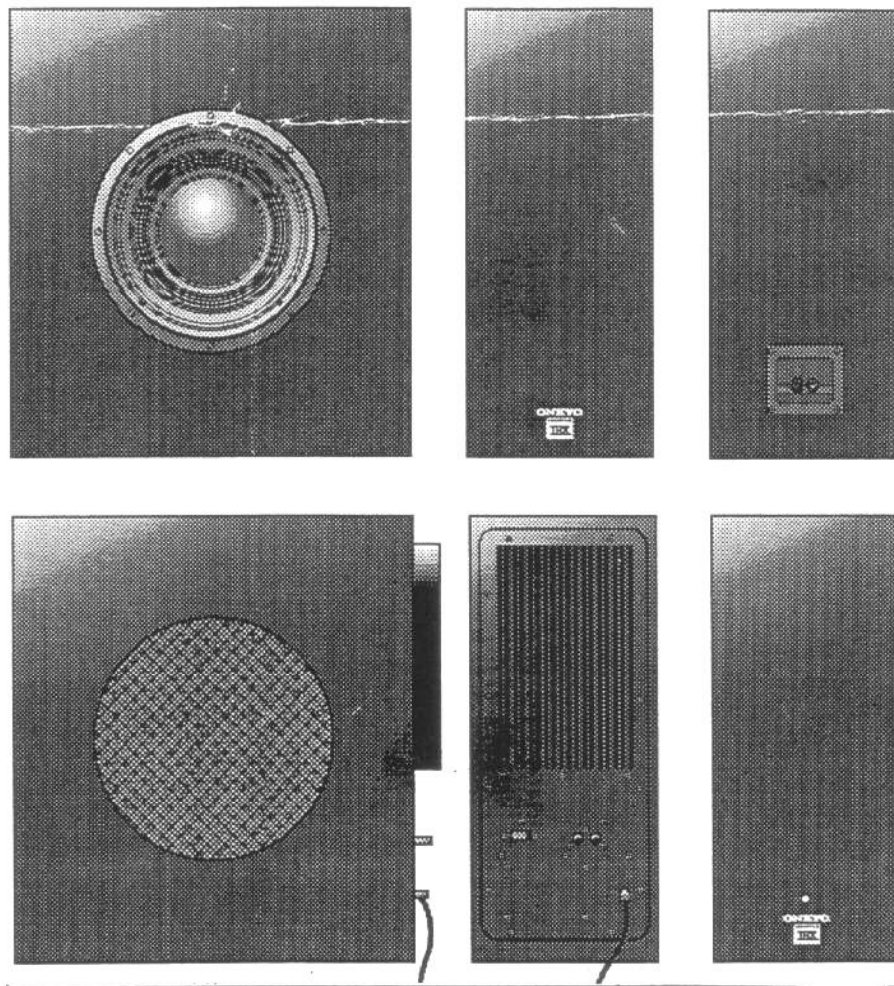


ONKYO®

SERVICE MANUAL THXPS-1A/THXPS-1P Home THX® Subwoofer System

This system consists of an powered (active) subwoofer with built-in amplifier (THXPS-1A) and a second passive subwoofer (THXPS-1P) driven from the amplifier inside the active subwoofer.

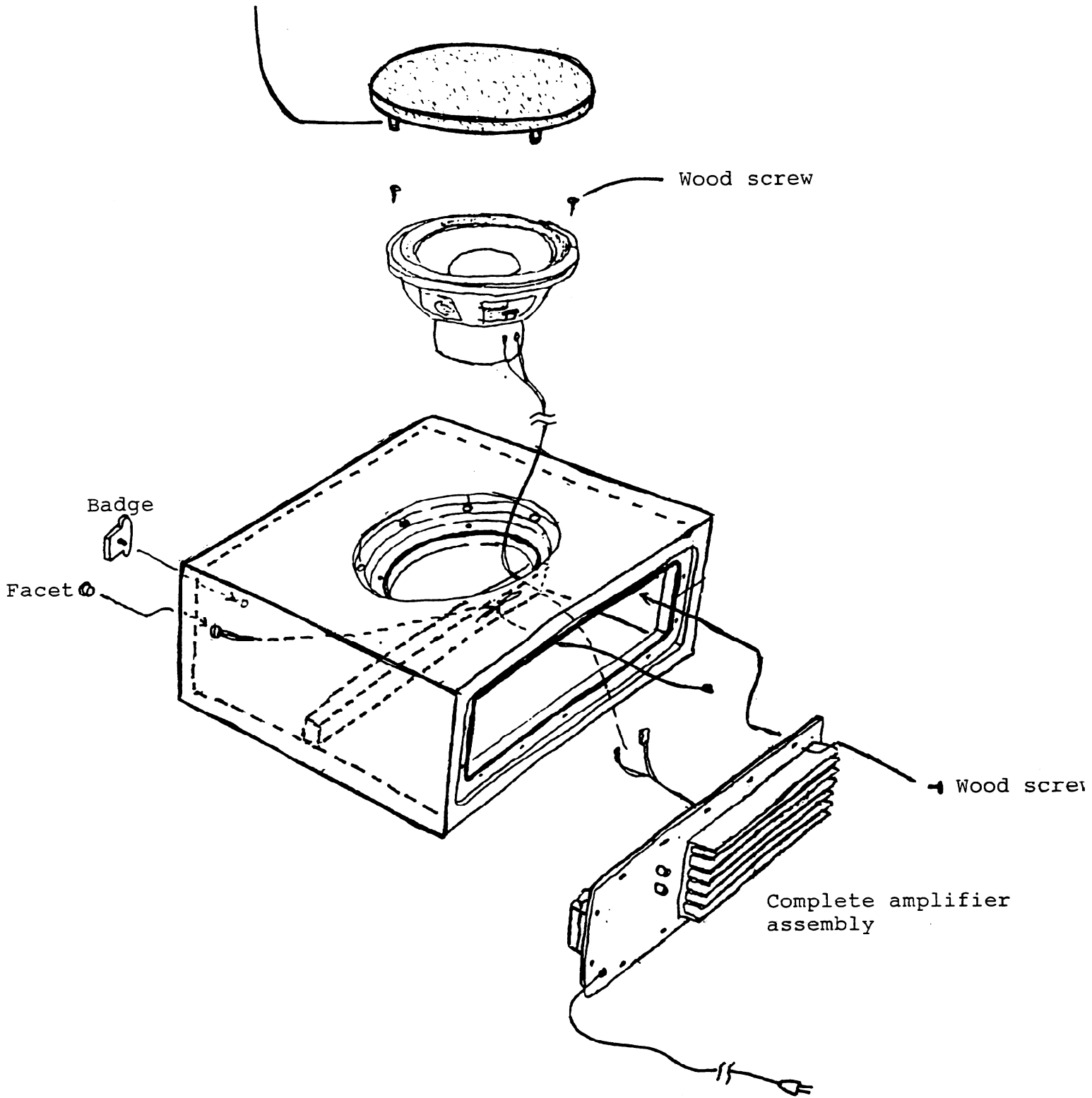


SAFETY-RELATED COMPONENT WARNING!!

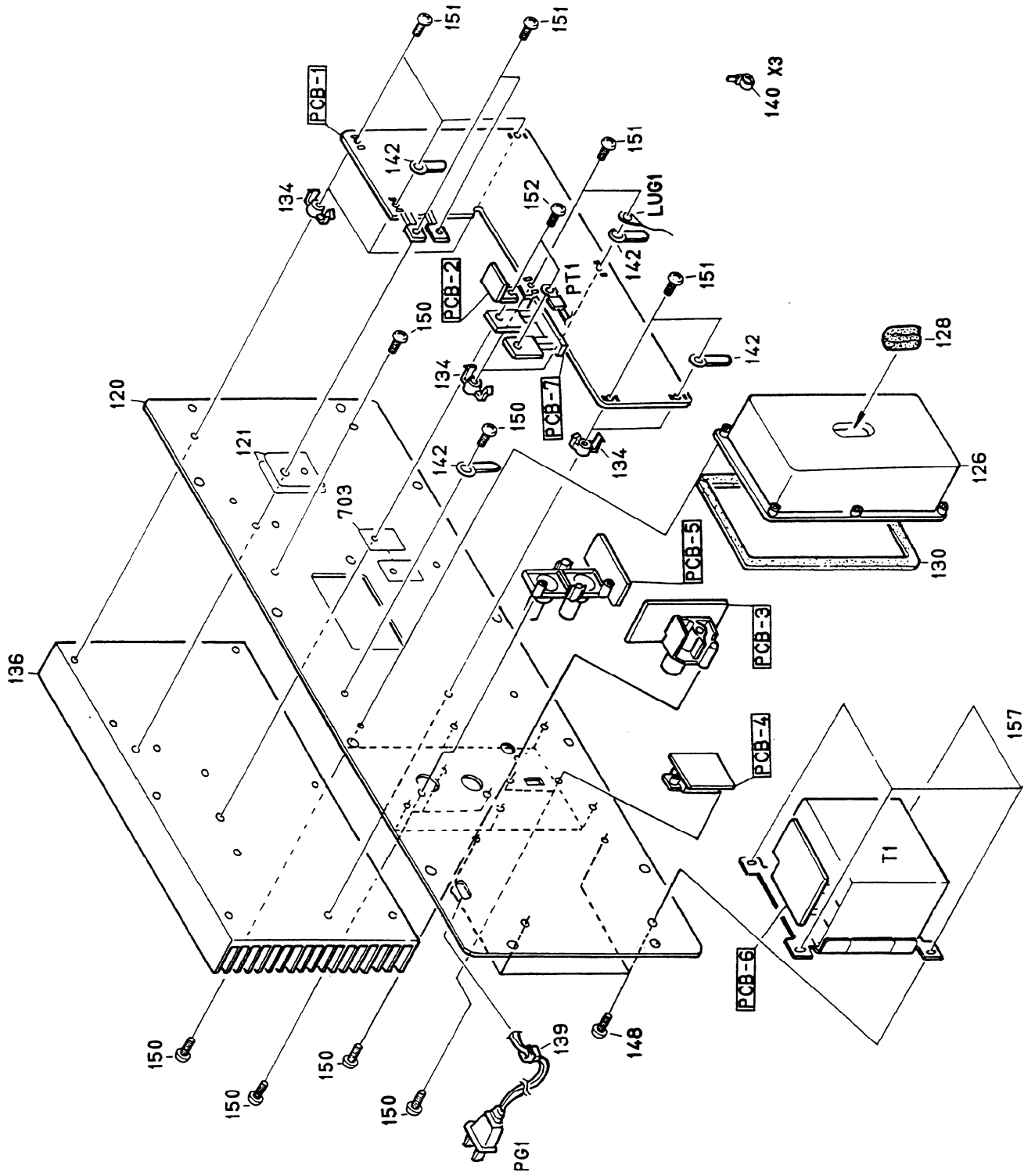
COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

In order to remove grille, apply heat (heat gun) on outer edge of grille in order to loosen glue on grille pegs.



GENERAL UNIT
EXPLODED VIEW



GENERAL PARTS LIST

<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
120	1443-15501	PANEL W/ HEATSINK
121	NOT AVAILABLE	HEAT SINK; Q211, Q212 (PARTS OF PANEL)
126	2217-7019	SHEILD CASE
128	2114-505	BUSHING
130	2116-107	PACKING
134	2360-7064	BOSS, SPE (x7)
136	2222-7345	HEAT SINK, MAIN
139	2240-7384	HOLDER, AC CORD
140	2240-R0101	HOLDER (x3)
142	2218-R0130	BRACKET, FIX, WIRING (x4)
148	830440109	SCREW, BND+ (4x10mm) TRANS (x4)
150	834230108	SCREW, BND T+ (3x10mm) (x14)
151	834430168	SCREW, B SPW+ (3x16mm) (x9)
152	834430148	SCREW, B SPW+ (3x14mm) (x2)
157	2440-60	NUT, SPE, TRANS (x4)
703	2224-7148	INSULATOR (x2)
Δ T1	5584T3003	AC POWER TRANSFORMER, 110V
	5584T3004	AC POWER TRANSFORMER, 230V
Δ PG1	4161-09901192	AC POWER CORD
	4161-09801192	AC POWER CORD, 230V
PCB-1	N/A	MAIN PC BOARD
PCB-2	N/A	BIAS PC BOARD
PCB-3	N/A	INPUT PC BOARD
PCB-4	N/A	PHASE SWITCH PC BOARD
PCB-5	N/A	SPEAKER PC BOARD
PCB-6	N/A	FUSE PC BOARD
PCB-7	N/A	POWER OUT PC BOARD
W-1	W2577A	WOOFER
G1	DL1227	GRILLE
B1	MK378	BADGE

N/A - Indicates not available as a complete assembly. Troubleshoot to component level and order individual parts actually needed.

PCB-1 MAIN PC BOARD

<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
CAPACITORS		
C2, C3, C130, C410, C411		METAL .1 μ f
C4, C5	5341-S46HM688	ELECT. 6800 μ f/ 71V
C10, C201, C408		MINI ELECT. 10 μ f/ 50v
C409		
C11, C204		ELECT. 33 μ f/ 16V
C12, C13		METAL .33 μ f
C15		MYLAR 3300pf
C25		METAL .068 μ f
C106		POLY .022 μ f
C108		METAL .1 μ f
C110, C132		METAL .047 μ f
C111		MINI ELECT. 10 μ f/ 50V
C112		CERA. 100pf
C114		CERA. 680pf
C121, C203, C211-C214		MINI ELECT. 220 μ f/ 16V
C122, C123		MINI ELECT. 10 μ f/ 50v
C124		METAL .18 μ f
C133		MYLAR .022 μ f
C141, C142		MINI ELECT. 220 μ f/ 16V
C202		MINI ELECT. 47 μ f/ 25V
C401, C406		MINI ELECT. 100 μ f/ 10V
C402		POLY 68pf
C404		MICA 7pf
C405		MICA 33pf

RESISTORS

R2, R204	CARBON 1/2W 10k Ω
R3, R27, R29, R31	CARBON 1/2W 4.7k Ω
R4, R13, R16, R26, R131	CARBON 1/6W 47k Ω
R5, R61	CARBON 1/6W 330k Ω
R6	CARBON 1/6W 680k Ω
R7, R165	CARBON 1/6W 180k Ω
R8	CARBON 1/6W 2.2M Ω
R9, R10, R12	CARBON 1/6W 100k Ω
R11, R17, R123, R159, R205	CARBON 1/6W 10k Ω
R14, R15, R18	CARBON 1/6W 22k Ω
R21, R219, R220	CARBON 1/2W 8.2k Ω
R25	CARBON 1/6W 1.5k Ω

NOTE: WHERE NO PARTS NUMBERS ARE GIVEN, THESE ARE COMMON ITEMS AND SHOULD BE OBTAINED LOCALLY

<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
R35		CARBON 1/2W 1.5k Ω
R37		CARBON 1/2W 1M Ω
R39, R51		CARBON 1/2W 3.3k Ω
R41, R416, R448		CARBON 1/2W 22k Ω
R62, R203		CARBON 1/6W 150k Ω
R106, R162		CARBON 1/6W 1k Ω
R111, R218		CARBON 1/6W 22k Ω
R112, R221		CARBON 1/6W 39k Ω
R113, R115, R210		CARBON 1/6W 68k Ω
R114		CARBON 1/6W 16k Ω
R120		CARBON 1/6W 13k Ω
R121, R160		CARBON 1/6W 5.6k Ω
R124		CARBON 1/6W 1.8k Ω
R125, R127		CARBON 1/6W 330 Ω
R126		CARBON 1/6W 4.7k Ω
R128		CARBON 1/6W 470 Ω
R130		CARBON 1/6W 51k Ω
R132		CARBON 1/6W 3/3k Ω
R161, R406, R407, R409		CARBON 1/2W 330 Ω
R163		CARBON 1/6W 110k Ω
R164		CARBON 1/6W 6.8k Ω
R201, R215		CARBON 1/6W 100k Ω
R202		CARBON 1/6W 560 Ω
R206, R207		CARBON 1/6W 22 Ω
R208		CARBON 1/6W 390k Ω
R209		CARBON 1/6W 820k Ω
Δ R211, R212	5102-4705116	RES. FUSE 47 Ω
R213, R214		CARBON 1/6W 2.2k Ω
R216		CARBON 1/6W 33k Ω
R222		CARBON 1/6W 1.2M Ω
R223		CARBON 1/6W 470k Ω
R230, R420, R421		CARBON 1/2W 2.2k Ω
R231		CARBON 1/6W 1k Ω
R401		CARBON 1/2W 680 Ω
R402		CARBON 1/2W 47k Ω
R403		CARBON 1/2W 68k Ω
R404		CARBON 1/2W 1.2k Ω
Δ R405	5102-1225116	RES. FUSE 1.2k Ω
R408		CARBON 1/2W 5.6k Ω
R412		METAL 1/4W 1k Ω
Δ R414, R415	5102-5615116	RES. FUSE 560 Ω
R417, R424, R425	5174-473381	METAL 1/4W 47k Ω
R418, R419		CARBON 1/2W 12k Ω
Δ R422, R423	5102-1815116	RES. FUSE 180 Ω
R426, R427		CARBON 1/2W 2.2 Ω
R428		CARBON 1/2W 150 Ω
R429, R430		CARBON 1/2W 390 Ω
Δ R433, R434	5102-1015116	RES. FUSE 100 Ω
Δ R435, R436	5102-2R25116	RES. FUSE 2.2 Ω
Δ R437, R438	5102-1505116	RES. FUSE 15 Ω
R439, R440		CARBON 1/2W 10 Ω
Δ R441	5102-2215116	RES. FUSE 220 Ω
R442, R444		CEM, 5W .27 Ω

NOTE: WHERE NO PART NUMBERS ARE GIVEN, THESE ARE COMMON ITEMS AND SHOULD BE OBTAINED LOCALLY

<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
R446		METAL 2W 15 Ω

TRANSISTORS

Q1,Q3, Q101, Q102, Q201, Q202, Q204	2213284	2SC1740
Q2, Q4, Q7	2216654	2SA933
Q5	2213160	DTC124ES
Q8	2211256	2SC1815
Q9	2211395	2SA970
Q203	2213660	DTA124ES
Q211	5614-1266	2SD1266 or 2SD1408
Q212	5612-941	2SB941 OR 2SB1017
Q401	2211945	2SK246GR
Q402, Q403, Q404, Q405, Q407	2211405	2SC2240
Q406	2212043	2SA1285
Q408, Q409	2211395	2SA970
Q410, Q412	2212032	2SC3245
Q411	2212043	2SA1285
Q415	2210743	2SC945
Q416	2211653	2SC2235
Q417	2211644	2SA965
Q418	5611-1837	2SA1837
Q419	5613-4793	2SC4793

INTERGRATED CIRCUITS

IC102-IC104, IC201	22240111	BA15218
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DIODES

D1	5685-D5SBA60	D5SBA60
D2, D3	5636-1S2471	1S2471
D4,	22415056	MTZ5.6A
D5, D101, D102, D201, D202, D205, D206, D208	223163	1SS133
D6, D401	223124	1S2473
D203, D204	5635-RD2R7EB2	O5AZ2.7Z
D207	5637-SML1216W	LED
D211, D212	224325	MTZ15C
D403, D404	22380035	GP104003E

COILS

L1, L2	5597-45502	CORE, BEADS
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CONTROL

VR402	5101-S0801102	RES. SEMI FIX 1k Ω, IDLING
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<u>REF NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
MISCELLANEOUS		
CN101	4443-030185	CONNECTOR
CN204, CN205	25055147	NPLG-3P131
Δ CW205	4163-S0203801	CONNECTOR W/W
Δ JL401	4132-R0202121	CORD, 2C
Δ LCN402	4163-0150024	CONNECTOR W/W (BLK)
Δ LCN403	4163-0150025	CONNECTOR W/W (RED)
Δ LCN404	4163-0110020	CONNECTOR W/W (BLK)
LUG1	4211-4	LUG
PT1	5192-010BD222	POSISTOR
TM402	4214-261	TERMINAL
TM403	4214-260	TERMINAL
TP401-TP404	4214-132	TERMINAL
W-201	4122-02210121	WIRE, T VINYL
W-401	4122-00213800	WIRE, T VINYL
W-402, W-403	4122-00226700	WIRE, T VINYL (PT1)

PCB-2 BIAS PC BOARD

RESISTORS

R801	CARBON 1/2W 1.8k Ω
R802	CARBON 1/2W 1.2k Ω

TRANSISTORS

Q801	5613-3423	2SC3423
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PCB-3 INPUT PC BOARD

CAPACITORS

C105	MINI ELECT. 10μf/ 50v
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RESISTORS

R105	CARBON 1/6W 24k Ω
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MISCELLANEOUS

HL101	2240-Z021	HOLDER
PJ101	250453021	NPJ-1PDBL161
W-101	4141-00158451	SHLD WIRE, IC

REF NO.

PART NO.

DESCRIPTION

PCB-4 PHASE SWITCH PC BOARD

MISCELLANEOUS

Δ LCN405	4163-10105001	CONNECTOR W/W (BLUE)
Δ LCN406	4163-10104001	CONNECTOR W/W (WHITE)
Δ LCN407	4163-0108026	CONNECTOR W/W (GRAY)
Δ LCN408	4163-0108027	CONNECTOR W/W (WHITE)
SW401	4421-00502021	SWITCH, SLIDE, PHASE SW

PCB-5 SPEAKER PC BOARD

MISCELLANEOUS

Δ LCN409	4163-10103001	CONNECTOR W/W (BLACK)
Δ LCN410	4163-10102001	CONNECTOR W/W (RED)
Δ TM401	4214-259	TERMINAL, OUTPUT

PCB-6 FUSE PC BOARD

MISCELLANEOUS

Δ F1	5732-01101312	FUSE, 3.15A- 125V/250V
	5732-01601162	AC FUSE, 230V
Δ HF1, HF2	4472-04901	HOLDER, FUSE
TM1, TM2	4214-245	TERMINAL

PCB-7 POWER OUTPUT PC BOARD

TRANSISTORS

Δ Q42	2201483	2SC3281
Δ Q43	2201473	2SA1302

REF NO.

PART NO.

DESCRIPTION

PCB-4 PHASE SWITCH PC BOARD

MISCELLANEOUS

Δ LCN405	4163-10105001	CONNECTOR W/W (BLUE)
Δ LCN406	4163-10104001	CONNECTOR W/W (WHITE)
Δ LCN407	4163-0108026	CONNECTOR W/W (GRAY)
Δ LCN408	4163-0108027	CONNECTOR W/W (WHITE)
SW401	4421-00502021	SWITCH, SLIDE, PHASE SW

PCB-5 SPEAKER PC BOARD

MISCELLANEOUS

Δ LCN409	4163-10103001	CONNECTOR W/W (BLACK)
Δ LCN410	4163-10102001	CONNECTOR W/W (RED)
Δ TM401	4214-259	TERMINAL, OUTPUT

PCB-6 FUSE PC BOARD

MISCELLANEOUS

Δ F1	5732-01101312	FUSE, 3.15A- 125V/250V
	5732-01601162	AC FUSE, 230V
Δ HF1, HF2	4472-04901	HOLDER, FUSE
TM1, TM2	4214-245	TERMINAL

PCB-7 POWER OUTPUT PC BOARD

TRANSISTORS

Δ Q42	2201483	2SC3281
Δ Q43	2201473	2SA1302

ALIGNMENT PROCEDURES

■ Conditions: ● Make the adjustment at a room temperature (approx. 77 ° F (25° C).

■ IDLING CURRENT ADJUSTMENT

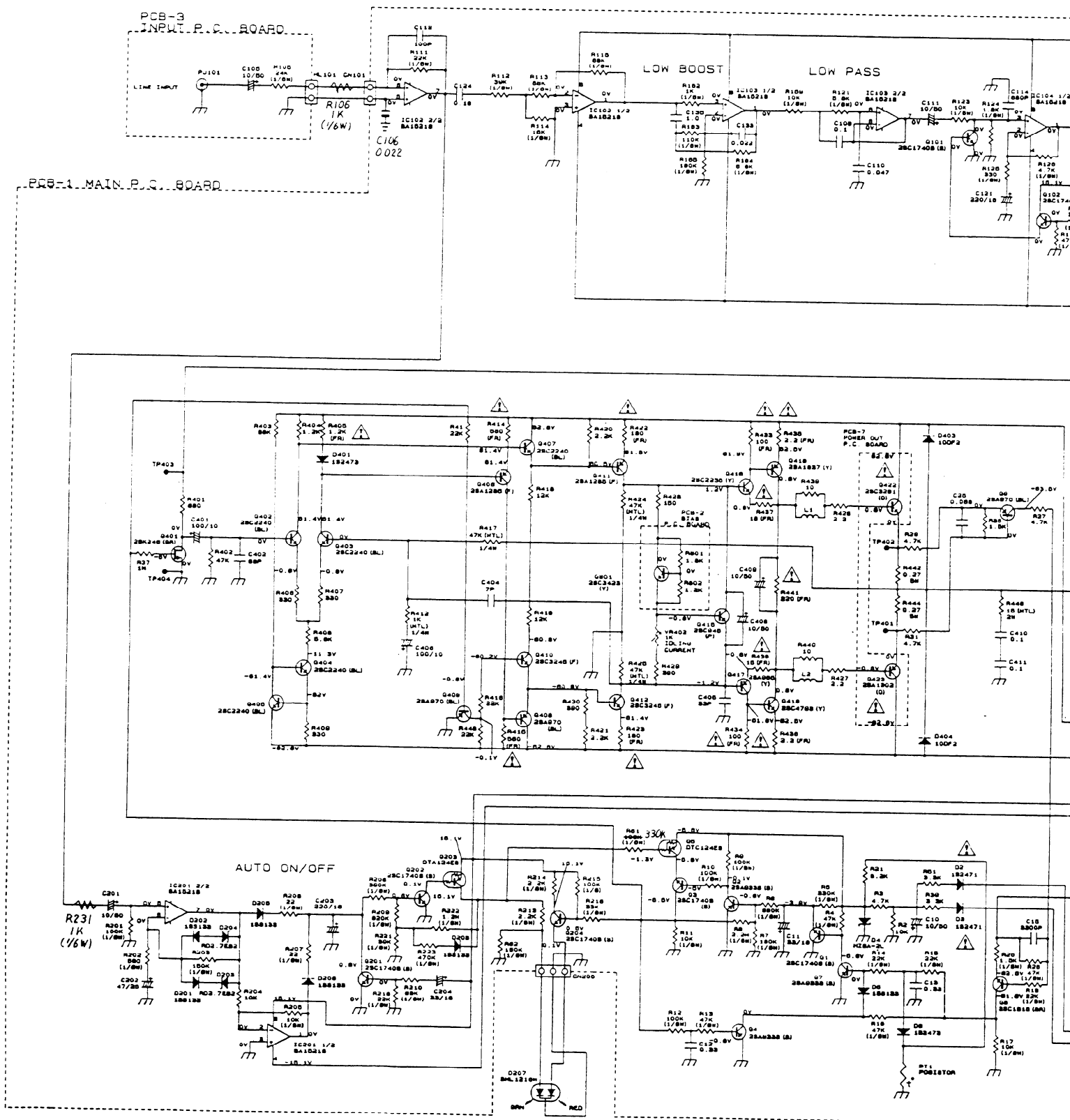
Step	Connection Equipments	Adjustment	For
1	Connect the Digital Volt Meter to TP401 and Tp402	VR402	40. 5mV±2mV

■ After the above adjustment, leave the unit with its power on for longer than 15 minutes and then repeat the same adjustment.

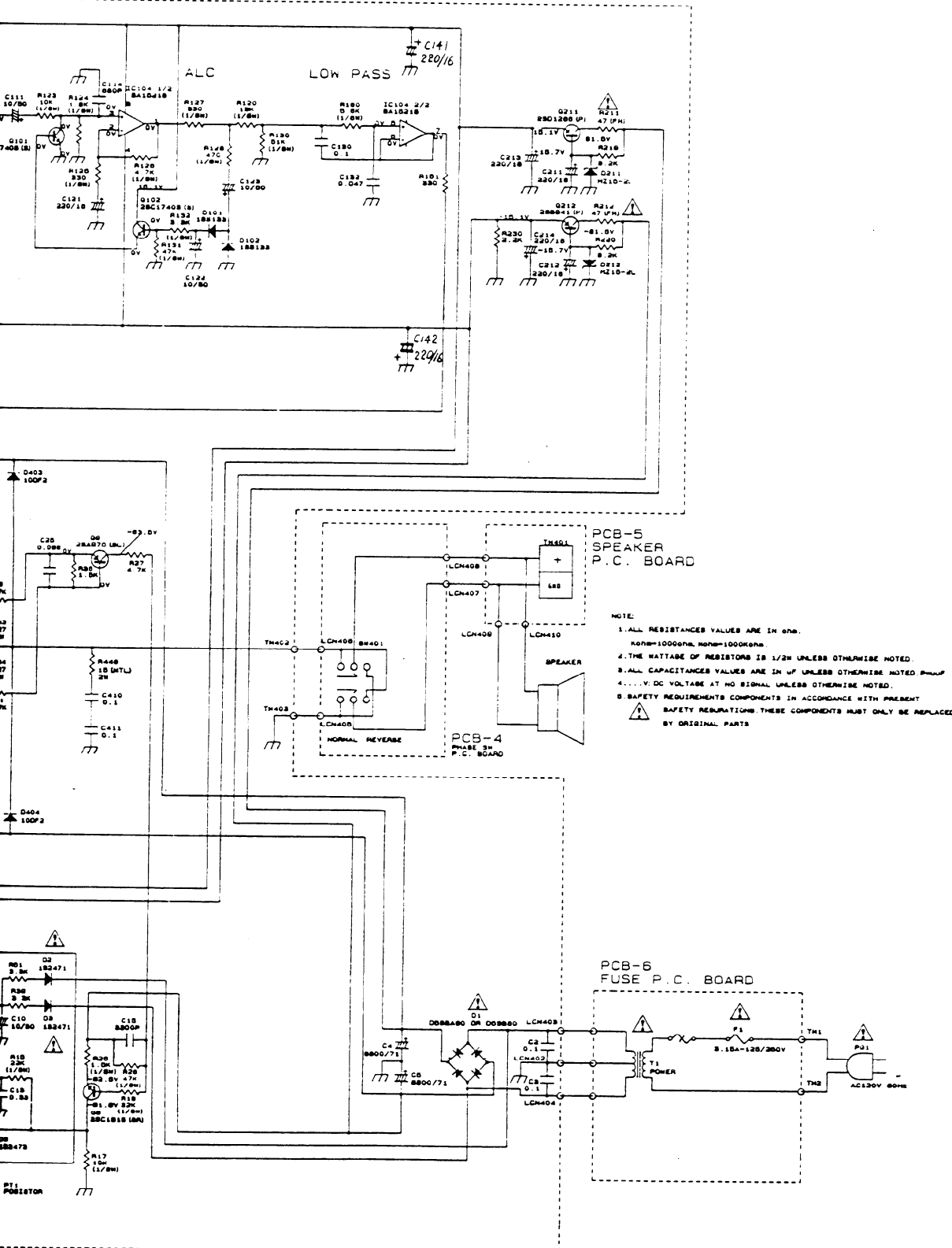
SPECIFICATIONS

	THXPS-1A	THXPS-1P
TYPE	acoustic suspension with built-in amplifier	acoustic suspension
WOOFER	25cm (10") Bio-Hybrid cone x 1	25cm (10") Bio-Hybrid cone x 1
FREQUENCY RESPONSE	30 to 200Hz +/- 3dB	30 to 200Hz +/- 3dB
SENSITIVITY	88dB/100mV @1m	
NOMINAL IMPEDANCE	greater than 20k ohms	
DIMENSIONS (HxWxD)	20 1/16" x 8 5/8" x 21" (510 x 220 x 533mm)	20 1/16" x 8 5/8" x 19 13/16" (510 x 220 x 503mm)
WEIGHT	45.5 lbs (20.7kg)	37.8lbs (17.2kg)

SCHEMATIC DIAGRAM



RAM



NOTE:

1. ALL RESISTANCE VALUES ARE IN OHMS.
KOHM=1000OHMS, MHOHM=10000OHMS.
2. THE RATIO OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCE VALUES ARE IN UF UNLESS OTHERWISE NOTED. PPMUF
4. ...V. DC VOLTAGE AT NO SIGNAL UNLESS OTHERWISE NOTED.
5. SAFETY REQUIREMENTS COMPONENTS IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS

敬 告 諸 君
REVISED