

DC Coupled B1 Shunt PSU

Part	Value	Info	Qty	Description	Mouser Part	Vendor
Resistors	220k	1/4W - Audio Parts	2	Takman Carbon Film (PartsConnexion)	TAKMAN-74089	PX
	220R	1/4W - Audio Parts	4	Takman Carbon Film (PartsConnexion)	TAKMAN-74077	PX
	1M	1/4W - Audio Parts	2	Takman Carbon Film (PartsConnexion)	TAKMAN-74121	PX
	470R	1/2W - Carbon Film - 5%	4	Takman Carbon Film (PartsConnexion)	TAKMAN-71693	PX
	47R	1/4W - Metal Film - 1%	2	Generic Metal Film	71-CMF5547R000FEEK	
	10R	1/4W - Metal Film - 1%	2	Generic Metal Film	71-CMF5510R000FHEK	
	100R	1/4W - Metal Film - 1%	2	Generic Metal Film	71-CMF55100R00FKEK	
	47K	1/4W - Metal Film - 1%	1	Generic Metal Film	71-CMF5547K000FHEK	
	10K	1/4W - Metal Film - 1%	1	Generic Metal Film	71-CMF5510K000FHEK	
	2k2	1/2W - Metal Film - 1%	1	Takman Metal Film (PartsConnexion)	TAKMAN-73034	PX
	68R	1/2W - Metal Film - 1%	4	Generic Metal Film	71-RN60D68R0F	
Caps (1)	4700uf	Electrolytic - Min 35V - 7.5 mm	2	Pana FC - Silmic II - Nichicon KW/PS	647-UKW1V472MHD	
	100uf	Electrolytic - Min 25V - 5 mm	5	Pana FC - Silmic II - Nichicon PM	647-UVY1E101MDD	
Jfet	2SK170-BL (2)	Matched -N Jfet - TO92	4	Resulting up to 5mV DC offset	ED LaFontaine	
	2SK170-BL	Unmatched -N Jfet - TO92	6	Unmatched - BL Grade	ED LaFontaine	
Transistors	BC-560 B or C	PNP - TO92	1		512-BC560CTA	
	BC-550 B or C	NPN - TO92	2		512-BC550CBU	
	BC-517 G	NPN - TO92	1		863-BC517G	
MOSFET	IRFP240	N Channel - TO-247	2		844-IRFP240PBF	
	IRFP9240	P Channel - TO-247	2		44-IRFP9240PBF	
LED	Led	3mm - 1.7 to 1.8 v - 2mcd	16	8 Matched units/rail - Vf : 1.8v at 20mA	ED LaFontaine	
Rectifier Diode	MUR120	UltraFast 200V - 1A	4	DO-41	863-MUR120G	
I/O Connectors to PCB						
Male Conn.	M 3 poles I/O	3 poles Male Pin header	7	For PCB - 2.54 mm spacing	538-22-23-2031	
Female Conn.	F 3 poles I/O	3 poles Female Pin header	7	For I/O connectors - 2.54 mm spacing	538-10-11-2033	
Crimps	Wiring	For Female Connector	21	For Female Connector Wiring (x3)	538-08-50-0114	
Rotary Switch Selector						
Rotary Switch	2 poles / 6 pos	2 poles / 6 positions	1		105-SR2611F-26-38RN	
Male Conn.	M 7 poles I/O	7 poles Male pin header	1		538-22-23-2071	
Female Conn.	F 7 poles I/O	7 poles Female pin header	1		538-22-01-3077	
Crimps	Fem Wiring	For Female Connector	7		538-22-01-2047	
Relays						
Relay Diode	1N4001	Standard 50v - 1A	7	DO-41	512-1N4001	
Decoupling A	150nf/63v	150nF/63v - 5mm footprint	1	Metal Film - Cap - Near BC517	80-MMK5154J63J01L4	
Decoupling B	100nf/63v	100nF/63v - 5mm footprint	1	Metal Film - Cap - Near L7812ACV	871-B32529C104K189	
12v Regulator	L78121CV	12v Fixed Tension Regulator	1	TO-220-3 pins - STMicroelectronics	511-L7812ACV	
TO-220 Sink	Heatsink	Heatsink for 7812	1	Clip	532-6237B	
12v Relay	G6H-2-100-DC12	12v DC - 2 poles Relay	7	NEC #EA2-12NJ	ED LaFontaine	
Others Hardware						
Led	Status Led	On/Off	1	Adjust RLED ON resistor value for brightness	ED LaFontaine	
Transformer	50va - 2x12v	Toridial		Antek	On hand	
TO-247 Sink(3)	Heatsink	Heatsink for IRFP240/9240	4	Clip	567-287-1ABE	
Fuse 115v	Fuse	750mA T (Slow)			576-0239.750HXP	
Terminal Block	3 poles	Standard 5.08mm	1	90° for PCB - Through hole	651-1729131	
Volume Pot (4)	15k-25k (5)	Basic Stereo Log Pot	1	PCB Footprint is for ALPS RK27	688-RK27112A00AK	

AC Power Entry Module	10A	250 VAC		Schurter - AC Power Entry Module	693-4304.6090	
Chassis				ParMetal 3 x 16 x 12	20-16123B	83
Chassis - Front Panel				ParMetal 3/16" Front	20-1633FB	21
Knobs - volume	40 mm	Black Anodized Alum.	1	Parts Connexion	CONNEX-75099	PX
Knobs - Selector	25 mm	Black Anodized Alum.	1	Parts Connexion	CONNEX-75103	PX
Potentiometer extender				http://www.vt4c.com/shop/program/main.php?cat_id=35&group_id=1	EXT-KIT-26	VT4C
Embical for Pearl 2		XLR Connectors	2	Embical for Pearl 2	NEUTRIK-53041	PX

(1) CAPS : 25V 4700uF caps are for the recommended transformer or up to 2X15VAC. Higher voltage caps won't hurt.

Onboard spacing are : 7mm for 4700IF - 5mm for 100IF. If you exceed those values, caps won't fit !

If you decide to ride over the use of 2x12v Transformer add sinks to IRFP and L7815

(2) JFET : 0-3 mV will be great - Up to 5 mV will be very good.

(3) Sinks for TO-247 are optional but suggested for lifetime of the parts

(4) LightSpeed attenuator : <http://www.diyaudio.com/forums/showthread.php?s=&threadid=80194&highlight=lightspeed>

Some DIYers have experimeted very good results using LightSpeed rather than usual pot.

(5) 15 to 25K is recommended - Refer to B1 thread for more detailed informations about Pot.

Boards Size

Hypnotize : 127 X 68.58mm

Mezmerize : 197.49 X 68.58mm

50K log pot is better if you use sources with small output capacitors like some tube dacs or phono, must use

560k input resistors instead of 220k on board with a 50K log.