

HiFi ENGINE[®]

For more Hi-Fi manuals and set-up information
please visit www.hifiengine.com

ELECTRONICS SERVICE MANUAL

C-06 Preamplifier

TABLE OF CONTENTS

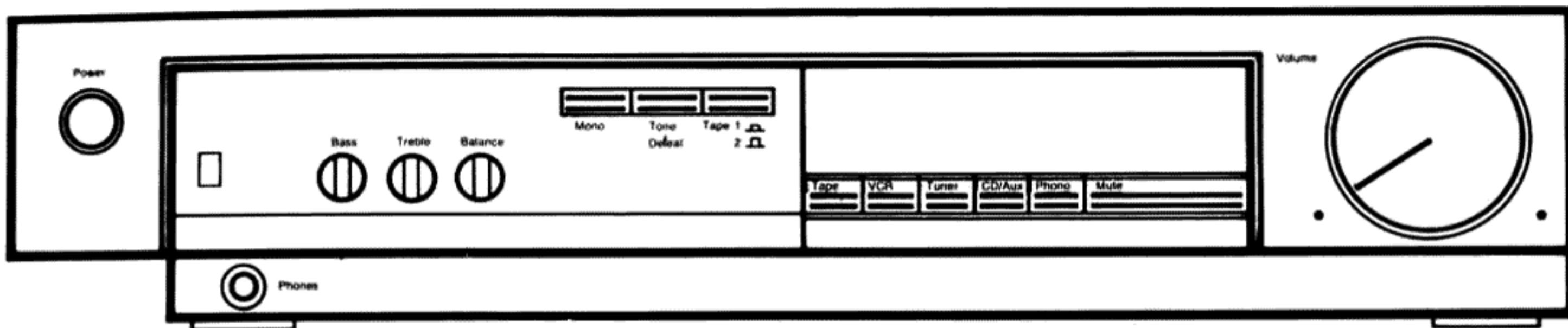
Specifications.....	1
Schematic Diagram.....	2
Wiring Diagram.....	3
Disassembly Diagram.....	4
Repair Parts List.....	5

 **TELEDYNE ACOUSTIC RESEARCH**

330 Turnpike Street, Canton,
Massachusetts 02021, USA

High Street, Houghton Regis, Dunstable,
Bedfordshire LU5 5QJ, England

AR
**ACOUSTIC
RESEARCH**



Specifications

Continuous Rated Power Output Total harmonic distortion (20 to 20,000 Hz)
 No more than 0.004% (CD/TUNER)
 Inter modulation distortion (60 Hz:7 KHz = 4:1)
 No more than 0.004% (CD/TUNER)

Output

Headphone 8 ohm nominal

Input Sensitivity/Impedance

Phono (MM) 0.8 mV/47 kohms

Phono (MC) 160 μ V/100 ohms

CD 150 mV/20 kohms

Tuner, Tape Monitor 150 mV/20 kohms

Output Sensitivity Impedance 1.5V/1.2 kohms

Overload Level (THD 0.5% 1 kHz)

Phono (MM) 180 mV

Phono (MC) 15 mV

CD, Tuner, Tape Monitor 5V

Frequency Response

Phono 20 to 20,000 Hz \pm 0.2 dB (RIAA STD)

CD, Tuner, Tape Monitor 20 to 20,000 Hz + 0 dB - 0.3dB

Signal to Noise Ratio (IHFA A Network)

Phono (MM) 80 dB

Phono (MC) 70 dB

CD, Tuner, Tape Monitor 90 dB

Power Consumption 20 watts

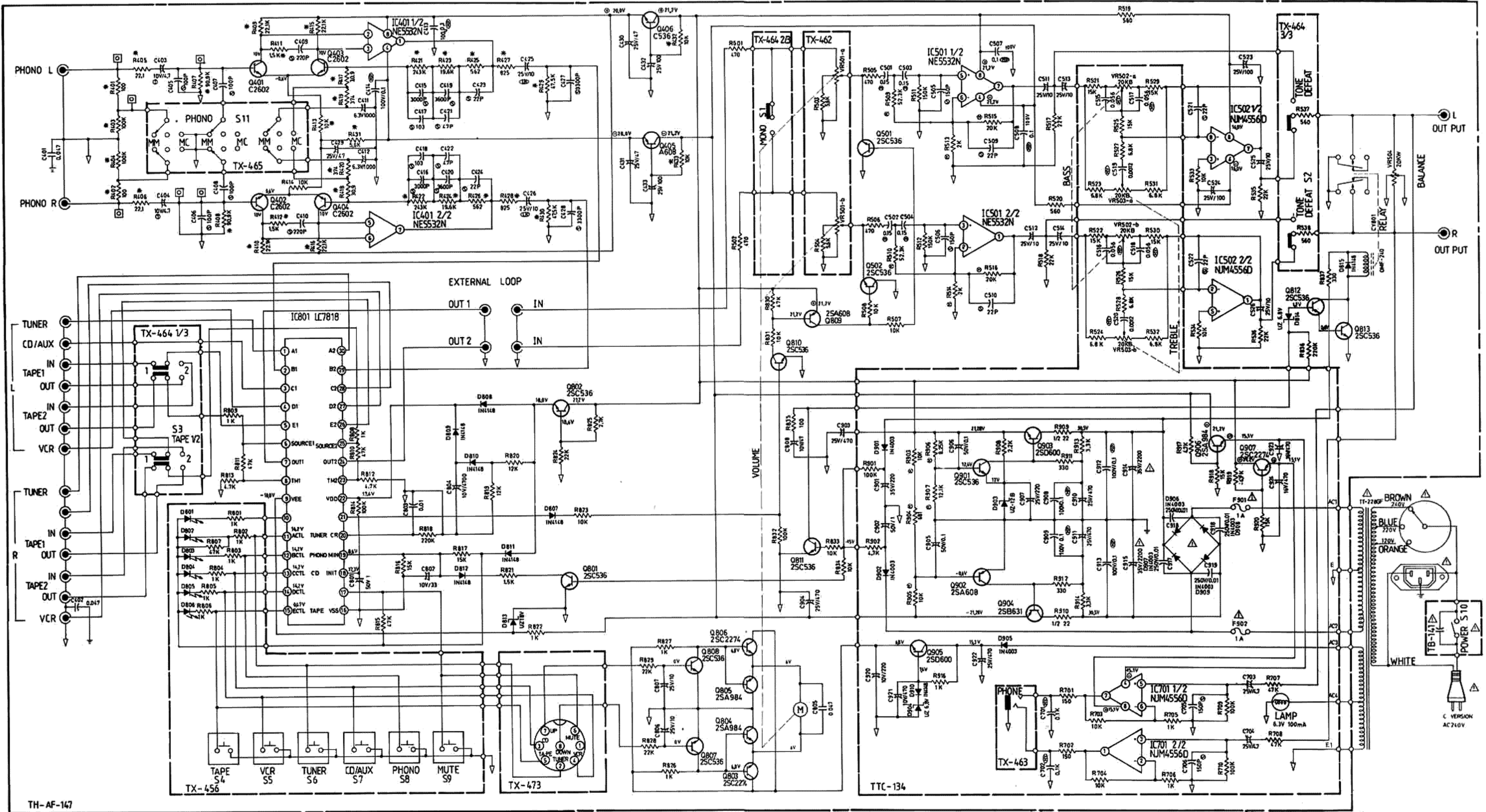
Dimensions (Overall) 430(W) \times 88(H) \times 356(D)

16 $\frac{15}{16}$ " \times 3 $\frac{15}{32}$ " \times 14 $\frac{1}{16}$ "

Weight (Net) 6.6 Kgs/14.52 lbs

Schematic Diagram

NOTE: PARTS AND CIRCUIT SUBJECT TO CHANGES FOR IMPROVEMENTS WITHOUT PRIOR NOTICE

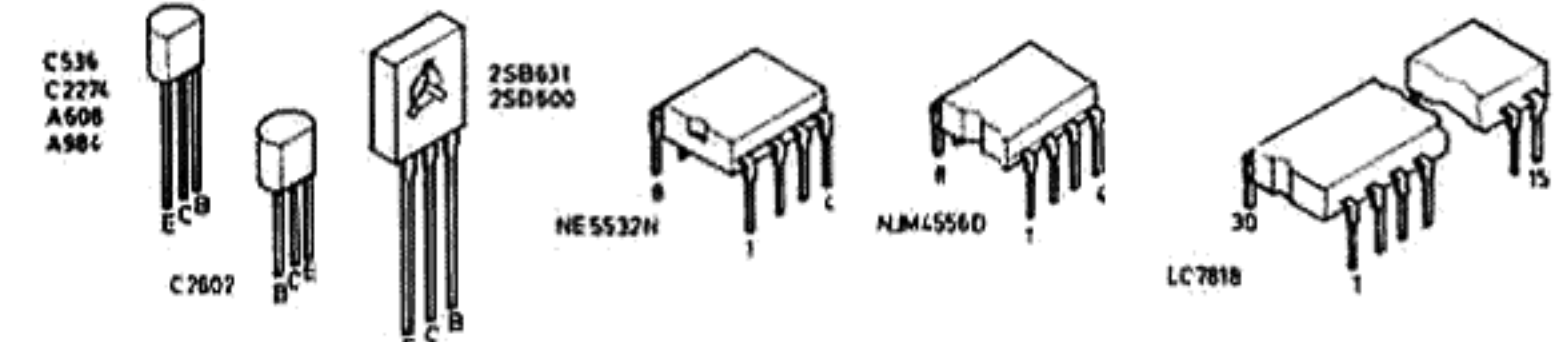


TH-AF-147

RESISTORS
 5%---TOLERANCE UNLESS OTHERWISE NOTED
 K---KILO OHM
 M---MEGA OHM
 ---METAL RESISTORS 1/4 WATT
 ---METAL OXIDE FILM RESISTORS
 ---NON MARK LOW NOISE TYPE CARBON RESISTORS

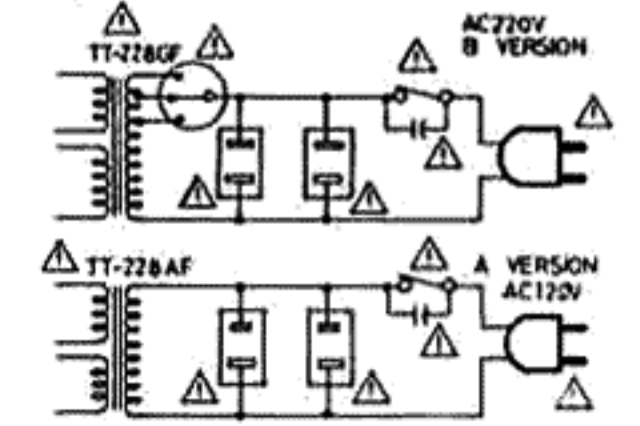
CAPACITORS
 ---LOW NOISE ELECTROLYTIC CAPACITORS
 ---MYLAR FILM CAPACITORS
 ---POLYSTYRENE FILM CAPACITORS
 ---TANALUM CAPACITORS
 ---ELECTROLYTIC CAPACITORS
 ---NON MARK CERAMIC CAPACITORS
 UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITORS VALUES ARE EXPRESSED

ITEM	SCHEMATIC LOCATION(LAST)
PHONO AMP	R433 C433
TONE AMP	R538 C526
PHONO'S AMP	R708 C706
FUNCTION	R837 C808
POWER SUPPLY	R924 C924

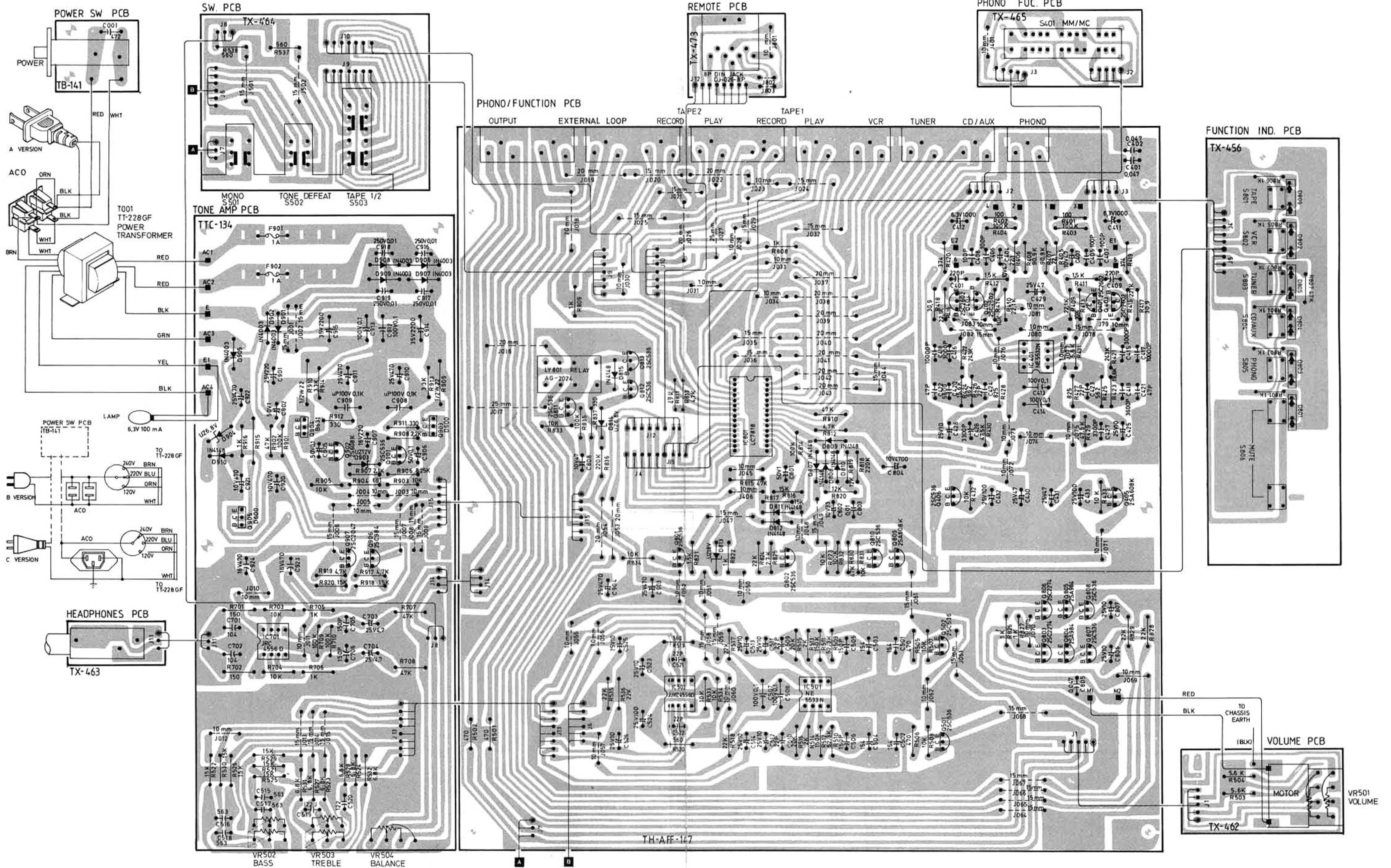


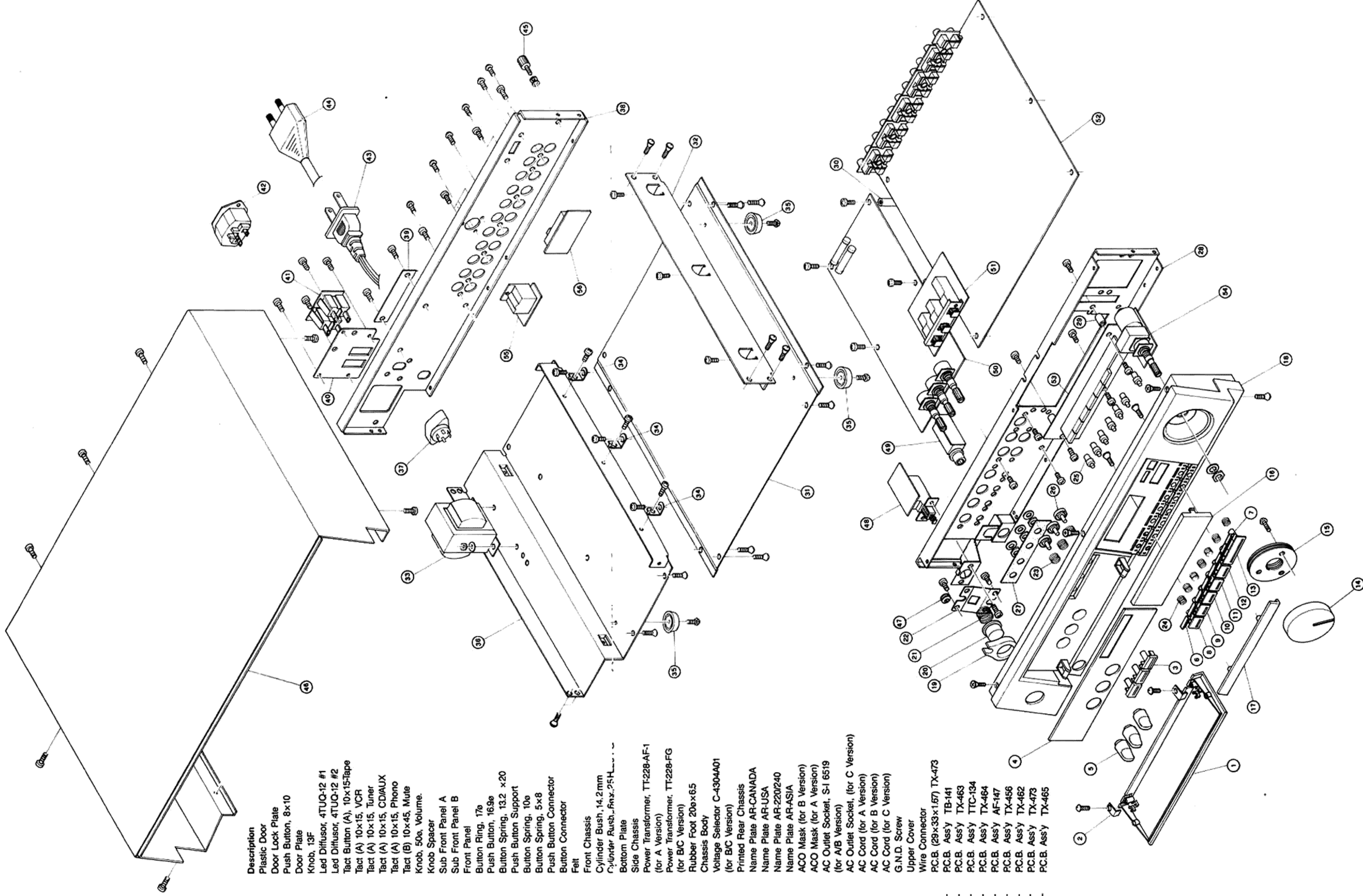
INSTRUCTIONS FOR SERVICE PERSONNEL

- 1). TO USE ONLY REPLACEMENT PARTS THAT HAVE THE CRITICAL CHARACTERISTICS RECOMMENDED BY MANUFACTURER.
- 2). TO 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.



Wiring Diagram





Key No.	Pats No.	Description
1	OM00002030	Plastic Door
2	SP10004822	Door Lock Plate
3	KB20001664	Push Button, 8x10
4	OM00002145	Door Plate
5	KB10001333	Knob, 13F
6	OM00002080	Led Diffuser, 4TUQ-12 #1
7	OM00002327	Led Diffuser, 4TUQ-12 #2
8	KB20001755	Tact Button (A), 10x15-tape
9	KB20001767	Tact (A) 10x15, VCR
10	KB20001779	Tact (A) 10x15, Tuner
11	KB20001780	Tact (A) 10x15, CD/AUX
12	KB20001792	Tact (A) 10x15, Phono
13	KB20001573	Tact (B) 10x45, Mute
14	KB10001357	Knob, 50a, Volume.
15	SR00000780	Knob Spacer
16	OM00002108	Sub Front Panel A
17	OM00002110	Sub Front Panel B
18	AA80000821	Front Panel
19	BU00000724	Button Ring, 17e
20	KB20001652	Push Button, 16.9a
21	SN00000180	Button Spring, 13.2 x20
22	SP10004901	Push Button Support
23	SN00000179	Button Spring, 10e
24	SN00000192	Button Spring, 5x8
25	OM00002091	Push Button Connector
26	OM00001943	Button Connector
27	FE00000407	Felt
28	AF80000299	Front Chassis
29	BC00000453	Cylinder Bush, 14.2mm
30	4R00000295	Cylinder Rubb. f.nx. 25H
31	AB00000160	Bottom Plate
32	AS01000180	Side Chassis
33	PT21006545	Power Transformer, TT-228-AF-1 (for A Version)
34	PT21006697	Power Transformer, TT-228-FG (for B/C Version)
35	FT00000140	Rubber Foot 20e x6.5
36	AM00001306	Chassis Body
37	VC00000048	Voltage Selector C-430A01 (for B/C Version)
38	AR800000570	Printed Rear Chassis
39	NP00001342	Name Plate AR-CANADA
	NP00001354	Name Plate AR-USA
	NP00001391	Name Plate AR-220/240
	NP00001380	Name Plate AR-ASIA
40	SP100005050	ACO Mask (for B Version)
	SP100004767	ACO Mask (for A Version)
41	SA000001450	ACO Mask (for C Version)
	SA000001553	ACO Mask (for A Version)
42	CD000000218	AC Cord (for A Version)
43	CD000000097	AC Cord (for B Version)
44	CD000000048	AC Cord (for C Version)
45	SW000001336	G.N.D. Screw
46	AU000000671	Upper Cover
47	SC000000090	Wire Connector
	PC04473001	PC.B. (29x33x1.67) TX-473
48		PC.B. Assy TB-141
49		PC.B. Assy TX-463
50		PC.B. Assy TTC-134
51		PC.B. Assy TX-464
52		PC.B. Assy AF-147
53		PC.B. Assy TX-456
54		PC.B. Assy TX-462
55		PC.B. Assy TX-473
56		PC.B. Assy TX-465

RePair Parts List

Schematic Location	Parts No.	Description
TRANSISTORS, DIODES AND IC'S		
Q401, 402	TR30000467	2SC2602, Differential Amp.
Q403, 404	TR30000467	2SC2602, Differential Amp.
Q405, 406	TR30000327	2SC536G, Stabilizer
Q501, 502	TR30000327	2SC536G, for Mute
Q801	TR30000327	2SC536G, for Switching,
Q802	TR30000327	2SC536G, Stabilizer
Q803	TR30000121	2SC2274, Motor Driver
Q804	TR10000140	2SA984K, Motor Driver
Q805	TR10000140	2SA984K, Motor Driver
Q806	TR30000121	2SC2274, Motor Driver
Q807	TR30000327	2SC536G, for Switching
Q808	TR30000327	2SC536G, for Switching
Q809	TR10000126	2SA608K, for Switching
Q810	TR30000327	2SC536G, for Switching
Q811	TR30000327	2SC536G, for Switching
Q812	TR30000327	2SC536G, Relay Driver
Q813	TR30000327	2SC536g, Relay Driver
Q901	TR30000327	2SC536G, Stabilizer
Q902	TR10000126	2SA608K, Stabilizer
Q903	TR40000069	2SD600K, Stabilizer
Q904	TR10000047	2SB631K, Stabilizer
Q905	TR40000069	2SD600K, Stabilizer
Q906	TR10000140	2SA984K, Stabilizer
Q907	TR30000121	2SC2274, Stabilizer
D801 ~ 806	DD40000812	SE65224DT-D, Function LED
D807	DD10000100	IN4148, Reverse Prevention
D808	DD10000100	IN4148, Reverse Prevention
D809	DD10000100	IN4148, Reverse Prevention
D810	DD10000100	IN4148, Reverse Prevention
D811	DD10000100	IN4148, Reverse Prevention
D812	DD10000100	IN4148, Reverse Prevention
D813	DD20000041	UZ18B, Zener 18V
D814	DD20000065	UZ6.8B, Zener 6.8V
D815	DD10000100	IN4148, Reverse Prevention
D901	DD10000068	IN4003, Rectifier
D902	DD10000068	IN4003, Rectifier
D903	DD20000016	UZ-12B, Zener 12V
D904	DD20000065	UZ-6.8B, Zener 6.8V
D905	DD10000068	IN4003, Rectifier
D906	DD10000068	IN4003, Rectifier
D907	DD10000068	IN4003, Rectifier
D908	DD10000068	IN4003, Rectifier
D909	DD10000068	IN4003, Rectifier
D910	DD10000100	IN4148, Protection
IC401	IC00001279	NE5532N, Phono Amp.
IC501	IC00001279	NE5532N, Flat Amp.
IC502	IC00001474	NJM4556D, Tone Amp.
IC701	IC00001474	NJM4556D, Phone Amp.
IC801	IC00001541	LC7818, Function IC.

Schematic Location	Parts No.	Description
COILS, VARIABLE RESISTORS, SWITCHES AND OTHERS		
LY801	LY0000058	OMF-240, Relay
VR501	RV10001073	05IC-4170A08 50KB x 2, Volume Control
VR502, 503	RV10000433	4TR-1742, 20KB x 2, Treble, Bass Control
VR504	RV10000378	LTR-1572, 20KW, Balance Control
S401	SH20000307	4TR-2293, Slide Switch Phono
S501 ~ 503	SH13000280	4TR-2277SUL, 3 Key Push Switch, Mono/Defeat/Tape 1, 2
S801 ~ 806	SH60000239	4TR-2301, Key Board Switch, Tape/VCR/Tuner/CD/Phono/Mute
	SH40000155	C-4176A01, Power
T001	PT21006545	Power Transformer, TT-228AF, (for A Version)
	PT21006697	Power Transformer, TT-228GF (for B/C Version)
F901, 902	FU12000070	Fuse, 250V, 1A (UL)
	FU23000025	Fuse, 250V 1A (S)