

深达威® 数字式噪音计

DIGITAL SOUND LEVEL METER

用户手册

User Manual



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| 中 文 | ----- | 01~08 |
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| English | ----- | 09~16 |
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用户须知

安全条例

初次使用仪器前，请先仔细阅读安全条款和操作指南

- ⚠ 在使用仪器之前请仔细阅读本手册中的所有操作指南和安全条例，没有按照本手册所指引的操作方法使用仪器有可能会造成仪器的损害、影响测量精度、对使用者或第三者的人身伤害。
- ⚠ 不要用任何方式自行打开或修理仪器，严禁非法改装。请妥善保管仪器，不要放置在儿童可以接触到的地方，避免无关人员的使用。
- ⚠ 仪器电磁辐射可能对其他设备和装置造成干扰，请不要在飞机或医疗设备附近使用本仪器，不要在易燃、易爆的环境中使用仪器。
- ⚠ 仪器更换的废旧电池和报废的仪器不可与生活垃圾一同处理，请按国家或者当地的相关法律规定处理废旧电池和报废仪器。
- ⚠ 仪器出现任何的质量问题，或对使用仪器有任何疑问时请及时联系当地经销商或深达威仪器厂家，我们将第一时间为您解决。

专业铸造品质

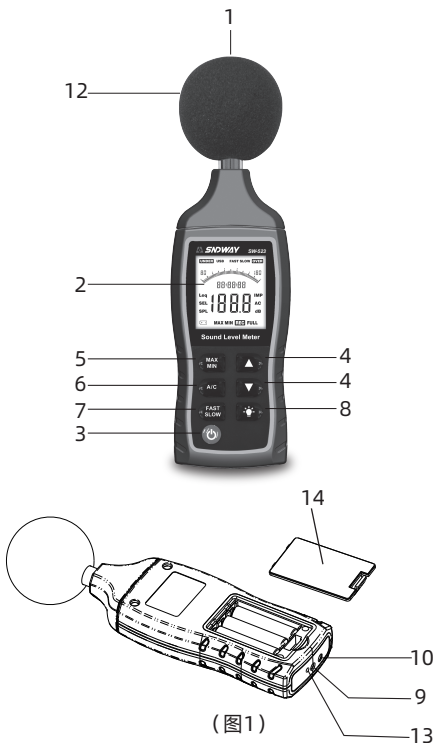
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功能说明

- 本噪音计符合国际委员会IEC651 TYPE2和美国国际标准ANSI S1.4 TYPE2
- 测量范围30dB~130dB
- 精度可达 $\pm 1.5\text{dB}$
- A权（模拟人耳）和C权（机械噪音）响应特性选择。快速/慢速反应速率选择。
- AC和DC模拟信号输出，可连接至频率分析仪或X-Y轴记录器做数据统计分析。
- 10分钟自动关机。

校正方法

- * 请使用94dB@1KHz标准音源
1. 状态设定：A权，FAST，30~130dB档
 2. 将麦克风头小心插入标准音源孔内
 3. 打开标准音源开关，使用一字批调尾部小圆孔（如图1-13）处的电位器使LCD显示为94.0
- * 本产品出厂前已经调校好，建议校正周期为一年



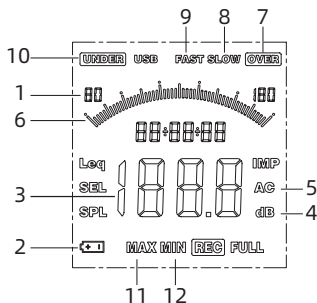
规格

- 准确度：±1.5dB（以标准声源为准，94dB @1KHz）
- 频率响应：31.5Hz~8.5KHz
- 动态范围：50dB
- 测量范围：30~130dB
- 频率计权特性：A权和C权
- 数位显示：4位数，解析度0.1dB，取样频率为2次/秒
- 动态刻度显示：1刻度代表2dB或1dB、取样频率为2次/秒
- 动态刻度档位：30~130dB、30~80dB、50~100dB、80~130dB
- 过载指示：“OVER”和“UNDER”符号表示
- AC信号输出：0.65Vrms/每档满刻度，输出阻抗约600ohm
- DC信号输出：10mV/dB，输出阻抗约100ohm
- 动态特性：FAST（快速）和SLOW（慢速）两种反应速率
- 麦克风：6mm电容式麦克风
- 最大值锁定：MAX
- 工作温湿度：0°C~40°C，10%~80%RH
- 储存温湿度：-10°C~60°C，10%~70%RH
- 电池类型：3x1.5V AAA
- 外形尺寸：215x63.5x27mm

功能（如图1）

1. 电容麦克风;
2. 显示面板;
3. 电源开关;
4. 档位开关：30~80、50~100、60~110、80~130、30~130;
5. 最大值（MAX）和最小值（MIN）开关;
6. 频率加权（A/C）选择开关频率加权A为人耳所感觉噪音量频率加权C为机械噪音特性;
7. 时间加权（FAST/SLOW）选择开关：FAST（快速）：使用125毫秒的时间常数，在大多数情况下均设定如此；LOW（慢速）：使用1秒的时间常数，此常数可使变动位更稳定;
8. 背光灯控制按键;
9. AC模拟信号输出插孔;
10. DC模拟信号输出插孔;
12. 海绵球（防风罩）;
13. 校正孔;
14. 电池盖;

LCD显示说明 (如图2)



(图2)

1. 测量范围指示
2. 电量符号
3. 噪音值显示
4. 噪音单位分贝
5. A权和C权
6. 模拟刻度
7. OVER警示符号 (读值超过该档位最大时显示)
8. SLOW (慢速反应)
9. FAST (快速反应)
10. UNDER警示符号 (读值低于该档位最小时显示)
11. MAX最大值显示
12. MIN最小值

操作前准备事项

1. 使用前，请您打开产品背面的电池盖，正确装上三颗AAA（7号）电池。
2. 盖好电池盖并使用。
3. 当电池电压不足时，LCD会显示电量符号，表示此时电池电量低，须更换新电池。

操作步骤

1. 按下电源开关开机。
2. 按下▲或▼选择适合的刻度档位测量当前噪音，以不出现“UNDER”或“OVER”为准。
3. 要测量以人耳为感觉的噪音请选用dBA，要测量机械噪音请选用dBC。
4. 要读取即时的噪音量请选择FAST，如果获得当时的平均噪音量请选SLOW。
5. 如要获取噪音量的最大值可按“MAX”键。

注意事项

1. 请勿置于高温，潮湿的地方使用。
2. 环境噪音必须低于被测物体之噪音才可以正常测量。
3. 长时间不使用请取出电池，避免电解液漏出损伤本产品。
4. 在室外测量噪音的场合，可在麦克风头上装上防风罩，避免麦克风直接被风吹到而测量以其它的杂音。
5. 使用环境条件：200公尺高度以下，相对湿度 $\leq 80\%$ RH，工作环境温度 $0^{\circ}\text{C} \sim 40^{\circ}\text{C}$ 室内使用。

Safety Regulation

Please read intently the safety regulation and operation manual before your first time using.

- ◆ Read this operation manual and safety regulation before using this instrument. Operating it may cause damage to instrument, or affect metrical accuracy, or body damage to user or partners if you don't follow this manual.
- ◆ Don't try to open or fix instrument by any means, refitting is not allowed. Keep it carefully, don't place it on where can be reached by children, and avoid people who has no knowledge on it using the instrument.
- ◆ Electromagnetic radiation of this instrument may cause interference to other instruments or devices. Don't use it nearing airplane or medical instruments, and in flammable, volatilizable circumstance.
- ◆ The used battery or instrument beyond repair should be dealt with by national or local related legal stipulation, and can't be handled with general life garbage.
- ◆ If there are any quality problems, or doubts about using of instrument, please contact the local franchiser or Sndway industry, we will solve it as soon as possible.

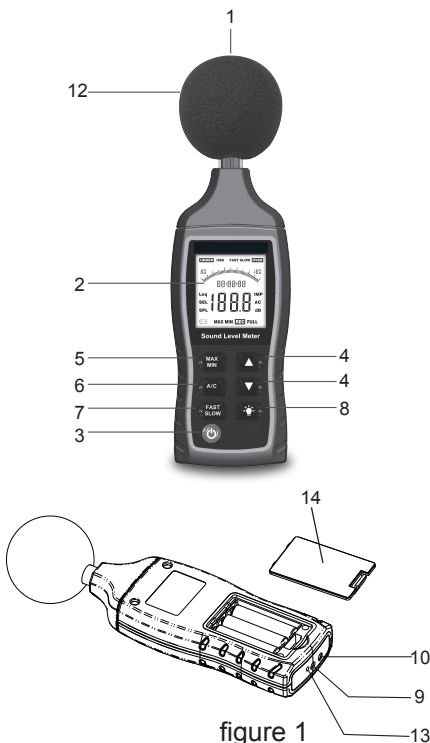
Function declaration

1. This meter is according with standard IEC651 TYPE2 of The National Committee and The American National standard ANSI S1.4 TYPE2.
2. The range of measurement : 30dB~130dB.
3. The accuracy : $\pm 1.5\text{dB}$.
4. Two characteristic choices of A weight(simulates human's ears) and C weight(mechanical noise) response. Two reaction rate choices of quick and low speed .
5. The output of AC and DC analog signal can be connected to frequency analyzer or X-Y axis recorder for statistic analysis of data.
6. Shut itself down automatically after no operation around ten minutes.

Adjusting mean

- * Please use 94dB@1KHz standard sound source
 1. State setting: A weight, FAST, 30~130dB shift
 2. Place the head of microphone into the hole of standard sound source carefully
 3. Turn the sound source on, use a slot type screwdriver to adjust potentiometer that is inside a little hole at the bottom(as shown in 1-13) till the LCD display screen shows 94.0
- * This product is already adjusted before go out, and the period of adjustment is one year, we recommend.

Struction



Specification

1. The accuracy: $\pm 1.5\text{dB}$ (based on the standard sound source $94\text{dB}@1\text{KHz}$)
2. Frequency response range: $31.5\text{Hz}\sim 8.5\text{KHz}$
3. Dynamic state range: 50dB
4. Measurement range: $30\sim 130\text{dBA}$ 、 $35\sim 130\text{dBC}$
5. Frequency weighting character: A weight and C weight
6. Numerical digit display: 4 digits, resolution 0.1dB , sampling frequency 2 times/second
7. Dynamic scale display: 1 scale equals 2dB or 1dB , sampling frequency 2 times/second
8. Dynamic scale shift: $30\sim 130\text{dB}$ 、 $30\sim 80\text{dB}$ 、 $50\sim 100\text{dB}$ 、 $80\sim 130\text{dB}$
9. Over capacity display: "OVER" and "UNDER" in display screen
10. AC signal output: 0.65Vrms for each shift and full scale, the output of impedance around 600ohm
11. DC signal output: 10mV/dB , the output of impedance around 100ohm
12. Dynamic character: Two choices of reaction rate "FAST" and "SLOW"
13. Microphone: 6mm capacitor microphone
14. Max locking: MAX
15. Batter: $3\times 1.5\text{V AAA}$
16. Working temperature and humidity: $0^{\circ}\text{C}\sim 40^{\circ}\text{C}$, $10\%\sim 80\%\text{RH}$
17. Storage temperature and humidity: $-10^{\circ}\text{C}\sim 60^{\circ}\text{C}$, $10\%\sim 70\%\text{RH}$

Function(as shown figure 1)

1. Capacitor microphone
2. Display screen
3. Power
4. Shift: 30~80、 50~100、 80~130、 30~130
5. Max/Min
6. Frequency weighting(A/C)

A weighting is for the sound volume of frequency that can be felt by human's ears C weighting is for mechanical noise character.

7. Time weighting(FAST/SLOW)

FAST: 125millisecond set as time constant can be used in many situations

SLOW: 1second set as time constant is to make sure of stabling variable digit

8. Backlight control key
9. The output port of AC analog signal
10. the output port of DC analog signal
12. Sponge ball(windshield)
13. Hole for adjustment
14. Battery cover

LCD display illustration

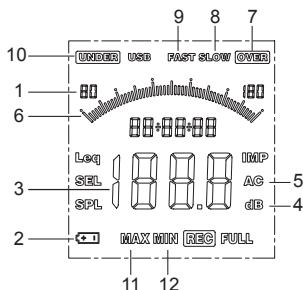


figure 2

1. the measurement range display
2. the power display
3. the value display
4. the unit display
5. A/C weight display
6. analog scale
7. OVER warning signal(the value is beyond the max of scale in this shift)
8. SLOW(react slowly)
9. FAST(react fastly)
10. UNDER warning signal(the value is below the min of scale in this shift)
11. the max value display
12. the min value display

Preparation before operation

1. Before using it, please open the battery cover on the back of the product and put three AAA batteries in correctly.
2. Put the battery cover back.
3. When the power is low, the power signal in LCD screen will be light, at this time, batteries should be changed.

Operation process

1. Press the power key to turn it on.
2. Press ▲ or ▼ to choose suitable scale for current noise, based on no "UNDER" or "OVER" light.
3. Choose dBA for noise that can be felt by human's ears, choose dBC for mechanical noise.
4. Choose FAST for current reading, choose SLOW for average reading.
5. Press "MAX" key for the max value.

Attentions

1. Do not use it in high temperature, humid circumstance.
2. Make sure that noise of circumstance is below the noise you test.
3. Take batteries out if you don't use it for a long time to prevent leakage of electrolyte from damaging the product.
4. Put the windshield on in outdoor in case the microphone is winded directly so that it could test other noises.
5. Operation environment conditions: below 200 meter height, the relative humidity $\leq 80\%RH$, environment temperature $0^{\circ}C \sim 40^{\circ}C$ indoor.



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