

Wharfedale Pro

Service Manual: EVP-X12PM Professional Speaker Enclosures

EVP-X12PM

★ TABLE OF CONTENTS

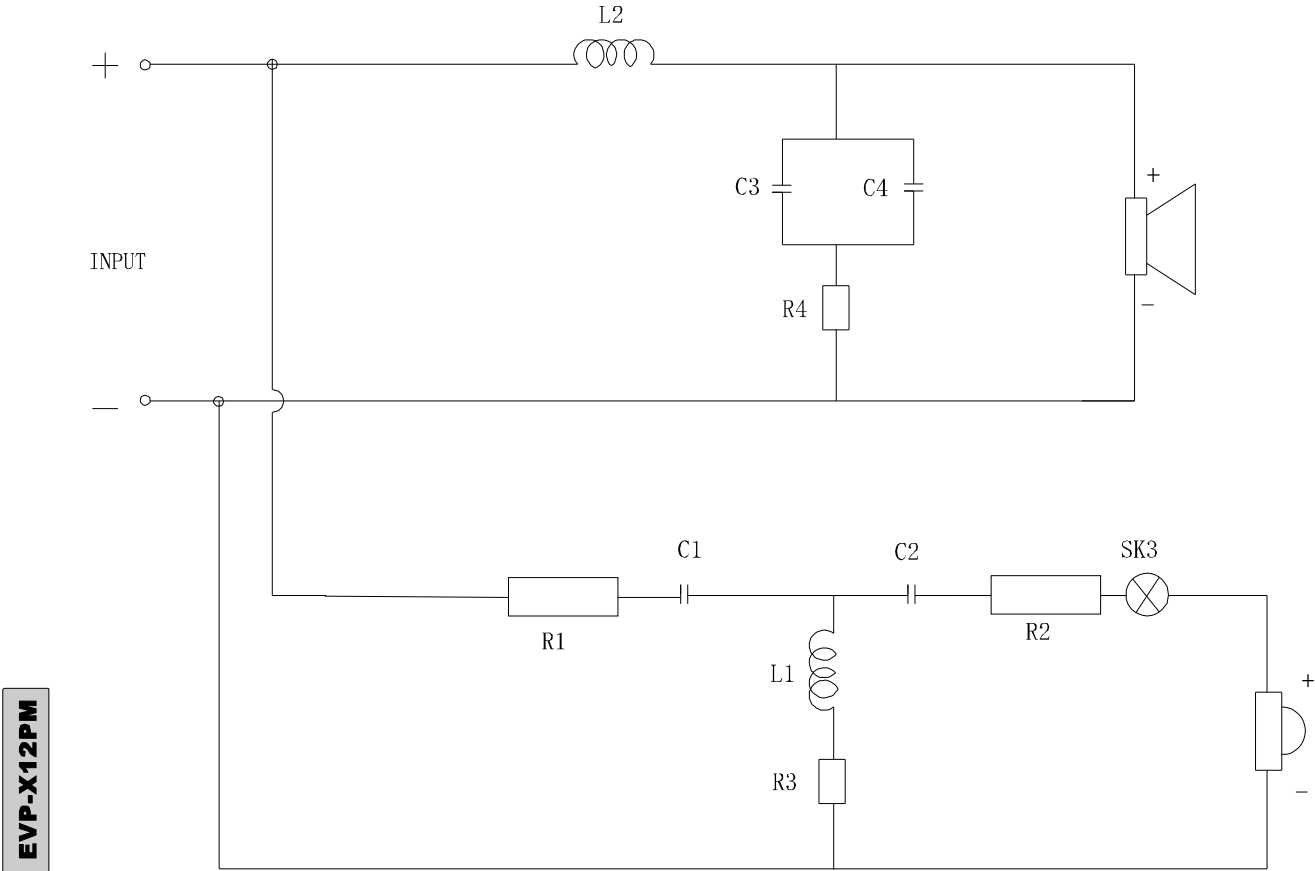
SPECIFICATIONS-----	2
SCHEMATIC DIAGRAM-----	4
ASSEMBLY SKETCH-----	3
ASSEMBLY PART LIST -----	5
ELECTRONICS PARTS LIST-----	6
SCHEMATIC DIAGRAM (AMP)-----	7
ASSEMBLY PART LIST (AMP)-----	8
ELECTRONICS PARTS LIST (AMP)-----	9

1. SPECIFICATIONS

EVP-X12PM

System specification	
System Type	15" 2-way monitor
Frequency Response +/- 3dB	50Hz-20kHz
Finish Material	Black carpet
Tripol stand	
Stand Bottom	--
Stand Top	--
Input:	
Input A	Switchable balanced mic or line level input
Input B	Line level input
Speaker Level Input	NA
Input Connectors	
Input A	Combined jack and XLR
Input B	Combined jack, XLR and RCA Socket
Input Sensitivity	
Mic	5mV
RCA	0.5V
LINE	0.775V
Input Impedance	
Mic	470 ohms
Line Input A	47k
Line Input B	10k ohms
Line Output	
Type	Balanced Male XLR connector
Line Output High Pass Filter	
Main EQ	5 band Graphic EQ
Active Crossover	NA
Infrasonic Filter	NA
Phase switch	NA
POWER SECTION	
Amplifier Power	Continuous:300W Peak:500w
Extention Speaker Output	1
Protection Type	Dynamic /AGC
Power on indicator	Red LED
System Dynamic AGC activate Indicator	Yellow LED
ENCLOSURE	
Dimention(mm) H x W x D	560X424X441
weight Net (kg)	22.5kg
weight Gross (kg)	25.1kg

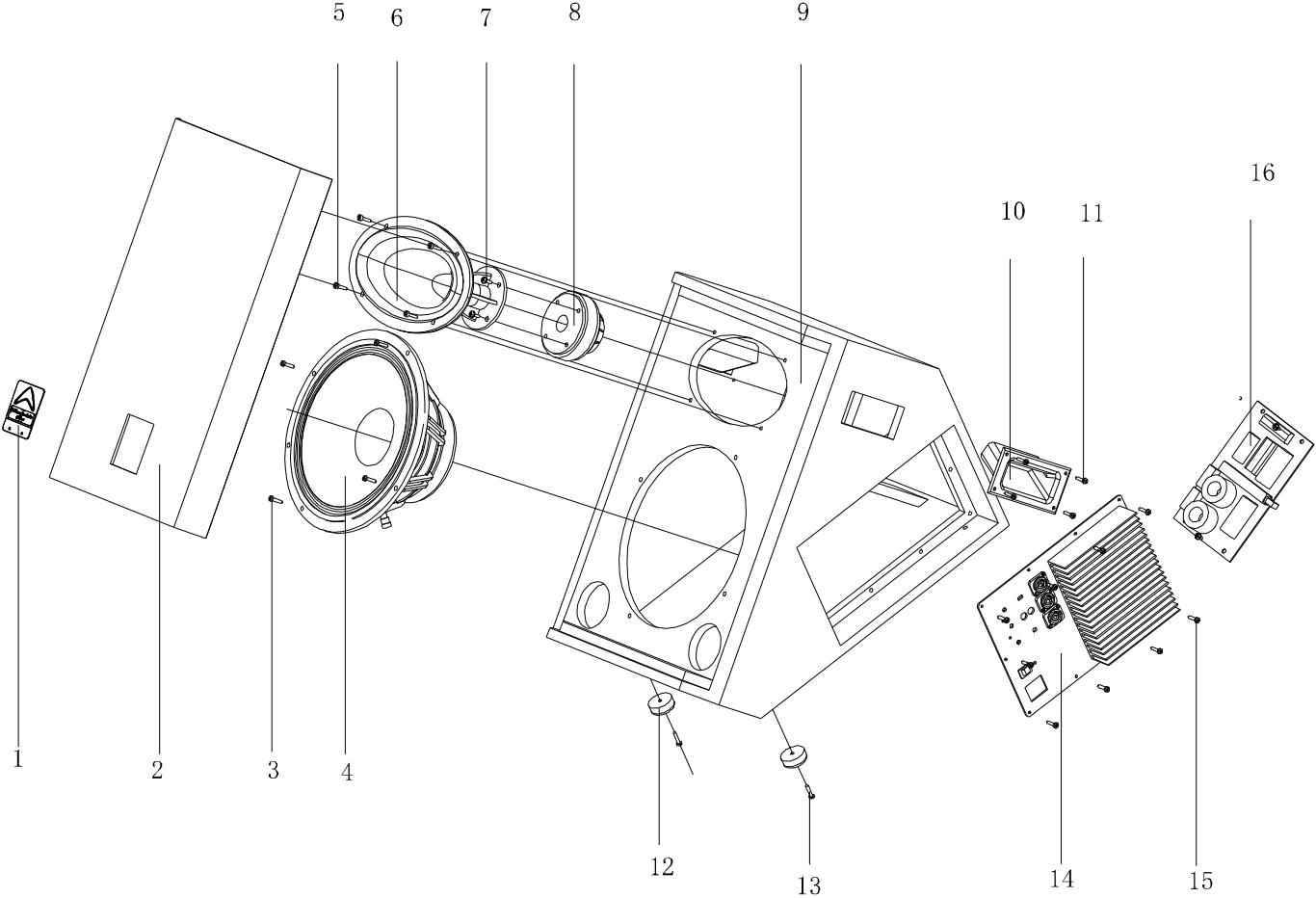
2. SCHEMATIC DIAGRAM



EVP-X12PM

C1=C3=3.0uF/250V	R3=4 OHM/10W
C2=C4=6.0uF/250V	R4=2 OHM/30W
R1=1 OHM/25W	L1=0.3mH
R2=5 OHM/25W	L2=0.7mH

3.ASSEMBLY SKETCH



EVP-X12PM

4.ASSEMBLY PARTS LIST

R/N	P/N	PART NAME	DESCRIPTION	QUA
1	217-2935000002R	LOGO PLATE		1
2	310-2112400001R	STEEL GRILLE		1
3	533-5001350801AR	SCREWS	MT (+) 5*35 BZn	4
4	ZD-64300-01R	WOOFER		1
5	539-4001300803AR	SCREWS	MC (*) 5*35 BZn	4
6	253-2929000001R	PLASTIC HORN		1
7	540-6001120306AR	SCREWS	MH6*12NID	4
8	ZD-53301-01R	TWEETER		1
9	344-2112500001R	CABINET		1
10	243-2009000001R	HANDLE		2
11	553-4001209061AR	SCREWS	4*20TA H BZn	12
12	226-3800601111R	RUBBER FOOT		4
13	553-4001209061AR	SCREWS	4*20 TA H BZn	4
14	ZC-38501-07R	AMPLIFIER		1
15	537-4002300801AR	SCREWS	MP (+) 4*30 BZn	10
16	600-2112500010R	CROSSOVER ASSEMBLED UNIT		1

EVP-X12PM

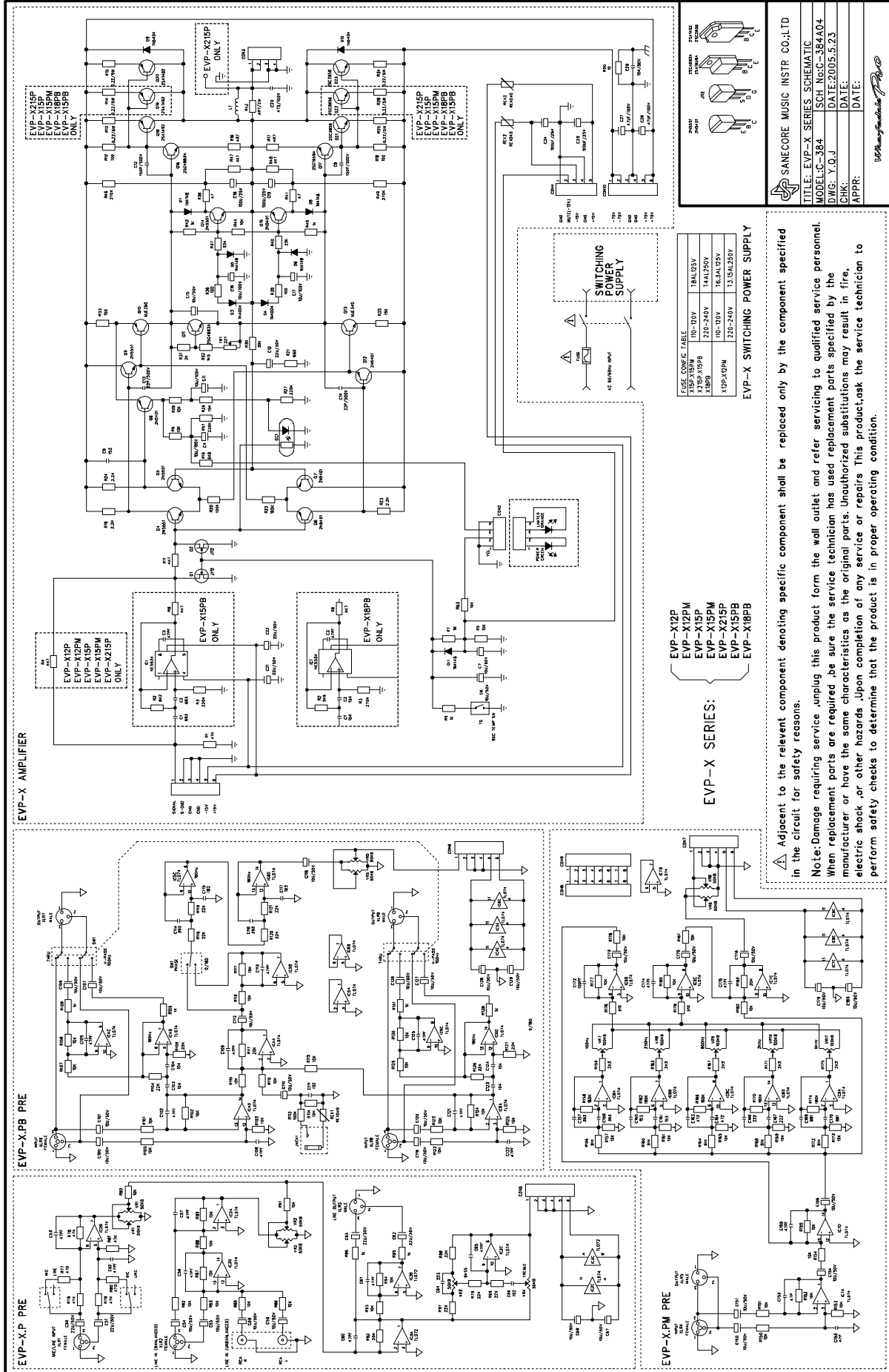
5.ELECTRONIC PARTS LIST

R/N	P/N	PART NAME	DESCRIPTION	QUA
1	053-2937003109R	PCB PLATE		1
2	053-2930003109R	LED PCB PLATE		1
3	019-0344122000R	YELLOW LED		1
4	019-0322122001R	GREEN LED		1
5	079-0002000000R	LAMP (SK3)		1
6	014-3050411002R	CAPACITOR (C1, C3)	3. 0uF/250V	2
7	014-6050411002R	CAPACITOR (C2, C4)	6. 0uF/250V	2
8	001-1009519100R	RESISTOR (R1)	1 OHM/25W	1
9	001-2000513050R	RESISTOR (R4)	2 OHM/30W	1
10	001-4009511100R	RESISTOR (R3)	4 OHM/10W	1
11	001-5009519100R	RESISTOR (R2)	5 OHM/25W	1
12	080-0600701000R	INDUCTANCE (L2)	0. 7mH	1
13	080-0300300100R	INDUCTANCE (L1)	0. 3mH	1

EVP-X12PM

6. SCHEMATIC DIAGRAM (AMP)

EVP-X12PM



SANECORE MUSIC INSTR CO., LTD

TITLE: EVP-X SERIES SCHEMATIC
 MODEL: C-384
 DWG: Y.D.J
 DATE: 2005.5.23

CHK: DATE:
 APPR: DATE:

7.ASSEMBLY PARTS LIST (AMP)

R/N	P/N	PART NAME	DESCRIPTION	QUA
1	300-1385010000R	AL PANEL		1
2	306-1385020000R	HEAT SINK		1
3	307-2000500121R	COPPER POST	M3*12	4
4	307-1300540151R	COPPER POST		5
5	307-2300500241R	COPPER POST		2
6	310-1385130000R	GRILLE		1
7	527-3012100811AR	SCREWS	SP(+) 3*10 DC H BZn	6
8	535-3031080801AR	SCREWS	MPW(+) 3*8 BZn	8
9	537-3001080801AR	SCREWS	MP(+) 3*8 BZn	10
10	537-3001140801AR	SCREWS	MP(+) 3*14 BZn	8
11	537-4001120801AR	SCREWS	MP(+) 4*12 BZN	8

EVP-X12PM

8.ELECTRONIC PARTS LIST (AMP)

R/N	P/N	PART NAME	DESCRIPTION	QUA	LOCATION
	088-1385001300R	SIGNAL POP PCB		1	
1	053-1385001113R	SIGNAL PCB		1	
2	001-1804203010R	RESISTOR	180K 1/8W F	5	R158. 162. 166. 170. 174
3	001-9103203010R	RESISTOR	91K 1/8W F	5	R156. 160. 164. 168. 172.
4	001-1003203010R	RESISTOR	10K 1/8W F	16	R150. 151. 152. 153. 154. 155. 157 . 161. 165. 169. 173. 177. 178. 180 . 181. 182
5	001-2003203010R	RESISTOR	20K 1/8W F	2	R92. 183
6	001-3302203010R	RESISTOR	3. 3K 1/8W 5%	5	R159. 163. 167. 171. 175
7	001-5101203010R	RESISTOR	MF 510R 1/8W 1%	2	R176. 179
8	006-1001051163R	CAPACITOR	SM10uF 50V 10%	8	C150. 151. 154. 156. 173. 178. 179 . 180
9	014-2220200028R	CAPACITOR	MKS2 2. 2nF 63V 5%	2	C166. 167
10	013-3930210501R	CAPACITOR	39N 63V J	2	C157. 158
11	014-1530211028R	CAPACITOR	MKS2 15NF 63V 10%	2	C160. 161
12	008-6801005016R	CAPACITOR	681-Y5P-50V-K	2	C169. 170
13	014-4720211028R	CAPACITOR	MKS2 4. 7nF 63V 10%	2	C163. 164
14	008-4700005004R	CAPACITOR	47P-50V-J	6	C152. 153. 155. 172. 174. 176
15	017-1530000000R	IC	TL074CN	3	IC7. 8. 9
16	020-5052119425R	POTENTIOMETERS	RD 16K124A068-50KCBX2SII	1	VR6
17	048-3000000000R	JACK	NYS143 J3Y1 3pin PCB	1	XLR5
18	056-4106221100R	JACK	JS-1001-6(2802-06GS)	1	CON7
19	056-4116000144R	JACK	PH=2. 54MM H=8. 5MM	1	CON8
20	049-2510222016R	JACK	CXLF-07	1	XLR4
21	057-2541222161R	JACK	PH=2. 5MM	1	CON9
22	053-1385003156R	SPEAKER PCB		1	
23	049-1304113120R	JACK	LS-2031-4	1	JACK1
	088-1385011000R	AMP POP PCB		1	
1	053-1384001110R	AMP PCB		1	
2	001-1003205010R	RESISTOR	10K 1/4W F	5	R5. 6. 29. 44. 53
3	001-2704205010R	RESISTOR	270K 1/4WF	2	R46. 49
4	001-4702205010R	RESISTOR	4. 7K 1/4W F	4	R4. 11. 47. 48
5	001-2204205010R	RESISTOR	220K 1/4W F	2	R51. 27
6	001-2202205010R	RESISTOR	2. 2K 1/4W F	3	R19. 23. 24.
7	001-3903205010R	RESISTOR	39K 1/4W F	1	R30
8	001-1005205010R	RESISTOR	1M 1/4W F	1	R7
9	001-1004205010R	RESISTOR	100K 1/4W F	2	R20. 22
10	001-1501205010R	RESISTOR	150 OHM 1/4W F	2	R33. 35.
11	001-6801205010R	RESISTOR	680 OHM 1/4W F	1	R21

EVP-X12PM

8.ELECTRONIC PARTS LIST (AMP)

12	001-1002205010R	RESISTOR	1K 1/4W F	3	R9. 43. 45
13	001-2002205010R	RESISTOR	2K 1/4W F	1	R31
14	001-1802205010R	RESISTOR	1.8K 1/4W F	1	R32
15	001-1001205010R	RESISTOR	100 OHM 1/4W F	4	R12. 18. 36. 39
16	001-3303205010R	RESISTOR	33K 1/4W F	2	R37. 40
17	001-4700205010R	RESISTOR	47 OHM 1/4W F	2	R38. 41
18	001-4709205010R	RESISTOR	4.7 OHM 1/4W F	2	R16. 17
19	001-1000205100R	RESISTOR	10 OHM/1/4W	1	R50
20	001-0229510050R	RESISTOR	0.22 OHM 5W J	6	R13. 14. 15. 25. 28. 34
21	001-0470308050R	RESISTOR	4.7 OHM 2W J	1	R42
22	005-2001306101R	RESISTOR	PA0631-HA1-B201	1	TR1
23	006-1004061194R	CAPACITOR	10uF 100V	6	C4. 6. 7. 16. 17. 11
24	006-1001051163R	CAPACITOR	SM10uF 50V 10%	3	C15. 21. 22
25	006-2201051163R	CAPACITOR	SM 22uF 50V 10%	1	C10
26	006-1011061143R	CAPACITOR	SM 100uF 25V 10%	4	C18. 19. 23. 24
27	006-4704101392R	CAPACITOR	47 UF/100V 10*12.5	2	C27. 28
28	013-1040210801R	CAPACITOR	104/63V	1	C29
29	013-1520210501R	CAPACITOR	152 63V 5%	1	C9
30	008-2201050004R	CAPACITOR	22P/500V 10%	2	C13. 14
31	008-1512050004R	CAPACITOR	151/500V 10%	2	C12. 8.
32	014-4730300001R	CAPACITOR	47N-100V-J CL11	1	C20
33	067-1104148000R	DIODE	IN4148	5	D11. 5. 6. 7. 8
34	067-2204004000R	DIODE	IN4004	2	D3. 4
35	067-2205404000R	DIODE	IN5404	2	D9. 10
36	018-2905401115R	AUDION	2N5401 T0-92	5	Q6. 7. 8. 12. 15
37	018-2905551115R	AUDION	2N5551 T0-92	4	Q4. 5. 9. 14.
38	018-1900350113R	AUDION	MJE350 T0-126	1	Q10
39	018-1900340113R	AUDION	MJE340 T0-126	1	Q13
40	018-0101492116R	POWER TRANSISTOR	2SA1492 T0-3P	2	Q18. 20
41	018-0101859113R	AUDION	2SA1859A	1	Q17
42	018-0303856116R	POWER TRANSISTOR	2SC3856 T0-3P	2	Q21. 23
43	018-0304883113R	AUDION	2SC4883A	2	Q16. 11
44	018-2800112115R	FIELD EFFECT TRANSISTOR	J112 T0-92	2	Q1. 2
45	026-2794103170R	INDUCTOR	2.7UH	1	L1
46	004-6609000000R	RESISTOR	3-11K	1	OC1
47	019-0315132000R	LED		1	
48	079-0401000000R	PROTECTOR	PTC RXE040	2	REX2. 3
49	066-0095010000R	SWITCH	T0-2P	1	TS

EVP-X12PM

8.ELECTRONIC PARTS LIST (AMP)

50	056-4104221100R	JACK	DJ2802-4P	1	CON2
51	056-6104224400R	JACK	VH3.96 4PIN	1	CON3
52	056-4105220000R	JACK	JS-1135-05	1	CON4
53	056-0106003300R	JACK	6PIN 3.96PH	1	CON10
54	277-0100000000R	CRYSTAL WASHER		3	Q16 Q17 Q11
55	001-4703205010R	RESISTOR	47K 1/4W F	1	R1
56	001-6802205010R	RESISTOR	6.8K 1/4W F	1	R10
57	001-1503205010R	RESISTOR	15K 1/4W F	1	R26
	088-1385001500R	POTENTIOMETERS PCB		1	
1	053-1385001118R	PCB PLATE		1	
2	020-1043119012R	POTENTIOMETERS	RA4543-20-15EB1-B100K-C	5	VR7. 8. 9. 10. 11
3	057-2541202161R	JACK	PH=2.54mm 16pinT	1	
	088-1384015000R	POWER PCB		1	
1	001-0220106050R	RSISTOR	2.2 OHM 1/2W J	1	R33
2	001-0393108050R	RSISTOR	39K 2W 5%	3	R24, 25, 30
3	001-0398810050R	RSISTOR	0.39R/5W 5%	2	R22, 23
4	001-1000203010R	RSISTOR	10 OHM 1/8W F	1	R29
5	001-1001203010R	RSISTOR	100 OHM 1/8W F	1	R3
6	001-1002203010R	RSISTOR	1K 1/8W F	1	R28
7	001-1003203010R	RSISTOR	10K 1/8W F	5	R14, 12, 1, 2, 9
8	001-1004208050R	RSISTOR	100K2W 5%	1	R7
9	001-1732203010R	RSISTOR	13.7K 1/8W 1%	1	R15
10	001-1803203010R	RSISTOR	18K 1/8W F	4	R11, 13, 16, 34
11	001-2203203010R	RSISTOR	22K 1/8W F	1	R21
12	001-2203208010R	RSISTOR	22K 2W 1%	1	R32
13	001-3002203010R	RSISTOR	3K 1/8W F	1	R20. 22
14	001-3300103050R	RSISTOR	33 OHM 1/8W J	2	R17, 18
15	001-3904203010R	RSISTOR	390K0HM 1/8W F	1	R35
16	001-4702203010R	RSISTOR	4.7K 1/8W F	2	R6, 31
17	001-4703107050R	RSISTOR	470K 1W 5%	1	R10
18	001-6801203010R	RSISTOR	680 OHM 1/8W F	1	R26
19	001-6802203010R	RSISTOR	6.8K 1/8W F	1	R27
20	001-9102203010R	RSISTOR	9.1K 1/8W F	1	R19
21	004-3307000000R	RSISTOR	10D-20	2	R4. 5
22	004-3312000000R	RSISTOR	NTC 10K	1	NT1
23	006-1001051163R	CAPACITOR	SM10uF 50V 10%	2	C3, 20
24	006-1011061143R	CAPACITOR	SM 100uF 25V 10%	2	C29, 30
25	006-1014081463R	CAPACITOR	GS101M050F115Z	1	C17

EVP-X12PM

8.ELECTRONIC PARTS LIST (AMP)

26	006-2214081443R	CAPACITOR	220 F 25V	1	C1
27	006-4711102053R	CAPACITOR	470uF 35V 10%	2	C26, 27
28	006-4714162593R	CAPACITOR	470UF/100V 16*25	2	C25, 28
29	006-4714253103R	CAPACITOR	LP470/200V 25*31	4	C12, 13, 14, 15
30	008-1004005017R	CAPACITOR	104-Y5P-50V-Z	4	C2, 4, 5, 6
31	008-1005027505R	CAPACITOR	1UF/275VAC	1	C8
32	008-1021040005R	CAPACITOR	102PF 400V M	4	C10, 11, 23, 24
33	013-3340722502R	CAPACITOR	0.33uF 275V 10%	1	C7
34	014-1020100002R	CAPACITOR	AMZ 0.001UF 50V 5%	2	C18, 19
35	014-1050411006R	CAPACITOR	1UF/250V 10%	1	C16
36	014-4740211028R	CAPACITOR	MKS2 470nF 63V 10%	1	C21
37	017-0190000000R	IC	NJM7815FA TO-220F(JRC)	1	U1
38	017-0200000000R	IC	NJM7915FA TO-220F(JRC)	1	U5
39	017-4660000000R	IC	DT5268S Dip 8P	1	U4
40	018-3408050115R	TRANSISTOR	SS8050	3	Q4, 7, 8
41	018-3408550115R	TRANSISTOR	SS8550C	1	Q6
42	018-7000460125R	FIELD EFFECT TRANSISTOR	IRFP460A	2	Q2, 3
43	022-1014101246R	TRANSFORMER	EC35	1	T2
44	034-1119992508R	BRIDGE RECTIFIERS	RBV2510	1	BR1
45	053-9384001604R	PCB	152*120*1.6MM	1	
46	056-0106003300R	JACK	6PIN 3.96PH	1	CN1
47	056-4103221100R	JACK	DJ2802-3P	1	CN3
48	056-4105221100R	JACK	DJ2802-05	1	CN2
49	067-1104148000R	DIODE	1N4148	7	D1, 11, 12, 13, 14
50	067-2200107000R	DIODE	HER107 JAL	3	D2, 3, 4
51	067-2200207000R	DIODE	HER204	4	D7, 8, 9, 10
52	067-2201620000R	DIODE	F16C20C	1	D6
53	067-2201620001R	DIODE	F16C20A	1	D5
54	067-3305246000R	ZENER	16V 1/2W 1N5246	2	ZD1, 2
55	080-0210012016R	INDUCTOR	13.6MH 0.8MM 230V AC	2	T1, 3
57	085-0070290200R	PLASTIC MAP		2	Q2, 3
59	306-1385080000R	HEAT SINK	36*45.5*65.5mm	1	
60	306-1386200000R	HEAT SINK	182*120*33mm	1	

EVP-X12PM