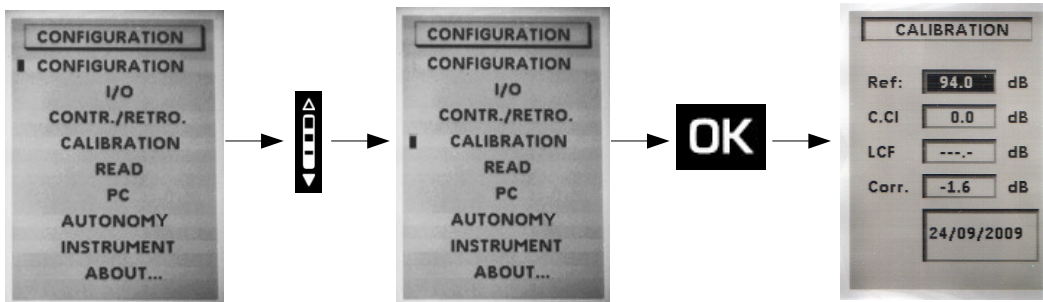
-
- 가
-
-
-
- : 94.0dB
-



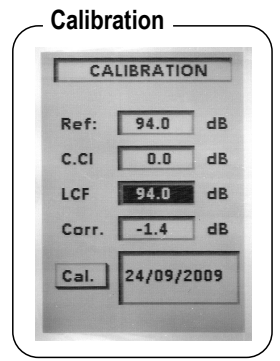
가



CALIBRATION



- Ref : 0.0dB
- (
-
- LCF
- 가 Ref LCF
- , Cal. OK
- 가



NOTE +/- 2 dB +/- 2 dB , Ref LCF가 ..)

1000Hz 94dB

가



Ref



dB

IX 4 -

가 , 가 .

IX 5 -

가 , metrological .

IX 6 -

•
•
• 1.5V / AAA-LR3 3
•

IX 7 -

30 가 가 .

•
•
•
•
•

IX 8 -

USB
USB
USB 500mA 가 .
8~10
USB :
• :
• :
• / :
• : :

IX 9 -

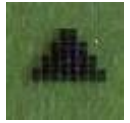
,가 AC .

,

X -

X 1 -

133.5dB, Z peak



• L and L-St modes :

- LXY : it comes fleetingly for each passing. It stays visible at least 1s for a better readability.
- LXpk :
- LXY max and LXY min :

• L-Leq mode :

- LXY : it comes fleetingly for each passing. It stays visible at least 1s for a better readability.
- LXpk et Leq :

(24)

• Leq-St Mode :

- Leq 0.5s :
- Leq, DI and LXpk :
(1 ~60)
- Leq, T :

• S1+S2 mode :

• % of presence of overloads of the input stage :

가



A LXY minimum value may have been overloaded, for example a level of 110 dBA with a high peak factor, while a LXY maximum value of 125dBA with a low peak factor can not be overloaded.

X 2 -

가

가



XI -

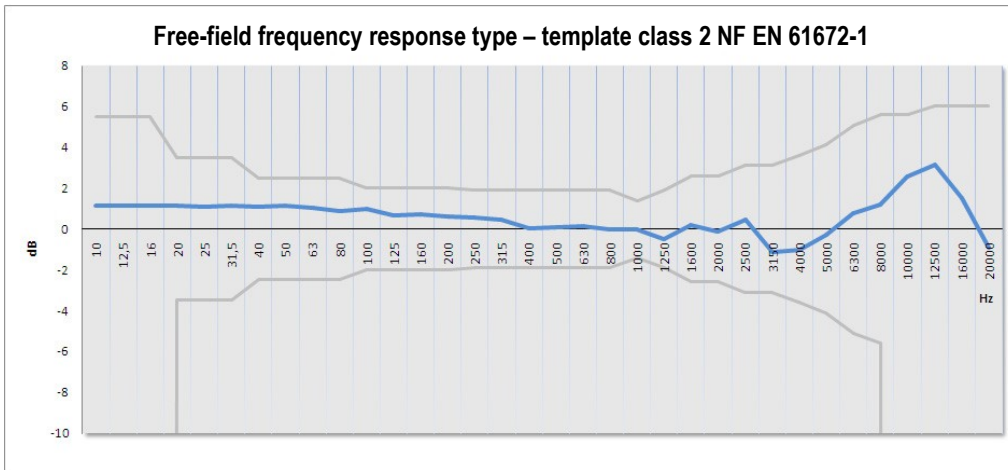
XI 1 -

1/2 가 ,
() .

XI 1 - 1 Sheet

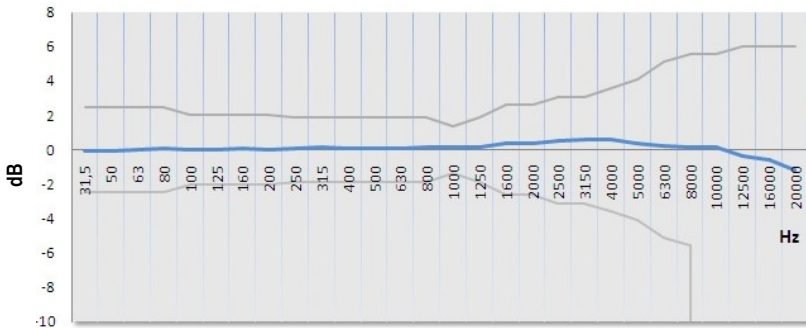
- Marque : KIMO
- Type : Prepolarized free-field 1/2"
- Grig diameter: 13.2 mm
- Preamplifier : integrated
- Power : 15 V DC
- Nominal sensitivity for preamplifier output : 50mV/Pa
- Equivalent capacity : about 10pF

XI 1 - 2 , 0°

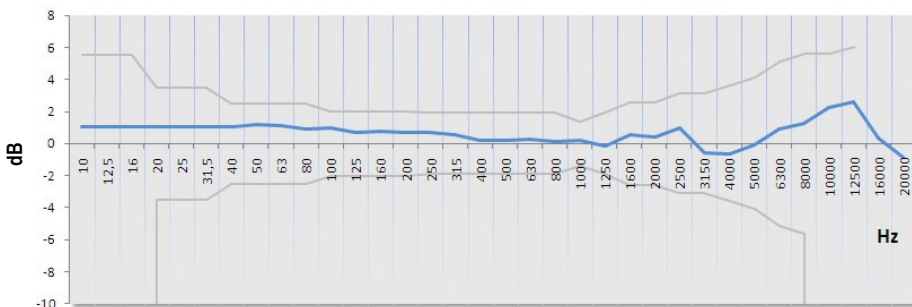


XI 2 -

B-DB23 가 가 . 2



B-DB23 free field response – template class 2 NF EN 61672-1



Free field response microphone type + B-DB23 – template class 2 EN NF 61672-1

XI 3 -

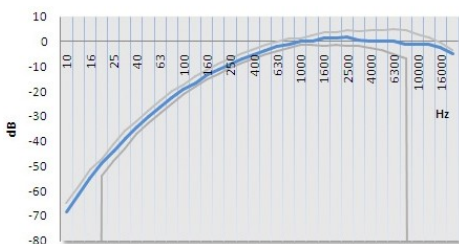
- A, C or Z - 가 가 : Slow, Fast of Impluse. E.g. : LAF.
- A, C or Z - 가 가 : Slow, Fast of Impluse.
E.g. : LAFMax
- A, C or Z - 가 가 : Slow, Fast of Impluse.
E.g. : LAFMin
- C or Z 가 . Ex : LCpk
- 가 , T A, C or Z 가 . Ex : LAeq, T ou LAT
- 가 , DI A, C or Z 가 . Ex : LAeq,DI
- 가 , DI A, C or Z 가 . Ex : LAeq, M
- 가 , DI A, C or Z 가 . Ex : LAeq, m
- 1 T A, C or Z 가 . Ex : LAE

:
:
L1 1% N% X가
, L50 50%
: L01 - L10 - L50 - L90 - L95

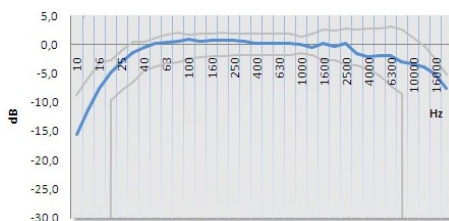
XI 4 - A-C-Z 가

/ / A,C or Z 가 ()
: NF EN 61672-1 /class 2.

:



Free field response with A weighting



Free field response with C weighting



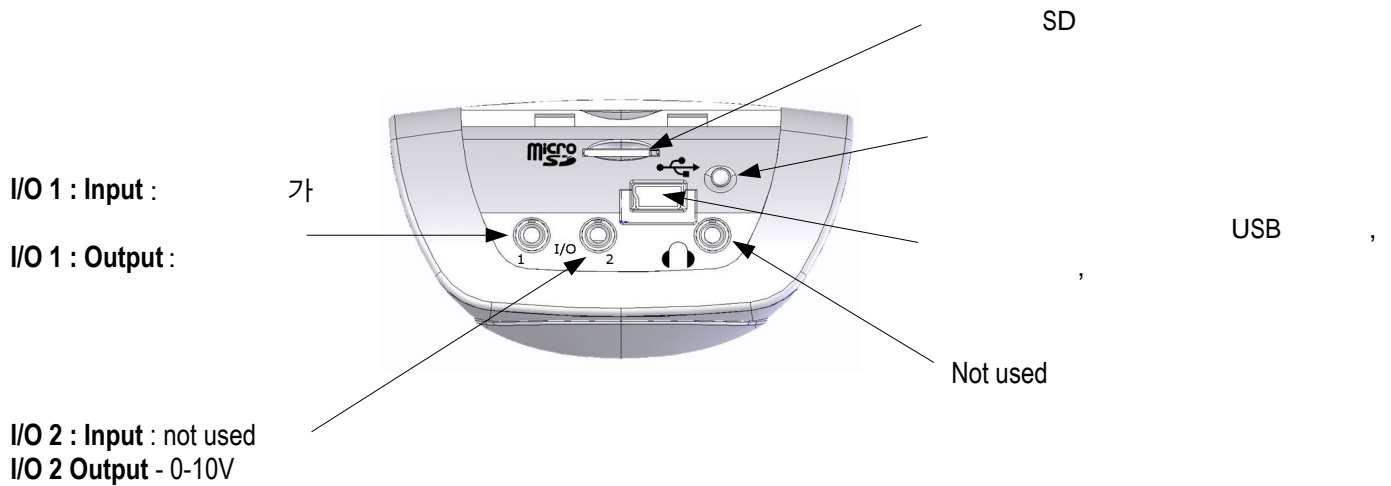
Free field response with Z weighting

XI 5 – Metrology**XI 5-1 – Main features**

DB200 sound level meter	Classical mode	Integrator – averager mode
Electromagnetical compatibility – CE mark	As per 89/336/CEE directive and product standards	
Standards	NF EN 61672-1 (2003)- NF EN 60651 (1994)	NF EN 61672-1 (2003)- NF EN 60804 (2000)
Accuracy class	2	
Reference		
Pressure level	94dB	
Frequency	1000 Hz	
Caliber	30-130 dB	
Direction	0°: microphone axis	
Measuring range		
A Weighted	30-130 dB	
C Weighted	35-130 dB	
Z Weighted	35-130 dB	
Peak channel measuring range	83-133 dB	
Resolution	0.1 dB	
Sound referred to input	Compatible with the linear range	
Frequency weighting X	A – C – Z	
Frequency weighting Y	Fast (F), Slow(S), Impulse (I)	
Overload indicator (min)	133,1 dB	
Controlled elementary integration time of LXeq for storing		1s, 2s, 3s, 5s, 10s, 15s, 30s, 60s
Sampling rate of LXY for storing	1s, 2s, 3s, 5s, 10s, 15s, 30s, 60s	
Free integration time – Start/Stop (max) order		24H00
Statistical indices LXN	Calculation based on LXY or LXeq,DI stored data, rounded up to the next dB on a dynamic of 100 dB	
Clock Accuracy	Better than 0.01 %	
Reference environment	23°C – 50% RH – 1013 hPa	
Operating environment	From -10°C to +50°C / 650 hPa to 1080 hPa / 25% to 90% FH	
Storage temperature	From 0°C to +50°C	
Dimensions (L x l x e)	270 x 70 x 40 mm	
Weight (with batteries)	280 gr	
Fixing	Fixation on the back of the instrument for tripod	

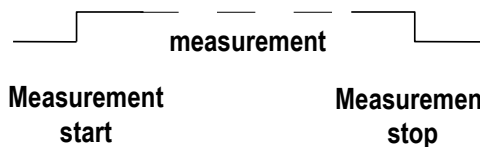
XI 6 -

- : I/O
- () /
- SD

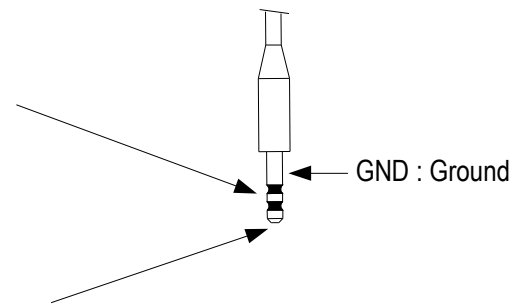


XI 6-1 I/O

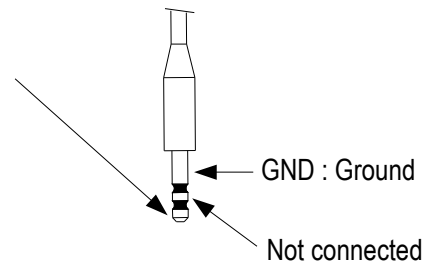
I/O 1 In - input : start-stop control for measurement :
 TTL level maximal 5V – input impedance > 15 kΩ – jack : 2,5 mm diameter



I/O 1 Out- output : to activate alarm - maintains high state after detecting a LX or planned LXeq level . Variable time selected from 1s to 10s by 1s steps.
 TTL level 3.3 V – input impedance < 100 Ω - jack : 2,5 mm diameter



I/O 2 Out : DC output : 0-10 Volts – input impedance < 100 Ω - jack : 2,5 mm diameter
 dynamic range 0-130dB
 step : 0,0769 mV/dB
 accuracy : ± 0,3dB



XI 6-2

- **Data transfer :** USB mode
- **Data Format :** proprietary

- **Mains supply – charger :** type universal USB format – ref : **AS-123**
 PRI : 100V-240V-60/50Hz – 150 mA
 SEC : 5V - 1000mA - 5VA

XI 7 -

• **Memory** : micro SD card type. , 25 86500 .

• **Capacity** : microSD Card – 1GB or 2GB

LXeq (LXY) () (1) .

Integration time or sampling rate	Maximum measurement time (in hours)	Maximum measurement time (in days)
1s	24	1
2s	48	2
3s	72	3
5s	120	5
10s	240	10
15s	360	15
30s	720	30
60s	1440	60



LDB200

가 .

XI 8 -

Measurement autonomies linked to power are given for a running at 20°C and backlight off. Beware of declining capacity of the battery or batteries for measurement at low temperature.

• **Batteries pack** : 3 alkaline batteries 1,5V – LR6/AA type

Autonomy (20°C) : 15H in continuous

• **Battery** : rechargeable Li-Ion type : 3,7 V – 4400 mAh.

Caution : Li-Ion battery is a delicate element. Take care when manipulating or storing.

Autonomy (20°C) : > 24H in continuous

• **Mains supply – charger** : type universal USB format – ref : **AS-123**

PRI : 100V – 240V - 60/50Hz – 150 mA

SEC : 5V - 1000mA - 5VA

Autonomy : unlimited, depending on memory capacity of the measurement (see table above).



PC

USB

DC 5V, 500mA

XII -

XII 1 -

(3 X LR6/AA),
가

USB , LDB200

CD-ROM,

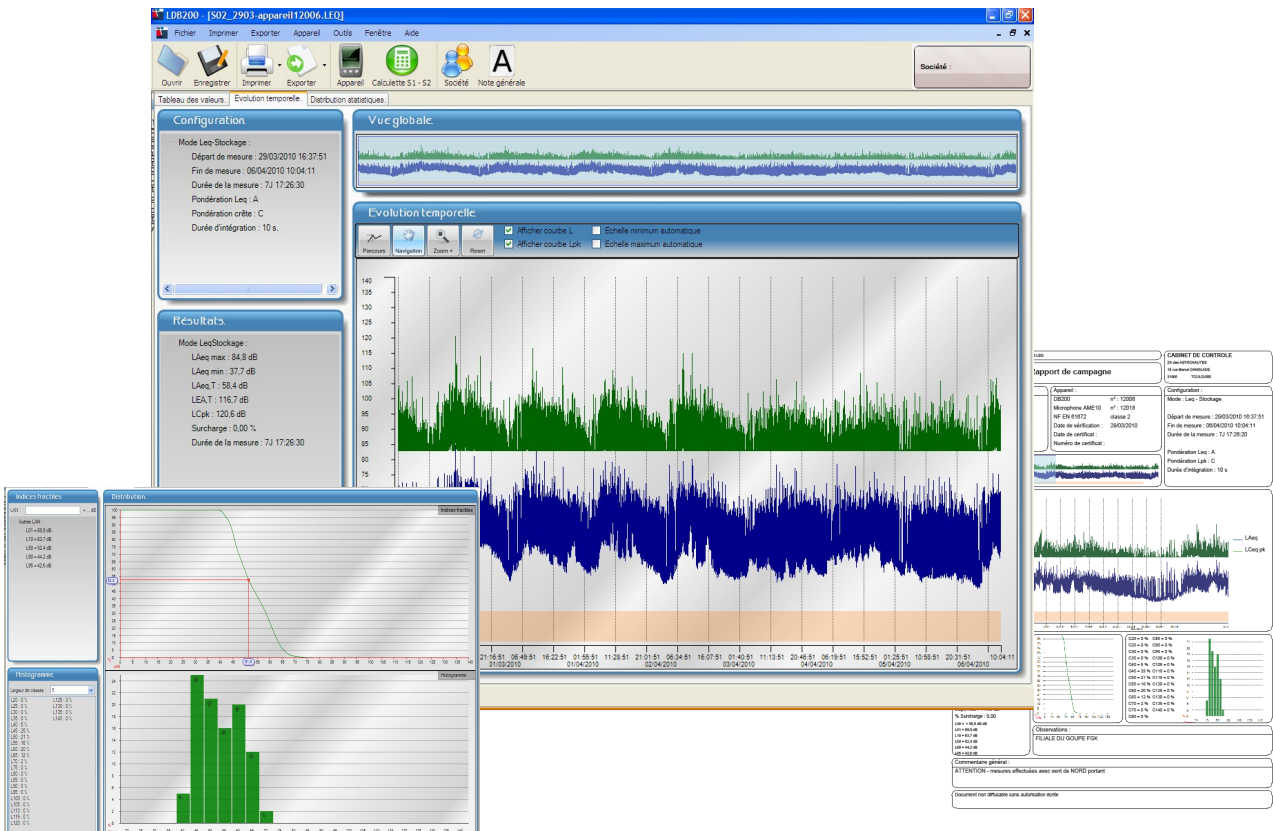
XII 2 -

- Class 2 : CAL200
- : - USB : BL-I23
- : AS-123
- : PPCX
- I/O :

XIII - LDB200 Software

LDB200

-
-
-
-
-



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