

WTF Amps El Estudiante						
Qty	Part	Notes	e.g. Vendor	e.g. P/N	Vendor	P/N
Resistors						
1	62 ohm, 3 W+	drops 8V of the B+ to put 40V across the heaters	Digikey	P62W-3BK-ND		
1	1,000 ohm, 1/4W+	part of the power filter for the tubes	Digikey	1.0KH-ND		
2	1M ohm, 1/4W+	grid resistor for tubes	Digikey	1.00MXBK-ND		
2	300 ohm, 1/4W+	grid stopper for tubes, carbon preferred	Digikey	330QBK-ND		
2	10,000 ohm, 1/2W+	anode load for tubes	Digikey	10KH-ND		
2	750 ohm, 1/4W+	cathode resistor for tubes	Digikey	750XBK-ND		
2	1,000 ohm, 1/4W+	gate stopper resistors for MOSFETs, carbon preferred	Digikey	1.0KH-ND		
2	1,000 ohm, 1/2W+	dummy load on output, discharges caps	Digikey	1.0KH-ND		
2	12 ohm, 1/2W+	CCS setting resistor	Digikey	12H-ND		
Capacitors						
2	100uF, 63V	power filter caps	Digikey	493-15149-ND		
2	100uF, 10V	cathode bypass capacitors	Digikey	493-15125-ND		
2	470uF, 63V	output caps	Digikey	493-11032-1-ND		
2	.1uF-.22uF, 63V	output cap bypass cap (optional)	Digikey	338-3412-ND		
Active Parts						
1	7370	it's the tube, dual triode	Tube Vendors			
2	IRF510	MOSFET, IRF610 probably also works fine	Digikey	IRF510PBF-ND		
2	LM317HV	regulator configured as CCS, non-HV may work	Digikey	LM317HVT/NOPB-ND		
Other						
1	50-100k dual gang pot	doesn't have to be super special, should be audio/log taper	Mouser	313-2420F-50K		
2	RCA jacks	for input; 3.5mm "headphone" style also ok	Mouser	568-NYS367		
1	headphone jack	1/4" TRS, 3.5mm, this is for output	Digikey	SC1317-ND		
1	2.5mm pin power jack	to work with your PSU (e.g. 163-1100-EX Mouser)	Digikey	839-1292-ND		
1	Cisco PSA-18U	same power supply as original starving student	eBay/Amazon			
1	9-pin tube socket	socket for tube, I like Belton but use whatever	Tube Vendors			
4	TO-220 mounting hardware	for MOSFET and CCS (e.g. 532-4880 Mouser)	Digikey	4880SG-ND		
4	heatsinks	4 C/W or better	Digikey	HS350-ND		
1	SPST power switch	nothing fancy	Digikey	451-1158-ND		
1	Chassis	get creative				
	Misc parts	screws, grommets, terminal strips, knob, etc				
https://wtfamps.wordpress.com/el-estudiante-headphone-amp/						