Norsonic 140 Set-up Guide & Features
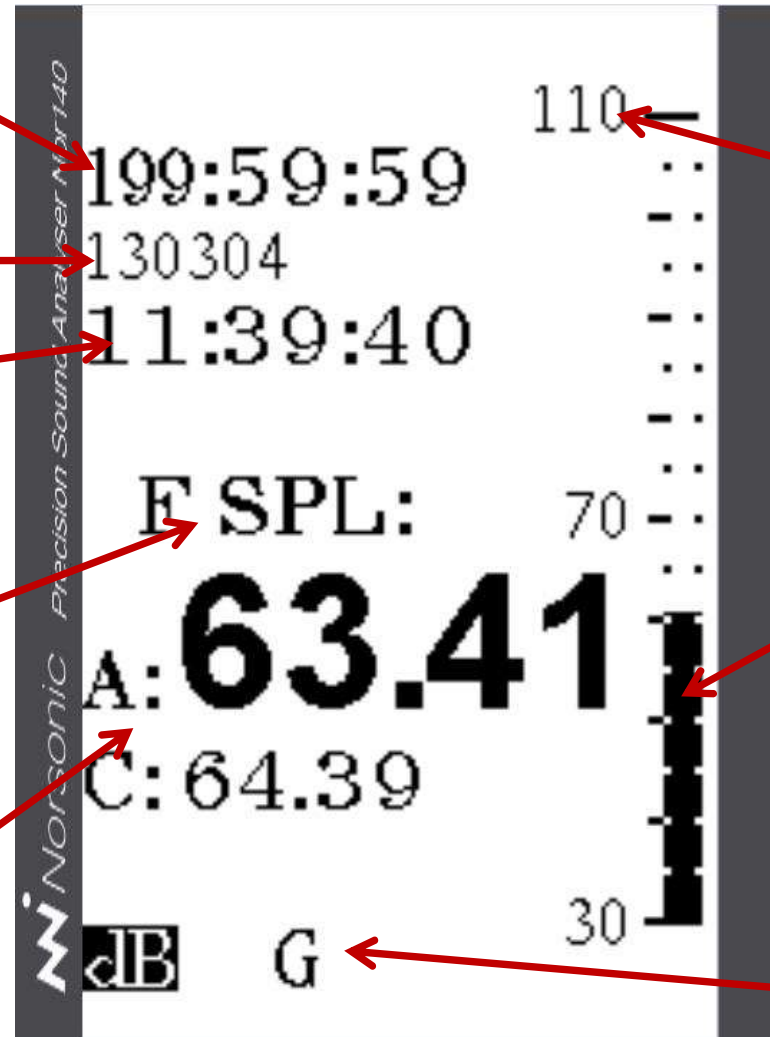
Front/Standby Screen Explained

Current Measurement Duration

Current Date

Current Time

Time Constant & Function (Currently Fast Sound Pressure Level). Adjusted using keys 8 for Time Constant and 3 to change display function

A-weighted and 2nd network Weighted readings

Display Range Values. Adjusted using inc & dec keys. Note this Does not alter the measurement Range

Graphical dB reading
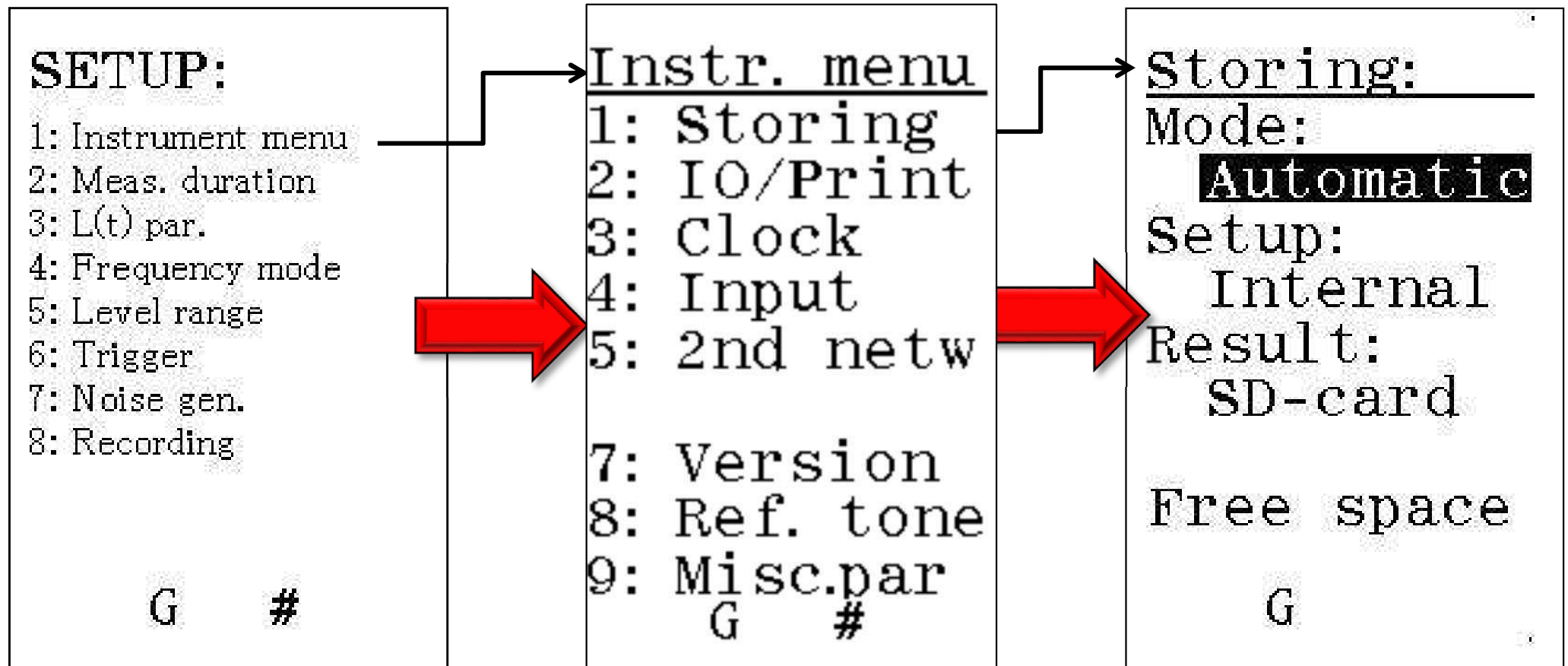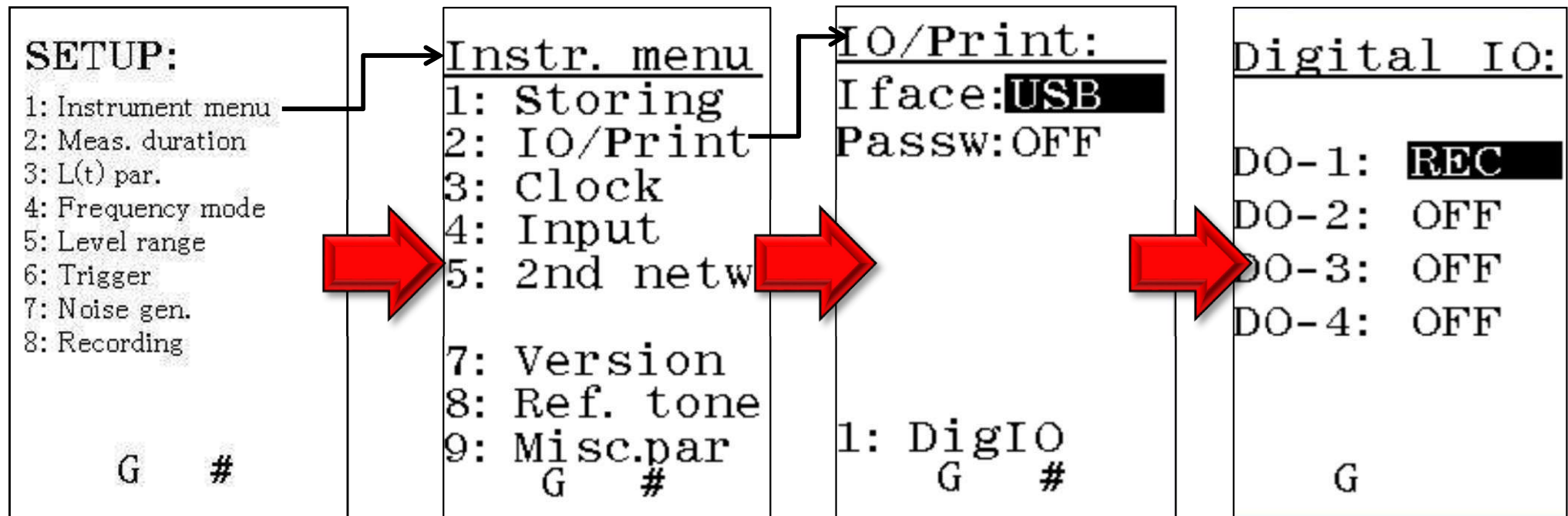
Corrections Applied (G is pre-amp)

Norsonic Precision Sound Analyser Nor140

```
199:59:59
130304
11:39:40

F SPL:

A: 63.41
C: 64.39

dB    G
```

```
110 —
    ·  ·
    —  ·
    ·  ·
    —  ·
    ·  ·
 70 — ·
    ·  ·
    ·  ·

 30
```

Screen Shots – Storing Method

```
SETUP:
1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording


      G       #
```

```
Instr. menu
1: Storing
2: IO/Print
3: Clock
4: Input
5: 2nd netw

7: Version
8: Ref. tone
9: Misc.par
       G       #
```

```
Storing:
Mode:
  Automatic
Setup:
   Internal
Result:
   SD-card

Free space

       G
```

Automatic – Automatic saving, Repeat – Repeat measurement duration and save until stopped, Syncro – Synchronise with the clock, Manual – Waits for Store/Record key to be pressed before saving.
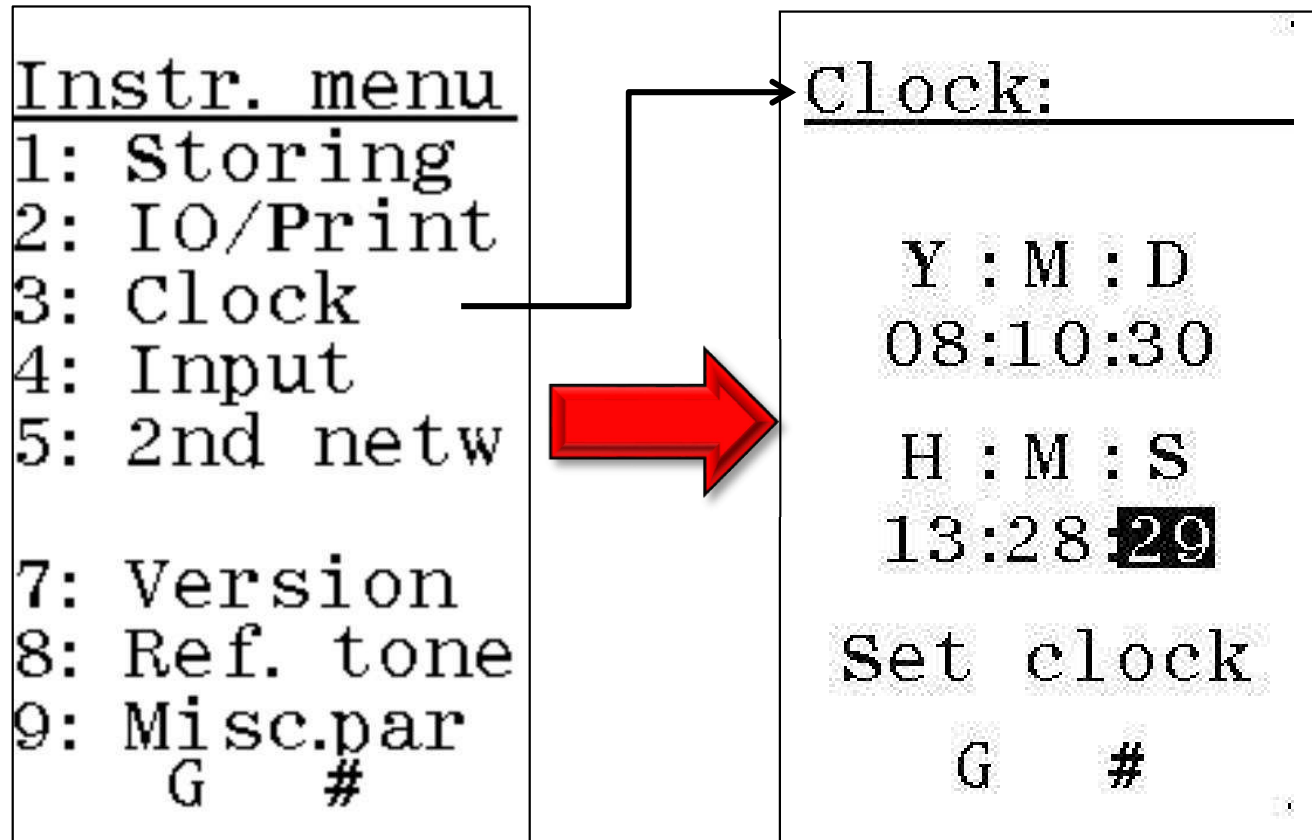
CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots - Handswitch Light Activation


```
SETUP:
1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

        G    #
```

```
Instr. menu
1: Storing
2: IO/Print
3: Clock
4: Input
5: 2nd netw

7: Version
8: Ref. tone
9: Misc.par
        G    #
```

```
IO/Print:
Iface:USB
Passw:OFF




1: DigIO
        G    #
```

```
Digital IO:

DO-1:  REC
DO-2:  OFF
DO-3:  OFF
DO-4:  OFF

        G
```

To make sure the handswitch light comes on go into 1) Instrument menu – 2) IO/Print and then press button 1 for the Dig IO ports. Make sure DO-1 is set to REC using the inc or dec keys at the top of the meter.

CAMPBELL ASSOCIATES
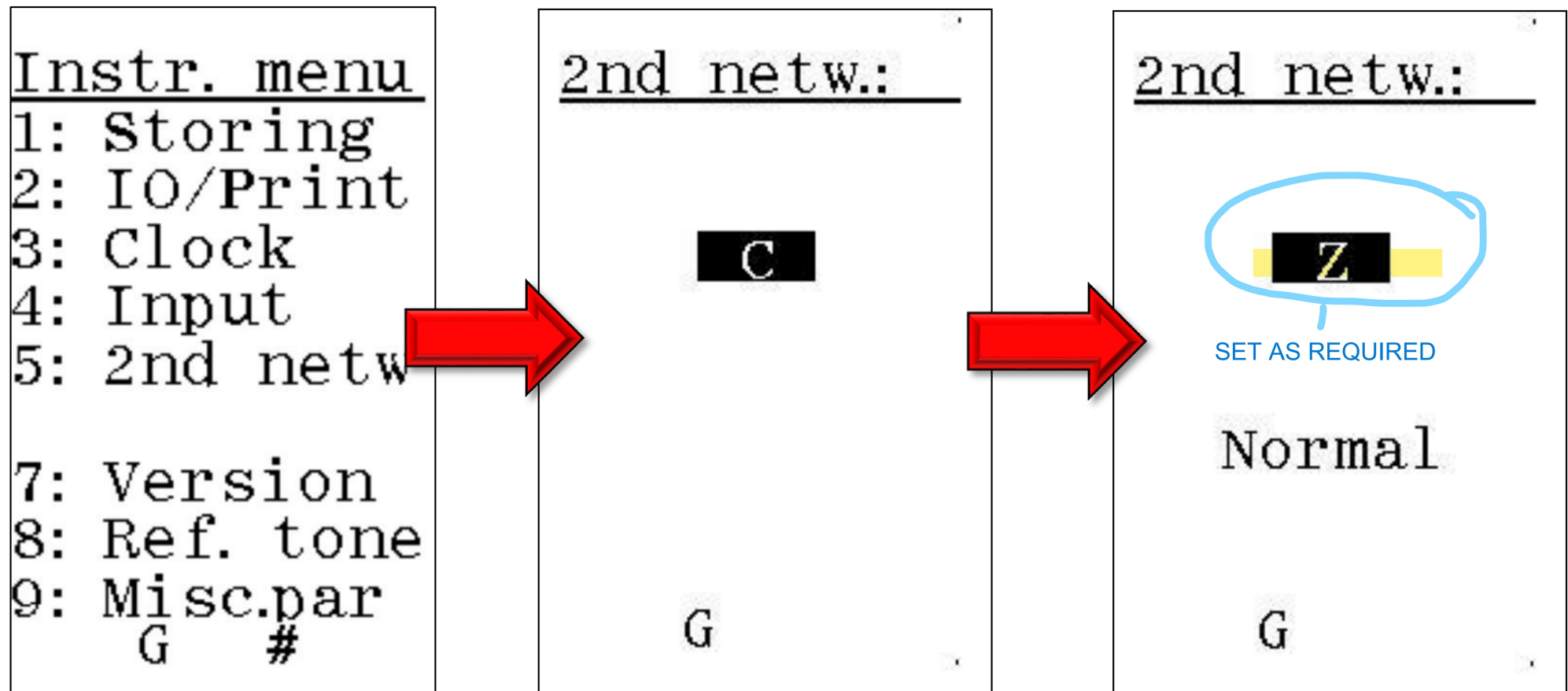SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots - Clock


```
Instr. menu
1: Storing
2: IO/Print
3: Clock
4: Input
5: 2nd netw

7: Version
8: Ref. tone
9: Misc.par
      G      #
```

```
Clock:

    Y : M : D
    08:10:30

    H : M : S
    13:28:29
   Set clock
      G      #
```

Make sure 'set clock' is highlighted before pressing enter.

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – 2nd Network

Instr. menu
1: Storing
2: IO/Print
3: Clock
4: Input
5: 2nd netw

7: Version
8: Ref. tone
9: Misc.par
    G   #

2nd netw.:

C

G

2nd netw.:

Z

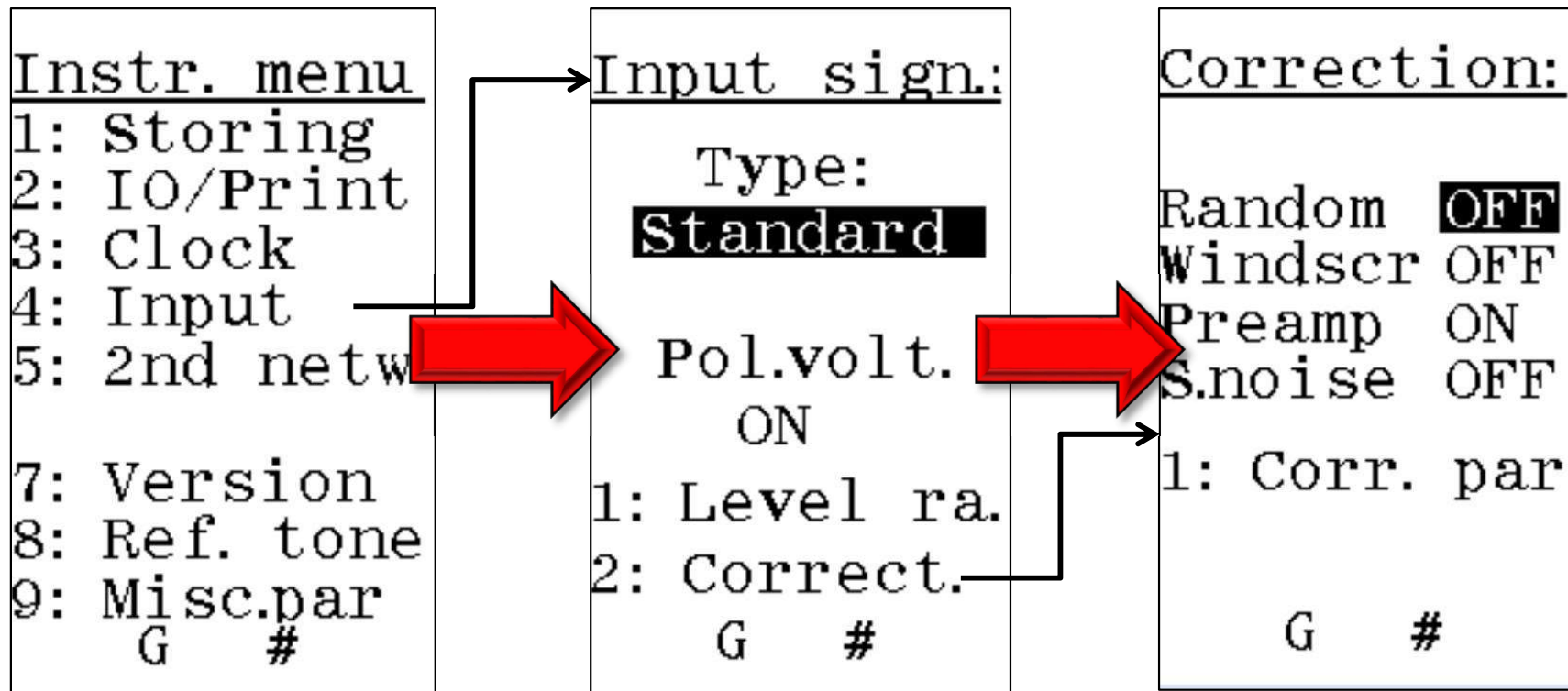SET AS REQUIRED

Normal

G

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – Input & Corrections

For most assessments the input type should be standard with the Pol. Volts set to On. If very low levels are measured on the front screen then it is likely that the voltage to the microphone is turned off.

```
Instr. menu        Input sign.:       Correction:
1: Storing
2: IO/Print           Type:           Random   OFF
3: Clock           Standard           Windscr  OFF
4: Input                              Preamp   ON
5: 2nd netw                           S.noise  OFF
                     Pol.volt.
7: Version             ON             1: Corr. par
8: Ref. tone       1: Level ra.
9: Misc.par        2: Correct.
     G    #            G    #              G    #
```
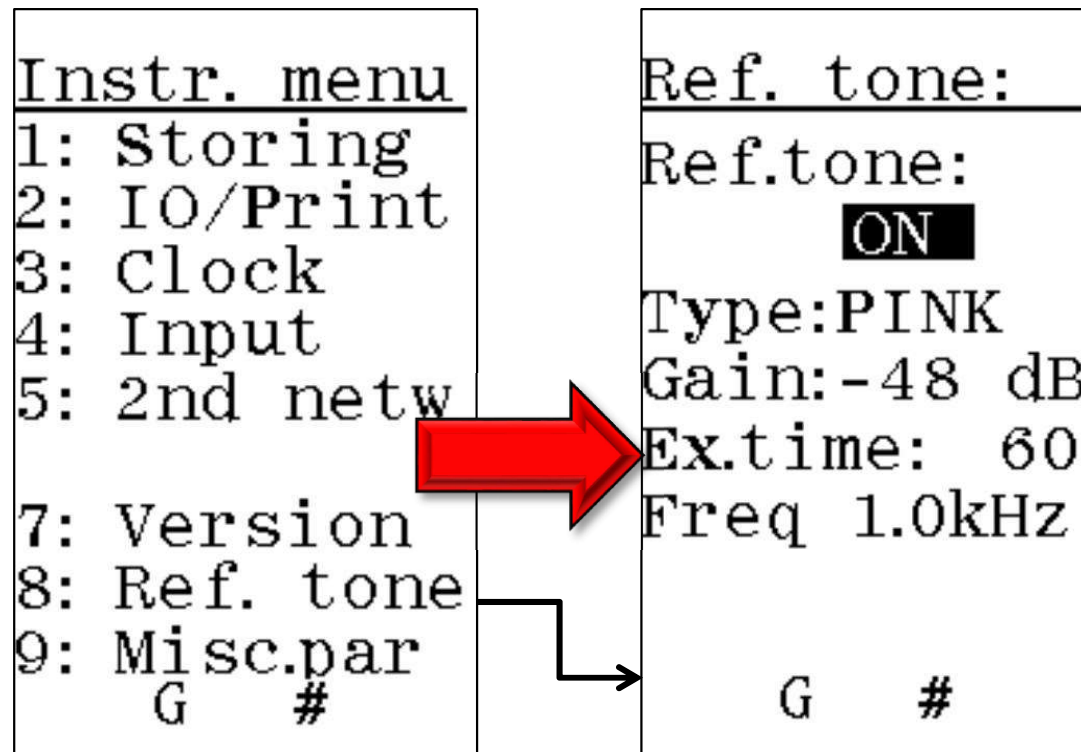
Active corrections are displayed by letters at the base of every screen. The preamp correction should be the only one active unless using a random incident microphone or a different composition windscreen.

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – Reference Tone

The reference tone is used to help calibrate the volume that audio recordings are played back in order to create a 'real life' situation when listening. This is activated using the Cal button when a measurement is taking place.

```
Instr. menu
1: Storing
2: IO/Print
3: Clock
4: Input
5: 2nd netw

7: Version
8: Ref. tone
9: Misc.par
     G    #
```

```
Ref. tone:
Ref.tone:
      ON
Type:PINK
Gain:-48 dB
Ex.time:  60
Freq 1.0kHz


     G    #
```
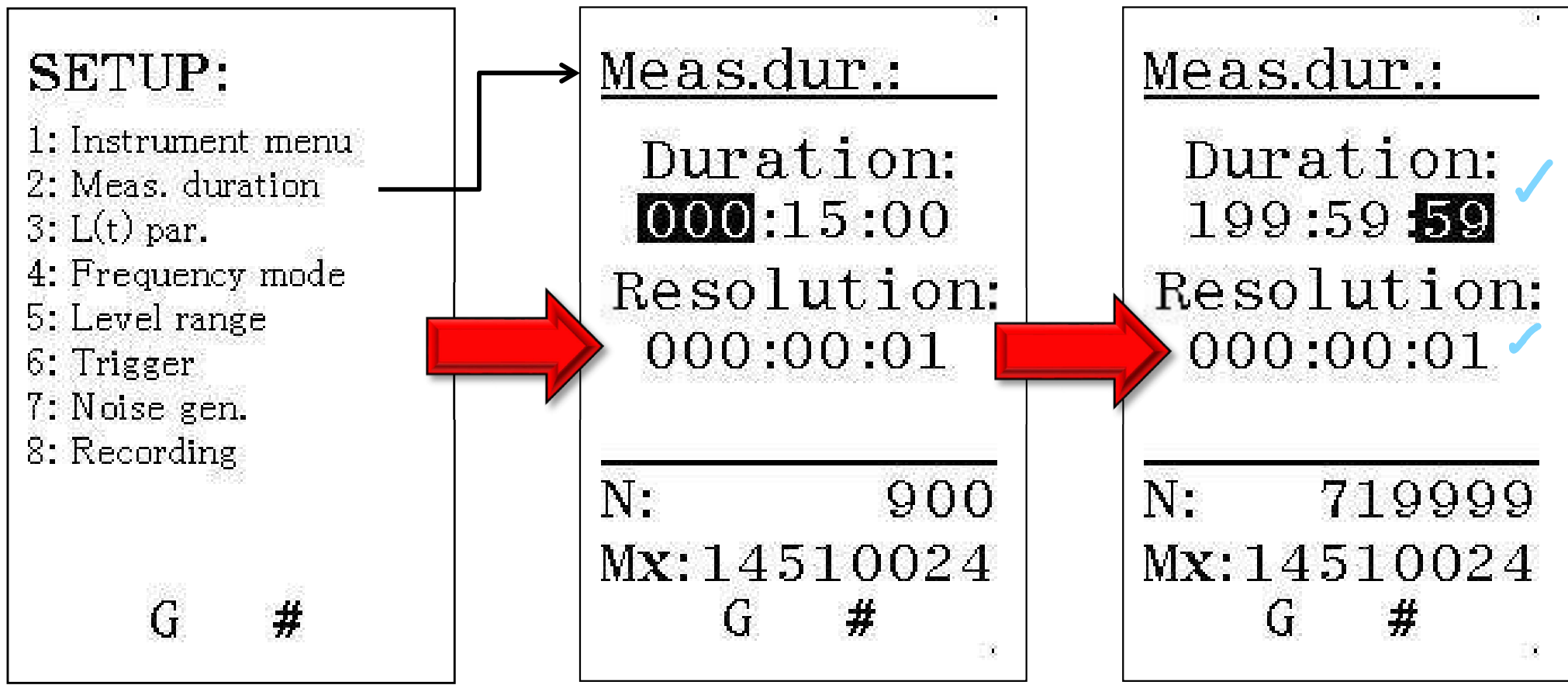
To activate the Ref. tone needs to be set to 'On' and the Type 'Pink'. The gain value, if set to 0, starts at 118dB. Putting a minus in here therefore brings the playback level down from 118dB. So -48 gain gives a playback volume of 70dB. The 'Ex time' is the period of time that this recording reference last for. The frequency is only relevant if the Type is changed to Sine, otherwise it is a broadband recording.
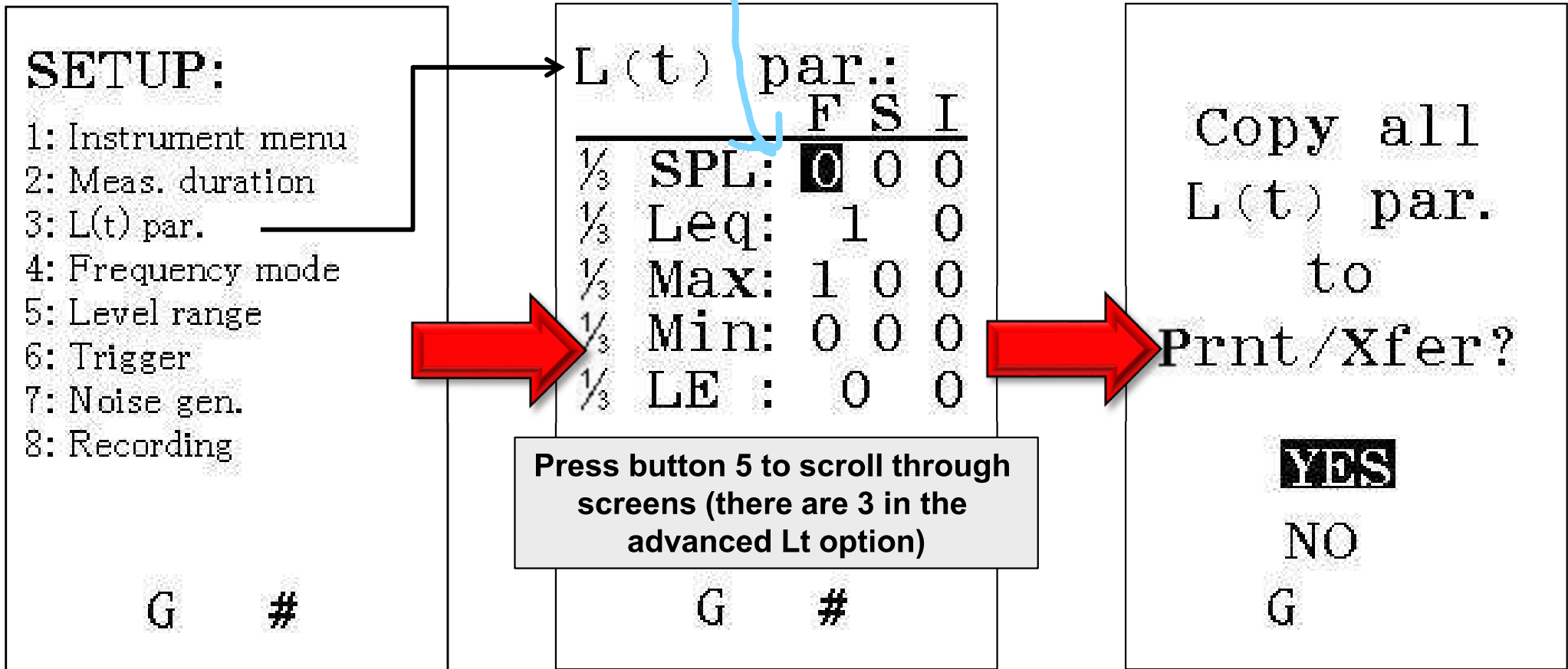
CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – Measurement Durations

SETUP:
1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

G   #

Meas.dur.:

Duration:
000:15:00

Resolution:
000:00:01

N: 900
Mx:14510024
G   #

Meas.dur.:

Duration:
199:59:**59** ✓

Resolution:
000:00:01 ✓

N: 719999
Mx:14510024
G   #

To move between boxes – type the number, press enter, use arrow keys to move to next box. Resolution reduced using 'inc' and 'dec' keys.

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – L(t) Parameters

SETUP:
1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

G   #

SET AS REQUIRED

L(t) par.:
                    F S I
⅓   SPL: 0   0   0
⅓   Leq: 1   0
⅓   Max: 1   0   0
⅓   Min: 0   0   0
⅓   LE :   0   0

G   #

Press button 5 to scroll through screens (there are 3 in the advanced Lt option)

Copy all
L(t) par.
   to
Prnt/Xfer?

YES
NO
G

1 = will be stored every second (can plot level vs time graph)
0 = will only appear in the global file

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – Frequency Mode

SETUP:

1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

G   #

Freq mode:

Mode: On
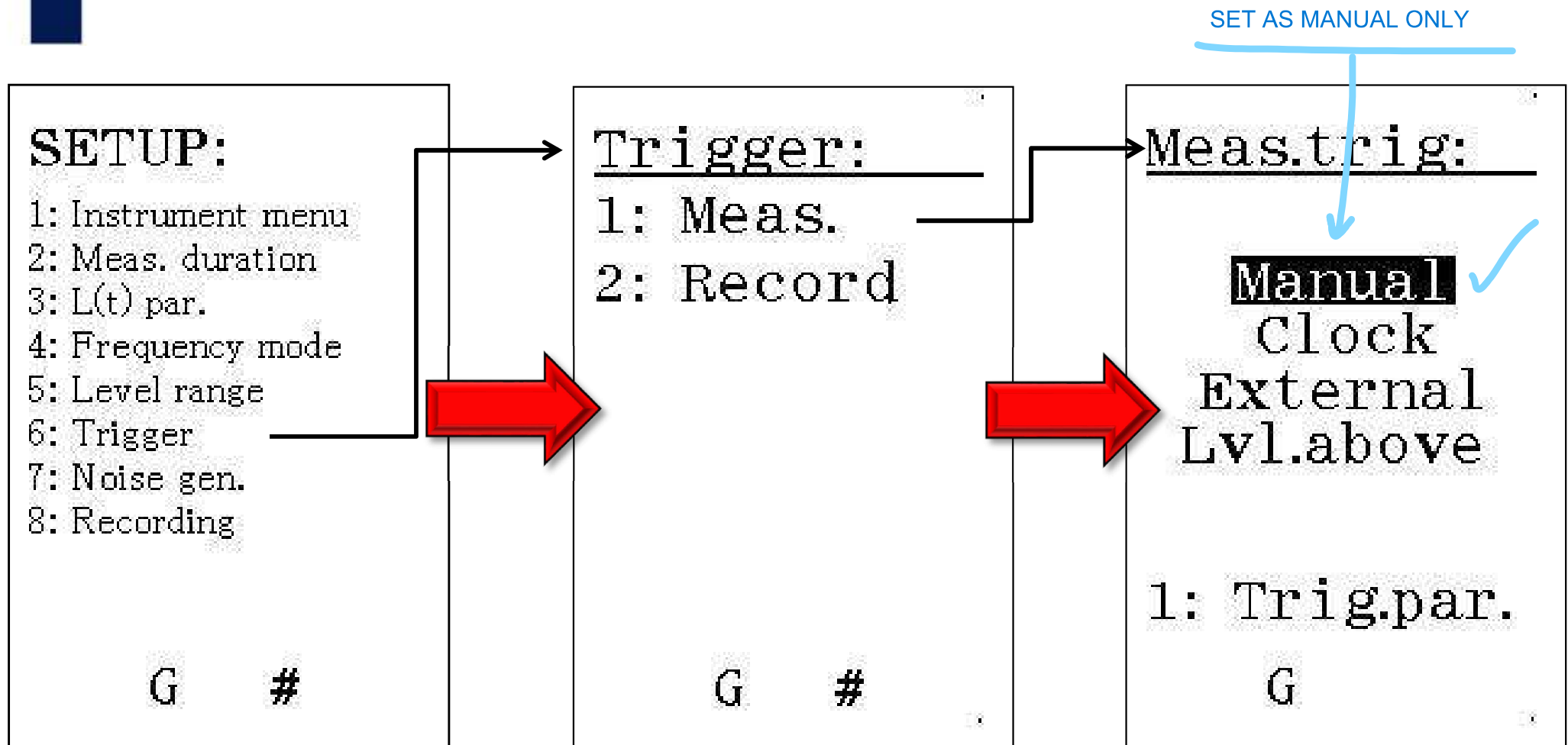Bandw.: 1/3

Ref.spectra:

Upper: off
Lower: off
QC: off
1: Ref.par.

G
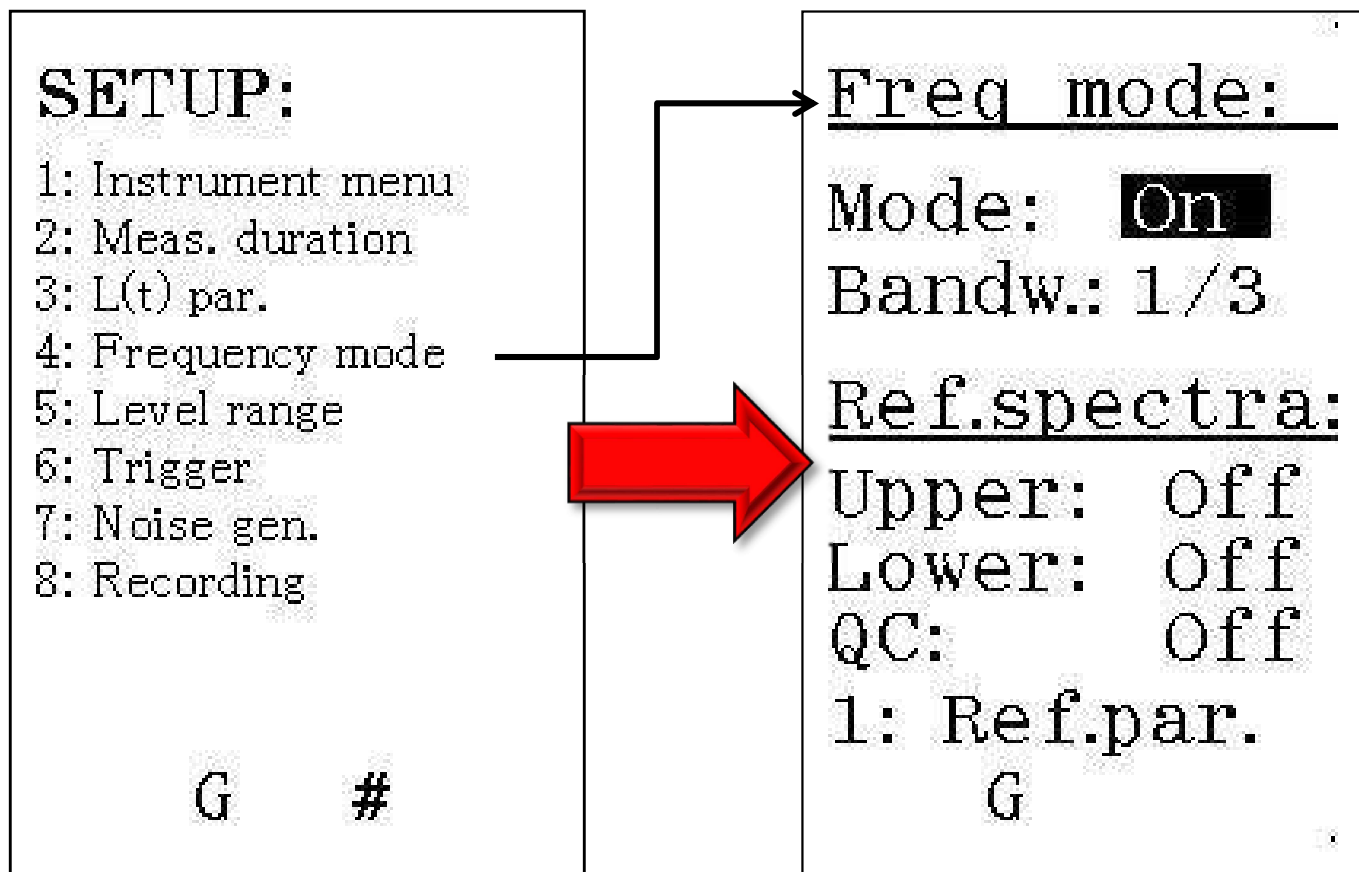
1/3 = 6.3Hz – 20kHz (standard microphone measurement capabilities)
1/3w = 0.4Hz – 20kHz (for use with accelorometer)

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots - Trigger

SET AS MANUAL ONLY

SETUP:

1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

G   #

Trigger:

1: Meas.
2: Record
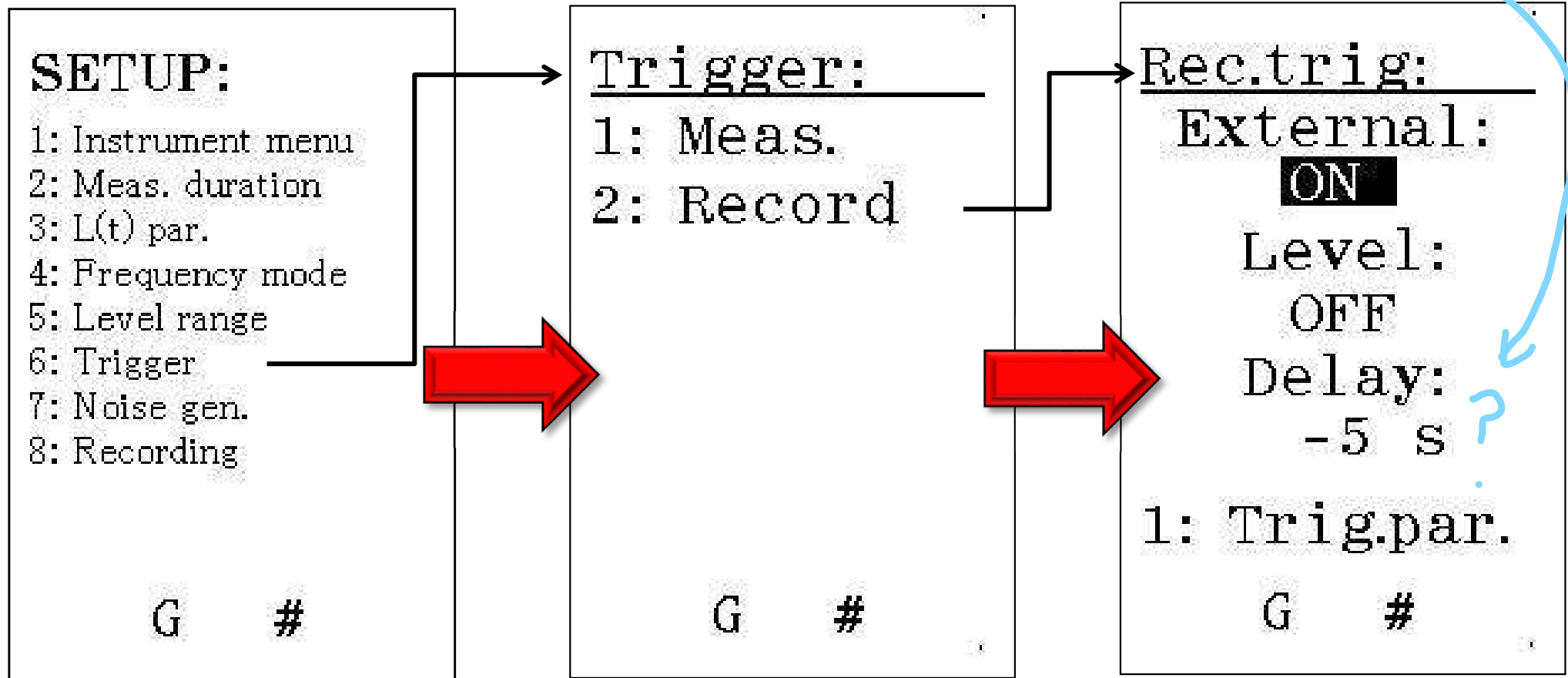
G   #

Meas.trig:

Manual ✓
Clock
External
Lvl.above

1: Trig.par.

G

Manual – Start key starts measurement, **Clock** (press 1 when highlighted) **–** measurement starts at specified time and runs for measurement duration, **External** – Link to bluetooth, 3G etc, **Level Above -** (press 1 when highlighted) set dB level to exceed before measurement starts.

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots - Trigger

SET AS REQUIRED -30S OR -60S

SETUP:
1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

G   #

Trigger:
1: Meas.
2: Record

G   #

Rec.trig:
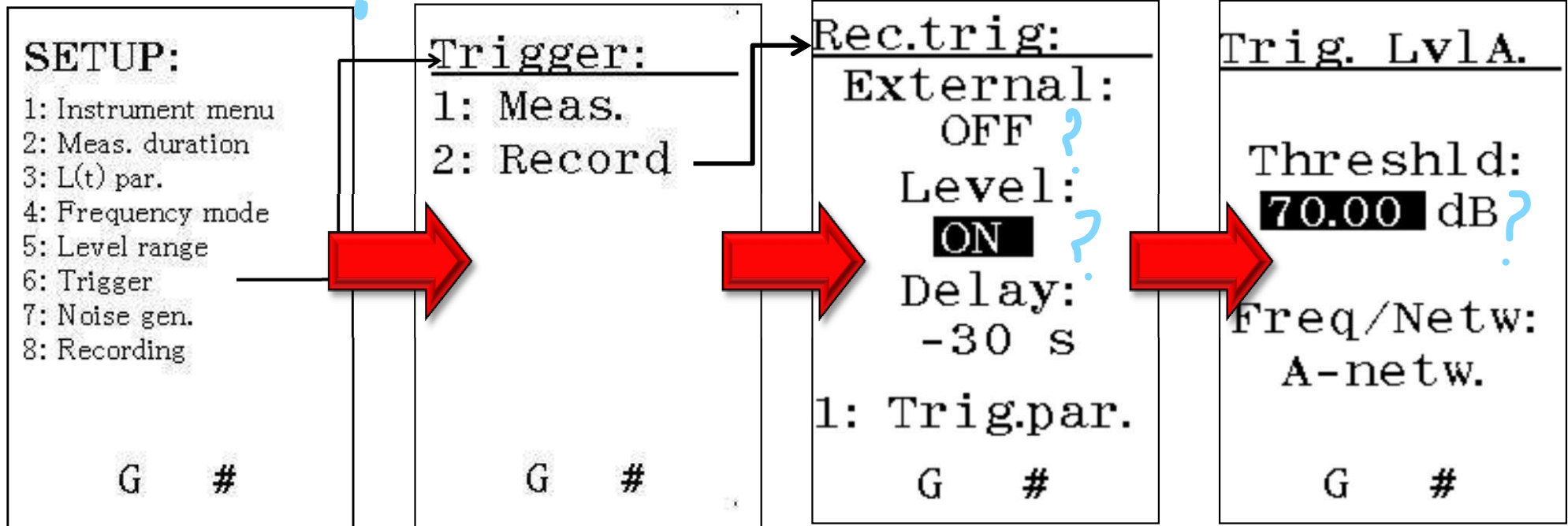External:
ON
Level:
OFF
Delay:
-5 s

1: Trig.par.

G   #

?

External is the handswitch audio trigger.
Level gives you a level above trigger. Press 1 to access settings.
Delay is the pre-trigger that can be up to -99seconds.

CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – Level Trigger

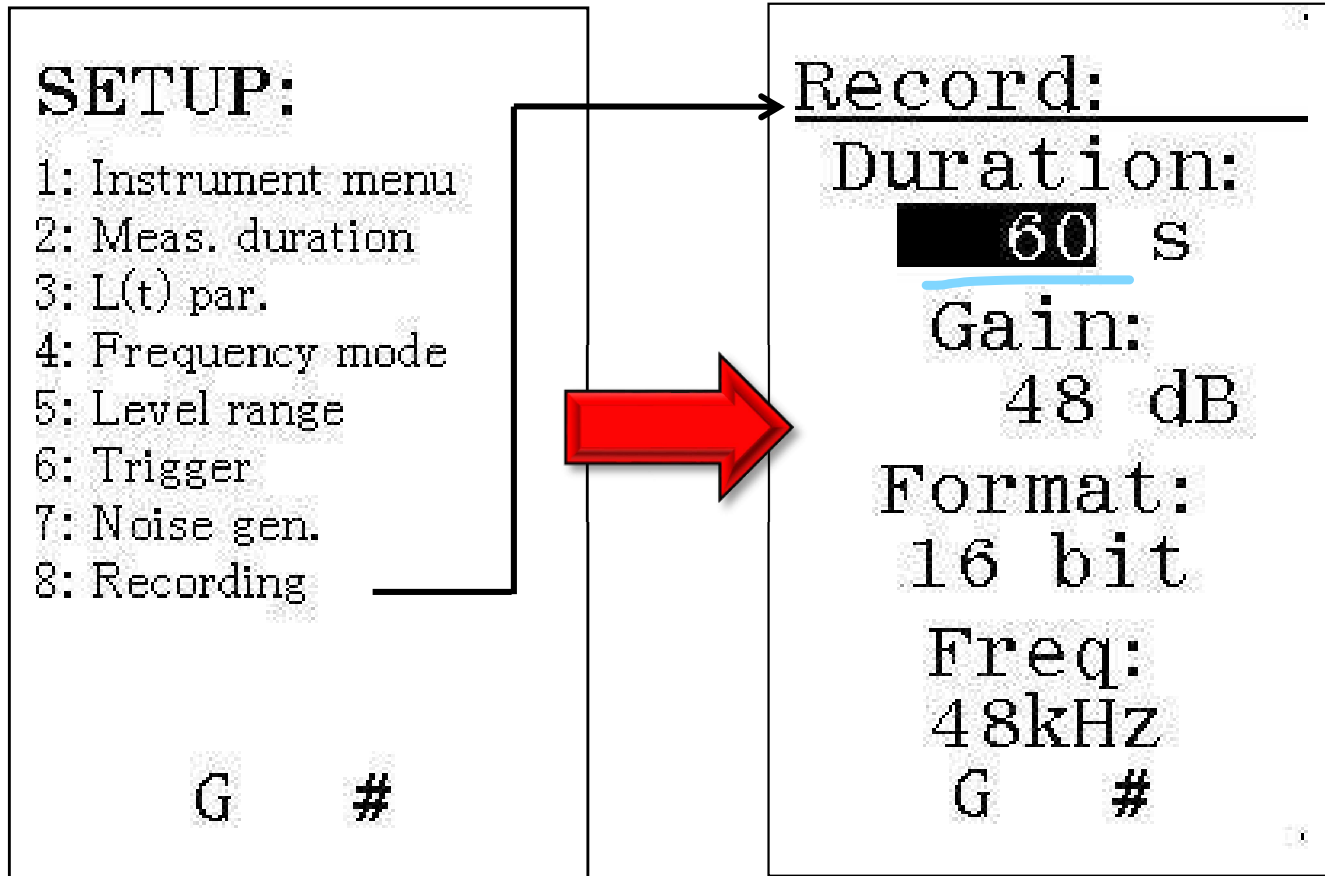THIS IS FOR INFORMATION PURPOSES ONLY - DO NOT SET THESE SETTINGS UNLESS REQUIRED

SETUP:
1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

G   #

Trigger:
1: Meas.
2: Record

G   #

Rec.trig:
External:
OFF
Level:
ON
Delay:
-30 s
1: Trig.par.

G   #

Trig. LvlA.

Threshld:
70.00 dB

Freq/Netw:
A-netw.

G   #

To activate audio recordings without the handswitch you can use the level trigger option. This is in set-up 6) Trigger – 2) Record Trigger and then change the external to off (handswitch) and the level to on. Press button 1 with the Level 'On' highlighted to change the dB level. With this set the meter will record audio every time the noise goes above this Threshold. Be careful when using this as manned properties will set the trigger off more often.
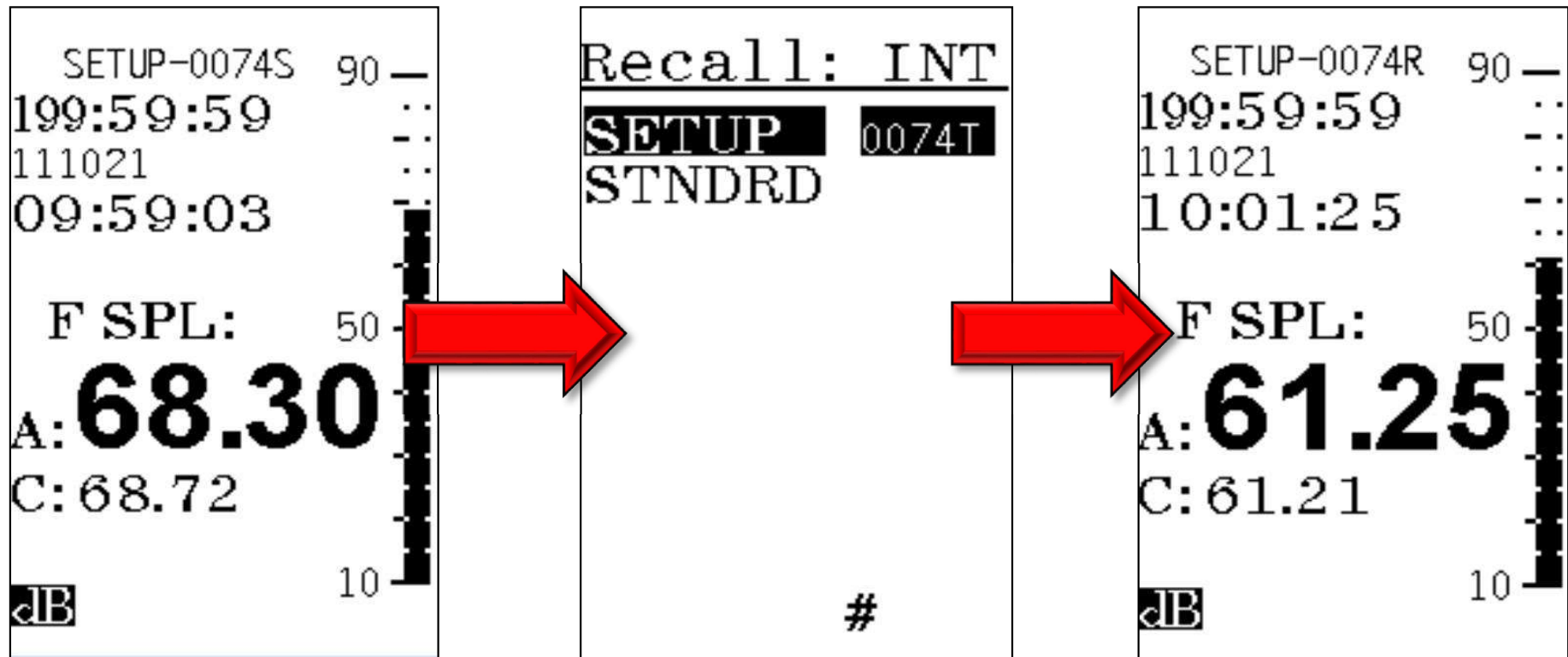
CAMPBELL ASSOCIATES
SOUND & VIBRATION SOLUTIONS

Norsonic

Screen Shots – Recording Settings

SET DURATION AS REQUIRED

SETUP:

1: Instrument menu
2: Meas. duration
3: L(t) par.
4: Frequency mode
5: Level range
6: Trigger
7: Noise gen.
8: Recording

G   #

Record:
Duration:
60 s
Gain:
48 dB
Format:
16 bit
Freq:
48kHz
G   #

Saving Settings & Recalling

When in the main standby screen press the Store/Record key and a set-up number will appear at the top of the screen with a 'S' to indicate it has been saved. To load the set-up press the 'Recall' key and make sure the letters In the top right say 'INT' for internal memory (SDC is SD card and you will need to press the inc or dec key to change). Find the correct set-up number and press enter. The set-up number will then appear at the top of the screen with the letter 'R' next to it to indicate it has been recalled.

Button 0 – Battery Indicator
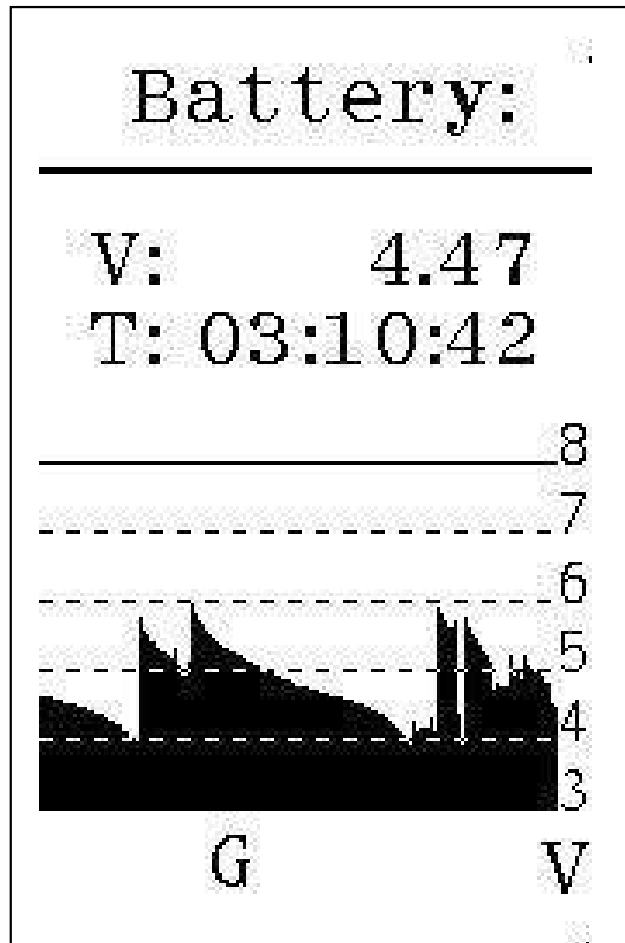
V indicates the current voltage. This will be around 5 for batteries and around 12 for mains supply.

T indicates the time the meter has been on batteries for. This is reset when new batteries are installed.

Notes