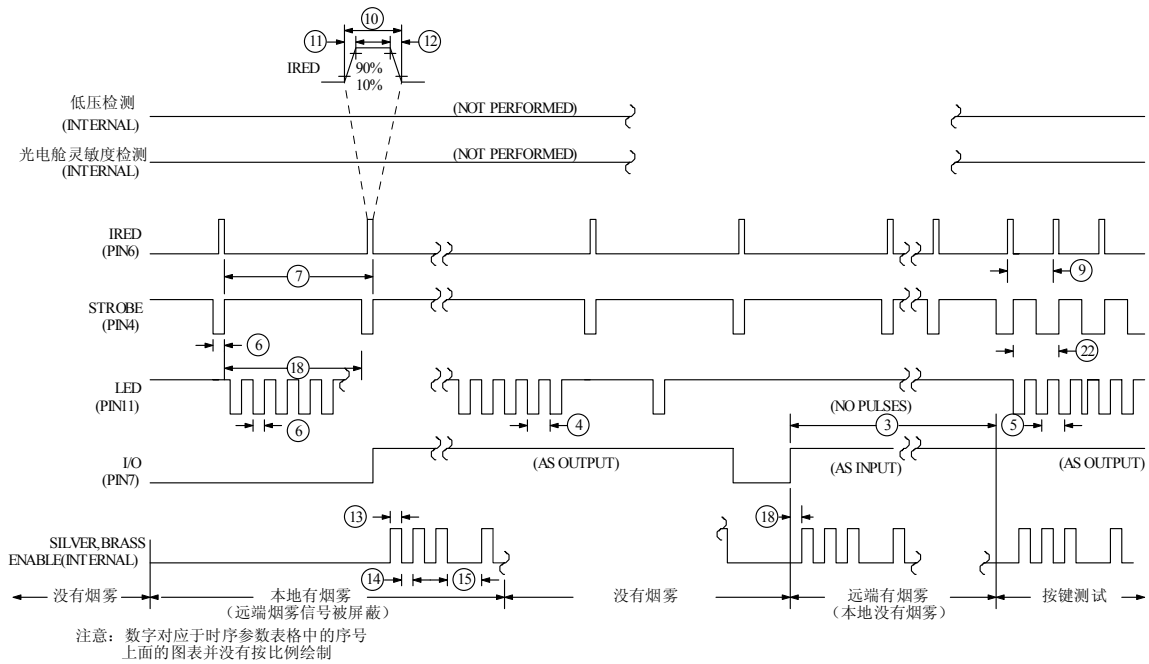


9. Values for R4, R5, and C6 may differ depending on type of piezoelectric horn used.
10. C2 and R13 are used for coarse sensitivity adjustment. Typical values are shown.
11. R9 is for fine sensitivity adjustment (optional). If fixed resistors are used, R8 = 12 k, R10 is 5.6 k to 10 k, and R9 is eliminated. When R9 is used, noise pickup is increased due to antenna effects. Shielding may be required.
12. C4 should be 22 µF if B1 is a carbon battery. C4 could be reduced to 1 µF when an alkaline battery is used.

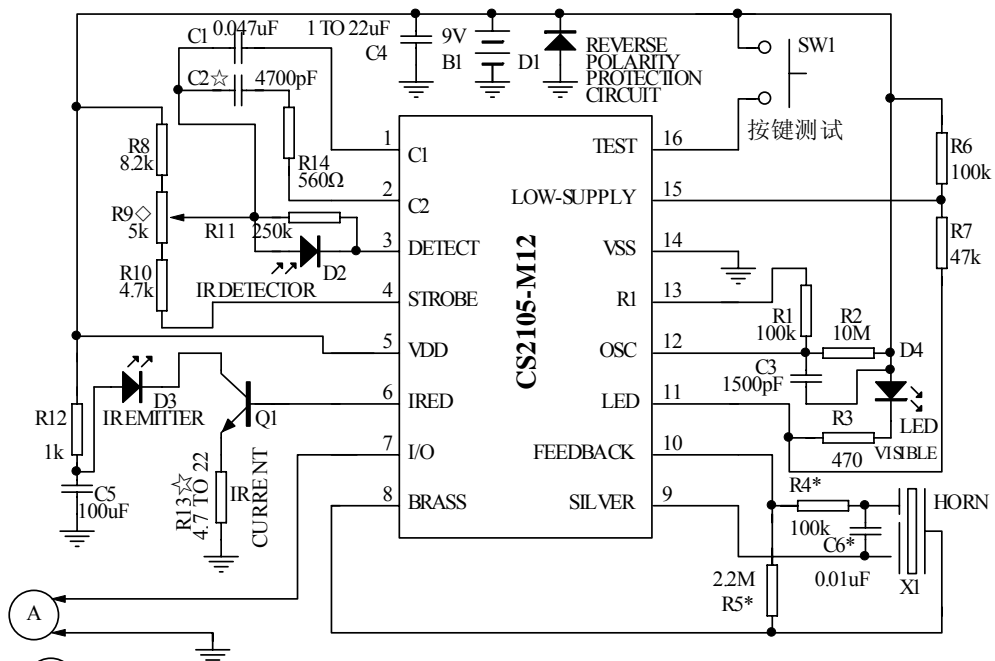
Figure 8. Typical Battery-Powered Application

Table 4. Pin Description

Pin No.	Pin Name	Description
1	C1	A capacitor connected to this pin as shown in Figure 8 determines the gain of the on-chip photo amplifier during push-button test and chamber sensitivity test (high gain). The capacitor value is chosen such that the alarm is tripped from background reflections in the chamber during push-button test. $A_v \approx 1 + (C1/10)$ where C1 is in pF. CAUTION: The value of the closed-loop gain should not exceed 10,000.
2	C2	A capacitor connected to this pin as shown in Figure 8 determines the gain of the on-chip photo amplifier except during push-button or chamber sensitivity tests. $A_v \approx 1 + (C2/10)$ where C2 is in pF. This gain increases about 10% during the IRED pulse, after two consecutive local smoke detections. Resistor R14 must be installed in series with C2. $R14 \approx [1/(12\sqrt{C2})] - 680$ where R14 is in ohms and C2 is in farads.
3	DETECT	This input to the high-gain pulse amplifier is tied to the cathode of an external photodiode. The photodiode should have low capacitance and low dark leakage current. The diode must be shunted by a load resistor and is operated at zero bias. The Detect input must be AC/DC decoupled from all other signals, V _{DD} , and V _{SS} . Lead length and/or foil traces to this pin must be minimized, also. See Figure 9.



5、典型应用线路与应用说明



Ⓐ 电路通过它实现多个并联工作模式，还可与外部辅助电路连接实现其它功能；

另注：电容C4的大小取决于所用的电池，如果为碳电池，则C4约为22uF，如为碱性电池，则C4约为1uF。

*： R4、R5 和 C6 的值依赖于所选用压电喇叭的型号，可能有所不同；

☆： C2 和 R13 用于灵敏度粗调，典型值示于图中；

◇： R9 用于灵敏度细调。若使用固定电阻，R9 则可以去掉，这时 R8=12k，R10 为 5.6k~10k；若要使用可调电阻 R9，由于天线效应噪音拾取增加，屏蔽可能是必须的。