

Qty	Value	Device	Parts	Description	Manufacturer	Mfg PN	Vendor	Vendor PN	Pice Ea	Price Ext	Comments
1	PCB	none	NA	Printed Circuit Board	<a href="http://www.pmillett.com">www.pmillett.com</a>	ATEST PCB	<a href="http://www.pmillett.com">www.pmillett.com</a>	ATEST PCB	\$50.00	\$50.00	Includes front and rear panels for case
14	0.1uF	C-EU050-030X075	C1, C4, C6, C9, C14, C15, C16, C17, C19, C20, C23, C24, C25, C26	Cap, 0.1uF 50V film, 5mm LS	Kemet	MMK5104J50J01TR18L16.5TR18	Mouser	80-MMK5104J50J01TR18	\$0.19	\$2.66	Generic OK
2	1uF 400V	C-EU150-084X183	C2, C3	Cap, 1uF 400V film, 22.5mm LS	Vishay BC	BFC2 373 53105	Digi-Key	BC1806-ND	\$1.11	\$2.22	
1	1uF 35V Ta	CPOL-EUTT2D5	C21	Cap, 1uF 25V dip tant 2.5mm LS	AVX	TAP105K025SCS	Mouser	581-TAP105K025SCS	\$0.40	\$0.40	20V, 35V OK
2	2.2uF 25V Ta	CPOL-EUTT2D5	C10, C12	Cap, 2.2uF 25V dip tant 2.5mm LS	AVX	TAP225K025SRW	Mouser	581-TAP225K025SCS	\$0.50	\$1.00	20V, 35V OK
4	330uF 35V	CPOL-EUE5-10.5	C7, C8, C13, C18	Cap, 330uF 35V electrolytic, 5mm LS 10mm dia	Nichicon	UPW1V331MPD	Mouser	647-UPW1V331MPD	\$0.48	\$1.92	Value not critical, 100uF +, 25V +
2	470uF 16V	CPOL-EUE5-10.5	C11, C22	Cap, 470uF 16V electrolytic, 5mm LS 10mm dia	Nichicon	UPW1C471MPD	Mouser	647-UPW1C471MPD	\$0.31	\$0.62	Value not critical, 100uF +, 10V +
12	1N4148	1N4148	D12, D13, D14, D15	Diode, 1N4148	Fairchild Semi	1N4148	Mouser	512-1N4148	\$0.03	\$0.36	Any mfg OK
1	1.5KE9.1A	15KE9X	D9	Diode, TVS, 1.5KE9.1A	Vishay	1.5KE9.1A-E3/54	Mouser	625-1.5KE9.1A-E3	\$0.33	\$0.33	Any mfg OK
1	NDTD0515C	DCDC_NDTD	DC1	DC/DC converter, +5 to +/-15V	Murata	NDTD0515C	Mouser	580-NDTD0515C	\$17.80	\$17.80	
1	RUSBF110	POLYFUSE_RUSBF110	F1	Fuse	Tyco Raychem	RUSBF110	Digi-Key	RUSBF110-ND	\$0.45	\$0.45	
2	73137-5003	CON_BNC_RA	J1, J2	Conn, BNC, RA PCB	Molex	73137-5003	Mouser	538-73137-5003	\$1.86	\$3.72	
1	PJ-102	DCJACK	J3	Conn, DC Jack	CUI	PJ-102	Digi-Key	CP-102B-ND	\$0.38	\$0.38	
1	61729	CON_USB_B	J4	Conn, USB "B"	FCI	61729-0010BLF	Mouser	649-61729-0010BLF	\$0.58	\$0.58	
2	NYS216	JACK_PHONE	J5, J6	Conn, 1/4" phone jack	Neutrik	NYS216	Mouser	568-NYS216	\$0.70	\$1.40	
1	MDMV0000	DPM_MDMV	M1	Digital Panel Meter	Red Lion Controls	MDMV0000	Digi-Key	RLC000-ND	\$40.80	\$40.80	
1	NA	NA	@M1	Conn, RA socket header	Samtec	SSQ-115-02-T-D-RA	Digi-Key	SAM1224-15-ND	\$4.47	\$4.47	
1	10	R14W	R24	Res, 1/4W 1% metal film, 10 ohm	Yaeko	MFR-25FBF-10R0	Digi-Key	10.0XBK-ND	\$0.11	\$0.11	MF only, generic OK
1	102	R14W	R7	Res, 1/4W 1% metal film, 102 ohm	Yaeko	MFR-25FBF-102R	Digi-Key	102XBK-ND	\$0.11	\$0.11	MF only, generic OK
1	200	R14W	R28	Res, 1/4W 1% metal film, 200 ohm	Yaeko	MFR-25FBF-200R	Digi-Key	200XBK-ND	\$0.11	\$0.11	MF only, generic OK
1	909	R14W	R6	Res, 1/4W 1% metal film, 909 ohm	Yaeko	MFR-25FBF-909R	Digi-Key	909XBK0ND	\$0.11	\$0.11	MF only, generic OK
2	1k	R14W	R29, R30	Res, 1/4W 1% metal film, 1.00k	Yaeko	MFR-25FBF-1K00	Digi-Key	1.00KXBK-ND	\$0.11	\$0.22	MF only, generic OK
2	7.50k	R14W	R21, R23	Res, 1/4W 1% metal film, 7.50k	Yaeko	MFR-25FBF-7K50	Digi-Key	7.50KXBK-ND	\$0.11	\$0.22	MF only, generic OK
1	9.09k	R14W	R5	Res, 1/4W 1% metal film, 9.09k	Yaeko	MFR-25FBF-9K09	Digi-Key	9.09KXBK-ND	\$0.11	\$0.11	MF only, generic OK
6	10k	R14W	R1, R3, R8, R10, R20, R22	Res, 1/4W 1% metal film, 10.0k	Yaeko	MFR-25FBF-10K0	Digi-Key	10.0KXBK-ND	\$0.11	\$0.66	MF only, generic OK
1	24.9k	R14W	R17	Res, 1/4W 1% metal film, 24.9k	Yaeko	MFR-25FBF-24K9	Digi-Key	24.9KXBK-ND	\$0.11	\$0.11	MF only, generic OK
1	27.4k	R14W	R14	Res, 1/4W 1% metal film, 27.4k	Yaeko	MFR-25FBF-27K4	Digi-Key	27.4KXBK-ND	\$0.11	\$0.11	MF only, generic OK
1	15k	R14W	R15	Res, 1/4W 1% metal film, 15k	Yaeko	MFR-25FBF-15K0	Digi-Key	15.0KXBK-ND	\$0.11	\$0.11	MF only, generic OK
1	90.9k	R14W	R4	Res, 1/4W 1% metal film, 90.9k	Yaeko	MFR-25FBF-90K9	Digi-Key	90.9KXBK-ND	\$0.11	\$0.11	MF only, generic OK
2	100k	R14W	R11, R26	Res, 1/4W 1% metal film, 100k	Yaeko	MFR-25FBF-100K	Digi-Key	100KXBK-ND	\$0.11	\$0.22	MF only, generic OK
2	49.9k 2W	R2W_5083	R2, R16	Res, 2W 1% metal film, 49.9k	Vishay	CPF249K900FKE14	Mouser	71-CPF249K900FKE14	\$0.42	\$0.84	Metal film only
1	5k	TRIMPOT_3266	R9	Trimpot, vertical 3266W type, 5k	Bourns	3266W-1-502LF	Mouser	652-3266W-1-502LF	\$2.94	\$2.94	
1	100k	TRIMPOT_3266	R25	Trimpot, vertical 3266W type, 100k	Bourns	3266W-1-104LF	Mouser	652-3266W-1-104LF	\$2.94	\$2.94	
4	PN225JNA03QE	SW_DPDT_PN	SW1, SW2, SW3, SW5	Switch, DPDT PB alt action	C&K	PN225JNA03QE	Mouser	611-PN225JNA03QE	\$0.95	\$3.80	Generic OK
1	71BDF30-01-2-AJ	SW_ROT_71BDF-2	SW4	Switch, 2P 6T rotary PCB	Grayhill	71BDF30-01-2-AJN	Digi-Key	GH7106-ND	\$18.16	\$18.16	Digi-key also calls this 71BDF30-01QAJN
2	DRV134PA	DRV134_S	U1, U8	IC, balanced driver, DRV134, DIP8	Texas Instruments	DRV134PA	Mouser	595-DRV134PA	\$4.38	\$8.76	G4 suffix same, can use THAT corp 1646P8-U
1	74HC86N	74HC86N	U2	IC, quad exclusive OR gate, 74HC86, DIP14	Texas Instruments	SN74HC86N	Mouser	595-SN74HC86N	\$0.40	\$0.40	Any 74HC86 OK
1	78L05	78LXX	U3	IC, 5V linear reg 78L05, TO92	Fairchild Semi	LM78L05ACZ	Mouser	512-LM78L05ACZ	\$0.20	\$0.20	Other mfgs OK
1	OPA2134AP	OPA2134P	U4	IC, dual opamp, OPA2134, DIP8	Texas Instruments	OPA2134AP	Mouser	595-OPA2134AP	\$2.42	\$2.42	G4 suffix same, other dual opamps can be used
1	AD536AJQ	AD536JDZ	U5	IC, true RMS converter, AD536, DIP14	Analog Devices	AD536AJQ	Digi-Key	AD536AJQ-ND	\$12.66	\$12.66	
2	INA134AP	INA134P	U6, U7	IC, balanced reciever, INA134, DIP8	Texas Instruments	INA134PA	Mouser	595-INA134PA	\$2.36	\$4.72	G4 suffix same, can use THAT corp 1240P08-U
5	Socket		@U1, @U4, @U6, @U7, @U8	IC socket, DIP8	Mil-Max	110-99-308-41-001000	Mouser	575-199308	\$0.42	\$2.10	Optional, allows selection of amps

### Final Assembly Components

Qty	Value	Device	Parts	Description	Manufacturer	Mfg PN	Vendor	Vendor PN	Pice Ea	Price Ext	Comments
4	Cap	none	@SW1, @SW2, @SW3, @SW5	Button cap (for switches)	C&K	G001G	Mouser	611-G001G	\$0.46	\$1.84	Can use different colors if you want
1	Knob	none	@SW4	Knob, 3/4" diameter, 1/4" shaft	Kilo	JD-75-2-5	Digi-Key	226-1011-ND	\$5.42	\$5.42	
1	Enclosure	none	NA	Plastic enclosure	Bud Industries	PC-11403	Mouser	563-PC-11403	\$18.00	\$18.00	
									<b>Total</b>	<b>\$166.62</b>	

Not included in BOM: USB cable or 5V 500mA (or higher) DC adapter to provide power

Many parts are carried by both Digi-Key and Mouser, so if one is out of stock, check the other

[www.mouser.com](http://www.mouser.com)

[www.digikey.com](http://www.digikey.com)