

Lightning Detector Ver 2.0 BOM

Note:(These are the parts needed for the Basic detector / Audio parts are optional and listed below)

You will also need various standoff to mount the PCBs, Screws , and connectors to make interconnecting the PCBs easy. I used the Twidac /600 PCS 2.54 mm dupont connector kit from Amazon for board interconnects /headers and plugs. Also needed will be a drill, drill index and a way to cut or punch the square hole for the 2.8" TFT display. I used a skill saw.

Teensy 4.0 Microcontroller / Amazon

Sparkfun Lightning Detector -AS3935 / Amazon

2.8" TFT LCD Display 240x320 , ILI9341, HiLetgo /Amazon

IC, SN74HC244N , WanParts / Amazon

Q3 , BS-170, TO-92 /NGUYEN DUY MONG/ Amazon

LED 2 ,RED LED , Huadi /Amazon

Inductor , L2 220 uH, DCR 1 Ohm , eeee_shop, Inductor kit/Amazon

Capacitor , C6 , 22uF ,16V

Resistor, R10, 100 Ohm,

Resistor ,R9, 100 k Ohm,

Toggle switch , SW5 ,SW4 , MTS-102 , SPDT ,Mxuteuk /Amazon

Aluminum Enclosure Case, Aluminum ,82.2 x 145 x200 mm , Xicheckai / Amazon

Power Jack , 2.1mm ,DC-099 ,AYECEHI/Amazon

15Pcs PCB Protoboards,YUNGUI 5X7cm 1-2-3 Perf Board Circuit Board Strip for Electronic Project and Electronic Experiment / Amazon

Plastic box (for enclosing the AS3935 SparkFun detector), LeMotech Project Box, 5 Pieces ABS Electrical Box Small Junction Box for Electronics PCB Case,Electronic Hobby Box Black, Outside Size 2.8 x 1.7 x 0.9 inch (72x 42x 23 mm) / Amazon

Additional Audio Parts for the VER 2.0 Lightning Detector

Adafruit FX Sound board WAV/OGG P/N 2342 – Amazon

IC, U1 , AD822AN DIP 8 opamp , Midzoo parts / Amazon

Transistor , Q1 , 2N2222, NPN , TO-92 case, PANMILED /Amazon

Transistor , Q2, 2N2907, PNP , TO-92 case, PANMILED /Amazon

Inductor, L1, 220uH, DCR 1 ohm , eeee_shop, Inductor kit/Amazon

Capacitor, C2, Electrolytic , 1000uF , 25V

Capacitor ,C5, 470nF, 16V ,

Capacitor , C3, 100nF, 16V ,

Capacitor , C4, 1.0 uF , 16V , non-polar

Capacitor , C1 , 100uF, 25V .Electrolytic,

Potentiometer, R3, 10K ohm, linear taper , Panel mount , with Knob Uxcell /Amazon

Resistor, R7 , 5k ohm, ¼ watt

Resistor , R1 ,R2, 10k ohm, ¼ watt

Resistor , R4, 27k ohm, ¼ watt

Resistor R6, 120 ohm, ¼ watt

Resistor R8 , 330 ohm,¼ watt

Resistor , R11, 1k Ohm, ¼ watt

Toggle switch , SW1 , MTS-102 , SPDT ,Mxuteuk /Amazon

Speaker, 4 ohm , (Speaker 3 Watt 4 Ohm is suitable) , CQRobot /Amazon

PCB Protoboards,YUNGUI 5X7cm 1-2-3 Perf Board Circuit Board Strip for Electronic Project and Electronic Experiment / Amazon (See BOM above)

Plastic enclosure for the SparkFun detector

LeMotech Project Box, 5 Pieces ABS Electrical Box Small Junction Box for Electronics PCB Case,Electronic Hobby Box Black, Outside Size 2.8 x 1.7 x 0.9 inch (72x 42x 23 mm) / Amazon

