

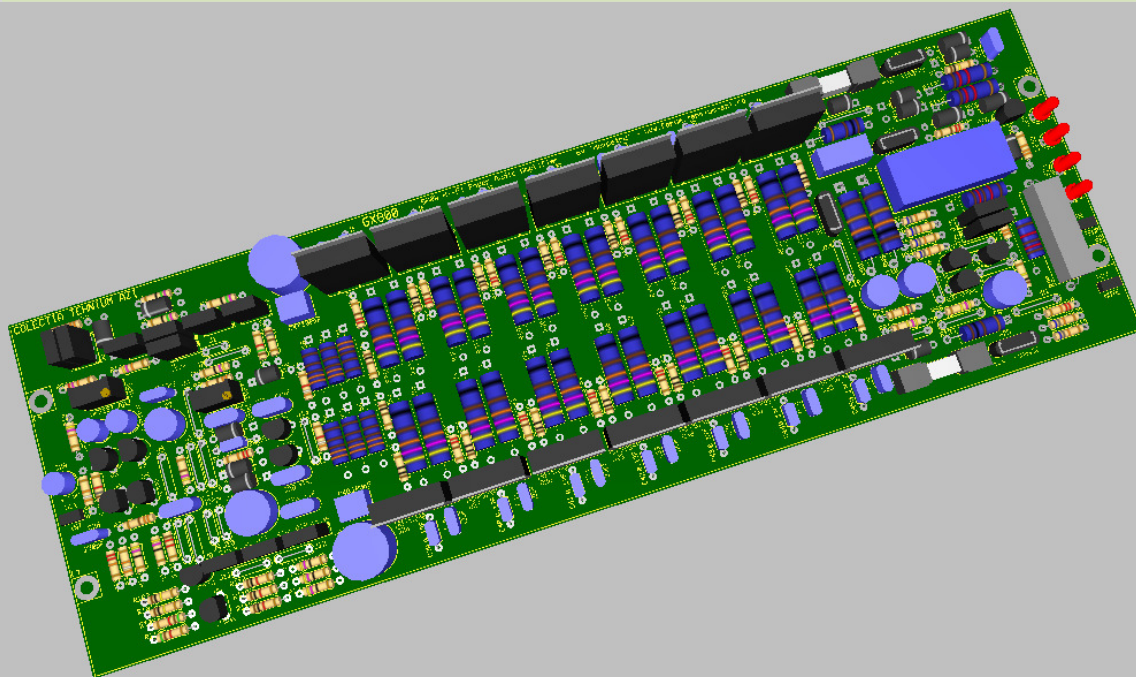
COLECTIA

TEHNIUM AZI

Do it yourself

# GX800

## *800W Hi-Fi Audio Amplifier*



*Hi-Fi Power Audio Amplifier for Public Address*

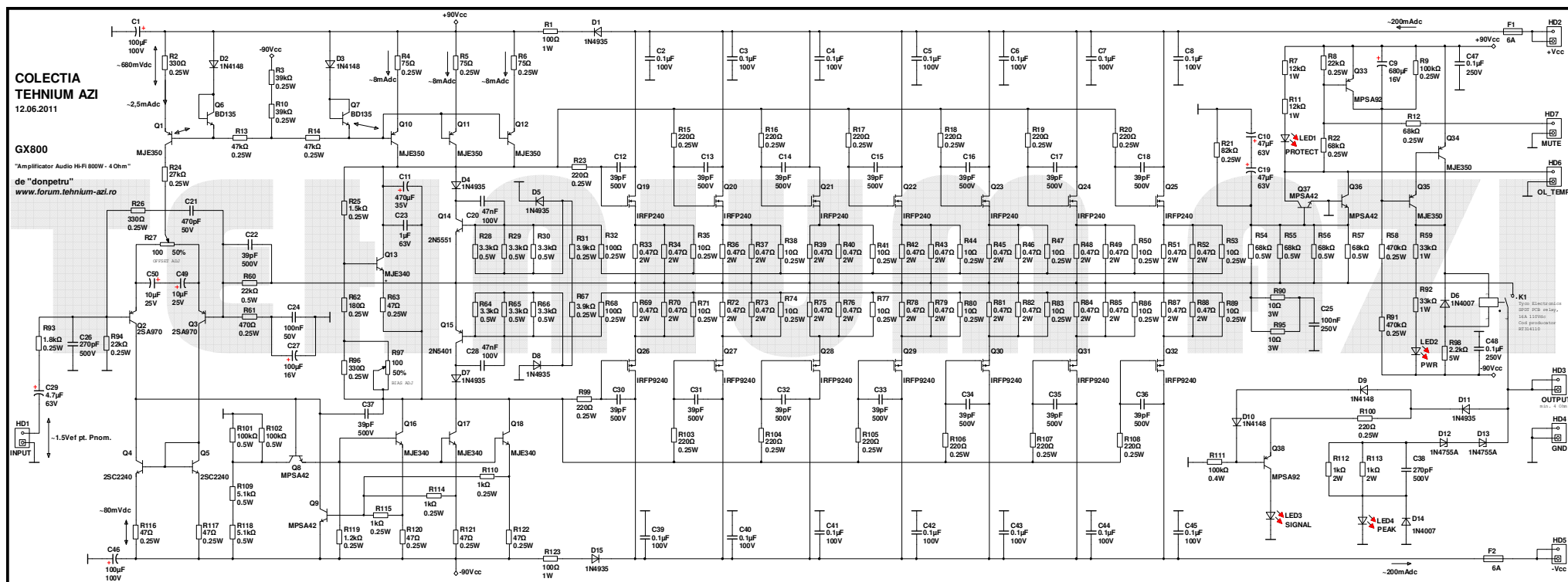
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2011@ by „donpetru”  
<http://www.forum.tehniium-azi.ro>  
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12/06/2011

## 2. SCHEMA ELECTRONICĂ

GX800 – un amplificator audio Hi-Fi de 800W - compact si performant –

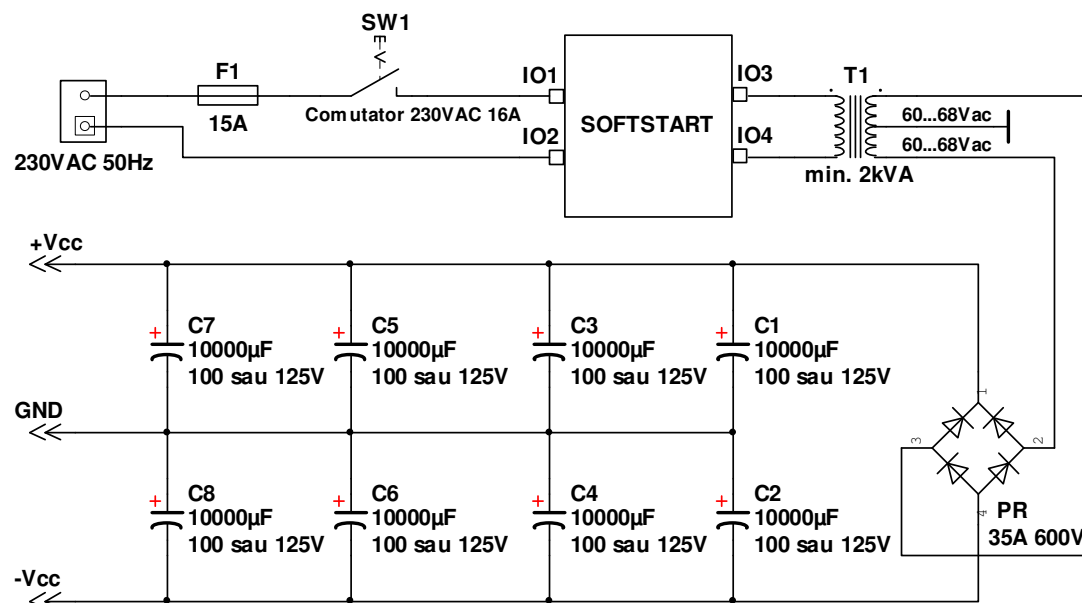
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Caracteristici tehnice

(**ATENȚIE!!!** curentul de mers in gol pentru tot amplificatorul se va ajusta **NUMAI** dupa anclarea releului de pe iesire in domeniul 140...220mA)

	Zin	Uin	Fin_sin	Ubias	+/-Ualim	Impedanta incinta Zload = 8 Ohm		Impedanta incinta Zload= 4 Ohm		SR	Randament
	[kOhm]	[Vef]	[kHz]	[V]	[Vdc]	P [W]	THD[%]	P [W]	THD[%]	[V/us]	[%]
GX800	~20	1,350	1	~6,850	95	418,05	0,0015	835,87	0,002	~55,00	~53,50
		~1,500				545,38	0,025	1100.05	0.08		~68,50

Sursa de alimentare:**Obs!**

1. Valorile componentelor din schema sunt recomandate pentru alimentarea a doua montaje GX800.
2. Dupa caz, condensatoarele de filtraj vor avea tensiunea nominala de 100V sau 125V.
3. Pentru descarcarea capacitatilor de filtraj la functionarea alimentatorului in gol, in paralel cu fiecare condensator se pot monta rezistente electrice.

## Tranzistoare

Nr. Crt.	Denumire	Bucati	Valori	Capsula	Alte observatii
1	Q19,Q20,Q21,Q22,Q23,Q24,Q25	7	IRFP240	TO247	-
2	Q26,Q27,Q28,Q29,Q30,Q31,Q32	7	IRFP9240	TO247	-
3	Q13,Q16,Q17,Q18	4	MJE340	TO126	-
4	Q1,Q10,Q11,Q12,Q34,Q35	6	MJE350	TO126	-
5	Q6,Q7	2	BD135	TO126	-
6	Q8,Q9,Q36,Q37	4	MPSA42	TO92	-
7	Q33,Q38	2	MPSA92	TO92	-
8	Q15	1	2N5401	TO92	-
9	Q14	1	2N5551	TO92	-
10	Q2,Q3	2	2SA970	TO92	-
11	Q4,Q5	2	2SC2240	TO92	-

Nr. Crt.	Denumire	Bucati	Valori	Capsula / Tip	Alte observatii
1	D6,D14	2	1N4007	DO-35	
2	D2,D3,D9,D10	4	1N4148	DO-35	
3	D12,D13	2	1N4755A	DO-41	
4	D1,D4,D5,D7,D8,D11,D15	7	1N4935	DO-41	
5	K1	1	Releu 110Vdc 2x16A	RM85-P-110VDC	vezi foto
6	HD2,HD3,HD5,HD4	3	Mufa plata PCB	PC187	
7	HD6,HD7	1	Header PCB	-	
8	HD1		Header PCB	NS25	
9	LED1,LED2,LED3,LED4	4	LED ROSU	3mm	
10	F1,F2	2	8_AMP	QUICK FUSE	*10AMP
11	J1...J21	21	JUMPERI	L total	0.3m

## Capacitoare

Nr. Crt.	Denumire	Bucati	Valori	Tip	Alte observatii
1	C2,C3,C4,C5,C6,C7,C8,C39,C40,C41,C42,C43,C44,C45	14	0.1uF	250V	MKS2
2	C23	1	1uF	63V	MKS2
3	C29	1	4.7uF	63V	ELEC
4	C49,C50	2	10uF	25V	TANTAL
5	C22	1	39pF	500V	LCC
6	C12,C13,C17,C30,C31,C34,C36	7	39pF	500V	LCC
7	C14,C15,C16,C18,C32,C33,C35,C37	8	39pF	500V	LCC
8	C47,C48	2	0.1uF	250V	MKS2
9	C25	1	0.1uF	250V	MKS2
10	C24	1	0.1uF	63V	MKS2
11	C27	1	100uF	25V	ELEC
12	C1,C46	2	100uF	125V	ELEC
13	C20,C28	2	47nF	100V	LCC
14	C10,C19	2	47uF	63V	ELEC
15	C21	1	470pF	100V	LCC
16	C11	1	470uF	63V	ELEC
17	C9	1	680uF	16V	ELEC
18	C26,C38	2	270pF	500V	LCC



Releu 110VDC 2 x 16A

Nr. Crt.	Denumire	Bucati	Valori	Capsula / Tip	Rezistoare
					Alte obs.
1	R33,R34,R42,R43,R45,R46,R49,R51,R70,R72,R73,R75,R78,R79,R81,R82,R87,R88,R36,R37,R39,R40,R48,R52,R69,R76,R84,R85	28	0.47 Ohm	3W	metal-oxid resistors
2	R119	1	1.2 kOhm	0.25W	
3	R25	1	1.5 kOhm	0.25W	
4	R93	1	1.8 kOhm	0.25W	
5	R110,R114,R115	3	1 kOhm	0.25W	
6	R112,R113	2	1 kOhm	2W	
7	R98	1	2.2 kOhm	5W	
8	R28,R29,R30,R64,R65,R66	6	3.3 kOhm	1W	
9	R31,R67	2	3.9 kOhm	0.25W	
10	R109,R118	2	5.1 kOhm	0.5W	
11	R35,R38,R41,R44,R47,R50,R53,R71,R74,R77,R80,R83,R86,R89	14	10 Ohm	0.25W	
12	R90,R95	2	10Ohm	3W	
13	R7,R11	2	12kOhm	1W	
14	R8,R60,R94	3	22 kOhm	0.25W	
15	R24	1	27 kOhm	0.25W	
16	R59,R92	2	33 kOhm	0.25W	
17	R3,R10	2	39 kOhm	0.25W	
18	R13,R14	2	47 kOhm	0.25W	
19	R63,R116,R117,R120,R121,R122	6	47 Ohm	0.25W	
20	R12,R22,R54,R55,R56,R57	6	68 kOhm	0.4W	
21	R4,R5,R6	3	75Ohm	0.4W	

22	R21	1	82 kOhm	0.4W
23	R9,R101,R102,R111	4	100 kOhm	0.4W
24	R97	1	100 Ohm	multitur
25	R32,R68	1	100 Ohm	0.25W
26	R27	1	100 Ohm	multitur 500Ohm
27	R1,R123	2	100 Ohm	1W
28	R62	1	180 Ohm	0.25W
29	R15,R16,R17,R18,R19,R20,R23,R99,R100,R103,R104,R105,R106,R107,R108	15	220 Ohm	0.25W
30	R2,R26,R96	3	330 Ohm	0.25W
31	R58,R91	2	470 kOhm	0.25W
32	R61	1	470 Ohm	0.25W

Rezistor 0.25W  
sau 0.4W

Rezistor 1W

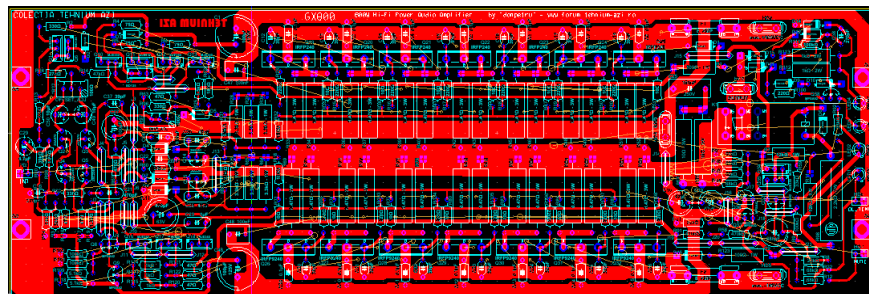


Rezistor 3W



Rezistor 5W

## VEDERE DE SUS



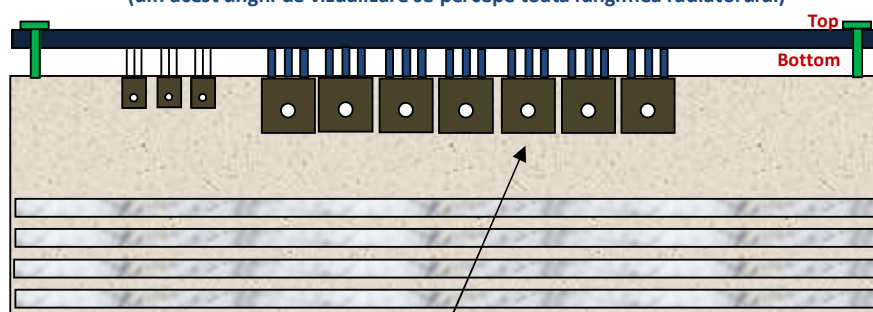
Gauri  
de prindere  
radiatoare



OS518 - AAVID THERMALLOY

## VEDERE DIN LATERAL

(din acest unghi de vizualizare se percepe toata lungimea radiatorului)



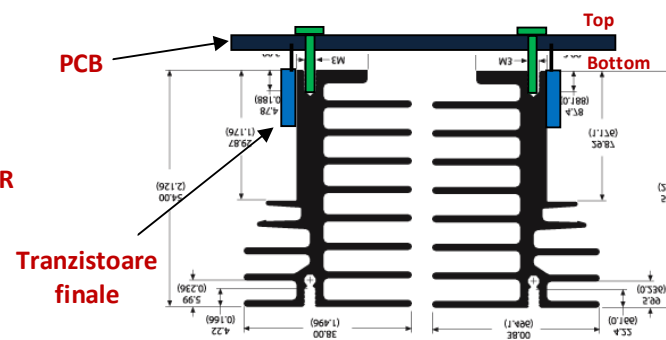
PCB

RADIATOR

Componente electronice prinse de radiator

## VEDERE DIN SECTIUNE

(din acest unghi de vizualizare se percep cele doua radiatoare)



**ATENTIE!** Deoarece rezistenta termica in convecție forțată a unui singur radiator OS518 de lungime 30cm este mai mare decât valoarea rezultată în urma calculelor, în asamblarea montajului se vor folosi **OBLIGATORIU** două radiatoare OS518 montate ca în figura alăturată. Cele două radiatoare se vor ventila forțat cu ajutorul a cel puțin unui cooler cu  $v$  aprox. 2m/s iar tranzistoarele finale și cele în capsula TO126 se vor izola față de radiatoare. Radiatoarele se vor conecta ulterior la masa.





