

Bill of Materials:**Standard basic module kit parts**

Onstate Technologies. PELDA3 audio band spectrum display module.

RGB 3-CH. Line level audio signal, full-range audio signal, general music. No microphone circuit.

Part Label	Qty.	Description Digi-Key part codes (www.digikey.com).
R1 (VR1)	1	100k, trimmer 3362P-104LF-ND or panel pot, 987-1300-ND
R9 (VR5)	1	10k, variable, trimmer resistor, 3362P-103LF-ND
R6, R7, R8	3	Wire jumper, pins 2/3. Use 10k VR for individual level adjustments.
R6A	1	3.3k, 1/8W, 3.3KEBK-ND, Pin 1 on R6, omit if R6/7/8=10k VR.
R2, R3, R10	3	100k, 1/8W, 100KEBK-ND
R4, R12	2	10k, 1/8W, 10KEBK-ND
R5	1	470k, 1/8W, 470KEBK-ND
R11	1	4.7k, 1/8W, 4.7KEBK-ND
R13, R17, R21	3	68k, 1/8W, 68KEBK-ND
R14, R20, R23	3	15k, 1/8W, 15KEBK-ND
R15, R19, R38	3	27k, 1/8W, 20KEBK-ND
R16	1	36k, 1/8W, 36KEBK-ND
R18, R22, R26, R30, R33	5	47k, 1/8W, 47KEBK-ND
R24	1	56k, 1/8W, 56KEBK-ND
R25, R29, R32	3	0k, wire jumper
R27, R28, R31, R34	4	2.2k, 1/8W, 2.2KEBK-ND (LED1-4 brightness)
C1, C2	2	35V 47uF, 0.1" alum elec. radial, any type, P5164-ND
C3, C15, C16, C17	4	16V 10uF, 0.1", alum elec. radial, any type, P5134-ND
C4, C11, C12	3	0.01uF (103), 0.1", mono, radial, any, BC1158CT-ND
C5, C6	2	1uF (105), 0.2", mono, radial, any, 478-4864-ND
C7, C8, C9, C10	4	0.1uF (104), 0.1", mono, radial, BC1160CT-ND, any
C13, C14	2	0.001uF (102), 0.1", mono, radial, any
D1	1	1N4002, diode, any type
D2, D3, D4, D5, D6, D7, D8	7	1N4148, diode, any type
LED1, LED2, LED3	3	Optional, 5mm, radial, any type, optional, 67-1098-ND
LED4	1	5mm, radial, any type, optional, 67-1098-ND
IC1, IC2	2	op-amp, 8-DIP, LM258N/LM358N
Q1, Q2, Q3	3	N-CH MOSFET, Power, TO-220, IRFZ14/24/34/44
SW1	1	Wire jumper LINE-center pin. SPDT slide switch select MIC/LINE.
REG1	1	LM78L05, 5V, TO-92, LM78L05ACZFS-ND
PCB-PELDA3	1	Printed Circuit Board, Onstate

Optional microphone or headphone/earphone input circuit.

Part Label	Qty.	Description
R35	1	27k, 1/8W, 27KEBK-ND, Low gain. R35/R37=2.2k, R36=1M.
R36	1	560k, 1/8W, 560KEBK-ND
R37	1	10k, 1/8W, 10KEBK-ND
C18	1	1uF (105), 0.2", mono, radial, any, 478-4864-ND
C19	1	0.01uF (103), 0.1", BC1158CT-ND, increase for less output noise
Q1	1	2N3904, NPN, TO-92, 2N3904FS-ND
Electret microphone	1	Electret microphone, small, 102-1724-ND, Headphone in omit R37

Low pass:270Hz, Band pass:700Hz (180Hz - 2500Hz), High pass:2170Hz

MOSFET output offset (bias, R9(VR5)) adjust. Measure MOSFET gate voltage (Q1).

Adjust until all LEDs are OFF. Minus 0.05-0.1V. Red usually lowest voltage required.