

DC Coupled B1 Shunt PSU

			Hypnotize Standard	Mezmerize Deluxe			
Part	Value	Info	Q	Q	Tips	Farnell	Mouser
Resistors	220K	1/4W - Audio Parts	2	2	Quality Parts : Takman, Riken, AB, Kiwame Carbon, Metal, Tantalum type. Takman Approved by Beta testers	www.partsconnexion.com www.diyhifisupply.com www.hificollective.co.uk	
	220R	1/4W - Audio Parts	4	4			
	1M	1/4W - Audio Parts	2	2			
	470R	1/2W - Carbon Film - 5%	4	4	Carbon Type preferred	1265115	293-470-RC
	47R	1/4W - Metal Film - 1%	2	2	Generic Metal Film	Your Choice	
	10R	1/4W - Metal Film - 1%	2	2	Generic Metal Film		
	100R	1/4W - Metal Film - 1%	2	2	Generic Metal Film		
	47K	1/4W - Metal Film - 1%	1	1	Generic Metal Film		
	10K	1/4W - Metal Film - 1%	1	1	Generic Metal Film		
	2K2	1/2W - Metal Film - 1%	1	1	Generic Metal Film		
	68R	1/2W - Metal Film - 1%	4	4	Generic Metal Film		
	600R	1/2W - Metal Film - 1%	2		Required only with 5v relays Use jumpers with 12v relays		
	300R	1/2W - Metal Film - 1%		2			
Caps (1)	4700uF	Electrolytic - Min 35V - 7.5mm	2	2	Pana FC - Silmic II - Nichicon KW/PS	Your Choice - Spacing 7.5mm	
	100uF	Electrolytic - Min 25V - 5mm	5	5	Pana FC - Silmic II - Nichicon PM	Your Choice - Spacing 5mm	
Jfet	2SK170-BL (2)	Matched - N Jfet - TO92	4	4	Resulting up to 5mV DC offset	DIYAudio Forum	
	2SK170-BL	Unmatched - N Jfet - TO92	6	6	Unmatched - BL Grade	NA	757-2SK170BLF
Transistors	BC-560 B or C	PNP - TO92	1	1		1467886	512-BC560CBU
	BC-556/7/8/9	Alternatives to BC-560B/C	1	1			
	BC-550 B or C	NPN - TO92	2	2		1467880	512-BC550CBU
MOSFET	BC-517 G	NPN - TO92	1	1		1705773	863-BC517G
	IRFP240	N Channel - TO-247	2	2		1463256	844-IRFP240PBF
	IRFP140	Alternative to IRFP240				9103040	844-IRFP140PBF
	IRFP9240	P Channel - TO-247	2	2		8649456	844-IRFP9240PBF
Led	IRFP9140	Alternative to IRFP9240				9103589	844-IRFP9140PBF
	Led	3mm - 1.7 to 1.8V - 2mcd	16	16	8 Matched units/rail - Vf : 1.8v at 20mA	1003205	593-VAOL-3HCE4
Rectifier Diode	MUR120	UltraFast 200V - 1A	4	4	DO-41	9557490	863-MUR120G
	11DQ10	Alternative to MUR120	4	4	DO-41	364472	844-11DQ10

I/O Connectors to PCB

Part	Value	Info	Q	Q	Tips	Farnell	Mouser
Male Conn.	M 3 poles I/O	3 poles Male Pin header	2	7	For PCB - 2.54mm spacing	1462950	538-22-23-2031
Female Conn.	F 3 poles I/O	3 poles Female Connector	2	7	For I/O connectors - 2.54mm spacing	1462780	538-10-11-2033
Crimps	Wiring	For Female Connector	6	21	For Female Connector Wiring (x3)	1462641	538-08-50-0114

Rotary Switch Selector

Part	Value	Info	Q	Q	Tips	Farnell	Mouser
Rotary Switch	2 poles / 6 pos	2 poles / 6 positions		1	1 pole & side is to be used	1123691	105-SR2611F-26-38RN
Male Conn.	M 7 poles I/O	7 poles Male Pin header		1	For PCB - 2.54mm spacing	1654534	538-22-23-2071
Female Conn.	F 7 poles I/O	7 poles Female Pin header		1	For PCB - 2.54mm spacing	NA	538-22-01-3077
	F 4 poles I/O	4 poles Female Connector		1	Alternative to "F7 poles I/O" using 1 x F4 poles + 1 x F3 poles	1462809	538-22-01-2047
	F 3 poles I/O	3 poles Female Connector		1		1462834	538-22-01-2037
Crimps	Fem Wiring	For Female Connector		7	For Female Connector Wiring (7 poles)	1462641	538-08-50-0114

Relay(s)			Hypnotize Standard	Mezmerize Deluxe			
Part	Value	Info	Q	Q	Tips	Farnell	Mouser
Relay Diode	1N4001	Standard 50v - 1A	1	7	D0-41	1651089	512-1N4001_Q
Decoupling A	150nF/63v	150nF/63v - 5mm footprint	1	1	Metal Film Cap - Near BC517	1413780	581-BQ014E0154K
Decoupling B	100nF/63v	100nF/63v - 5mm footprint	1	1	Metal Film Cap - Near L7812ACV	1189289	871-B32529C104K189
12v Regulator	L7812ACV	12v Fixed Tension Regulator	1	1	TO-220-3 pins - STMicroelectronics	1087091	511-L7812ACV
TO-220 Sink	Heatsink	Heatsink for 7812	1	1	Clip	4621220	532-6043PB
12v Relay	G6H-2-100-DC12	12v DC - 2 poles Relay	1	7	Non latching - Omron and Nais OK	9949208	653-G6H-2-100DC12
05v Relay	G6H-2-100-DC5	05v DC - 2 poles Relay	1	7	Non latching - Omron and Nais OK	9949194	653-G6H-2-100DC5
Warning : Only one set of 12v or 5v relays !							

Others Hardware

Part	Value	Info	Q	Q	Tips	Farnell	Mouser
Led	Status Led	On / Off Status	1	1	Adjust RLed ON resistor value for brightness	Your Choice	
Transformer	50Va - 2x12V	2x12v - 50Va	1	1	Rcore / EI / Toroidal	Your Choice	
TO-247 Sink (3)	Heatsink	Heatsink for IRFP240/9240	4	4	Clip		567-287-1ABE
Fuse 115V	Fuse	750mA T (Slow)	2	2	Ok for 50VA Transformer - 115V	Your Choice	
Fuse 230V	Fuse	500mA T (Slow)	2	2	Ok for 50VA Transformer - 230V	Your Choice	
Terminal Block	3 poles	Standard 5.08mm	1	1	90° for PCB - Through hole	3041451	651-1729131
Volume Pot (4)	15K-25k (5)	Basic Stereo Log Pot		1	PCB Footprint is for ALPS RK27	Your Choice	

(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 4700µF - 5mm for 100µF. 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.

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.

Boards Size

Hypnotize : 127 X 68.58mm

Mezmerize : 197.49 X 68.58mm